Marginalization in the Future of Work: The Role of Intersectional Identities and Platforms in the Trajectories of Online Freelancers

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Abstract

This dissertation examines how platforms and identity attributes such as gender, race and occupation mediate individuals’ evolving participation and outcomes in online freelancing. I approach the investigation through an intersectionality lens to build insight into the dynamics of workers’ identity attributes and how these are embedded in online freelancing platforms. The research design draws on a longitudinal panel study with 108 online freelancers, working on Upwork.com. More than 400 interview and survey responses as well as secondary platform data are incorporated in the study’s analysis. Findings illuminate that platforms reinforce and exacerbate gender, race and occupation stereotypes. Data also demonstrate that identity attributes are not mutually exclusive but instead are interrelated and mediated through the platform’s features and terms. Over time, freelancers adjust their platform efforts to navigate their evolving work arrangements and the precarity of online freelancing. Together, the findings contribute to our understanding of 1) the differential experiences of freelancers, 2) how platforms mediate intersectionality and marginalization and 3) the role of online freelancing in workers’ trajectories.
MARGINALIZATION IN THE FUTURE OF WORK: THE ROLE OF INTERSECTIONAL IDENTITIES AND PLATFORMS IN THE TRAJECTORIES OF ONLINE FREELANKERS

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Chapter 1: Introduction

Through this dissertation, I examine the evolving experiences and outcomes of online freelancers, with a specific focus on workers from marginalized populations. The current investigation builds insight about how workers’ intersectional race, ethnicity, gender, and other social identities lead to differential experiences with online work and the role of freelancing platforms in limiting or exacerbating marginalization. To do this, I synthesize relevant literature about the platform-based gig economy, intersectionality, and marginalization.

Online freelancing platforms like Upwork\(^1\) and Fiverr\(^2\) serve as the study domain for this research. Online freelancing is one form of gig work that is fully remote, relies on specialized knowledge, and requires extended interaction between workers and clients. Unlike other gig work platforms (e.g., Uber, Instacart, Grubhub), freelancing platforms enable more complex contingent work arrangements, including copywriting, architecture, software development, and other types of knowledge work. And despite the increased prevalence of this form of work (Freelancing in America: 2019 Survey, n.d.; Graham et al., 2017; Kässi & Lehdonvirta, 2018), online freelancing has received relatively less attention in scholarly literature as compared to other forms of gig work like ridesharing, delivery services, and microtasking.

\(^1\) https://www.upwork.com/
\(^2\) https://www.fiverr.com/
Online freelancing is an important domain due to 1) the growth of this form of work, 2) the unique opportunities it provides for future workers, including access to more specialized and flexible work, and 3) the gap in research about marginalized workers in this form of work. To date, Black and Latinx workers, two groups that have historically been marginalized in the workforce, are overrepresented in platform-based work. According to Pew Research, 30% of Latinx and 20% of Black adults report using at least one online labor platform as compared to only 12% of white adults; yet we still lack research that focuses on this segment of freelance workers (Munoz, Sawyer, et al., 2022). Workers from marginalized groups may be overrepresented in online work for many reasons, including access to different work opportunities, the promise of better working conditions, or the need for more flexibility in working arrangements. Advancing insights about these online workers and their needs, preferences, and challenges, as well as the freelancing platforms enabling this work are essential to inform future policy, technology design, and worker training and education.

This study provides a means to better understand - both empirically and conceptually - how arrangements, practices, and strategies differ among online freelancers from marginalized and non-marginalized groups. Studying online freelancing can also provide specific insight into the roles that freelancing platforms can play in addressing, exacerbating, or transforming known issues of inequity among workers from marginalized populations (A. Barzilay, 2019b; Hannák et al., 2017a; Monachou & Ashlagi, 2019a; Vyas, 2020).
1.1 Motivation

Individuals from historically marginalized populations, including Black and Latinx adults as well as women, face persistent structural barriers to securing work and succeeding in the workplace (Castilla, 2008; Cohn, 2019; Kabat-Farr & Cortina, 2012; Nelson et al., 2019). Despite laws and regulations forbidding discrimination, research has shown that these groups tend to face inhospitable working environments, largely due to work bias and discrimination. These challenges include job/occupation segregation, lower pay, and challenges during promotions and performance reviews (Castilla, 2008). It is well documented that minority Black and Latino workers experience issues with racial and ethnic discrimination as early as in the hiring process, due to systemic and institutional barriers. For example, employment audit studies regularly find lower response rates for applications with Black names as compared to White names (Gaddis, 2015; Hanson et al, 2016). Studies also show that this is also the case for Latinos/Hispanics, who have lower callback rates than White applicants and are typically recommended for lower-status jobs than those they originally applied to (Pager et al., 2009; Cross et al., 1990; DelCastillo, 1992).

Racial and gender inequality and bias also exist in work organizations through 1) *allocative discrimination*, which refers to how women and minorities are sorted into certain types of jobs and pay during hiring, promotion, or termination processes; 2) *within-job wage disparities*, where women and minorities are paid less for the same work as their white male counterparts; and 3) *valuative discrimination*, which refers to how certain groups are paid less despite equal skills requirements and other factors because they are valued less.
These and other issues of inequality—such as selective incivility, meritocracy, and other forms of covert discrimination—have been documented for decades in traditional workplaces (Castilla, 2008; Kabat-Farr & Cortina, 2012). This means that bias, inequality, and lack of representation continue to occur at work despite a collection of laws that distinctly prohibit discrimination based on sex, gender, race, color, or other attributes.

Given that there is a robust history of bias in the workplace, research on whether and how bias exists in online freelancing platforms is warranted. Hannak et al. (2017) note that online freelance marketplaces have the potential benefit of providing more equality given that the conscious and unconscious biases of the traditional labor markets are limited when online platforms “act as neutral intermediaries that preclude human biases” (p. 1914). However, the study authors question this promise for equality given that freelancing platforms are designed around traditional workflows such that clients (employers) search and assess workers’ profiles before making their hiring decisions. For example, although worker profiles are structured to provide the same (or similar) information across their profiles, these typically contain details about a worker such as their name, photo, and work experience, which could allow the hiring clients to make inferences about a worker’s race, ethnicity, and/or gender. As such, in the under-regulated spaces of independent online work, the long-known biases from traditional workplaces are likely to continue to be an issue even as many market advocates decry such realities (A. R. Barzilay & Ben-David, 2016-2017; Monachou & Ashlagi, 2019b; Robinson et al., 2020).
1.2 Research goals and questions

Extending from what is known about differential experiences in work and the rise of gig work, this research focuses on investigating the gap in knowledge about the role of gender, race and ethnicity in mediating differential experiences and outcomes among online freelancers. My goal with this study is to contribute conceptual and empirical insight regarding marginalized workers’ experiences and outcomes with online freelancing. Secondly, I advance knowledge of platform features and how these are perceived by workers. These goals are reflected in the following three research questions (RQ1, RQ2, and RQ3 are presented in Table 1).

Table 1. Research questions

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Data Collection effort</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RQ1</strong>: How do the platform-mediated experiences of freelancers from marginalized populations differ from those of other freelancers?</td>
<td><strong>Freelancer Panel</strong>: Given the background of bias, inequality and marginalization among women and racial and ethnic minorities in the workplace, I focus primarily on highlighting differences based on workers’ self-reported gender, race, and ethnicity.</td>
</tr>
<tr>
<td><strong>RQ2</strong>: How do freelancers’ experiences and strategies change over time?</td>
<td><strong>Freelancer Panel</strong>: Investigates the evolving arrangements, strategies and outcomes among workers with a focus on marginalized groups.</td>
</tr>
<tr>
<td><strong>RQ3</strong>: What is the role of platforms in mediating online freelancing outcomes?</td>
<td><strong>Platform Investigation</strong>: Focuses on how the platform features, algorithm, and policies moderate workers’ experiences. And how the changes in the platforms may or may not affect worker outcomes.</td>
</tr>
</tbody>
</table>
1.3 Research design

To address the identified gap in our knowledge about marginalized groups’ online freelancing, this research is designed as a theory-building study that combines a longitudinal freelancer panel and a platform investigation. This study design reflects the fact that we lack clear theoretical guidance to study how workers’ self-defined social identities and platforms may mediate their experiences and outcomes in online freelancing. As such, the freelancer panel is an investigation of freelancers’ experiences, drawing on interviews to help contextualize and assess the differential experiences of workers from marginalized populations. I rely on semi-structured interviews as the primary form of data collection for my research design, supported by descriptive survey data and secondary data sources. The platform investigation builds on the panel, to address how freelancing platform features, norms, and policies may or may not be playing a role in exacerbating the differential experiences of freelancers.

1.4 Contributions

The research study outlined here focuses on three primary contributions. First, this research provides insights into what it means to be an online freelance worker, contributing to the literature on remote knowledge workers and their differential experiences. Secondly, this study develops insight into how intersectionality frames marginalization in online labor platforms. Finally, this work provides insights into the trajectories of the workers on these freelancing platforms.
These contributions are important for informing future policy, technology design, and community education and training for more inclusive futures of work. In Chapter 6, I discuss practical and design recommendations for labor platforms to improve their architecture, design, and policies to be more inclusive. Finally, the work leads to policy implications to improve the livelihood of online freelance workers.

1.5 Key terms and definitions

This dissertation is developed around several concepts related to online freelancing and marginalization. In Table 2, I define each of these key terms as they are used in this dissertation and further discuss key terms in section 2.4.1. The listed concepts and literature related to these concepts are discussed further in Chapter 2 (Literature review) and Chapter 3 (Research Model).

Table 2. Key terms/concepts

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Gig economy</td>
<td>A form of economic system of contingent labor that leverages digital platforms to connect workers with consumers (Duggan et al., 2020). This system provides flexible, on-demand, and transient work arrangements (Sutherland &amp; Jarrahi, 2017)</td>
</tr>
<tr>
<td>Online freelancing</td>
<td>A form of non-standard remote knowledge work arrangement enabled by online freelancing platforms (Dunn et al., n.d.; Munoz, Dunn, &amp; Sawyer, 2022).</td>
</tr>
<tr>
<td>Online freelancing platforms</td>
<td>Two-sided markets that facilitate the intersection of workers and clients in contingent, project-based work (Dunn et al., 2021; Sawyer, Dunn, Munoz, Stephany, Raheja, et al., 2020).</td>
</tr>
</tbody>
</table>
Online freelancers | Knowledge workers that find their work via online freelancing platforms (Dunn et al., n.d., 2021; Munoz, Dunn, & Sawyer, 2022; Sawyer, Dunn, Munoz, Stephany, & Raheja, 2020).

Identity | Self-reported “social category, defined by membership rules and (alleged) characteristic attributes or expected behaviors, or (b) socially distinguishing features that a person takes a special pride in or views as unchangeable but socially consequential (or (a) and (b) at once)” (Fearon, 1999). In this study, participants’ different identity attributes are self-reported, including their gender, race, and ethnicity.

Marginalization | The process of ‘othering’ certain identities such that some individuals and social groups are in positions of low(er) or unequal standing (Trudeau & McMorran, 2011).

Intersectionality | Refers to the framework for understanding how one’s identities are intertwined to create different modes of discrimination and privilege (K. Crenshaw, 1989, 1991; K. W. Crenshaw, 2017).

Bias | A “tendency, inclination, or prejudice toward or against something or someone” (“Bias,” n.d.).

1.6 Outline of the dissertation document

The following sections of the dissertation further expand on the related literature (Ch.2), research framework (Ch.3), methods (Ch.4), findings (Ch.5), and discussion (Ch.6). In Chapter 2, I discuss relevant literature that relates to this study, including the rise of the platform economy, online freelancing, and how marginalization has previously been studied. In Chapter 3, I articulate my theory-elaboration approach and how intersectionality frames my study. In Chapter 4, I discuss the research design, and specific research methods for the study. In Chapter 5, I discuss the findings of this study. Finally, in Chapter 6, I provide a discussion of the findings, contributions, and directions for future
work. These chapters are supplemented by materials in the Appendices-- including research instruments and protocols (Appendices 1-12), an overview of Upwork.com as the research site (Appendix 13), Analysis Scoping (Appendix 14), IRB documentation (Appendix 15), and my CV.

1.7 Chapter summary

Chapter one contains the background and motivation for my research study on online freelancing and the research questions driving the study. The focus is on the experiences and outcomes among marginalized workers in this form of work. The research study stems from empirical and conceptual gaps in the literature on online freelancing addressing different populations of workers, particularly those from historically marginalized populations facing less-than-ideal conditions in traditional workplaces. I discuss how persistent inequality and discrimination are experienced by large populations of workers with marginalized identities-- such as Black and Latinx workers and women. As such, my study’s research questions address this important gap of knowledge by focusing on the workers and platforms that are enabling online freelancing arrangements. The following chapter reviews relevant literature about the changing work realities, online freelancing, the role of identity at work and its effects of marginalization.
Chapter 2: Literature Review

Changes in work and the role of identity in online freelancing

This chapter contains a summary of the literature that is relevant to this research. The literature review is organized into four broader sections that discuss: 1) the shifting realities of work; 2) the gig economy; 3) online freelancing; and 4) the role of identity in work marginalization. The first section is a brief introduction to some of the literature about the ways work is changing, outlining major shifts in our current economy and work landscapes. The second section serves as the framing for the research, focusing on the gig economy. The third section discusses online freelancing as one form of work in the gig economy and highlights specific research to date on the challenges and opportunities with this relatively new form of work. The fourth and final section explains how identity mediates work marginalization and the importance of studying marginalization in online freelancing.

This literature review is centered around perspectives from Human-Computer Interaction (HCI) and draws on literature from other disciplines. This decision reflects HCI’s focus on questions of how to study and what to do with technology (Druin et al., 2002). Thus, HCI aligns well with my topic of interest and research questions which are centered around the uses, design, and impact of technologies for finding and securing work, like Upwork and other freelancing platforms. “The study of work and the workplace can serve as a method for informing the design of computer systems to be used at work” (Button & Sharrock,
This work is relevant as “technology reflects all aspects of our humanity” (Druin et al., 2002).

While HCI is my focus, the topic of this study is of interest to scholars in multiple disciplines. So, I also draw on the literature from sociology, economics, law, organizational studies, and information systems. This interdisciplinary perspective allows for a more thorough exploration of the increasing disconnect between employers and workers, and the rise of contingent work (Bertram, 2016; Dunn, 2017; A. Kalleberg, 2009, 2011; Petriglieri et al., 2018); the role and reliance on digital platforms (Erickson et al., 2014; Gomes, 2019; Sutherland et al., 06/2020; Ticona, 2015b); and the challenges associated with this type of work for people of various identities (A. Barzilay, 2019a; A. R. Barzilay & Ben-David, 2016-2017; Churchill & Craig, 2019; Foong et al., 2018; Vyas, 2020).

2.1 Shifting realities of work

Over the past few decades, we have experienced a drastic evolution of work. Three major shifts have contributed to the changing nature and organization of work including 1) globalization and the rise of contingent workforces (G. Davis, 2016a; Gershon, 2020; Piketty, 2013); 2) a focus on knowledge work (Caruso, 2016; A. Kalleberg, 2011; Pyörä, 2005; Reich, 1991; Temin, 2018); and 3) increasing digital connectivity (A. Adams, 2018; Goos, 2018; A. L. Kalleberg, 2003; Zuboff, 1988). Together, these shifts are re-shaping our work environment, including through an evolving employee-employer relationship and altering how people are pursuing work and shaping their careers (Abraham et al., 2018; G. Davis, 2015; Katz & Krueger, 2019a, 2019b; Molla, 2017). Fields like HCI and others have a
keen interest in studying the causes and effects of these changes. “Rapid advancements in computing technology, ever-changing economic and political factors, and ongoing crises such as the COVID-19 pandemic and climate change are intertwining to radically change where and how people work, and the HCI community has a central role to play in shaping the future of work” (CHIWORK Collective, 2022).

2.1.1 Globalization and the rise of contingent workforces

Since the 1970s, globalization has influenced the restructuring of work, driven in large part by the principle of neoliberal markets perpetuating an ideological shift toward individualism and “high performance work organizations” (Bertram, 2016; G. Davis, 2015, 2016a). Organizations have restructured their production processes and employment systems to better adapt to changes in industrial societies, including rapidly evolving technologies, growing competition, and increasing pool and diversity in labor markets (Altman et al., 2021; G. Davis, 2015, 2016a; A. Kalleberg, 2009; A. L. Kalleberg, 2003). Kalleberg has documented several ways organizations have become more adaptable to these ongoing changes through internal and external flexibility, which involve the restructuring of the organization itself (A. L. Kalleberg, 2003). Davis (2015) also documents the change in the shape of the corporation in the US, with the primary focus shifting from management and labor to a focus on growth (and profit) to benefit the shareholder (G. Davis, 2015). He highlights a shift from organizations as social institutions, with responsibilities to protect and provide benefits to their members, to viewing organizations as a nexus of contracts with the primary goal of ‘efficiency’ (G. Davis, 2015).
With these shifts, there is constant pressure for companies to be increasingly 'lean' (Bertram, 2016), which ultimately means organizations are focused on cutting labor costs. This “neoliberal revolution” emphasizes the centrality of markets and market-driven solutions, privatization of resources, and removal of government protections (A. Kalleberg, 2009). And this way of viewing companies has spread globally. As such, the deregulation of the labor market, combined with economic downturns, and shifting perspective on profits have given rise to cutting organizational costs through downsizing, outsourcing and offshoring work. These conditions have led to an expansion of non-standard contingent workers (Bertram, 2016; A. Kalleberg, 2009; Katz & Krueger, 2019a; Matusik & Charles W. L. Hill, 1998; Szabó & Négyesi, 2005). Employers increasingly rely on open markets as the primary focus of seeking work and workers (Burtch et al., 2018; Dunn, 2017; Fleming, 2017; Graham et al., 2017). And currently, many organizations rely on a smaller set of “core” employees with a “sheddable” set of contingent workers-- this is the case even though contingent workers may be hired to do the same work and work similar hours as those in regular employee status (Bertram, 2016).

Powell (W. Powell, 2001) coined the term "decentralized capitalism" to highlight this fundamental change in the way work is being organized. Companies are shifting from vertically integrated firms (i.e. corporations) to maintaining a core of permanent employees supplemented by a periphery of contingent workers. This shift introduces a greater reliance on independent contractors and companies that focus on tasks rather than jobs (G. Davis, 2016a).
2.1.2 The rise of knowledge work

In addition to globalization and increasing reliance on contingent workers, a second change is the growth of knowledge-based and cognitively-demanding work that relies on abstractions, technical skills, and collaborative problem-solving as the locus of economic value (Caruso, 2016; A. Kalleberg, 2011; Pyöriä, 2005; Reich, 1991; Temin, 2018). Information or knowledge has become an increasingly important asset in our post-industrial societies (W. W. Powell & Snellman, 2004; Pyöriä, 2005; Szabó & Négyesi, 2005). Within a knowledge economy, there is a greater reliance on workers’ intellectual abilities to improve production processes, develop and incorporate new ideas, and create new goods, services and organizational practices (Caruso, 2016). More simply, knowledge work is “an inherently cognitive (as opposed to physical) type of labor that typically generates information or knowledge as its primary output” (Erickson et al., 2014) (p.3).

Pyöriä (2005) notes that the growth of knowledge work reflects the increasing complexity and specialization of economies and technologies. “In other words, the more complex and specialized the production system becomes… [means that] the demand for informational labour that is capable of handling, synthesizing, and creating new knowledge has grown” (Pyöriä, 2005) (p. 117). So, the reduction in ‘traditional’ manual work, which is more susceptible to be changed by automation/mechanization, stands in contrast to the rise of knowledge work in the form of managerial, professional and technical jobs (A. Kalleberg, 2011; Pyöriä, 2005).
2.1.3 Increasing digital connectivity and work technologies

A third change to how and where work is done is a rise in pervasive digital connectivity reshaping both the structures of work and labor markets (A. Adams, 2018; Goos, 2018; A. L. Kalleberg, 2003; Zuboff, 1988). The increased reliance on project-based work, combined with growth in the number of contract or freelance workers sets the stage for the new work ecosystem that relies on online platforms, brokering employer-worker interactions. The engine driving this ecosystem is powered by advancements in connectivity (internet infrastructure and access) and accompanying software, such as platforms to enable work. These trends are the catalyst for the rise of both platform-driven companies and new ways of brokering work and managing workers. For example, this computer-mediated labor market creates a new, digital ‘negotiating space’ that is mediating workers and employers (Taylor, 1986, 2007; Ticona, 2015).

The past 10 years bear witness to a rapid expansion of digital platforms (including Uber, TaskRabbit, Upwork, and many others) that enable clients and customers to find task- and project-based workers more efficiently (Jarrahi, et al., 2020; Peticca-Harris et al., 2020; Plantin et al., 2016; Srnicek, 2017; Wood et al., 2019a). These fully online and platform-mediated markets are seen as providing opportunities for both workers seeking flexible employment arrangements and for organizations to help absorb market shocks (Gray & Suri, 2019; Kalleberg, 2003; Lehdonvirta et al., 2019). These changes are impacting work more broadly and introducing new forms of working.
2.1.4 Changes to the employee-employer relationship

In part, driven by these changes, the employee and employer relationship has also evolved (and has largely eroded) over time. “If the traditional, lifetime employment relationship was like a marriage, then the new employment relationship is like a lifetime of divorces and remarriages, a series of close relationships governed by the expectation going in that they need to be made to work and yet will inevitably not last” (Cappelli, 1998, p. 2-3). This quote from Cappelli’s (1998) book introduction exemplifies how employee-employee relationships have changed from what we think of as “traditional” long-term work relationships which included systems of internal worker development, and worker protections/security, which yielded employee motivation, loyalty and commitment (a contract, which ultimately benefited both parties at the time). Over the last few decades, competitive markets, changes in working arrangements and management techniques, and innovations in information technology for coordinating and monitoring have contributed to an erosion of this old employee-employer model.

Replacing the old employee-employer model is a new social contract of work which is defined by a lack of internal labor markets for advancement, little to no on-the-job training, and the expectation that people will leave the job at some point, all without an expectation of predictable advancement of lifelong employment. This reflects organizations’ changing realities, including the focus on profit, downsizing and outsourcing, as well as ongoing market pressures and changing policies and practices that previously enabled a strong worker-employer relationship (Bidwell et al., 2013). In this new model, organizations rely on the market to meet their needs, without having to provide incentives like training.
promotions and employment protections. And with these changes, the behaviors of employees are also affected. Capelli argues that the end of employee loyalty to an organization has been replaced by workers’ desire to advance their careers (Cappelli, 1998). Thus, both the employer and worker view the arrangement as temporary, as long as it benefits their own goals.

2.1.5 Effects of the changing work environment

In addition to the new employee-employer contract, this change in worker arrangement means that workers face different (and often more precarious) conditions in their work. For example, there has been a decline in unionization efforts over the past few decades (Bidwell et al., 2013; Clawson & Clawson, 1999; Western & Rosenfeld, 2011). From the 1970s to the early 2000s, union membership declined, dropping from 34% to 8% for men and 16% to 6% for women (Western & Rosenfeld, 2011). And during the same period, there was more than a 40% increase in wage inequality across all workers in the private sector. This suggests that with the decline in unionization, there are associated effects on the allocation of wages for both union and non-union workers (Western & Rosenfeld, 2011).

In addition to a decrease in unionization and an increase in wage inequality, the changing work environment is also reflected in changes to the structure of pay, benefits, and other work incentives that previously went hand-in-hand with the contract between an employee and an employer. Bidwell et al. (2013) highlight some of these changes. For example, organizations have increasingly implemented pay structures and practices such as performance-contingent pay which rewards workers for productivity. Additionally, firms have changed their benefits practices, with many organizations no longer offering health
insurance and retirement benefits or others shifting more of the market risks to their employees. And as “firms no longer enter into a traditional employment relationship with their workforce… companies are able to employ workers using arm’s-length agreements” (Bidwell et al., 2013, p. 12).

Taken together, the changes in work driven by social, economic, and political forces have aligned to make work more precarious (Kalleberg). Workers now face conditions with fewer protections, less work stability, and with reduced access to benefits. According to Bidwell et al (2013), the changes in employment relations have specifically affected how rewards are distributed: “how pay and benefits are allocated within jobs; and the selection of different kinds of workers into jobs that are more-versus less-rewarding” (p.32). This has created challenges, especially for “less-privileged workers, such as those with lower skills or who come from traditionally disadvantaged groups such as women and ethnic minorities” (p. 32).

The rise of precarious working conditions continues with the increasing access to informal work arrangements, propelled in part due to technological innovation and globalization. Today we are grappling with the “changing spatialities and temporalities of the increasing precarity and informalization of work through gig work, platformization, and subcontracting, including in contexts where informal work is already highly prevalent” (CHIWORK Collective, 2022). Together, the demand for knowledge work, the growing number of workers willing - if not eager - to do this work, and the prevalence of digital technologies have propelled the rise of platform-based gig work, and the gig economy more broadly.
In addition to these major shifts in working arrangements, the COVID-19 pandemic and the “great resignation” have further changed the work landscape by bringing an even greater focus on both independent and remote work (*MBO Partners State of Independence in America Report 2021, 2020*). The effects of the COVID-19 pandemic led a large number of workers to rethink what work means to them. Today, workers seek better work-life balance, shorter commutes, and greater flexibility (*MBO Partners State of Independence in America Report 2021, 2020*). As millions of workers rethink their priorities, relationships to work, and career options, many are joining the gig economy (*Upwork Study Finds 59 Million Americans Freelancing Amid Turbulent Labor Market*, n.d.).

### 2.2 Gig economy: What is it and why is it important?

Across the media, industry and academia, the *gig economy* has become a popular topic, “lauded as the vanguard of a new era in work and employment that brings about new business models and mega platform-organizations” (Kinder et al., 2019) (p.212:2). To this point, a study of the US independent workforce found that 59 million Americans participated in the gig economy in 2021, representing more than one-third (36%) of the US workforce (*Upwork Study Finds 59 Million Americans Freelancing Amid Turbulent Labor Market*, n.d.). Accordingly, the gig economy has emerged as a key topic of study and discussion in HCI (Foong et al., 2018; Huang et al., 2019; Kinder et al., 2019; Lampinen et al., 2018; Ma & Hanrahan, 2020; Sutherland & Jarrahi, 2017) and across other fields, including economics (Bertram, 2016; Popescu et al., 2018; Stewart & Stanford, 2017; Wood et al., 2019a), communication (Greenwood et al., 2017; Plantin et al., 2016; Popiel, 2017; Rosenblat & Stark, 2016), law (A. Barzilay, 2019a; A. R. Barzilay & Ben-David, 2016-2017;
Davis, 2016b; Perulli & Treu, 2020; Silberman & Irani, 2016; Vyas, 2020), and sociology (Churchill & Craig, 2019; Dunn et al., 2021; McMillan Cottom, 2020; Milkman et al., 2021; Wingfield & Chavez, 2020; Wood et al., 2019b). As the gig economy has become critical to understanding work and modern employment practices, this section highlights some of the literature about the gig economy, including important terminology, workers’ arrangements, and opportunities and challenges posed by this emerging work environment.

2.2.1 Gig economy defined

The term *gig economy* can be broadly defined as “a system of flexible, on-demand, and transient work arrangements” (Sutherland & Jarrahi, 2017). This definition is useful as it highlights the tensions visible in much of the gig economy literature which addresses the opportunities and challenges that come with the temporary and independent nature of the contingent work arrangements and the always-available view of workers that is core to the gig economy. It also signals that the gig economy is made up of an ecosystem of actors--including workers, consumers, and intermediary technologies that enable these working arrangements.

According to Kalleberg and Dunn (2016), the gig economy “is generally characterized by short-term engagements among employers, workers, and customers”. Gig work is not new, existing for over a century before the use of digital platforms like Uber, Lyft, and others--including among musicians and other artists who performed work on a contingent basis. Yet the gig economy exists today as a digital, and expanded, version of the traditional offline “atypical, casual, freelance, or contingent work arrangements characteristic of much of the
economy prior to the middle of the twentieth century and that have reappeared in the past thirty years” (A. L. Kalleberg & Dunn, 2016, p.11).

More specifically, the gig economy refers to a form of an economic system of contingent labor that leverages **digital platforms** to connect workers with consumers (Duggan et al., 2020). Many definitions of the ‘gig economy’, particularly in HCI, emphasize the computer-mediated nature of the gig economy (Anjali Anwar et al., 2021; Kinder et al., 2019). This is because, central to this new work ecosystem are a range of digital platforms that enable entrepreneurial activity and work tasks of varying complexity (Lampinen et al., 2018). These platforms provide a digital space where the critical aspects of the gig economy take place (Sutherland & Jarrahi, 2017). Thus, Duggan et al (2020) argue “the common denominator across all gig work, and a critical distinguishing feature from other contingent labour, is the presence of an intermediary in the form of a digital platform” (p.5). Examples of these intermediary digital platforms include popular matching services like Uber, Lyft, GrubHub, Deliveroo, TaskRabbit, and others that manage location-dependent work of transport, food delivery, couriering, and manual labor. Gig platforms also include those for conducting remote, location-independent tasks and projects of varying complexity, including Amazon Mechanical Turk (AMT), Fiverr, 99designs, and Upwork.

Each of these gig platforms provides its own set of rules and work processes enabling a transaction between workers and consumers. However, they all rely on algorithmically-driven systems, which are the core of the transactions on each platform. The labor arrangements enabled by the gig economy are “novel due to the three-way relationship between (a) the workers, who are formally considered independent
contractors; (b) the clients; and (c) the platforms, which effectively serve as intermediaries… In practice, this three-way relationship diffuses formal and contractual responsibilities among gig workers, clients, and platforms” (Kost et al., 2020), p.101). In addition to “gig economy,” other terms that are often used interchangeably in the HCI literature and beyond about this technology-mediated work environment include: *sharing economy, platform economy, and on-demand economy.*

### 2.2.2 Typologies of the gig economy

Because the gig economy includes a variety of services and platform types, scholars have developed various ways to categorize the different work, platforms and workers that are part of the gig economy (see Table 3). As noted, the gig economy includes a range of working arrangements, from in-person services such as ride-hailing, food delivery services and domestic work to remote microtask work, freelancing, and other forms of ‘high-skill’ work (Friedman, 2014; Graham et al., 2017; Gray & Suri, 2019; A. L. Kalleberg & Dunn, 2016). In distinguishing jobs in the gig economy, Kalleberg and Dunn (2016) developed a useful way to categorize gig work by type of platform, wage/earnings, and levels of worker control. They identified four primary types of gig platforms: *crowdwork platforms, transportation platforms, delivery/home task platforms,* and *online freelance platforms* (A. L. Kalleberg & Dunn, 2016). These categories, shown in Table 3, demonstrate some of the differences between the platforms in terms of location dependence, skill level, wages, and amount of worker control.
Table 3. Gig platforms (drawing on Kalleberg & Dunn, 2016; Vallas & Schor, 2020)

<table>
<thead>
<tr>
<th>Type</th>
<th>Examples</th>
<th>Location</th>
<th>Skill-level</th>
<th>Wages</th>
<th>Worker Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Platforms</td>
<td>Uber, Lyft</td>
<td>Location-dependent</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Delivery/Home Task Platforms</td>
<td>GrubHub, Doordash, Instacart, TaskRabbit</td>
<td>Location-dependent</td>
<td>Various</td>
<td>Various</td>
<td>Low</td>
</tr>
<tr>
<td>Crowdwork Platforms</td>
<td>AMT, PeoplePerHour</td>
<td>Remote</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Online Freelance Platforms</td>
<td>Upwork, Fiverr, Toptal</td>
<td>Remote</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

Scholars have also developed additional typologies to help understand the platforms and workers that are part of the gig economy, given that this is not a homogeneous form of work (Duggan et al., 2020; Howcroft & Bergvall-Kåreborn, 2019; Manyika et al., 2016). There are four typologies that provide additional insight into the heterogeneity of platforms and workers in the gig economy. Table 4 and Table 5 highlight two different typologies of gig work platforms. These two tables highlight the range of services, mode of delivery of services (in-person vs remote), assets involved (or not), and task complexity. In addition to the differences in platforms, Table 6 and Table 7 showcase differences in workers. These typologies of workers demonstrate the different motivations and autonomy among workers who are part of the gig economy, including types of independent workers more broadly (Table 6) and platform-based gig workers (Table 7). These categories highlight that there are differences in the levels of activity and commitment from different workers engaging in
the gig economy. Dunn (2020) categorized workers’ precarity based on workers’ employment status, financial precarity, and other factors.

**Table 4. Duggan (2019) typology of gig work**

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Platform</td>
<td>Individuals use a digital platform to sell goods peer-to-peer or to lease assets</td>
<td>Airbnb, Etsy</td>
</tr>
<tr>
<td>Crowdwork</td>
<td>Individuals remotely complete tasks through platforms that allow workers to connect with customers</td>
<td>AMT, Upwork, Fiverr</td>
</tr>
<tr>
<td>App work</td>
<td>Individuals use service-providing intermediary organizations (apps) to perform tasks locally (e.g. transport, food-delivery) for customers who pay for these services</td>
<td>Uber, GrubHub, Instacart</td>
</tr>
</tbody>
</table>

**Table 5. Howcroft et al. (2018) typology of crowdwork platforms**

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Task Crowdwork</td>
<td>Paid work for modular tasks</td>
<td>AMT, Upwork, Fiverr</td>
</tr>
<tr>
<td>Playbour Crowdwork</td>
<td>Non-paid work, done for fun/entertainment</td>
<td>Threadless, Innocentive</td>
</tr>
<tr>
<td>Asset-Based Services</td>
<td>Real-world exchanges using worker assets</td>
<td>Airbnb, Uber, TaskRabbit</td>
</tr>
<tr>
<td>Profession-Based Freelance Crowdwork</td>
<td>Has a specialist focus which requires a high-level of professional knowledge and competence</td>
<td>iStock</td>
</tr>
<tr>
<td>Worker</td>
<td>Definition/Circumstances</td>
<td>Decision</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Free agents</td>
<td>Actively choose independent work and derive their primary income from it</td>
<td>Choice</td>
</tr>
<tr>
<td>Casual earners</td>
<td>Use independent work for supplemental income and do so by choice.</td>
<td>Choice</td>
</tr>
<tr>
<td>Reluctants</td>
<td>Make their primary living from independent work but would prefer traditional jobs</td>
<td>Necessity</td>
</tr>
<tr>
<td>Financially strapped</td>
<td>Who do supplemental independent work out of necessity</td>
<td>Necessity</td>
</tr>
</tbody>
</table>

Table 7. Dunn (2020) Typology of gig workers and precarity levels
Together, these typologies of platforms and workers demonstrate the range of services, platforms, and workers involved in the gig economy. Though the commonalities across the gig economy are that 1) platforms serve as intermediaries of work and 2) workers are classified as ‘independent contractors’ as opposed to employees. This means that the rise of the gig economy enables online labor markets that rely on hiring independent workers via market mechanisms (Abraham et al., 2018; G. Davis, 2015; Sweet & Meiksins, 2020). The work done in the gig economy can be seen as a transaction between employer and worker through the various digital work platforms.

2.2.3 Why study the gig economy and research streams in HCI
The gig economy is a domain of importance in HCI and beyond given that this new ecosystem of work is transforming work, worker trajectories and the economy more broadly. Duggan et al. (2020) highlight that “the detached and distributed nature of the gig economy signals a radical reinvention of work, embodied by a significant shift towards novel management tools enabled by technology” (p.23). The rise of the gig economy is enabled by the rapid expansion of digital platforms that enable employers and firms to find project-based workers more efficiently (Jarrahi et al., 2020; Peticca-Harris et al., 2020; Plantin et al., 2016; Srnicek, 2017; Wood et al., 2019a). Any form of work which can be assigned online can be outsourced on a platform (Harmon & Silberman, 2019). Thus, gig
work platforms have become widespread in the past few years, affording individuals across the globe with work opportunities in many occupations (Churchill & Craig, 2019; D'Cruz & Noronha, 2016; Graham et al., 2017; Raval & Pal, 2019; Wood et al., 2018).

Considering that technology’s use, design and impact are core to the study of HCI (Button & Sharrock, 2009; Druin et al., 2002), there have been various research studies focused on the technologies of the gig economy and the impacts these platforms are having [e.g., (Chiang et al., 2018; Dillahunt & Malone, 2015; Hanrahan et al., 2021; Irani & Silberman, 2013; Jarrahi et al., 2020; Lindley et al., 2019; Ross et al., 2010; Sutherland & Jarrahi, 2017; Toxtli et al., 2021)]. “Gig jobs have become a structural aspect of the contemporary economic landscape, creating unique social and technological challenges” (Parigi & Ma, 2016).

These social and technological challenges are core to the literature from HCI which highlight the move toward extensive data gathering and the use of machine learning to support online work processes (Jarrahi et al., 2020; Kinder et al., 2019; Lampinen et al., 2018; Lee et al., 2015). For example, Lee et al. (2015) explored how jobs on ride-sharing services Uber and Lyft are assigned, optimized and evaluated through algorithms and tracked data. They highlight ways that decisional, informational, and evaluation roles, previously held by human managers in organizations, are now embedded in platforms like Uber. Data and algorithms allow the platform to make informed decisions about driver assignments, dynamic/fluctuating pricing, and data-driven evaluations based on acceptance rates and ratings. The shift toward platform power and managerial functions has also been visible in HCI research that investigates other platforms, including those for
micro-task work (Gray & Suri, 2019), and online freelancing (Carlos Alvarez de la Vega et al., 2021).

In addition to the focus on gig platforms’ algorithms and data, other HCI gig economy research streams emphasize other opportunities and challenges within gig work. This includes opportunities for flexibility, autonomy and job satisfaction (Kim et al., 2018); tensions and issues of design and control (Bates et al., 2020; Kinder et al., 2019; Marquis et al., 2018); and policy and design solutions (Parigi & Ma, 2016). Because gig economy platforms are generally unique in their design, features, and outcome, each of these topics tends to be explored in the context of a particular platform (or type of platform). To date, research in HCI and other fields has more generally investigated the opportunities and challenges of ridesharing platforms (Peticca-Harris et al., 2020; Raval & Dourish, 2016; Rosenblat & Stark, 2016), delivery platforms (Milkman et al., 2021; Ping et al., n.d.; Veen et al., 2020), and microtask platforms (Fieseler et al., 2019; Rani & Furrer, 2019; Toxtli et al., 2021).

2.3 Online freelancing

2.3.1 Definitions and background

For my research, I focus on one type of gig work: online freelancing. Online freelancing is a form of non-standard remote work arrangement enabled by digital work platforms like Upwork³, Fiverr⁴, Freelancer⁵, and Toptal⁶. This work is flexible, independent, and fully

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³ https://www.upwork.com/
⁴ https://www.fiverr.com/
⁵ https://www.freelancer.com/
⁶ https://www.toptal.com/
digital (Kässi & Lehdonvirta, 2018; Munoz, Dunn, & Sawyer, 2022; Sawyer, Dunn, Munoz, Stephany, Raheja, et al., 2020; Sawyer, Dunn, Rancy, et al., 2020; Sutherland et al., 06/2020). Similar to other types of gig work, online freelancing relies on the market-making meditation of third-party digital platforms for contingent work arrangements. However, unlike other forms of gig work, such as ridesharing and food delivery, online freelancing allows workers to be loosely connected to clients via temporary contracts for short-term professional or high-skill projects (Abraham et al., 2018; G. Davis, 2015; Sweet & Meiksins, 2020). Online freelancing is also distinct from microtasking sites like Amazon's Mechanical Turk (AMT) by the complexity of the tasks and the expectation of worker-client interactions for guidance and sense-making (Howcroft & Bergvall-Kåreborn, 2019; Wood et al., 2019a; Gray and Suri, 2019).

On account of its specific characteristics, Blaising et al. (2020) argue that “online freelancing constitutes a specific new genre of work” (p. 226:3). Online freelancing tends to involve a greater reliance on conceptual skills, cognitive abilities, and creativity (Alvesson, 2004; Blackler, 1995; W. W. Powell & Snellman, 2004). This form of work also involves extended communication between workers and clients (the customers) (Barley & Kunda, 2006). Others have also noted that the project-based nature of online freelancing tends to require that workers engage in multiple, parallel projects across different clients (Blaising et al., 2021). And the lack of a spatial requirement “[allows] workers to serve multiple clients at varying hours remotely from their homes or co-working spaces instead of working full-time for a single employer” (Kässi et al., 2021). In addition, online freelancing
projects may range from hours to months. Meaning that online freelancing platforms provide opportunities for workers to engage in short-term and long-term projects with a variety of clients. As such, “the combination of high skill and high autonomy makes online freelancers a unique subset of gig workers” (Sutherland et al., 06/2020).

Unsurprisingly, online freelancing is a fast-growing part of the workforce (Kässi et al., 2021; Kässi & Lehdonvirta, 2018). The ability to pursue digitally-mediated work with flexibility to choose from a variety of clients, projects and work schedules has drawn large numbers of individuals to online freelance work: An estimated 8 million freelancers and 2.5 million businesses tap into Upwork, one of the largest freelancing platforms (53 Million Americans Now Freelance, New Study Finds, n.d.). And even as current economic statistics are not well suited to measure the entire online freelancing economy, estimates suggest that the number of registered profiles on online platforms is growing (Kässi et al., 2021).

As online freelancing continues to grow, research has started to outline some of the opportunities and challenges posed by this form of working [e.g., (D’Cruz & Noronha, 2016; Graham et al., 2017; Sutherland et al., 06/2020; Wood et al., 2018)]. Below, I discuss several of these highlights from the literature about online freelancing.

2.3.2 Opportunities and benefits of online freelancing

The growing body of research highlights some of the benefits of online freelancing, including 1) the flexibility and autonomy that it affords, 2) the potential for equality, and 3) workers’ ability to develop skills and experiment with entrepreneurial aspirations in this form of work.
Flexibility and autonomy: One of the most-often-noted reasons people provide for their motivation for pursuing online freelancing and other forms of platform-mediated work is the autonomy and flexibility it affords (Malone, 2004; Horton, 2010; Johns & Gratton, 2013; Kuek et al., 2015; Sundararajan, 2016; Wheatly, 2017). Because it is primarily cognitive work, online freelancers can work independently of location (Erickson and Jarrahi, 2016; Sutherland & Jarrahi, 2017). For example, literature has focused on the practices of digital nomads, individuals who work on the go to enable a lifestyle that prioritizes traveling (Hemsley et al., 2020). These workers rely on a range of digital technologies and infrastructures to carry out their work entirely remotely (Ciolfi & de Carvalho, 2014; Erickson et al., 2014; Hemsley et al., 2020; Jarrahi et al., 2019; Kleinrock, 1996; Liegl, 2014; Nash et al., 2018; Su & Mark, 2008).

In addition to location flexibility, online freelancers have the autonomy to set their working hours to fit their scheduling needs and be able to choose clients and projects that align with their experience, interest and goals. To this point, early accounts of online freelancing emphasized that this form of work provides a “flexible working schedule [that] allows individuals to take better care of their families, continue to study, or start their own businesses while working and earning a salary” (Kuek et al., 2015, p.4). This is key for individuals who require flexible working arrangements (e.g., individuals with varying abilities, mothers who need to be home with their children, etc.); however, work flexibility is increasingly important for many others as well (Alexander et al., 2021; Burnford, 2019). Burnford (2019) reported that more than 92% of millennials identify flexibility as a top priority in their next job. And this trend of embracing flexible work cuts across generations
and genders as most people (80% of women and 52% of men) want flexibility, and those over 50 years and older want to ease slowly into retirement through reducing hours and working flexibly (Burnford, 2019). This trend of seeking flexibility in work was exacerbated by the onset of the COVID-19 pandemic and its ongoing effects, which led many individuals across the globe to work and collaborate remotely (Alexander et al., 2021).

**Equality:** With the rise of online labor platforms, there has also been discourse about the promises for more equitable worker outcomes (Bertram, 2016; D’Cruz & Noronha, 2016; Howcroft & Rubery, 2019). Aligned with the discussions about flexibility, some scholars have highlighted that fully-digital work has the potential to improve work equality by removing barriers that workers tend to face in traditional work environments, including the physical barriers that exclude people of different abilities and women and others who are stay-at-home caregivers (Fieseler et al., 2019; Vyas, 2020). To this point, Vyas (2021) notes that “the gig economy might be the necessary solution for women [caregivers] who can possibly transition from unemployment to employment… It presents a huge opportunity for enhancing women’s economic equality” (p.39). This aligns with Fieseler et al. (2019)’s view of online work as offering more ubiquitous and flexible access to income. Other potential benefits of digital labor that could promote equality are that online freelancing and other forms of digital work also provide more comfortable labor conditions for 1) workers in remote or socially disadvantaged locations and 2) minorities, based on anonymity [per (Fieseler et al., 2019)].

**Skills development:** Scholarship also highlights that online freelancing presents several opportunities for worker development, including the ability to experiment with new skills
and entrepreneurial aspirations (Bellesia et al., 2019; Blaising et al., 2021). Because online freelancers are ‘independent contractors’, these workers are particularly responsible for crafting their own career and personal development (Sutherland et al., 06/2020). Workers who seek this work tend to be more ‘entrepreneurial’ and are more likely to depend on their skills, including learning new ones, to navigate their work (Barley & Kunda, 2006). Navigating the world of online freelancing means “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” (Sutherland et al., 06/2020) (p.459).

The constant job-seeking/job-matching process on freelancing platforms means workers must find ways to display (and to continue to develop) their competencies to be competitive and secure jobs (Bellesia et al., 2019). And, given the wide variety of projects and clients available on freelancing platforms, workers have the opportunity to constantly learn new skills ‘on the job’. Additionally, freelance workers can re-bundle, or combine, their skill sets to have higher work success. Stephany (2021) notes that online labor platforms like Upwork are becoming marketplaces where “Freelancers can sell previously unrelated skills in one single portfolio for one hourly price.” They also emphasize that when it comes to freelancing, the combination of skills from different domains can be profitable for workers, especially if these skills are complementary (Stephany, 2021), p.2). Thus, many online freelancers are motivated to constantly build on and polish their skill sets.
2.3.3 Challenges of online freelancing

Notwithstanding the opportunities provided by online freelancing, there are also discussions in the HCI literature and other fields about several of the challenges that come with online freelancing and the platforms enabling this work. These challenges, often in contrast or direct opposition to the benefits of freelancing include 1) the uncertainty and lack of control that workers face to secure work and succeed on the platforms, 2) the platform-mediated management that is core to the freelancing platforms, 3) bounded interaction and development, and 4) potential for bias and inequality due to the reliance of platform algorithms and use-policies (Blaising et al., 2021; Dillahunt & Malone, 2015; Dubey et al., 2017; Foong et al., 2018; Hannák et al., 2017a; Huang et al., 2019; Kinder et al., 2019; Lampinen et al., 2018).

Uncertainty and lack of control: Recent accounts are more critical of online freelancing than earlier research, noting that the work is uncertain (Blaising et al., 2019; Duggan et al., 2021; Dunn et al., n.d.), which constraints many of the perceived benefits and opportunities in this form of work. Online freelancers, like other forms of contingent workers, face uncertainty in their clients, projects, and income. This means many workers have to constantly be available for new work opportunities as they are dependent on a labor market that has shifts in supply and demand (Aroles et al., 2019; Stephany, Dunn, Sawyer; et al., 2020; Wood et al., 2019a). In our work, we argue that “many of the potential advantages of flexible scheduling are associated with worker-controlled flexibility, while manager-controlled flexibility is associated with the opposite effects because from the worker’s point of view, it creates uncertainty and inhibits planning” (Dunn et al., 2020, p.8).
The uncertainty and control that workers have vary based on workers’ unique situations. For example, Pichault and McKeown (2019) argue that autonomy at work depends on several conditions in which the work is performed, including skills development, income, time, and space arrangements. These authors developed a matrix (See Table 8) that provides differing levels of autonomy based on relevant factors faced by independent professionals.
Table 8: Autonomy at work of independent Professionals. Table reproduced from Pichault and McKeown (2019) on the autonomy levels among independent workers based on worker’s work status, content and conditions.

<table>
<thead>
<tr>
<th>High Autonomy</th>
<th>Low Autonomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work status</td>
<td></td>
</tr>
<tr>
<td>Independent contractor</td>
<td>Supported independent contractor</td>
</tr>
<tr>
<td>Private insurance</td>
<td>Insurance packages via third parties</td>
</tr>
<tr>
<td>Diversity of clients</td>
<td>Economic dependency/ sole client</td>
</tr>
<tr>
<td>Deliberate choice</td>
<td>Forced choice</td>
</tr>
<tr>
<td>Work content</td>
<td></td>
</tr>
<tr>
<td>Broad guidelines allowing job crafting (low vertical division)</td>
<td>Detailed specifications preventing job crafting (high vertical division)</td>
</tr>
<tr>
<td>Work pace, workload at own discretion</td>
<td>Work pace, workload imposed by clients</td>
</tr>
<tr>
<td>Mutual adjustment Standardization of norms</td>
<td>Standardization of outcomes Standardization of work processes Direct supervision</td>
</tr>
<tr>
<td>Strong support and/or access to shared expertise and skills standards, high identification to a professional community</td>
<td>Weak support and/or access to shared expertise and skills standards, low identification to a professional community</td>
</tr>
<tr>
<td>Working conditions</td>
<td></td>
</tr>
<tr>
<td>Self-responsibility for developing skills</td>
<td>Access to functional equivalents for skills development</td>
</tr>
<tr>
<td>Self-responsibility for steady income flow</td>
<td>Financial support offered by third parties</td>
</tr>
<tr>
<td>Self-responsibility for time and space arrangements</td>
<td>Access to shared facilities (co-working)</td>
</tr>
<tr>
<td>High Autonomy</td>
<td>Low Autonomy</td>
</tr>
</tbody>
</table>

Algorithmic management and platform monitoring: Another vibrant discussion in online freelancing literature (and gig economy literature more broadly) is centered around issues of platform control and more specifically the automated ‘algorithmic management’ that is

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7 Table reproduced from Pichault and McKeown (2019) on the autonomy levels among independent workers based on worker’s work status, content and conditions.
driving and regulating platform use (e.g., (Duggan et al., 2021; Griesbach et al., 2019; Jarrahi et al., 2020; Kinder et al., 2019; Lee et al., 2015; Popescu et al., 2018; Rani & Furrer, 2020; Rosenblat & Stark, 2016; Veen et al., 2020). *Algorithmic management* is the term used to refer to the mechanisms that direct platform processes (Lee et al., 2015; Rosenblat & Stark, 2016). According to Lee et al. (2015) who coined the term, they “call software algorithms that assume managerial functions and surrounding institutional devices that support algorithms in practice algorithmic management” (p. 1603). Wood et al. (2019) demonstrate that algorithmic control is central to the operation of online freelancing platforms (Wood et al., 2019a). Algorithmic management is a digital extension of traditional management strategies. On freelancing platforms and other forms of gig work, many of the management functions are completed by a range of algorithms, web forms, and other automated processes (Kinder et al., 2019).

Automating managerial tasks surrounding work practices means that the platform is designed and structured to create information asymmetries and other barriers that typically put workers at a disadvantage. “These decision-making processes may create and maintain information asymmetries between workers and the platform; for example, workers remain unaware of how the platform makes key choices regarding ranking and evaluation” (Kinder et al., 2019), p.212:2). Algorithms can monitor “platform workers’ behavior and ensure its alignment with the platform organization’s goals” (Möhlmann et al., 2021).

Much like in traditional employment relations where a manager is present, the algorithm acts like a ‘manager’ or ‘boss’ to oversee the work and workers. Literature on the ‘autonomy
paradox’ outlines the tension between perceived flexibility and autonomy on freelancing platforms where workers are simultaneously encouraged to take on these ‘flexible’ work arrangements while at the same time encountering automated management and platform monitoring: including being subject to surveillance features like keyboard tracking, screen recording and platform-mediated ratings. “While gig workers are provided with certain flexibility and autonomy (e.g. to work versatility across time and space), the way gig platforms manage their work may displace aspects of workers’ autonomy” (Kinder et al., 2019) (212:3).

**Bounded networking and professional development:** A third challenge to online freelancing is the absence of opportunities for communicating and networking with others to support workers’ career competencies (Blaising et al., 2020, 2021; Kost et al., 2020). While there are fewer studies focused on this challenge, some of the literature has noted that even as online freelancing and gig work show promise for career mobility, workers’ careers in platform-based work are significantly bounded, including by algorithmic management (Duggan et al., 2021; Kost et al., 2020). This work tends to be isolating, as workers are responsible for their work success and professional development (Sutherland et al., 06/2020). Several of the studies about the bounded networking and career opportunities on gig work platforms rely on boundaryless theory [e.g., (Duggan et al., 2021; Kost et al., 2020; Popiel, 2017)]. According to Duggan et al (2021), the lack of transparency in algorithmic structures, policies and work designs leaves workers with uncertainty and without a chance to develop more advanced, transferable knowledge that could aid in their career development.
Online freelancing also limits the opportunities for networking among workers given that the structure of work penalizes downtime, and limits workers’ abilities to engage with management and other workers. Together, this restricts the development of worker social capital and networks. Duggan et al. (2021) and Blaising et al. (2020; 2021), among others, have explored this lack of career opportunities and professional development on freelancing platforms, which tend to be viewed as providing unbounded opportunities for career growth (Blaising et al., 2020, 2021; Duggan et al., 2021; Kost et al., 2020; Lo Presti et al., 2018). “Paradoxically, while platforms espouse boundaryless opportunities for psychological and physical mobility with the lure for many being the self-authority to choose when and how often to work, our findings indicate that career self-management is heavily bounded by algorithmic technologies” (Duggan et al., 2021, p.23)

2.3.4 Bias and inequality in online freelancing

A final challenge, and one that is core to my work, is the potential for continued marginalization in online freelancing, due to structural bias and inequality embedded in freelancing platforms. Online labor platforms are viewed as neutral mediators of work, unbiased actors facilitating the transaction between employers and workers (Duggan et al., 2020; Fieseler et al., 2019; Jarrahi et al., 2020; Veen et al., 2020). Despite this perception of technology as an objective actor, evidence has begun to show that the promise of equality in the new online economy, including in online freelancing, is not being achieved in practice (Hannák et al., 2017a). Empirical evidence from online freelancing platforms demonstrates differential experiences for women and people from underrepresented populations (A.
Barzilay, 2019a, 2019b; A. Barzilay & Ben-David, 2017; Churchill & Craig, 2019; Foong et al., 2018; Graham et al., 2017; Vyas, 2020).

Moreover, bias can be found in the data, algorithms, and systems that support labor markets and guide hiring, particularly for the under-regulated and fast-growing markets for independent workers (Ticona, 2015a). This suggests that the gendered and racialized issues in the traditional workplace are likely exacerbated in an online free-for-all marketplace in which technological-based organizations avoid scrutiny as they perpetuate a narrative about systems and decision-making being automated, objective, and neutral (Duggan et al., 2020; Fieseler et al., 2019; Veen et al., 2020).

In particular, online freelancing platforms rely on data from employers, workers, and jobs. These data, in turn, power algorithm-based matching technologies that seem likely to embed new, and continue reinforcing known, biases. Indeed, some scholars have started to address issues with digital labor platforms. Several studies highlight that biases – including gendered occupational expectations and the gender income gap – which exist in traditional workplaces are also visible in online work (A. Barzilay, 2019a, 2019b; Foong et al., 2018; Hannák et al., 2017a; Monachou & Ashlagi, 2019a; Vyas, 2020). On average, women’s request rates in the gig economy are 37% lower than men’s, a difference that persists even when controlling for factors such as experience, occupation, job-quality ratings, level of education, and hours of work (A. Barzilay, 2019a, 2019b; A. Barzilay & Ben-David, 2017).

Research has also begun to illuminate race-based discrimination in freelancing platforms. Scholars have found that Black independent workers receive more negative evaluations
than White workers (Hannák et al., 2017a). Additionally, algorithms perpetuate and reinforce known and implicit biases (Popescu et al., 2018; Robinson et al., 2020; Vyas, 2020). This is because “the inequality and discrimination prevalent in society are ultimately reflected in the data collected by the algorithm thereby creating a discriminatory pattern” (Vyas, 2020), p.45). As such, there is work left to be done to fully understand how the gig economy and each type of platform mediates or perpetuates marginalization according to workers’ differing and intersectional identities (e.g., race, gender, ethnicity). The following section discusses some of the challenges individuals face and the insight we have learned about the intersection of work, identity and inequality.

Here, identity is viewed as the self-reported “social category, defined by membership rules and (alleged) characteristic attributes or expected behaviors, or (b) socially distinguishing features that a person takes a special pride in or views as unchangeable but socially consequential (or (a) and (b) at once)” (Fearon, 1999). In this study, participants’ different identity attributes are self-reported, including their gender, race, and ethnicity.

2.4 The role of identity in work marginalization

2.4.1 Definitions and background

For my research, I draw on the concepts of identity, marginalization and intersectionality. Before diving in depth on how I see these concepts connecting to the current work, here I provide a broad introduction to the terms, how these are defined in the literature and how they are used in the current research study.
Identity: For the purposes of this dissertation, identity is defined as the self-reported “social category, defined by membership rules and (alleged) characteristic attributes or expected behaviors, or (b) socially distinguishing features that a person takes a special pride in or views as unchangeable but socially consequential (or (a) and (b) at once)” (Fearon, 1999). Identity is a well-studied concept that is often used in two linked senses, encompassing the “social” and “personal” aspects of how an individual defines themselves and views others (A. Elliott, 2019; Fearon, 1999; Wetherell, 2010). There is a rich and complex body of identity-related research, and with it many different ways of conceptualizing identity (Alvesson et al., 2008; Brubaker & Cooper, 2000; Castells, 2011; Cover, 2015; A. Elliott, 2015, 2019; Shoemaker et al., 2019; Wetherell & Mohanty, 2010). Reflexivity, performativity, and standpoint theory, among other theoretical approaches, have all been historically important for the study of identity over the years (Butler, 2002; A. Elliott, 2015, 2019; Giddens, 1992; Goffman, 1979; Holmes, 2012; Wetherell & Mohanty, 2010; Zhao & Biesta, 2012). Yet, due to the heterogeneity of uses and meanings of identity across literature, the use of the term ‘identity’ in research can be problematic if it is not well defined.

My dissertation research focuses on how identity is mediated in online freelancing platforms, including the role of identity attributes in worker experiences and how others perceive those attributes. However, beyond this view of identity, other work may be adopting other definitions and aspects of identity. Other conceptualizations of identity beyond the scope of the current research include considering 1) reflexivity and the self (Giddens, 1992; Zhao & Biesta, 2012); 2) identity and power implications, including

In this study, participants’ different identity attributes are self-reported, including their gender, race, and ethnicity. For example, as a Latinx woman, my race and gender are something I view as unchangeable and are each a core part of my identity. I also recognize that my race and gender have mediated many of my social interactions. This does not mean that I don’t acknowledge the reflexive and performative aspects of my identity—instead, my decision to focus on social categories reflects a reality that attributes like race, ethnicity and gender play a large part in the development of people’s identities and how individuals experience the world (K. Crenshaw, 1991; A. Y. Davis, 2011).

**Marginalization:** For this research, I adopt Trudeau & McMorran’s definition of marginalization as the process of ‘othering’ certain identities such that some individuals and social groups are in positions of low(er) or unequal standing (Trudeau & McMorran, 2011). Because socially-imposed categories like race, ethnicity, class and gender, among others, are central to our identity and our understanding of others’ identities, we must also understand the ramifications associated with identity defined by these typifications (Anthony Appiah, 1998; Bonilla-Silva, 2006; K. Crenshaw, 1991; Munro, 2010). As noted by Rolland Murno, we can define identity “in terms of accounts that mark someone as belonging to a category or class of being” (Munro, 2010) (p. 201). The social categories we attach to individuals are often hierarchically organized. For example, the categories ‘rich’, ‘white’, and ‘male’, are privileged over categories like ‘poor’, ‘Black’ and ‘female’ (Munro,
2010; Strathern, 1998). While these groupings of identity are cultural, they also affect power relations. These categories provide social power to exclude and marginalize those who are different (K. Crenshaw, 1991) (p.1242).

Categorizing, exclusion and ‘othering’ is at the core of marginalization. Dosono and Semaan define marginalization as “the process of excluding a particular group of people to the periphery of society by denying them of their voice, identity, or place in it” (Dosono & Semaan, 2020). Individuals and groups can be marginalized across various dimensions of their identity, including their race, gender, or socioeconomic status (K. Crenshaw, 1991; K. W. Crenshaw, 2017; Dosono & Semaan, 2020; McCall, 2005; Trudeau & McMorran, 2011; Walby et al., 2012). As marginality stems from these multiple sources of difference which separate the self from others (intersectionality), the experiences and outcomes of imposed marginality vary from person to person. According to Trudeau & McMorran (2011) “The ways that people experience exclusion through these factors can vary immensely, as marginality is often complicated due to the intersection of multiple nodes of difference” (Trudeau & McMorran, 2011). Beyond inclusion and exclusion, marginalization is also intertwined with outcomes of stereotyping, discrimination, and inequality. The ‘othering’ of groups of individuals across identities has typically led to differential treatment and discrimination.

**Intersectionality:** In this dissertation, intersectionality refers to the framework for understanding how one’s identities are intertwined to create different modes of discrimination and privilege, as defined by Kimberlé Crenshaw (K. Crenshaw, 1989, 1991; K. W. Crenshaw, 2017). Kimberlé Crenshaw coined and conceptualized ‘intersectionality’ as
a framework to understand how aspects of one’s identities are intertwined to create different modes of discrimination and privilege. Intersectionality has come to represent the fact that individuals are simultaneously positioned in various categories (K. Crenshaw, 1989, 1991). This perspective also “indicates that a focus on any one social category can only be understood in the context of other categories and of differences, as well as commonalities, within groups” (Wetherell & Mohanty, 2010). The use of intersectionality in understanding identity further crystallized that social categories like race and gender are associated with power and power relations, and as such cannot be neutral (Collins, 1998; Wetherell & Mohanty, 2010). The intersectionality perspective has led the way to understanding the particularities of groups at the point of intersection (Walby et al., 2012). This includes differences between intra-categorical, anti-categorical, and inter-categorical group experiences (McCall, 2005); as well as unitary, multiple and intersectional categories of difference (Hancock, 2007; Walby et al., 2012).

2.4.2 Identity in the context of work

According to Patricia Hill Collins (2015): “...work constitutes one important concept that contains highly nuanced scholarship on how labor market organization, occupational segregation, work-family balance, and other aspects of paid and unpaid reproductive labor underpin complex social inequalities” [(Collins, 2015) p. 11]. Prior to the rise of online freelancing and the gig economy, research from sociology, law, and economics has demonstrated - again and again - the persistent pervasiveness of bias and inequality among historically marginalized groups (Badgett, 2009; Bielby, 2000; Castilla, 2008; Kabat-Farr & Cortina, 2012; Nelson et al., 2019; Sturm, 1997).
The presence of bias and discrimination has been documented as early as in the application and interview process, including the presence of unconscious bias in the mind of an interviewer (Vyas, 2020). “This bias is generated through various factors including, but not limited to, socially devised roles, cultural barriers, bias related to gender, ethnicity and other preconceived societal factors” (p.41).

In a widely cited resume field experiment, Bertrand and Mullainathan (2003) found that applicant resumes with White-sounding names were significantly more likely to get callbacks than equivalent resumes with Black-sounding names. The call-back rate was 50% higher for White applicants than the equally qualified black applicants (Bertrand & Mullainathan, 2004). And the racial gap in response rate widened when comparing high and lower-skill resumes, penalizing Black applicants. The authors noted “Whites with higher quality resumes receive 30 percent more callbacks than Whites with lower quality resumes, a statistically significant difference. On the other hand, having a higher quality resume has a much smaller effect for African Americans” (Bertrand & Mullainathan, 2004), p.3).

Moreover, broader disparities exist in the labor force status of racial minorities, within unemployment numbers, discriminatory hiring decisions, and work stability negatively affecting workers from racial minorities (Braddock & McPartland, 1987; Castilla, 2008; Gaddis, 2015; Levitt, 2004; Pager & Shepherd, 2008; Wingfield & Chavez, 2020). Research highlights “the persistence of occupational segregation, with racial minorities concentrated in jobs with lower levels of stability and authority and with fewer opportunities for advancement” (Pager & Shepherd, 2008).
2.4.3 Gender, race and ethnicity at work

Literature discussing work marginalization often uses the identity categories of gender and race to describe differential experiences in the workforce, as these social identity categories are directly related to work experiences and outcomes (e.g., (Bell Smith & Nkomo, 2003; Browne & Misra, 2003; Duffy, 2005, 2007; J. R. Elliott & Smith, 2004; McGuire, 2000, 2002; Smith, 2003; van Doorn, 2017). Even as scholars debate the different causes of gender and race oppression and how these play out in labor markets, literature makes clear that identity attributes like a person’s gender, race, and ethnicity matter when it comes to work (Browne & Misra, 2003; Ragins et al., 2003; Reskin, 2000; Tomaskovic-Devey, 2018). Gender and race are particularly critical to workers’ differential experiences during hiring, in terms of wages, and when it comes to promotions and positions of leadership due to several (implicit and explicit) biases and stereotypical perceptions we hold about different groups (Castilla, 2008; Kabat-Farr & Cortina, 2012). It seems pertinent to note that continued issues with hiring biases and discrimination are particularly salient to online freelancing (as compared to other forms of gig work) given that online freelancers must routinely bid for jobs to secure work.

Substantial research demonstrates the persistent disparities in wages of workers from various racial minorities as well as women. A racial gap exists in even the latest reports showing that for every $1.00 earned by White workers, Black and Hispanic/Latino workers are earning only $0.76 and $0.73 respectively (Earnings Disparities by Race and Ethnicity, n.d.). There is also a significant gender wage gap: According to a 2022 Census report, the national median earnings for full-time workers was $53,544 for men compared to $43,394
for women (US Census Bureau, n.d.). According to this study, the US states with the largest gender wage gaps included: Wyoming, $21,676; Utah, $17,303; and the District of Columbia, $16,032 (per year) (US Census Bureau, n.d.). This means that women in these states are earning significantly less than men, even as the reports emphasize that the earnings differences could be due to the hours worked, the presence of children and education.

Unsurprisingly, the wage gap is even greater when examining the experiences of individuals who are penalized both for their race and gender (i.e., non-White women in the workforce). For example, Latinas face one of the greatest wage disparities (Hegewisch & Mefferd, 2021). A 2020 report notes that Latinas earned only 57% of what non-Hispanic white men were paid in 2020. “That means it takes Latina workers almost an entire extra year of full-time, year-round work to be paid the average annual earnings of white men” (Latinas and the Pay Gap, 2020). This pay gap equates to a loss of more than one million dollars over a 40-year career: $1,156,440 per year, $28,911 per year, or $2,409 per month in ‘lost’ wages (Gomez, 2021; Hegewisch & Mefferd, 2021). And Latinx/Hispanic women are earning less than White men at every education level. According to an Institute for Women’s Policy Research fact sheet, this means that “If progress continues at the same rate as it has since 1985, Latinas will not reach equal pay with White non-Hispanic men for another 185 years, or until 2206” (Hegewisch & Mefferd, 2021).

Castilla (2008) highlights several ways in which issues of inequality and bias are embedded in work organizations, including through 1) allocative discrimination, which refers to how women and minorities are sorted into certain types of jobs and pay during hiring,
promotion or termination processes; 2) within-job wage disparities, where women and minorities are paid less for the same work as their white male counterparts; and 3) valuative discrimination, which refers to how certain groups are paid less despite equal skills requirements and other factors because they are valued less.

Beyond issues of lower value and lower pay among marginalized groups, bias and discrimination have led to a wide gap in representation within leadership positions. Women and minorities make up only 4% and 2% (respectively) of low and mid-level managerial positions in the workforce and combined these marginalized groups represent less than 1% of executive and senior-level positions (Job Patterns For Minorities And Women In Private Industry (EEO-1), n.d.; Roberson et al., 2020). These and additional issues of inequality such as selective incivility, meritocracy and other forms of covert discrimination (Castilla, 2008; Kabat-Farr & Cortina, 2012), have been documented for decades in traditional workplaces despite a collection of laws that distinctly prohibit discrimination on the basis of sex, gender, race, color or other attributes.

While the focus of previous work has largely focused on gender, race, and ethnicity, we must also acknowledge that these categories are not always mutually exclusive or easy to distinguish. The focus on these social identities is complex when the categories for our identity attributes are not always neatly defined. For example, attributes like ‘gender’ transcend traditional views of binary choices such as male/female and associated categories of man/woman (Richards et al., 2016). Additionally, we have to also consider the experiences of individuals who are more than one race, as well as individuals who have
several marginalized intersecting identities-- which is why intersectionality is a useful lens to adopt to analyze workers' experiences (discussed in more detail in Section 2.4.3).

Furthermore, research that investigates questions of identity in the workplace tends to primarily highlight the deficits of different identities, including those who are disadvantaged, challenged and/or discriminated against based on their gender, race and ethnicity (among other attributes). Marginalized groups tend to be discussed around the negative aspects or outcomes of their identities, including, for example, a lack of access to different resources or negative outcomes at work. Yet, other scholars stress the importance of also focusing attention on the assets of the individuals with these marginalized identities (Brock, 2020; Yosso *, 2005). From this view, there is also an opportunity to move away from exclusively focusing on the ‘deficits’ associated with these groups by highlighting the assets associated with their identities. For example, one of the primary assets among communities of color is their access to knowledge and cultural wealth from their social support circles. Yosso (2005) notes that “community cultural wealth is an array of knowledge, skills, abilities and contacts possessed and utilized by Communities of Color to survive and resist macro and micro-forms of oppression” (p. 77). Thus, being cognizant of both the deficit and asset models of identity offers us different perspectives and insights about marginalized groups in research and discussions on the future of work.

2.4.4 Social identity categories in online freelancing: A research gap

As noted, worker’s differential experiences in the workforce, including in the gig economy, tend to be related to different parts of their self-reported identity, including their gender, race, and class, among other important attributes (Churchill & Craig, 2019; Foong et al.,
2018; Vyas, 2020). Here, I use the term **identity** to refer to the self-reported “social category [or categories], defined by membership rules and socially distinguishable features that a person takes a special pride in, or views as unchangeable but socially consequential” (Shoemaker et al., 2019). Identities are meanings that are attached to a person by themselves and others (Gecas, 1982). According to (Alvesson et al., 2008), an individual’s identity “implies certain forms of (often positive) subjectivity and thereby entwines feelings, values and behaviour and points them in particular (sometimes conflicting) directions” (p.6). More broadly, “Identity focuses on the meanings comprising the self as an object, gives structure and content to self-concept, and anchors the self to social systems” (Gecas, 1982) (p.4).

Identity research is of interest to HCI scholars, with a number of studies exploring the role and management of identity in information and communication technologies (ICT) (Buche, 2008; DeVito et al., 2018; DiMicco & Millen, 2007; Dosono & Semaan, 2020; Farnham & Churchill, 2011; Flores et al., 2013; Handel et al., 2015; Lingel et al., 2014; Radhakrishnan, 2009; Seering et al., 2018). Lingel, Naaman and boyd noted “Identity work provides a focal point for investigations of the role of technology in shaping the construction of the self, where a number of technological practices are deployed in everyday tasks related to identity” (Lingel et al., 2014), p.1503). Research on identity has previously focused on faceted identities (DiMicco & Millen, 2007; Farnham & Churchill, 2011); collective or shared identity (Hsiao & Dillahunt, 2021; Voida et al., 2012); and identity work among different groups (Haimson, 2017; Haimson et al., 2016; Lingel et al., 2014; Morioka et al., 2016; B. C. Semaan et al., 2016).
Research has highlighted how identity characteristics have been increasingly scrutinized with the increased use of big data, machine learning and artificial intelligence-reliant systems (Scheuerman et al., 2020). And other work has highlighted concepts of self-presentation in digital systems (Birnholtz et al., 2014; DeVito et al., 2018; DiMicco & Millen, 2007), particularly identity work and impression management (DiMicco & Millen, 2007; Dosono et al., 2017; Dosono & Semaan, 2018, 2020; Haimson et al., 2015; Lingel et al., 2014; B. Semaan et al., 2017; B. C. Semaan et al., 2016).

Despite its relevance in HCI and across other disciplines and contexts, there are currently only a few studies that have explored identity concepts like self-presentation, identity work, impression management, and differential experiences and outcomes for workers in the gig economy. A few exceptions exist, with Bellesia et al. (2019) discussing the process of work identity construction for gig workers. Their findings suggest that the online work environment constrain workers who must adapt to platform features to succeed which triggers “an experiential process of work identity construction” (Bellesia et al., 2019). This work highlights that “Through experimenting with the platform, freelancers develop an entrepreneurial mindset by integrating into their work identities pieces of self as unique workers, sponsors, and bosses” (p. 261).

Several studies have highlighted the differential experiences based on gender in the gig economy (A. Barzilay, 2019a; A. R. Barzilay & Ben-David, 2016-2017; Churchill & Craig, 2019; Foong et al., 2018; Gupta, 2020; Hannák et al., 2017b; Vyas, 2020). And some scholars have begun to demonstrate differential experiences in platform-based work for people from marginalized ethnic/racial identities (Hannák et al., 2017a). Studies show that bias that
perpetuates inequality for different types of workers can be found in the data, algorithms, and systems that support labor markets and guide hiring, particularly for the under-regulated and fast-growing markets for independent workers (Ticona, 2015a).

While these studies address some of the identity-related issues in the gig economy, these studies are also limited to the specific platforms they study—most of them focused on microtask work, ride-sharing or delivery platforms. Additionally, identity is complex (Alvesson et al., 2008; A. Elliott, 2019; Wetherell & Mohanty, 2010), and we lack an understanding of the role of identity in online freelancing platforms. We also lack knowledge about how identity categories like race, gender, and other intersectional attributes may be impacting the experiences of workers from different identities. The experience of marginalized workers in online freelancing remains largely unexplored. Thus, identity research in online freelancing and marginalized workers in the gig economy remains a research gap.

2.4.5 Intersectionality and marginalization: A framework for exploring platform (in)equality

One way to explore the issues with identity, bias, and differential experiences within online freelancing is to adapt a lens of intersectionality. At its core, intersectionality “references the critical insight that race, class, gender, sexuality, ethnicity, nation, ability, and age operate not as unitary, mutually exclusive entities, but as reciprocally constructing phenomena that in turn shape complex social inequalities” (Collins, 2015). As such, we can draw on intersectionality to investigate the complex forms of inequalities that exist in our social world, including the experiences and outcomes of workers in the gig economy.
Key scholars in this space such as Patricia Hill Collins, bell hooks, and Angela Davis have explored the intersections between gender, and other attributes like race and class (Collins, 2000; A. Davis, 1993; A. Y. Davis, 2011; Hooks, 1989, 2000). These scholars view identity as relationally constituted through narratives (Holmes, 2012). Aligned with some of this work, Kimberlé Crenshaw coined and conceptualized ‘intersectionality’ as a framework to understand how aspects of one’s identities are intertwined to create different modes of discrimination and privilege. Intersectionality has come to represent the fact that individuals are simultaneously positioned in various categories (K. Crenshaw, 1989, 1991). This perspective also “indicates that a focus on any one social category can only be understood in the context of other categories and of differences, as well as commonalities, within groups” (Wetherell & Mohanty, 2010).

The intersectionality perspective has led the way to understand the particularities of groups at the point of intersection (Walby et al., 2012), including approaches to differences between intra-categorical, anti-categorical, and inter-categorical group experiences (McCall, 2005); as well as unitary, multiple, and intersectional categories of difference (Hancock, 2007; Walby et al., 2012). The use of intersectionality in understanding identity has demonstrated that social categories like race and gender are associated with power and power relations, and as such cannot be neutral (Collins, 1998; Wetherell & Mohanty, 2010). Through her work, Crenshaw illustrates intersectionality by highlighting how experiences that Black women face don’t fit within the bounds of race or gender discrimination and demonstrating how gender and race intersect to shape the structural, political and representational aspects of violence against women of color (K. Crenshaw, 1989, 1991).
Women of color tend to face unique forms of oppression, exacerbated by the fact that these women are simultaneously occupying multiple burdened and subordinated positions.

Intersectionality is related to outcomes of marginalization or exclusion of many individuals who occupy these several subordinated positions. Marginalization stems from multiple sources of difference which separate the self from others and the experiences and outcomes of imposed marginality vary from person to person. According to Trudeau & McMorran (2011) “The ways that people experience exclusion through these factors can vary immensely, as marginality is often complicated due to the intersection of multiple nodes of difference” (Trudeau & McMorran, 2011). Beyond inclusion and exclusion, marginalization is also intertwined with outcomes of stereotyping, discrimination, and inequality. The ‘othering’ of groups of individuals across identities has typically led to differential treatment and discrimination (K. Crenshaw, 1991; K. W. Crenshaw, 2017; Trudeau & McMorran, 2011). Scholars have long used identity markers to understand the ways individuals and social groups are relegated to lower and unequal standing in society, with race and ethnicity being some of the ways society has historically relegated Black and brown individuals to the margins (Collins, 1998, 2000).

Focusing on intersectionality and marginalization provides the conceptual lens to better understand the role(s) of identity in online freelancing. Drawing on these concepts allows us to build on our understanding of marginalized workers’ experiences and their outcomes with online freelancing. This is critical as workers from racial minorities are underrepresented in the literature about gig work and online freelancing, yet they are overrepresented in the broader gig economy and in low-paying jobs in both the traditional
and gig economy (*Labor Force Characteristics by Race and Ethnicity, 2019, 2020, Racial and Ethnic Differences Stand out in the U.S. Gig Workforce, 2021; Vyas, 2020*). To this point, recent reports highlight that while Hispanics/Latinx make up 18% of the labor force, 30% of this population has reported participating in the gig economy. And among Black workers, who make up 13% of the labor force, 20% report participating in the gig economy. Despite this high participation among Black and Latinx workers, limited literature has focused on the differential experiences of workers based on their race and gender (A. Barzilay, 2019a, 2019b; Churchill & Craig, 2019; Hannák et al., 2017a; Vyas, 2020).

Building from an intersectional perspective allows us to address a gap in knowledge about workers who tend to be historically marginalized and how multiple subordinate positions of one’s identity could affect them in their work outcomes online. Doing so also provides an opportunity to learn which other attributes of workers’ identities influence their success or lack thereof on freelancing platforms, such as their occupation, experience, or family structure (among others). The intersectional perspective allows me to contribute to the growing knowledge in HCI and other fields about how technology use and design relates to concepts of identity (DeVito et al., 2018; Dosono & Semaan, 2020; Dym et al., 2019; Farnham & Churchill, 2011; Haimson et al., 2015; Karusala et al., 2019; Lingel et al., 2014; Morioka et al., 2016; Shoemaker et al., 2019); intersectionality and marginalization (Shoemaker et al., 2019; Vyas, 2020); and equity and justice (Bardzell, 2010; Dombrowski et al., 2016; Eubanks, 2018; Foong & Gerber, 2021a; Karizat et al., 2021; Tacheva et al., 2022).
2.5 Chapter summary

In this chapter, I discuss several threads of research regarding how work realities are shifting, the rise of the gig economy, and online freelancing. I cover some of the literature about the important opportunities and challenges within online freelancing, including the conflicting evidence about flexibility, autonomy, and control. This section also summarized research about marginalization and its relevance to HCI and gig work scholars. I then emphasized an important gap in the literature about social identities in online freelancing and how an intersectional approach may be useful for investigating this gap. In the following chapter (Chapter 3), I leverage this literature review to highlight a research framework for my research.
Chapter 3: Research Framework

My work contributes to the theorization of marginalization and intersectionality by investigating how workers are marginalized based on their self-reported identity attributes in online labor platforms. To date, several scholars have started to advance insights about how gender influences workers’ experiences on digital labor platforms. Through their work, Barzilay, Foong, Vyas and others have provided empirical evidence on gender differences, including pay inequality, on labor platforms (A. Barzilay, 2019a; A. R. Barzilay & Ben-David, 2016-2017; Churchill & Craig, 2019; Foong et al., 2018; Gupta, 2020; Vyas, 2020). Additionally, (Hannák et al., 2017a) demonstrate evidence of racial bias on these platforms. My work expands on these insights by investigating how different aspects of workers’ self-reported intersectional identities-- including gender, race, ethnicity and occupation-- may together be complicating and exacerbating marginalization in online freelance platforms.

The rest of this chapter contains the research framework that is driving my study’s design. Next, I provide an overview of my approach to this research: Theory elaboration. I then discuss the concepts of marginalization and intersectionality that frame this work. I conclude with an outline of the core conceptual elements and a summary of this chapter.

3.1 Theory elaboration approach

My research design relies on and is guided by the premise of theory elaboration to build insights into marginalization in online freelance labor. Fisher and Aguinis (2017) define
theory elaboration as “the process of conceptualizing and executing empirical research using pre-existing conceptual ideas or a preliminary model as a basis for developing new theoretical insights by contrasting, specifying, or structuring theoretical constructs and relations to account for and explain empirical observations” (p.441).

Theory elaboration is different from other research models such as theory generation and theory testing. Theory generation seeks to produce formal and testable propositions, while theory testing seeks to test formal hypotheses. However, theory elaboration’s focus on extending current frameworks is better suited for the phenomenon of study and research questions I seek to answer (See Table 1, which outlines my research questions).

I am building my research from a phenomenological interest, and seek to contribute to the existing theorizing about marginalization, particularly on how intersectionality accounts for workers’ differential experiences within online freelancing. To do so, I draw on the framework of intersectionality to help explore and explain the differential experiences and outcomes within online freelancing. As I discuss below, intersectionality refers to the framework for understanding how identity is both multifaceted and intertwined, creating different modes of discrimination and privilege (K. Crenshaw, 1989, 1991; K. W. Crenshaw, 2017). Marginalization serves as a means to characterize individuals’ unequal standing in society based on different and intersecting identity characteristics (Collins, 1998, 2000). Marginalization and intersectionality are interrelated; and these concepts allow me to investigate some of the complexities of inequalities that exist in our social world, with a particular focus on the experiences and outcomes of workers in the gig economy.
Through this work, I contribute specifically to theorization about how intersectionality frames marginalization, including how workers navigate finding work, how they build their strategies and how they succeed (or not) in online freelancing. I focus primarily on self-identified Black and Latinx workers, as these are historically marginalized populations in the workforce (and more broadly as well). The research questions and framing allow me to unpack the complexities of different and intersecting social identity categories on the strategies and outcomes of workers, including how they develop their worker profiles and bidding strategies, and how they manage their communication with their clients. And, it is likely that beyond self-identified gender, race and ethnicity, other identity categories may impact worker strategies and outcomes. For example, a worker’s reported age, location or family structure may tell us more about their approach to work and outcomes in online freelancing. Furthermore, as online freelancing platforms evolve, workers’ strategies, perspectives, and outcomes are also likely to change. Thus, understanding different types of workers may provide insight into how workers’ practices and overall experiences are evolving.

With this approach, my contribution is about how different social groups experience marginalization in online freelancing. This means that the level of contribution of this research is about different social groups. I focus on theorizing about how the experiences of historically marginalized groups’ identities lead to experiences of marginalization, and how those experiences are similar or different to those of other workers in this form of work. This draws on the intersectionality lens to analyze how workers’ self-reported intersecting identities contribute to the processes and outcomes of marginalization--including issues
with bias and inequality—on freelancing platforms. To make these assertions, the theorizing is driven by the data collection with individuals across these different marginalized and non-marginalized social groups. Thus in this research, the data and analysis are at the individual level, which then informs the social-group level theorizing and contributions.

3.2 A focus on marginalization

Our current understanding of *marginalization* centers on the othering and differential treatment of a person or group from a dominant, central majority. And more specifically, marginalization refers to the sociopolitical process to exclude individuals and groups to the periphery (Hall, 1999). As such, marginalization is often discussed in terms of the process and outcomes of social exclusion from basic services or opportunities. And, this process of marginalization is seen as producing both vulnerabilities (risks) and strengths (resilience) among marginalized individuals/groups (Hall, 1999).

The phenomenon and process of marginalization have long been documented and investigated across different social domains, including healthcare, housing, education, and employment. Scholars typically use different identity markers such as gender, race, ethnicity, and class to understand the ways individuals and social groups have been relegated to lower and unequal standing in society across these different domains [e.g., (Arnold, 1995; Hall, 1999; Jackson et al., 2016; Proctor, 2020; Trudeau & McMorran, 2011)]. And in particular, the work of Kimberle Crenshaw, Patricia Collins Hills, and other prominent critical scholars has outlined the issues and outcomes of marginalization as well

Certain groups of people - such as racial and ethnic minorities, immigrants, individuals with disabilities, and LGBTQ+ individuals - have often been marginalized based on their “out-group” social identities. As such, these groups face barriers related to identity-based marginalization that in-group participants do not. This occurs despite apparent progress made through emerging technologies, new processes, or color-blind policies (Bonilla-Silva, 2001, 2006). In a recent example of marginalization, a Yale study revealed that non-white students were more likely to drop out of medical school compared to their white counterparts (Nguyen et al., 2022). And in this study, students of color who also grew up in a low-income household and in an under-resourced neighborhood had even greater dropout rates. This difference was attributed to biases and lack of diversity in medical school faculty and described by the senior author of the study as an “accrual of disadvantage” (Ali, 2022).

Nguyen et al’s (Nguyen et al., 2022) finding are not unique or surprising-- Studies have long shown that Black, Latinx, and low-income individuals are consistently marginalized (Bonilla-Silva, 2006; A. Y. Davis, 2011; Jackson et al., 2016). These groups have traditionally faced barriers and disadvantages in education and the workplace (Arnold, 1995; Gomez, 2021; Hegewisch & Mefferd, 2021; Latinas and the Pay Gap, 2020, Systematic Inequality, 2018; Mineo, 2021; Perelman, 2018), including unequal access to good education and mentorship which ultimately leads to a recurring cycle of fewer or lower paid job
opportunities, lower access to promotions, a gap in wealth and a lack of representation in leadership. This marginalization and disadvantage stem from multiple sources of difference, including an individual’s various social identities related to race, ethnicity, and socio-economic status [as exemplified in the (Nguyen et al., 2022) study].

And because marginality is complicated when a person holds multiple disadvantaged positions of difference--such as being Black, a woman, and also low-income-- it is critical to analyze these intersecting social identities to understand differential access, treatment, and outcomes (Trudeau & McMorr, 2011). What the study author referred to as the “accrual of disadvantage” is what Kimberle Crenshaw coined as “intersectionality” decades ago to describe the ways society has historically relegated certain groups of people (like Black women) to the margins.

Within online freelancing, marginalization across intersectional identities is still likely to continue to be an issue, even as proponents of technology promote the ‘neutrality’ and ‘objectivity’ of work going online (Hannák et al., 2017b). This is because even though the work transactions have moved online, workers’ identity attributes continue to be visible to those hiring. For example, freelancers on Upwork (as well as those on other online labor platforms) have to disclose their name, photo and other background information in order to have access to jobs. And Upwork verifies these details by requiring and processing government-issued identification\(^8\) and having standards for appropriate profile photo selection.

That means that workers with Black or Latinx-sounding names on Upwork are still subject to the same discrimination that occurs during the traditional application and interview processes, in which those hiring have unconscious (and conscious) biases about social groups that affect who they select for interviews and who they ultimately select for a job (Bertrand & Mullainathan, 2004; Braddock & McPartland, 1987; Fryer & Levitt, 2004; Pager & Shepherd, 2008). Even as names on a resume are enough to discriminate against Black and Latinx applicants (Bertrand & Mullainathan, 2004), online freelancing platforms provide additional evidence of workers’ identity through the inclusion of elements such as language proficiency and educational background.

Upwork’s terms of use require that freelancers’ profile photos are “a close-up image of your head and shoulders, clearly showing your face”. Upwork notes that: “Since as a freelancer your profile picture has to accurately represent who you are, it obviously shouldn’t be a photo of a place, a design or object, or someone or something else (also, misrepresenting who you are, goes against our Terms of Service.”9. Thus, the photo requirement introduces an extra element of racial, ethnic and gender representation that is attached to each of the workers on the platform, likely leading to exacerbation of existing discrimination based on social identities. My study addresses if this is the case: my research questions explore whether a technology platform mediating freelance work is leveling out the playing field in work or whether it is exacerbating marginalization as is the case in previous literature about identity and marginalization in the domain of work.

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9 Photo requirements: https://support.upwork.com/hc/en-us/articles/360053305673-How-to-choose-a-good-profile-picture
3.3 The role of intersectionality

I approach marginalization online through a lens of intersectionality. As discussed in Chapter 2, intersectionality is a concept rooted in Black feminism and Critical Race Theory (Collins, 2000, 2015; K. Crenshaw, 1989, 1991). The term and approach of *intersectionality* was introduced by Kimberle Crenshaw as a “method and a disposition, a heuristic and analytic tool” to understand the marginalization of (including the exclusion and violence against) Black women through the law, and through antiracist theory and politics (Carbado, p. 303).

Intersectionality is useful to investigate the complex forms of inequalities that exist in our social world. At its core, intersectionality “references the critical insight that race, class, gender, sexuality, ethnicity, nation, ability, and age operate not as unitary, mutually exclusive entities, but as reciprocally constructing phenomena that in turn shape complex social inequalities” (Collins, 2015). For Crenshaw, intersectionality is related to outcomes of marginalization or exclusion for many individuals who occupy these several disadvantaged positions (K. Crenshaw, 1991; K. W. Crenshaw, 2017). Other scholars including Patricia Hill Collins, bell hooks, and Angela Davis have also previously explored the intersections between gender, race and class (Collins, 2000; A. Davis, 1993; A. Y. Davis, 2011; Hooks, 1989, 2000).

The theory of intersectionality has also been used to analyze additional social identities and multiple axes of difference, including class, sexual orientation, nation, citizenship and immigration status, disability and religion. For example by focusing on how historic biases
against LGBT or disability communities may intersect with ongoing discussions of racial movements (Carbado et al., 2013). And even as critics have argued that the theory is primarily about Anti-Black racism and sexism, it can be (and has been) employed to “analyze a range of complex social processes—classism, homophobia, xenophobia, nativism, ageism, ableism, and Islamophobia” (Carbado, 2013). And the engagement with the framework of intersectionality within and across disciplines and national contexts has led to “pushing against and transcending boundaries, while building interdisciplinary bridges, and prompting a number of theoretical and normative debates” (Carbado et al., P. 304).

For my own work, intersectionality provides one lens to better understand marginalization in online freelancing. Building from an intersectional perspective allows me to address a gap in knowledge about workers who tend to be historically marginalized and who are participating in online labor markets. This includes understanding how workers’ multiple subordinate positions of their identity could affect their experiences and outcomes in online freelancing platforms. As such, this work extends our understanding of intersectionality and marginalization by explaining how these constructs play out in online freelance work. To do this, below I discuss several important concepts that allow me to build on our current understanding through theory elaboration.

3.4 Core concepts for analysis

Table 9 below defines five key concepts that are relevant to the study of intersectionality and marginalization in online freelance work. I draw on literature and prior work to define
and discuss how gender, race, ethnicity, occupation and career trajectories are each relevant worker attributed for understanding marginalization and intersectionality in this form of work.

Table 9. Core concepts and definitions for analysis

<table>
<thead>
<tr>
<th>Concept</th>
<th>Concept</th>
<th>Rationale</th>
</tr>
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<tbody>
<tr>
<td>Gender</td>
<td>Gender is used as a self-reported identity category that refers to “One’s innermost concept of self as male, female, a blend of both or neither – how individuals perceive themselves and what they call themselves” [per (Sexual Orientation and Gender Identity Definitions, n.d.)]. Gender is self-reported by participants in this study through a survey (e.g., Female, Male, Non-binary, etc.).</td>
<td>Gender is a key concept research continuously shows that gender is an important identity element in workers' experiences and outcomes. The presentation of gender in online platforms tends to relate to workers’ asking rates, negotiation skills, and perceived worker abilities and competence (A. Barzilay, 2019a, 2019b; Churchill &amp; Craig, 2019; Cook et al., 2020; Dunn et al., 2021; Foong et al., 2018; Foong &amp; Gerber, 2021b; Ma et al., 2022a; Vyas, 2020).</td>
</tr>
<tr>
<td>Race</td>
<td>Race is used to categorize individuals based on socially distinctive physical traits. Both race and ethnicity here reflect socio-political constructs to classify people. Both of these concepts have been used to label and identify people with a presumed/inferred shared essence. Race is self-reported by participants in this study, with the option to select one or more of the US categories for data on race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. (Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity, 2015)</td>
<td>Race is another important element of a freelancer’s reported identity that could influence workers’ experiences. Even as workers do not classify themselves by race online, the presentation of workers through their name, photo, languages and other elements of their worker profiles could signal identification with different social identities. Prior work has shown that race often relates to discrimination and unequal work outcomes (Castilla, 2008; Cohn, 2019; Kabat-Farr &amp; Cortina, 2012; Nelson et al., 2019).</td>
</tr>
<tr>
<td>Ethnicity</td>
<td><strong>Ethnicity</strong> defines cultural differences (Eriksen, 2012). Both <em>race</em> and <em>ethnicity</em> here reflect socio-political constructs to classify people. Both of these concepts have been used to label and identify people with a presumed/inferred shared essence. Ethnicity is self-reported by participants in this study. The two categories for data on ethnicity include: &quot;Hispanic or Latino,&quot; and &quot;Not Hispanic or Latino.&quot; <em>(Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity, 2015)</em></td>
<td>Like race, ethnicity is also related to a worker’s reported social identity and can be assumed by others through the presentation of a worker’s name, photo, languages and other elements of their digital profiles. Prior work has shown that ethnicity is another identity attribute that relates to discrimination and unequal work outcomes (Castilla, 2008; Cohn, 2019; Kabat-Farr &amp; Cortina, 2012; Nelson et al., 2019).</td>
</tr>
<tr>
<td>Occupation</td>
<td><strong>Occupation</strong> refers to the category of work individuals do. Here, I focus on the worker’s primary occupation on Upwork in terms of the broader categories of administrative, creative, and technology workers, as used in prior research for comparative analysis (Dunn et al., 2021; Munoz, Dunn, &amp; Sawyer, 2022).</td>
<td>Based on previous research, worker occupation is an element that mediates a worker’s experiences with online labor platforms (Dunn et al., 2021; Munoz, Dunn, &amp; Sawyer, 2022). Occupation is relevant as it relates to the jobs and clients that workers are matched with and is related to workers’ professional identity. Occupation is facilitated by the platform-defined job categories, skills, profile descriptions, and specialized profiles.</td>
</tr>
<tr>
<td>Career trajectory</td>
<td><strong>Career trajectory</strong> here refers to an individuals’ work path. I focus on a worker’s previous and current working arrangements, and their future work plans. Career trajectory is self-reported by participants in the study through a combination of questions about their work on Upwork, other digital platforms, and additional part-or full-time employment.</td>
<td>Career trajectory is a final concept that could be related to a worker’s experiences and outcomes (Blaising et al., 2020, 2021). Our ongoing research and analysis suggest that workers’ agency, experiences and outcomes are related to their trajectories-- including whether they do freelance work as a primary source of income or as a supplementary form of income. This has consequences for how precarious workers’ freelance situations are and may be related to other key concepts and identity attributes.</td>
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</table>
3.4.1 External elements for consideration

As noted in the rationale column of Table 9, each concept listed is important to our understanding of intersectionality and marginalization in online freelancing. By analyzing each of these concepts and how they relate to one another, I advance our understanding of freelancing and experiences of marginalization and intersectionality in online platforms. I also seek to explore these additional elements as they emerge. For example, it is likely that clients, market shocks, and other elements may also play a role in addressing or exacerbating the marginalization experienced by workers.

Clients are involved in the evaluation of freelance workers, including by contributing to the platform data on worker metrics (like Job Success Score, Talent Badges, Ratings, and Reviews) (Nelson et al., 2019; Stephany, Dunn, Sawyer, et al., 2020; Sutherland et al., 06/2020). Literature has also highlighted that market shocks disrupt work, including literature on the effects of the COVID-19 pandemic on work and workers (Dunn et al., n.d.; Sawyer, Dunn, Munoz, Stephany, Raheja, et al., 2020; Stephany, Dunn, Sawyer, et al., 2020). A final set of elements that may be relevant to workers’ experience with online freelancing is their family arrangement and support network. Because online freelance workers tend to be disembedded from their clients (and the organization they work for) as well as other workers on online freelance platforms (Wood et al., 2019b), it could be important to better understand how worker’s networks and communities play a role in workers’ differential experiences and outcomes.
3.5 Detailing the research framework

Research question 1 is guided by our understanding of the ongoing struggles of different marginalized groups in the workplace. Black, Latinx, and women workers tend to be marginalized at work. And with the understanding that social identities may be reproducing marginalization online, RQ1 addresses how intersectionality is leading to differential experiences, including success or lack thereof in online freelancing. The adopted intersectionality framework is relevant given the gap in knowledge about how different identities may compound or exacerbate worker experiences in online freelancing. As such, RQ1 helps to elucidate the concept of marginalization and our understanding of different marginalized groups in online work. In addition, RQ2, adds to our understanding by focusing on how workers change/adapt/resist their conditions in online freelancing platforms over time.

Research question 2 focuses on the mediating power of online freelancing platforms (and other platforms in the gig economy). By using the lens of intersectionality, I address how platforms, which are market intermediaries, are embedding existing or new forms of marginalization. Existing literature highlights that data and algorithms reflect society’s biases. So this research question and frame extend our understanding of how these and additional platform features, processes, and policies lead to the marginalization of certain kinds of workers. Additionally, it investigates how platform verification processes limit or exacerbate the potential for reproducing existing discriminatory work practices. By interrogating freelancing platforms’ design, processes, and policies, this work advances our
insight into the role of platforms in limiting or exacerbating marginalization among different workers.

3.6. Chapter summary

In this chapter, I outline my theory-elaboration approach to building knowledge about marginalization as it occurs in online freelancing. I defined theory elaboration and how this approach aligns with my research design. I also discuss key concepts in my study--particularly how gender, race, ethnicity, and occupation are all relevant for analyzing freelancers’ experiences and outcomes. Finally, this chapter briefly discusses how additional external elements may also influence my theorizing about marginalization in online work.
Chapter 4: Research Design and Analysis

This chapter contains a full description of the research design, data collection, and analysis efforts. The study is designed around the research questions relative to freelance workers and platforms (see Table 10). The research questions focus attention on the differences among workers’ experiences (RQ1), how they change over time (RQ2), and the roles of digital labor platforms (RQ3).

Table 10. Research questions and focus for data collection

<table>
<thead>
<tr>
<th>Focus</th>
<th>Research Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freelance workers</td>
<td><strong>RQ1</strong>: How do the platform-mediated experiences of freelancers from marginalized populations differ from those of other freelancers?</td>
</tr>
<tr>
<td></td>
<td><strong>RQ2</strong>: How do freelancers’ experiences and strategies change over time?</td>
</tr>
<tr>
<td>Freelance platforms</td>
<td><strong>RQ3</strong>: What is the role of platforms in mediating online freelancing outcomes?</td>
</tr>
</tbody>
</table>

4.1 Research site: Upwork.com

The study focuses on one platform: Upwork\(^{10}\) (More about the Upwork platform is detailed in Appendix 13). This platform was chosen as a research site given that it is the largest online freelancing platform. As of 2021, Upwork (Previously Elance-oDesk) involves 8 million freelancers and more than 3.5 million businesses (*53 Million Americans Now* [www.upwork.com](http://www.upwork.com))

\(^{10}\) See [www.upwork.com](http://www.upwork.com)
Choosing one freelancing platform is also pragmatic as it reduces the variability due to the effects of platform differences.

The single-platform nature of the study is both a strength and a limitation. That is, this design choice can facilitate an in-depth understanding of the individual experiences of workers and clients on Upwork and the platform itself. However, analysis and transferability of findings may be limited as not all platforms share the same processes, algorithms, features, etc. To mitigate this concern, I seek to collect different types of data from freelancers as well as the Upwork platform to be able to triangulate findings and offer more robust insights about online freelancing and the differences in experiences and outcomes across different workers.

4.2 Freelancer panel research design (RQ1 and RQ2)

The goals of RQ1 and RQ2 are to examine how these freelancers’ experiences differ (between marginalized workers and non-marginalized workers) and how their strategies and outcomes change over time. I do this through a longitudinal panel study of online freelancers. This panel addresses the first two research questions. Research question RQ1 focuses on understanding the differences in experiences of online freelancers from marginalized populations. Research question RQ2 focuses on how online freelancers’ experiences and strategies change over time. The goal is to learn how workers adapt to platform changes and whether their experiences improve or get more precarious over time. To address these questions, I, in collaboration with the Digital Work Research Group, have co-led the design of a longitudinal study of Upwork freelancers. These freelancers include a
range of workers across different self-reported attributes like gender, race, ethnicity, and education.

One of the reasons for designing the study as a longitudinal panel is our lack of understanding of how online freelancers’ experiences change over time. Because platforms are often changing their features, algorithms, policies, and interface, one of the benefits of doing longitudinal data collection is that this approach allows us to better understand how the platform changes are affecting workers and how workers adapt, resist, or respond to these changes. And particularly how different workers are responding as compared to others. To date, there are limited studies that incorporate a longitudinal approach to study workers’ experiences. This may be due to the time commitments and other costs associated with doing longitudinal research (Rajulton, 2001). One exception is the work by Blaising et al. (2021) who sought to understand freelancer’s long-term experiences and evolution regarding workers’ career trajectories. However, Blaising et al.’s study was also limited in the small sample size, which included talking to 10 freelancers over 3 years. The current study provides more in-depth and robust findings that allow us to better understand online work, freelancers’ experiences and how these change over time.

The longitudinal freelancer panel provides empirical data about workers’ experiences and outcomes with online freelancing over time. While the study is a collaborative effort with the Digital Work Research Group, I have explicitly sought to collect interview and survey data that addresses my research questions. To do so, I have actively guided the development of the survey and interview instruments as well as the study protocols for the
various parts of this study. I discuss the data collection, sampling and recruitment and data analysis approaches for this freelancer panel investigation below.

4.2.1 Data collection

The freelancer panel was designed as a longitudinal study to gather data from the same workers across various points in time. The study incorporates three rounds of data collection, each done about one year apart in order to capture these freelancers’ differential experiences over time, including how their practices, arrangements, strategies and outcomes are evolving. Data collection began in November 2019 and concluded in May 2022. In each round of data collection, the study paired a survey with a semi-structured interview as the primary data collection methods. These methods are discussed below, along with the procedures, sampling and recruitment approaches, and outcomes from the longitudinal panel data collection effort.

Interview: Interviews are conducted with workers to gain an in-depth understanding of their experiences with online freelancing and how this form of work fits into their lives and career plans. The interviews are organized around several themes to address the stated research questions and also draw on important concepts such as labor strategies, work organization, household arrangements, and other topics that were raised in the literature as important to freelance workers, see Table 11.
### Table 11. Themes for interview questions

<table>
<thead>
<tr>
<th>Round #</th>
<th>Question Themes</th>
<th>Description/Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Round 1</strong></td>
<td><strong>Overview of work</strong></td>
<td>These questions are included to get a sense of how workers started on Upwork, what they do on Upwork, and the role of freelancing in their work strategy.</td>
</tr>
<tr>
<td></td>
<td><strong>Labor market strategy</strong></td>
<td>This section asks workers about their strategy for online work and how it has evolved over time.</td>
</tr>
<tr>
<td></td>
<td><strong>Employment effort</strong></td>
<td>This section asks about workers’ approach to finding work, their use of work flexibility and their perception of pay fairness.</td>
</tr>
<tr>
<td></td>
<td><strong>Work organization</strong></td>
<td>This section asks about how workers have organized for doing freelance work.</td>
</tr>
<tr>
<td></td>
<td><strong>Freelancing experience</strong></td>
<td>This section asks about challenges with freelancing and advice they would give others.</td>
</tr>
<tr>
<td></td>
<td><strong>Closing</strong></td>
<td>These questions ask for interesting freelancing experiences, allow freelancers to discuss additional questions, and ask participants if they are interested in future participation.</td>
</tr>
<tr>
<td><strong>Round 2</strong></td>
<td><strong>Household arrangements</strong></td>
<td>This section asks about workers’ household, caregiving, and other family arrangements and how workers balance these responsibilities with work.</td>
</tr>
<tr>
<td></td>
<td><strong>Review work arrangements</strong></td>
<td>This section asks about changes to work since we last spoke to workers.</td>
</tr>
<tr>
<td></td>
<td><strong>Pricing and bidding</strong></td>
<td>These questions are to get a sense of workers’ pricing and bidding strategies, including how strategies have changed and what platform metrics they pay attention to.</td>
</tr>
<tr>
<td></td>
<td><strong>Online identity</strong></td>
<td>This section asks about workers’ strategies for presenting themselves online, including on social media and other platforms.</td>
</tr>
<tr>
<td></td>
<td><strong>Networks and community</strong></td>
<td>This section asks about the resources, networks, and communities that workers leverage for their work.</td>
</tr>
<tr>
<td></td>
<td><strong>Closing</strong></td>
<td>This section asks about freelancing tips, additional questions, and about workers’ interest to continue</td>
</tr>
</tbody>
</table>
As shown in Table 11, the interview themes focus on a range of topics that allow me to better understand the experiences of freelance workers. Starting in Round 1, interview questions ask about strategies, efforts, and arrangements of online freelance workers. Asking questions from these themes across the rounds of data collection allows me to look for changes over time among workers. Additionally, in subsequent rounds, the interview themes cover topics such as family and household arrangements, identity presentation, and networks and social support.

**Survey:** The survey component of this study focuses on supplementing the data from interviews. The survey instruments allow me to gather descriptive quantitative data about freelancers’ arrangement, satisfaction, and feedback about the platform. It also provides a way to track changes over time among participants. Finally, the survey captures data about
workers’ identities, including their self-reported demographics and identity characteristics, such as workers’ gender, race, ethnicity, family arrangements, and other attributes for analyses comparing different freelance workers. Table 12 includes the themes for the survey questions.

**Table 12. Themes for survey questions**

<table>
<thead>
<tr>
<th>Round #</th>
<th>Question Themes</th>
<th>Description/Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Appendix 1)</td>
<td>Freelance work overview</td>
<td>These survey items ask about work arrangements and the efforts of work on freelancing platforms.</td>
</tr>
<tr>
<td></td>
<td>Freelance labor</td>
<td>These items ask about pay satisfaction, benefits, savings, and overall satisfaction with online freelancing.</td>
</tr>
<tr>
<td></td>
<td>Freelance differentiation</td>
<td>These items ask about the importance of formal schooling and experience in freelance work.</td>
</tr>
<tr>
<td></td>
<td>Demographics</td>
<td>These items are about workers’ gender, age, race, household arrangements, and location.</td>
</tr>
<tr>
<td>2 (Appendix 4)</td>
<td>Freelance work basics</td>
<td>These items ask about current work arrangements, satisfaction with online freelancing, work predictability, and efforts required to secure work.</td>
</tr>
<tr>
<td></td>
<td>Freelance effort</td>
<td>These items ask about earnings, financial security, satisfaction, and changes to benefits and savings.</td>
</tr>
<tr>
<td></td>
<td>Freelance branding</td>
<td>These items ask participants whether they are interested in sharing their LinkedIn and participating in another research sub-project about freelancer branding.</td>
</tr>
<tr>
<td>3 (Appendix 10)</td>
<td>Freelance work basics</td>
<td>These items ask about current work arrangements, satisfaction with online freelancing, work predictability, and efforts required to secure work.</td>
</tr>
<tr>
<td></td>
<td>Freelance effort</td>
<td>These items ask about earnings, financial security, and changes to benefits and savings.</td>
</tr>
<tr>
<td></td>
<td>Working</td>
<td>These items ask about workers’ freelancing</td>
</tr>
</tbody>
</table>
arrangements and Upwork features | arrangements, Upwork features, pricing arrangements (hourly vs. project-based), Upwork support interactions, and resources for navigating Upwork.

As shown, during Round 1, the survey focused on collecting demographic information, career information, and platform usage habits. For Round 2 and Round 3, we again had participants complete an online survey. The second and third surveys were used to record changes since the first survey (e.g., change in work status, change in a personal situation, change in finances, etc). For a more detailed description of all the survey questions, see Appendix 1 (Round 1), Appendix 4 (Round 2), Appendix 7 (Round 2-Summer), and Appendix 10 (Round 3).

**Multi-year Data Collection:** The study is designed to gather data from the same participants at multiple times to strengthen our understanding of participants on the platforms over time (See Table 13). Given that freelancing platforms change, a longitudinal study design that collects data over time allows me to build an understanding of how workers’ practices, arrangements and outcomes change over time and whether their self-reported identity mediates how workers respond, adapt or resist the platform changes.

For this panel, we have collected data in three rounds over three years (2019-2022). Round 1 was completed in May 2020, Round 2 was completed in August 2021 (this round was done in two parts, to incorporate an additional group of participants, see Section 4.2.2 on Sampling and Recruitment for details), and Round 3 was completed in May 2022 (See Table 13).
Table 13. Multi-year Data Collection Effort

<table>
<thead>
<tr>
<th>Data Round</th>
<th>Data Collection Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1</td>
<td>November 2019- May 2020</td>
</tr>
<tr>
<td>Round 2</td>
<td>November 2020- March 2021, July-August 2021</td>
</tr>
<tr>
<td>Round 3</td>
<td>November 2021-May 2022</td>
</tr>
</tbody>
</table>

4.2.2 Sampling and recruitment

The population for this study is U.S.-based online freelancers. The study draws on a purposive sample of workers who pursue freelance work as a primary or secondary source of income, selected based on three primary criteria: 1) the worker must have been based in the U.S; 2) they must have earned money on Upwork in the past year; and, 3) workers were sampled across a variety of occupations.

To select participants for the study, we randomly selected workers across three broad categories of occupations: 1) Administrative, 2) Creative, and 3) Technology. This decision was made due to the changing nature of occupational categories that Upwork provides. Given that these Upwork occupation categories change as the platform changes, we adopt the approach by Stephany et al. 2020, to develop three aggregate occupational categories: Administrative (e.g., bookkeeping, scheduling, basic project management), Creative (e.g., web design, editing, marketing), and Technology (e.g., scripting, programming, web maintenance).
Based on these three sampling criteria, we systematically sampled a range of random worker profiles across pages of Upwork search results for each occupation—Ensuring we took into consideration sampling evenly from the first to the last pages of workers for each type of worker occupation. To do so, we randomly selected a page number (with a random number generator) and retrieved another random number to select a worker on the selected page. This randomization of pages and workers allowed us to reach a variety of workers on Upwork, versus selecting only those that appeared on the first few pages of results.

Occupation was chosen as the primary way to include a range of workers given that workers’ job categories are visible and searchable on Upwork. Contrastingly, the Upwork platform does not allow workers to self-identify by gender, race, ethnicity or other identity categories (And clients cannot search for workers based on these worker attributes). Thus, the researchers involved made an effort to ensure the sample also included workers with a range of identities, by including workers across various gender and race presentations and online labor experience. By gender and race presentation, we rely on names and photos to make estimates of workers’ identities, understanding that there would likely be errors in some of these assumptions. Yet, we make these assumptions given that the presentation of gender (and race) “plays a fundamental role in the division of spaces within the perceived public and private spheres, on- and off-line.” (Williams & Aldana Marquez, 2015). For sampling purposes, the number of years working on the Upwork platform was used as a proxy for determining workers’ online freelancing experience. Once participants were recruited, the workers’ gender, race, and other demographics were self-reported through
the survey in the first round of data collection. Through this purposive sampling effort, the freelancer sample reflects a range of occupations, education levels, online experience, gender, race, location, and household size. The characteristics of the study sample, including the breakdown of participants’ gender, race and education, are shown in Table 14.

**Participant Recruitment:** Based on the sampling efforts above, the researchers determined a list of workers that fit our sampling criteria. These participants were contacted directly through the Upwork platform to invite them to participate in this research study. The participants were recruited through direct invites to a job set up on Upwork (The job title included “Academic Research” for all rounds). With the invite, we sent potential participants information about the project, including a brief overview of the project, the IRB-approved informed consent document for their review, and researchers’ contact information for questions or clarification. Once invited, these workers could accept or decline the invitation to participate by accepting or declining the job offer on Upwork. We were in contact with those who accepted (75 workers in Round 1) to describe the research process, including information on how to complete the survey and interview. Participants were compensated with $35 for each round of data collection they participated in.

The same recruitment process was completed for Round 2 and Round 3 of data collection. We invited all participants from the initial group of workers to participate in Round 2 and Round 3; however, we naturally had a few workers drop out over time. Additionally, data collection in Round 1 straddled the arrival of the COVID-19 pandemic, which may have affected the number of workers who dropped out of the study in subsequent rounds. See
Table 14 for a list of participant demographics. To accommodate for the natural drop and return of participants in the study over the years of data collection, we recruited new participants to the study in Rounds 2 and 3.

**Sampling Workers from Marginalized Groups:** Reflecting the goal of this study to investigate worker differences, in Summer 2021 - during Round 2 of data collection, I added 20 workers from historically marginalized groups - focusing specifically on Black and Latinx workers - to the sample. As noted, the Upwork platform does not provide a way to identify workers based on race or ethnicity, so researchers relied on workers’ photos, names, and languages spoken to determine a random list of workers that may be included in the sample across Administrative, Creative, and Technology occupations. Our sampling also ensured that we took into consideration sampling from the first to the last pages of workers for each type of worker occupation.

**Sampling Newcomers:** In Round 3, we recruited an additional 13 new participants. These participants were chosen from a pool of workers that had been on the platform for less than 3 months and had made less than $100 in earnings on the platform.
Table 14. Freelancer sample characteristics

<table>
<thead>
<tr>
<th></th>
<th>Round 1 (73 total)</th>
<th>Round 2 (68 total)</th>
<th>Round 3 (66 total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of participants per round (survey and/or interview)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Female</td>
<td>47</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>26</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Non-binary</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Occupation</td>
<td>Administrative</td>
<td>32</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Technology</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Creative</td>
<td>29</td>
<td>27</td>
</tr>
<tr>
<td>Education</td>
<td>No college degree</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Associates</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Bachelors</td>
<td>33</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Post-graduate degree</td>
<td>29</td>
<td>25</td>
</tr>
<tr>
<td>Race</td>
<td>Asian</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Black/African American</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>44</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Other race</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Hispanic/Latinx</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Non-Hispanic</td>
<td>70</td>
<td>58</td>
</tr>
</tbody>
</table>

**Procedures:** Recruitment and data collection were done entirely online - through Upwork. The survey was done online (via Qualtrics), typically prior to scheduling an interview with workers. After we received a worker's survey, we contacted them to schedule an interview. Semi-structured interviews are conducted as an audio call via Zoom, following a prepared interview guide and protocol (See Appendix 1-12). The combination of the two data collection efforts took approximately one hour for each worker (~15 minutes for the survey and ~45 minutes for the interview). Workers were hired and compensated $35 for their time on Upwork, as we recognize these participants are hourly workers. Participants were paid if they began any part of the survey or interview, per IRB guidance. We also rated all workers 5 stars (the highest rating) and left a positive review for their participation in each
round. All survey and interview instruments as well as their accompanying protocols have been approved by Syracuse University’s Institutional Review Board (see Appendix 15).

Given that this study design involves several rounds of surveys and interviews, I collaborated with the Digital Work Research Group to design the protocols, survey questions, and interview guides. This research group consists of two principal investigators (Steve Sawyer and Michael Dunn) who served as supervisors and several undergraduate research assistants. The undergraduate research assistants who are part of this group were involved in the data collection process and each had training to ensure all data collection efforts followed IRB guidelines and protocols\(^\text{11}\). As a research group, we met weekly remotely to discuss project progress and we communicate as often as needed in between meetings through Slack and email. We also kept detailed group notes, and researchers who participated in interviews posted their notes and insights to Slack to keep a record of all data collection efforts for this investigation.

Following the data collection protocol described above, we contacted participants three different times to invite them to participate in the study. Recruitment and data collection for Round 1 was conducted from November 2019 to May 2020. Recruitment and data collection for Round 2 was conducted in two parts, the first with the original panel participants from November 2020 to March 2021, and the second was done in July and

\(^{11}\) Based on previous experience with other data collection efforts, we adopted an experimental training process for all in the research group. Each of the research assistants were involved in the entire data collection process. This included 1) weekly meetings to discuss project planning and data collection design prior to data collection, 2) involvement in developing each protocol, and survey and interview research instruments and walkthroughs of final research protocols, 3) shadowing one or multiple interviews with the lead investigators or advanced researchers, and 4) weekly debriefing meetings, to discuss what we are learning through data collection.
August 2021 to include an additional set of workers (sampled from marginalized groups). Recruitment and data collection for Round 3 was conducted from November 2021 to May 2022. The breakdown of the surveys and interviews completed in each round is included in Table 15. On average, interviews each took approximately 45 to 60 minutes. However, the efforts for collecting interview data also required time for contacting workers on Upwork, sending out the survey, setting up interview times, following up with and compensating workers through Upwork, writing up notes/insights from the interview, and ensuring data was stored properly. Together, this process takes approximately 3-4 hours to complete all the steps required per interview.

Table 15. Overview of data collected

<table>
<thead>
<tr>
<th>Data Round</th>
<th>Data Collection Period</th>
<th>Total Number of Participants</th>
<th>Surveys</th>
<th>Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1</td>
<td>November 2019-May 2020</td>
<td>73</td>
<td>73</td>
<td>67</td>
</tr>
<tr>
<td>Round 2</td>
<td>November 2020-March 2021, Summer 2021 (20 new workers)</td>
<td>68</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>Round 3</td>
<td>November 2021-May 2022</td>
<td>66</td>
<td>66</td>
<td>66</td>
</tr>
<tr>
<td>TOTALS</td>
<td></td>
<td>(108 total unique participants)</td>
<td>207</td>
<td>201</td>
</tr>
</tbody>
</table>

12 The number of surveys and interviews are different per round given that participants were not required to complete both efforts. While we encouraged participation in both efforts, some freelancers only completed either the survey or the interview in that round of data collection. In our effort to be more inclusive, I present the aggregate number of surveys and interviews that were completed.
**Participation Outcomes:** As noted in Table 15, our sampling and recruitment efforts led to the inclusion of 108 unique freelancers across all data collection efforts. From these, there were 73 freelancers in Round 1, 68 freelancers in Round 2 (20 of these workers were sampled in the Summer of 2021 as part of the effort to include more Black and Latinx workers); and 66 workers in Round 3 (13 of these workers were added in this round part of an effort to include more newcomers in the study). Across the rounds, this led to the completion of 207 total survey responses and 201 interviews (see Table 15).

### 4.2.3 Instruments

As noted, each round of data collection included a survey and interview. These are included as appendices and are described below in Table 16. Because we added a group of new participants to the panel study in Round 2, these workers had a separate survey and interview guide than those for Rounds 1 and 2 of the broader panel. The instruments for this Summer 2021 group were developed as a selective combination of the survey and interview questions from Rounds 1 and 2 and were also tailored to ask about the role of their identity in their experiences (See Appendices 7-9). In Round 3, all participants were administered the same survey and interview questions for consistency.

**Table 16. Freelancer panel instruments and protocols**

<table>
<thead>
<tr>
<th>Round #</th>
<th>Collection Period</th>
<th>Group of participants</th>
<th>Instruments (See Appendices 1-12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2019-20</td>
<td>Initial Group</td>
<td>Round 1 Survey</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Round 1 Interview Guide</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Round 1 Protocol</td>
</tr>
<tr>
<td>2</td>
<td>2020-21</td>
<td>Initial Group</td>
<td>Round 2 Survey</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Round 2 Interview Guide</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Round 2 Protocol</td>
</tr>
<tr>
<td></td>
<td>2021 Summer</td>
<td>Summer 21 Group</td>
<td>R2-Summer 21 Survey (Includes questions from Round 1 and Round 2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R2-Summer 21 Interview Guide (Includes questions from Round 1 and Round 2, modified for this instrument)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R2-Summer 21 Protocol</td>
</tr>
<tr>
<td>3</td>
<td>2021-22</td>
<td>Initial Group + Summer 21 Group</td>
<td>Round 3 Survey</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Round 3 Interview Guide</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Round 3 Protocol</td>
</tr>
</tbody>
</table>

4.2.4 Ethical Considerations

In undertaking this research, there were several considerations to ensure we provided ethical treatment of the participants throughout this study. First, the study was reviewed and approved by the Syracuse University Institutional Review Board (IRB). All researchers who took part in the study followed the guidelines and regulations set forth in the project’s IRB. Beyond the attention to the IRB, here are additional steps we took to ensure the ethical treatment of all participants prior to, during and after the data collection:

1. **Prior to data collection:**
   a. *IRB and Informed Consent:* Our team followed all IRB guidelines and ensured we provided ethical treatment of all participants from the start of the project, including ensuring all participants were fully informed about the research
and knew their participation was voluntary. All participants had the right to refuse to participate and withdraw from the study at any time or choose to skip any questions or part of the research they didn’t want to participate in. We covered this in the informed consent that was sent to all workers during recruitment and was reiterated before the beginning of each interview.

b. Recruitment: Because we recruited directly from the Upwork platform, we ensured that the participants didn’t have to spend money or “Connects” on Upwork to find and participate in the study. Instead, the participants were recruited by us directly inviting them to participate in our posting for the study. Participants weren’t affected whether they accepted or declined the invitation, this info was also presented in the recruiting materials sent to all participants.

2. During data collection:

a. Fairness, Equity, and Avoiding Harm: To ensure we provided fairness and equity in the study, all researchers followed the IRB-approved protocol during data collection, including the same process for data collection across all participants. We also ensured that all participants received the same treatment afterward (compensation, ratings, etc).

b. Compensation: Additionally, because we understand that freelancers are compensated on an hourly or project basis, in this study all participants were compensated for their time in the study. Participants who started any portion of the study were compensated $35 (for the approximately 60 min study). This was the case even if they only completed a portion of the study.
c. **Sticking to Study Time Frame:** Beyond compensation, for any interview that approached the 45 min mark, researchers were instructed to acknowledge the time and wrap up the interview as agreed upon with the freelancer. Again, this aligns with our understanding that participants do hourly and project-based work, so we wanted to respect their time.

d. **Ratings and Review:** To minimize any harm and provide a positive experience and benefit to all participants, our team thanked each participant, provided them compensation on Upwork, and provided a 5-star rating and a positive review on the platform. The review for all participants was: “<NAME> was easy to work with. They were prompt, professional, and articulate. We look forward to hiring them again!”

3. **After data collection:**

a. **Data Management and Confidentiality:** We followed the confidentiality and data management process as noted in our IRB (see Appendix 14). This included de-identifying the survey, transcript and audio files before transferring them to our data repository. Each participant was assigned a participant number (P#) and code, which is used in the data instead of any personally identifiable information to maintain participant confidentiality. Any analysis, papers and presentations from this data only report the P# assigned to a participant to continue keeping participants’ confidentiality.

b. **Participant Updates:** Finally, we ensure we maintain a positive relationship with our participants and seek to communicate with them and provide value regularly given the longitudinal nature of the study. One of the ways we
maintain communication and provide them value is by sending out an update with our key findings after each round of data collection. Each update allows the participants to learn about the patterns, interesting insights and other information that we are also learning from the sample.

4.3 Platform research design (RQ3)

The focus of this question investigates the role of platforms in understanding different outcomes among workers. This investigation addresses RQ3: *What is the role of platforms in mediating online freelancing outcomes?* The goal of the platform investigation is to collect data and parse through the individual worker profiles from the Upwork platform to be able to triangulate data from the Freelancer Panel and advance our understanding of how workers’ differential experiences may be mediated by the Upwork platform design. Given the research questions and goals of this research, I focus on how individuals present their professional histories, experience, and competencies online, and how workers’ presentation and outcomes vary across self-reported identities.

4.3.1 Data collection

The data collection for this effort requires gathering the available data from Upwork and from participants’ Upwork profiles. Platform data collected includes a combination of qualitative and quantitative data. For example, quantitative data includes participants’ job success score, total earnings, total jobs, total hours, asking rate, and ratings for comparison across groups. Qualitative data include workers’ headlines, worker summaries and client reviews. Both of these types of data can help address the research question, by analyzing
how workers differ in their presentation and how the platform is mediating worker presentation and outcomes.

4.3.2 Study population and sampling

For this effort, the sample participants were those included in the panel (See Section 4.1.2). This allowed me to compare platform findings by worker occupation, level of effort on the platform, worker arrangement, and worker demographics such as gender, race, ethnicity, education level, etc (See Table 14 for participant demographics).

4.4 Data analysis

Following the data collection process, I analyzed the interview, survey, and platform data independently, and then together to address my research questions and develop insights as described below.

4.4.1 Analysis of interview data

Building from the research framework outlined in Chapter 3, data analysis combines three approaches: grounded theory/inductive coding, deductive coding, and thematic analysis (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006). I used a thematic analysis approach to identify key themes in the interview data. Thematic analysis is a useful method for identifying, analyzing and documenting themes in a data set. The goal of this method is to identify patterns in meaning across the data. As such, a thematic analysis approach is useful for understanding individuals’ experiences, opinions and perspectives; thus, this approach is useful for the goals of the study.
I draw on Braun & Clarke’s (2006) guidance for conducting a thematic analysis that is bottom-up (starting by exploring the data) and iterative (multiple rounds of coding and theme refinement) (Braun & Clarke, 2006). This is a useful approach to learn from the different ideas conveyed in the data. A bottom-up approach avoids having a predetermined set of codes that may force the analysis and instead allows for a more organic development of codes. Braun and Clarke’s thematic analysis is one widely used iterative process to systematically develop a useful set of themes from interview data.

Drawing on their approach, and following practical guidelines from the literature, I adapted existing analysis approaches to my data and study design. Given the longitudinal and large-scale qualitative design of our study, I analyzed the qualitative data in five stages with the assistance of two trained research assistants, as discussed below:

1. **Inductive theme exploration**: First, three researchers read through the transcripts and each completed an exploratory coding effort, informed by principles of inductive coding on a subset of transcripts (Strauss & Corbin, 1997). Following the individual exploratory coding stage, the researchers organized and synthesized the initial meaning units into higher-level themes.

2. **Develop initial codebook**: The inductive coding effort allowed the researcher to gain familiarity and derive themes after initial discussions, informing the creation of an initial codebook. During this process, the researchers held weekly meetings to share reflections, discuss points of disagreement, offer alternative explanations, and further develop a set of themes.
3. **Finalize broader themes:** The themes and patterns that emerged during the preliminary coding effort were discussed among three researchers. We engaged in regularly scheduled discussions to expand, merge, and alter themes in order to craft a revised codebook and ensure proper operationalization of each code. This iterative process continued until the researchers were not introducing new meaning units from the transcripts and a 10-code codebook was created on the role of gender, race and other identity attributes in online freelancing.

4. **Code a subset of transcripts for coder agreement:** In the fourth stage, each of the three researchers individually coded the same subset of transcripts to ensure intercoder reliability, following the finalized codebook. Each researcher individually coded 15 transcripts in Nvivo, a common qualitative analysis tool. Then, we ran intercoder reliability measures and ensured we reached a high percent agreement across coders.

5. **Individual coding of the entire dataset:** Once high levels of intercoder reliability were observed, each researcher was assigned a segment of the transcripts to deductively code according to the codebook developed and refined in the previous stages. This allowed us to collectively code more than 200 interview transcripts. We used Nvivo to perform the individual coding for the entire dataset.

4.4.3 Analysis of survey responses

Survey data was designed to complement the data from the interviews. As such, survey data was used to guide a comparative analysis of workers based on various self-reported identity categories (Gender, race/ethnicity, etc), as described above. Additionally, survey
data were used to triangulate findings from interview data. To do this, I drew on descriptive statistics. The goal of descriptive statistics is to provide characteristics of a dataset. My aim was to understand the details and compositions of the sample. To facilitate survey data analysis, I followed the following steps to prepare, analyze and synthesize the data collected:

1. **Data Preparation:** In this step, the goal was to identify low-quality responses that may skew results, including duplicate responses, missing data.

2. **Data Exploration:** Next, I sought to familiarize myself with the data to get an overview of what the survey data shows through descriptive statistics. Descriptive statistics include looking for the frequency distribution, central tendency and data dispersion. This can help to determine emerging patterns in the data (Müller et al., 2014).

3. **Systematic data analysis:** In this step, I refined patterns in the survey data, particularly focused on comparing workers’ responses based on their various self-reported identity categories to determine meaningful patterns.

4. **Synthesizing and documenting insights:** For this final step, the goal was to summarize the key themes ground through the analysis. This included developing chats and other visualizations of the data.

I used several tools to complete the analysis of the survey data (for preparing, exploring, and visualizing the data), including Excel, Tableau and R.
Given the longitudinal nature of the data, I also analyzed the differences in workers’ responses over time. Longitudinal qualitative research (LQR) is unique in that time is designed into the research process, which allows change to be a key focus for analysis. Because LQR involves data collection at various times, analysis of longitudinal qualitative data is complex and time-consuming. “A longitudinal analysis occurs within each case and as comparison between cases. The focus is “to ground the interviews in an exploration of processes and changes” (Calman et al., 2013). Given that this analysis is complex, I focused primarily on analyzing the experiences of the broader groups of participants across categories of gender, race, occupation and employment status. I focused on primarily comparing averages (means) of workers’ experiences across these identity categories.

This analysis allowed me to answer questions about the change over time and differences in participants’ experiences to address RQ1 and RQ2. The longitudinal analysis leverages the themes from the thematic analysis described above. Themes allowed me to identify key patterns that may change/evolve over time across participants’ responses. I used NVivo to code data and keep track of the themes and relationships across the interview data over time.

4.4.3.1 Scoping Attributes for Intersectional Analysis

To address the Research Questions for this study (RQs 1-3), I had to make several decisions to identify and scope the identity attributes to be included in the analysis of survey and interview data. For the purposes of this research, I relied on a combination of 1) existing research, 2) discussions with committee members, and 3) survey data (the actual responses) to identify and scope the key identity attributes for analysis.
For example, existing literature highlights the importance of occupation, gender, and race in online freelancing and in work experiences and outcomes more broadly (A. R. Barzilay & Ben-David, 2016-2017; Castilla, 2008; Dunn et al., 2021; Foong et al., 2018; Hannák et al., 2017c; Vyas, 2020). As such, these are the primary attributes that I report on for the intersectional analysis in Chapter 5. However, after discussions with committee members and reviewing the survey responses, additional attributes of ethnicity, employment status, and education were also included in some of the intersectional analyses to provide a more robust analysis. A detailed breakdown of these identity attributes and the decisions for categorization within each attribute is outlined in Appendix 14.

→ Occupation (Administrative / Creative / Technology)
→ Gender (Female / Male / Non-binary)
→ Race (White / non-White) & (Black / White / Other Race)
→ Ethnicity (Hispanic / non-Hispanic)
→ Employment (Has FT Job / No FT Job)
→ Education (No degree / Associates degree / Bachelor's degree / Post-graduate degree)

4.4.3 Analysis of platform data

The data analysis relied on a walkthrough of the platform. The goal of this walkthrough is to guide a comparative analysis of workers based on various self-reported identity categories (e.g., gender, race/ethnicity, etc). This helped me generate initial findings about worker differences in presentation (what they include/exclude in their profile, strategies for identity presentation) as well as outcomes on the platform (i.e., total jobs or total earned
based on attributes like gender/race/etc.). The data also assisted in later efforts for triangulation with earlier findings.

4.4.5 Triangulating results

Because this project includes survey, interview and platform data, I validated findings by comparing the findings across each of these datasets. Methodological triangulation involves the use of more than one qualitative and or quantitative method to study a phenomenon.

Triangulation allows researchers to test conclusions across methods and “if the conclusions from each of the methods are the same, then validity is established” (Guion et al., 2011). For this project, I sought to triangulate findings from the freelancer panel thematic analysis, longitudinal analysis and complementary survey analysis, and then also compare them with the findings from the platform investigation. By comparing (triangulating) the findings from each analysis, I can build on how the data shows the same or similar conclusions about the experiences of freelancers and their outcomes and what this means for workers of various identities.

4.5 Chapter summary

This chapter outlines the design of the research, including the data collection and analysis efforts. This chapter includes a discussion about the research site, the panel study design, data collection efforts, recruitment and sampling procedures. I also discuss specific processes and tools involved in the analysis of the data.
Chapter 5: Findings

In this chapter, I describe the study findings related to the evolving experiences and outcomes of online freelancers with a focus on freelancers from marginalized populations.\(^\text{13}\)

This section incorporates the findings organized according to the research questions for the study (See Table 17). For each section, I provide an overview of each theme and the supporting evidence.

Table 17. Research questions and related findings

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Section</th>
<th>Theme</th>
<th>Supporting Evidence</th>
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<tbody>
<tr>
<td>( RQ1: ) How do the platform-mediated experiences of freelancers from marginalized populations differ from those of other freelancers? (Section 5.1: Differences in Platform-mediated Experiences)</td>
<td>5.1.1</td>
<td>Gender Differences in Online Freelancing</td>
<td>➔ Gendered occupational expectations ➔ Gendered responsibilities expectations ➔ Gendered value of work</td>
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<tr>
<td></td>
<td>5.1.2</td>
<td>Racial Differences in Online Freelancing</td>
<td>➔ Racial stereotypes &amp; biased expectations ➔ Marginalized identities as an asset</td>
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<tr>
<td></td>
<td>5.1.3</td>
<td>Earning Differences in Online Freelancing</td>
<td>➔ Gender gap: differences in male and female freelancer earnings ➔ Racial gap: differences in White and Non-White freelancer earnings ➔ Intersectionality in online freelancing</td>
</tr>
<tr>
<td>( RQ2: ) How do freelancers’ experiences and strategies change</td>
<td>5.2.1</td>
<td>Changes to Working Arrangements</td>
<td>➔ Decrease in reliance on earnings from online freelancing ➔ Work stability as an increasing priority</td>
</tr>
</tbody>
</table>

\(^{13}\) A subset of these findings were included in a manuscript titled “Platformization of Inequality: Gender and Race in Digital Labor Platforms”, which was submitted for review at CSCW 2023.
over time?
(Section 5.2: Changes in Freelancers’ Experiences)

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<th>5.2.2</th>
<th>Changes to Freelance Efforts</th>
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<tr>
<td></td>
<td>➔ Reduction in freelancing hours</td>
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<td></td>
<td>➔ Reduction in unpaid efforts</td>
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<th>Changes to Bidding Strategy</th>
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<td>➔ Reduction of bidding</td>
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<td>➔ Changes in bid success rates</td>
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RQ3: What is the role of platforms in mediating online freelancing outcomes?
(Section 5.3: The Role of Platforms in Online Freelancing)

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<td>➔ Identity through freelancer photos</td>
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<td>➔ Identity through freelancer names</td>
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<td>➔ Intersectionality in profile presentation</td>
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<th>5.3.2</th>
<th>Deconstructing and filtering identity</th>
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<td></td>
<td>➔ Geographic exclusion</td>
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<td>➔ Language exclusion</td>
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<th>5.3.3</th>
<th>Strategizing platform identity</th>
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<td>➔ Taking back control of profile presentation</td>
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5.1 Differences in platform-mediated experiences (RQ1)

This section expands on the outcomes of the first research question, **RQ1: How do the platform-mediated experiences of freelancers from marginalized populations differ from those of other freelancers?** The findings presented in this section focus on comparing the lived experiences of online freelancers across their identities, including gender, race, work arrangement and occupation to better understand differences between online freelancers from historically marginalized groups and other online freelancers. The data on online freelancers’ experiences support three overarching themes: 1) gender differences in online freelancing; 2) racial differences in online freelancing; and 3)
arrangements and outcomes differences in online freelancing. I elaborate on each of these overarching themes next.

5.1.1 Gender differences in online freelancing experiences

Interview data first illuminates that there are differences in online freelancers’ experiences on Upwork based on their gender. Participants across the three rounds of data collection discussed three primary ways in which female freelancers’ experiences on Upwork differ from those of their male counterparts: 1) gendered occupational expectations, 2) gendered responsibilities expectations, and 3) gendered value of work.

5.1.1.1 Gendered occupational expectations

Data makes clear that within online freelancing, there are gender-based differences in occupational expectations (e.g., P01, P07, P17, P19, P42, P49, P89). Both male and female participants highlighted instances they believe clients were consciously and unconsciously looking for a freelancer of a given gender based on a job or occupation. One female creative freelancer said “I have been completely ignored for work that I would be great at, because I have experience renovating homes. I used to work as an insurance claims adjuster, so I’ve literally taken courses on home construction. But I have never once been offered a writing job in that niche, and I’ve applied for them. And I cannot help but assume it has to do with my gender: ‘What is this woman going to know about writing about home construction?’” (P19, Female, Creative, White).

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14 For gender, I use male or female to recognize freelancers as male-, or female-, identifying. Participants self-identified their gender in the study through their survey responses.

15 To present the findings, I anonymized the participants and assigned them a P-number (e.g., P01, P02, etc) to include freelancers’ direct quotes and incorporate their insights in this submission.
As noted by P19, this bias may be due to generalizations about the capabilities of natural skills of each gender. Clients and employers online and off have conscious and unconscious biases about the perceived abilities of each gender. These biases are more pronounced in the experiences of freelancers from traditionally gender-stereotyped professional roles. A male administrative freelancer highlights this difference among lawyers “I think that sometimes people believe that a woman may be less capable than a man, or they’re perhaps deciding that they would prefer to hire a man rather than a woman and it’s just more of an unconscious bias. I definitely think that may be the case with lawyers, for example, because people have this idea that they want to hire a bulldog, they want to hire somebody tough to fix their problem, and the most effective lawyers are not bulldogs, but that’s what people think, and they have a hard time imagining a woman being able to do that, or they’re not comfortable with women who can do that” (P49, Male, Admin, Black).

These known gender-based biases were demonstrated in other occupational categories. For example technical work was perceived as associated with males: “I think there is still a bias in which people perceive of men being more astute technically than women. There’s still a bias there, particularly in business and construction fields, which I don’t think is accurate at all, but I still think there’s a bias there” (P89, Male, Tech, Black). Contrastingly, administrative assistant work is associated with females, reflected by clients hiring based on these stereotypes. One female administrative freelancer said “My field is virtual assistant on Upwork, and they always tend to want a female, because females are stereotypically in those roles. I work for a law firm and in a firm, I want to say of upwards of 500 employees, we have
three male secretaries, so it’s rare, very rare, so I do think, at least for what I do, gender plays a role” (P17, Female, Admin, Black).

5.1.1.2 Gendered responsibilities expectations

Data show that there are expectations of gender-based responsibilities associated with online freelancers. Participants highlighted examples of different home/work responsibilities associated with men and women, and how these may be influencing freelancers’ work experiences (e.g., P24, P29, P31, P67). For example, males are more frequently associated with being the primary breadwinner and social expectations of higher income levels despite occupation, industry or experience level. One female freelancer said "Historically, the males are still the primary breadwinner. I don’t mean that to sound archaic or anything, but I think that they have to have a certain amount. Whether it is male or female, that primary breadwinner has to have a higher rate and expectation” said P24 (Female, Admin, White).

Female participants noted that differential earnings and treatment between male and female freelancers is in part due to the gendered expectations and values often associated with gender. And, females were more likely to discuss these gendered views of differences in values among females and males. Their responses express that traditional roles and expectations are attached to gender.

Females are more often associated with child care and household responsibilities, viewed as primary caregivers. And, as such, there may be implicit and explicit expectations that their work and careers should be second to these gendered expectations. Indeed,
freelancers voiced their views that align with these expectations toward women’s participation such as prioritizing home-based responsibilities over their professional pursuits. One freelancer said “I don’t want to sound cliché, or like I’m complaining, or whatever, because I’m not, and I love being with my son and all that stuff, but I guess…you read in the news and stuff, and typically it is the woman who would take off or be the one more with the kids, and raising them at home and stuff, so because I’m the mom and because I’m the woman of the household, I was the one that it affected my career… I think childcare is a really big deal and a heavy burden, particularly for women and for a lot of women since, right or wrong, or whatever, even today I think women are typically the ones who are just more responsible for that, or they end up being the ones that have the gap in their career, or they have to take off work” (P29, Female, Creative, White).

These perceived gender responsibilities are visible in other ways. For example, male freelancers benefit from being perceived as the primary breadwinner, as they are more likely to ask for and to receive fair rates. In contrast women who are also primary breadwinners, or in dual-earning households, will be less likely to ask for their worth and less likely receive fair rates based on these skewed perceptions of gender roles and responsibilities. One female freelancer provided a possible interpretation of this finding by noting “I really think why women are afraid to ask the same is just how we were raised as kids, that we look up to the husband, and the dad’s supposed to take care of the family. And now I have so many friends that are not married and have to take care of themselves” (P31, Female, Creative, White).
5.1.1.3 Gendered value of work

A third gender-based difference visible in freelancers’ experiences is the value of work and freelancers. Data show that female freelance work is undervalued and underpaid on digital labor platforms (e.g., P02, P08, P13, P15, P39, P41, P45, P46, P47). This issue was noted by both male and female participants who believe women in general charge and earn less on these platforms. Several female participants recognize that they ask for less money than would a male counterpart. For example, one female in a Technology occupation said “I know I have, for many years, asked for much less money than a male counterpart would or has, and I’ve had direct comparisons in some jobs, and it’s always shocked me” (P08, Female, Tech, White). This participant continued to list the reasons she felt she has accepted charging and earning less for her work: “When I looked at why I’ve tolerated that, what it came down to for me was I was just happy to do the work, like money wasn’t the priority for me, which seems crazy, because I’ve always had to support myself, and if I was doing a job I loved but not necessarily making the amount of money that would support the lifestyle that I wanted” (P08, Female, Tech, White). This quote highlights that some women freelancers ask for and accept lower rates for their work, as they are satisfied with their work tasks and working arrangements. This suggests that for some of the online freelancers, income is perceived as secondary to work satisfaction.

Beyond the trade-off of income for work satisfaction, participants noted several additional reasons for females undervaluing their work. For example, female freelancers being more modest and their lack of confidence in asking for or negotiating fair rates. One female in a creative occupation noted females are uncomfortable asking for a fair rate even when they
know their worth, instead valuing maintaining relationships through self-driven compromise: “We want to find a good compromise. We want to find a situation where everyone is satisfied and I think sometimes we do undercut ourselves a bit that way...Even if my work is worth twice as much, it's hard to be that direct and say, ‘You’re offering me $150, but actually I’ll do it for $300.’ It’s hard for anyone to say that, but it’s something I need to get more comfortable saying and I think that is gender influenced” (P15, Female, Creative, White).

Gendered socialization was a recurring reason for female freelance work being undervalued. Male and female participants believe the ways females are raised and how they are expected to show up in the workplace influence how both freelancers and clients value female freelance work and contributions. For example a male freelancer in a creative occupation said “I think women are socialized, often, to value themselves less and value their contributions less. A lot of women I went to law school with are extraordinarily accomplished, but you’d never know, not just because they’re modest, but it’s almost as if they think that it would be impolite or inappropriate for them to assert themselves. But men do it with no problem. Men will go around and brag on themselves for hours, but a woman who is as competent, or more, is usually less likely. So I think there’s this internalized feeling that ‘I deserve less than whatever I might charge,’ mainly because of that societal discrimination” (P47, Male, Creative, White). This view of gender differences was echoed among female participants. For example, one female compared her approach with the approach of their male spouse: “So, like if I’m interviewing for a project or a job, I feel like I need that and that I’m lucky to be there. So, I feel like a lot of other women are like me, we feel like we are in the
position with no power. So, we don’t even think. Whereas I have watched my husband negotiate, and he knows that they want him and that he has all the power. So, of course he’s going to ask for what he wants” (P67, Female, Creative, White and Black).

Both male and female participants noted instances of clients’ attitudes being gender-based (e.g., P15, P19, P29, P46). For example, clients were more likely to speak in a demanding or pejorative tone to female freelancers. One male creative freelancer noted “Grown men will refer to a woman as a girl. They’ll use that language, and it’s somewhat...they’ll use language that in a different way, I would characterize as pejorative, and diminutive, and it’ll just show me their mindset” (P46, Male, Creative, Black).

Several female freelancers discussed how the power differential between clients and freelancers is even more pronounced when their clients are male. One freelancer said “I have noticed some perhaps gender issues with some clients, where I feel like it’s an intersection with culture as well. I have had some clients that I felt were quite sexist and sort of had the attitude of I’m going to order you around because I’m male. There was at least one client where I did not encourage any more work from that client because I just felt a little disrespected and I felt it was gender-based. ‘I can demand this; you will do this for me’” (P15, Female, Creative, White).

Another female freelancer highlighted a similar dynamic with a male client that did not value her work or accepted criticism from her as the expert. She said “I think that the way your clients speak to you and write...like I have a client who’s a smart guy, he has a master’s in engineering, but he doesn’t know jack about SEO and writing...But I have to be so gentle
with [him]… And I can’t help but think the dynamic in the relationship would be different if…like I have had to work so hard to prove myself to this guy” (P19, Female, Creative, White). These instances offer examples of differential treatment across genders in online freelance work. Unlike these experiences highlighted by female freelancers, there were no instances of clients’ attitudes or language being perceived as demanding, pejorative, or disrespectful toward male freelancers based on their gender.

5.1.2 Racial differences in online freelancing experiences

Interview data also showcases differences in freelancers’ experiences on Upwork based on their race and ethnicity\(^\text{16}\). Data highlights two primary ways in which race and ethnicity mediate the experiences of freelancers from minoritized groups: 1) racial stereotypes and biased expectations and 2) marginalized identities as an asset.

5.1.2.1 Racial stereotypes and biased expectations

Data illuminate how race and ethnicity mediate clients’ perception of freelancers on Upwork through stereotyping and biased expectations (e.g., P32, P46, P59, P63, P89, P94). Black and Hispanic/Latinx participants highlighted several ways in which they felt their race and/or ethnicity negatively influences clients’ perceptions, including through assumptions about freelancers’ qualifications, their abilities in a given occupation, and/or their language skills.

\(^{16}\) Given the limited sample of freelancers, race is reported as White and non-White for these findings. Ethnicity is reported as Hispanic or non-Hispanic. Participants self-identified their race and ethnicity in the study through their survey responses.
For example, one Hispanic male freelancer noted how the client's bias toward freelancers' linguistic proficiency can be influenced by the freelancers' ethnicity. “I'm bilingual and half Mexican, so I'm pretty sure that I expect that some people think that my English may not be good because I'm half Mexican” (P63, Male, Creative, Hispanic). This concern over language proficiency was also reflected on by a female creative freelancer: “When people see my last name, they go like oh, is it Latin, or whatever... I think I am the minority. I'm an editor in a male environment; I am a Black woman, and I'm Latin, so people sometimes assume that my English won't be good. They assume three hundred things. I produce and write in three languages, but I'm not going to oversell myself” (P32, Female, Creative, Black).

Beyond language expectations, data highlighted occupational stereotypes. A Black male technology freelancer noted how he has experienced several times that clients must adjust their perspective in order to accept his qualifications: “My photo shows I'm African American. I think that affects things. It's just perceptions... A lot of business owners have an adjustment to seeing that the perception of the analyst isn't what they thought in their mind. It doesn't add up to them... I would say because I'm African American, a lot of people just are not ready for someone who is African American to tell them how to run their business; or they’re just not ready for roles and figures of business acumen, because I do analytics and things... It takes some people a while to understand that wow, this Black person really is qualified. You learn that because people disappear, and then they come back after they have maybe one or two failed efforts with somebody who more fit in” (P46, Male, Tech, Black).

Similarly, another freelancer highlights how clients correlate race with technical abilities. One freelancer noted that certain racial groups are more likely to be perceived as
technically proficient, while other groups are subject to racially biased discrimination on their technical skills. He reflected on how his race might be influencing other platform experiences, including their platform metrics. “I sometimes worry about the ethnicity and the job success score, almost being like people making a correlation between those two. Like, maybe... because I feel like a lot of people have a bias that Black people aren’t as technically astute as folks from... like Black and Latino people aren’t as technically astute as people who are, perhaps, White or East Asian, or South Asian.” (P89, Male, Tech, Black).

Echoing client expectations related to race, freelancers described how a non-English-sounding name influences clients’ perceptions of freelancers’ language skills.

“Race, I’m not sure, because always when they see my name they’re very confused, but then once they call me and they’re like, ‘Oh, you actually speak good English,’ they seem very relieved about it, which is a little bit funny” (P94, Female, Admin, Hispanic). This view highlights erroneous client assumptions based simply on a freelancer’s name. A freelancer also noted: "As far as the name [removed], a lot of times, and there’s been a few times, I don’t know why this is, I’ve applied for a few jobs, and it will come back and say to me, 'The clients is looking for English only candidates.' I don’t know why it comes back that way, because English is the only language I know” (P59, Male, Creative, White).

5.1.2.2 Marginalized identities as an asset

Even as some participants felt they experienced a disadvantage from their presentation of race and ethnicity on the platform, another segment of participants highlighted their racial/ethnic identity as a benefit (e.g., P06, P09, P49, P63, P82, P87). These participants felt they were able to secure certain jobs based on their identity. Participants who saw their
racial/ethnic identity as a benefit noted that their identity allowed them to make a connection with the clients, or the client benefited or actively sought to support freelancers with a specific identity. This highlights ways identity may be positively related to freelancer outcomes.

One female freelancer said her connection with one client was based on their shared identity as being Black: “A couple of times I think I’ve gotten clients because I’m Black, and it’s generally after they go with someone else, and then they come back to me... There was an older gentleman who keeps coming back to me but my prices are too high, but I think he was more comfortable because he was Black and I was Black.” (P06, Female, Creative, Black).

Another participant felt a connection with several clients based on a shared language and ethnicity: “I have gotten at least two clients that hired me for multiple jobs because I spoke Spanish, so that was good. So, yeah, I would say ethnicity is a factor” (P63, Male, Creative, Hispanic).

From this perspective, race and ethnicity could be perceived as an asset in online freelance work. One freelancer said “I think that I have definitely had several Black clients who like working with a Black lawyer, and I totally get that and respect that. I think the fact that I’m an African American man really increased my understanding with that assignment I was telling you about around race and diversity. I think that there’s a sense that someone from my experience can speak really compellingly about it, as opposed to someone with less experience, or personal experience, lived experience” (P49, Male, Admin, Black).
Identity was also seen as a benefit among non-White participants in situations when a client actively sought to hire and/or support freelancers from racial minorities. One freelancer said “I’m African American, and the client that I had [recently] on Upwork wanted to support African American entrepreneurs. So that was a factor.. because I didn’t think that that was going to work out, but when I actually had a phone conversation with her and she was telling me a little more about herself, and she was telling me what her purpose was, her agenda was, I’m like, Okay. You’re being up-front. I like it” (P87, Male, Tech, Black).

Another freelancer mentioned that minority freelancers could be given preference for employment on the platform due to clients’ intentional minority hiring practices. “Some people might be like, ‘Oh, cool. I can check the box that I hired a minority’ or whatever, if they will talk to me” (P09, Female, Tech, Black). This experience was viewed as the exception when the clients are consciously and intentionally making decisions based on identity.

5.1.3 Earning differences in online freelancing

To explore differences in the reported earnings across the three rounds of data collection, I analyzed the central values from earnings data. Here, I report the median and the arithmetic mean—referred to as “average (mean)” or “average” for simplicity, calculated across various dimensions. For example, in this section I report the average and median earnings across freelancers’ 1) gender (female/male), 2) race (White/non-White), and 3) occupation (admin/creative/tech), while controlling for employment status (freelancers with full-time [FT] jobs/ freelancers without FT jobs). Null values (no responses) were excluded from the analysis. A total of 93 participants provided earnings data. See Figures 1-4 for a summary of earnings data across the three rounds of data collection.
The reported monthly freelancing earnings reinforce that both gender and race mediate freelancers' outcomes in online freelancing. Survey findings suggest that male participants
tend to earn more than females on average. Findings also highlight there is a racial gap that penalizes non-White freelancers. An analysis of intersectionality in earnings shows that White male participants are reporting higher income rates, for the most part surpassing the earnings of other groups across occupation, and employment arrangements, with only a few exceptions.

Figure 3. Average (mean) monthly earnings across identity dimensions
Figure 4. Median monthly earnings across identity dimensions

5.1.3.2 Gender gap: Difference between male and female freelancer earnings

Data show that overall, male freelancers tend to earn more on average than their female counterparts in online freelancing. Male freelancers’ reported average (mean) monthly earnings that were more than $300 higher compared to female freelancers in Round 1 (2019-20). Median monthly earnings also showed a gap in Round 1 and Round 3 of data
collection. There was a decrease in earnings among both genders after Round 1 (See Tables 18-19).

**Table 18. Average (mean) monthly earnings by gender (in dollars)**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>$1,569</td>
<td>$700</td>
<td>$728</td>
</tr>
<tr>
<td>Male</td>
<td>$1,874</td>
<td>$1,189</td>
<td>$1,501</td>
</tr>
<tr>
<td>Gender gap:</td>
<td>$305</td>
<td>$489</td>
<td>$773</td>
</tr>
</tbody>
</table>

**Table 19. Median monthly earnings by gender (in dollars)**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>$900</td>
<td>$500</td>
<td>$400</td>
</tr>
<tr>
<td>Male</td>
<td>$1300</td>
<td>$500</td>
<td>$500</td>
</tr>
<tr>
<td>Gender gap:</td>
<td>$400</td>
<td>$0</td>
<td>$100</td>
</tr>
</tbody>
</table>

Analyzing the difference between males’ and females’ median monthly income from freelance work shows that the gender income gap is more nuanced than it initially appears. Comparing freelancers with full-time (FT) jobs and those without FT jobs reveals that there was a greater gender income disparity in Round 1, as male workers’ median income was $1200 more than their female counterparts. However, females’ monthly median income was higher in Round 1 and Round 2 among those without FT jobs. Tables 20-21 provide an overview of mean and median monthly earnings by employment status.
This data suggests that overall, the gender gap (or lack thereof) is influenced by workers’ employment arrangements. Focusing solely on gender differences oversimplifies some of the differences between freelancers and minimizes the role of workers’ different working arrangements outside of online freelance platforms.

Table 20. Average (mean) monthly earnings by gender and job status (in dollars)

<table>
<thead>
<tr>
<th>Gender &amp; Job Status</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Has FT Job</td>
<td>No FT Job</td>
<td>Has FT Job</td>
</tr>
<tr>
<td>Female</td>
<td>$1,303</td>
<td>$1,769</td>
<td>$408</td>
</tr>
<tr>
<td>Male</td>
<td>$1,974</td>
<td>$1,784</td>
<td>$1,101</td>
</tr>
<tr>
<td>Gender gap:</td>
<td>$671</td>
<td>$15</td>
<td>$693</td>
</tr>
</tbody>
</table>

Table 21. Median monthly earnings by gender and job status (in dollars)

<table>
<thead>
<tr>
<th>Gender &amp; Job Status</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Has FT Job</td>
<td>No FT Job</td>
<td>Has FT Job</td>
</tr>
<tr>
<td>Female</td>
<td>$400</td>
<td>$1400</td>
<td>$400</td>
</tr>
<tr>
<td>Male</td>
<td>$1600</td>
<td>$1000</td>
<td>$800</td>
</tr>
<tr>
<td>Gender gap:</td>
<td>$1200</td>
<td>-$400</td>
<td>$400</td>
</tr>
</tbody>
</table>

5.1.3.3 Racial gap: Differences between white and non-white freelancer earnings

The data also make clear that race is another identity dimension mediating freelancers’ monthly earnings. White participants in the sample reported higher earnings as compared to non-White and multi-racial participants (based on mean and median calculations). The racial gap persisted across three rounds of annual data collection. This gap accounted for a
difference of $200 to $800 in median monthly earnings each round between White and non-White participants. Notably, there was a dip in average earnings across both groups after Round 1. Tables 22-23 provide an overview of average monthly earnings across the racial groupings.

**Table 22. Average (mean) monthly earnings by race groups (in dollars)**

<table>
<thead>
<tr>
<th>Race</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-White</td>
<td>$1,359</td>
<td>$594</td>
<td>$732</td>
</tr>
<tr>
<td>White</td>
<td>$1,953</td>
<td>$1,086</td>
<td>$1,415</td>
</tr>
<tr>
<td>Racial gap:</td>
<td>$594</td>
<td>$492</td>
<td>$683</td>
</tr>
</tbody>
</table>

**Table 23. Median monthly earnings by race groups (in dollars)**

<table>
<thead>
<tr>
<th>Race</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-White</td>
<td>$800</td>
<td>$400</td>
<td>$400</td>
</tr>
<tr>
<td>White</td>
<td>$1600</td>
<td>$800</td>
<td>$600</td>
</tr>
<tr>
<td>Racial gap:</td>
<td>$800</td>
<td>$400</td>
<td>$200</td>
</tr>
</tbody>
</table>

The racial earnings gap remains when analyzing the differences across employment status. In all rounds, White participants earned more than non-White freelancers both among freelancers with FT jobs and those without FT jobs. The greatest racial gap reported was in Round 1 (starting December 2019) in which White freelancers' median income from freelancing was $1,050 more than non-White freelancers. Tables 24-25 provide a summary of earnings by racial group and employment status across the rounds of data collected.
Table 24. Average (mean) monthly earnings by race and employment status (in dollars)

<table>
<thead>
<tr>
<th>Race &amp; Job Status</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Has FT Job</td>
<td>No FT Job</td>
<td>Has FT Job</td>
</tr>
<tr>
<td>Non-White</td>
<td>$1,023</td>
<td>$1,574</td>
<td>$303</td>
</tr>
<tr>
<td>White</td>
<td>$1,938</td>
<td>$1,967</td>
<td>$796</td>
</tr>
<tr>
<td>Racial gap:</td>
<td>$915</td>
<td>$393</td>
<td>$493</td>
</tr>
</tbody>
</table>

Table 25. Median monthly earnings by race and employment status (in dollars)

<table>
<thead>
<tr>
<th>Race &amp; Job Status</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Has FT Job</td>
<td>No FT Job</td>
<td>Has FT Job</td>
</tr>
<tr>
<td>Non-White</td>
<td>$550</td>
<td>$1,000</td>
<td>$325</td>
</tr>
<tr>
<td>White</td>
<td>$1,600</td>
<td>$1,600</td>
<td>$450</td>
</tr>
<tr>
<td>Racial gap:</td>
<td>$1,050</td>
<td>$600</td>
<td>$125</td>
</tr>
</tbody>
</table>

5.1.3.4 Intersectionality in online freelancing

Data show that combining race and gender identities further impacts freelancers’ earnings from freelancing platforms, providing a different perspective of freelancer outcomes based on these two intersecting identity dimensions. Individuals who self-identified as both White and male reported the highest earnings compared to other racial and gender groupings.

Among White participants, males reported higher earnings across each round of data collection than their female counterparts. Among non-White/multi-racial participants,
female participants reported higher earnings from freelancing than their male counterparts across all rounds of data collection. However, the gap between the male and female participants who identified as non-White/multi-racial was much smaller than the gap between the White participants. A summary of mean and median monthly earnings across the gender and race intersection are reported in Tables 26-27 and Figure 5.

Table 26. Average (mean) monthly earnings by race and gender (in dollars)

<table>
<thead>
<tr>
<th>Racial Group</th>
<th>Gender</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-White and Multi-Racial</td>
<td>Female</td>
<td>$1,694</td>
<td>$669</td>
<td>$868</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$1,008</td>
<td>$520</td>
<td>$607</td>
</tr>
<tr>
<td>White</td>
<td>Female</td>
<td>$1,494</td>
<td>$714</td>
<td>$625</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$2,956</td>
<td>$1,600</td>
<td>$2,327</td>
</tr>
</tbody>
</table>

Table 27. Median monthly earnings by race and gender (in dollars)

<table>
<thead>
<tr>
<th>Racial Group</th>
<th>Gender</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-White and Multi-Racial</td>
<td>Female</td>
<td>$1,200</td>
<td>$450</td>
<td>$400</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$800</td>
<td>$350</td>
<td>$500</td>
</tr>
<tr>
<td>White</td>
<td>Female</td>
<td>$800</td>
<td>$550</td>
<td>$400</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$2,200</td>
<td>$1,000</td>
<td>$900</td>
</tr>
</tbody>
</table>
Incorporating employment status variation in the analysis reveals additional insight into freelancer outcomes based on their intersecting identity dimensions. White male freelancers without a FT job are reporting the highest median earnings from Upwork, with White male freelancers with a FT job report the second highest median monthly earnings from freelancing for Rounds 1-2.

White males report more than White females and non-White male and female freelancers with and without FT employment across most rounds. The only exception is in Round 3, where among those with FT jobs, White females reported the highest monthly earnings. In the same round (Round 3), among those without FT jobs, White male freelancers’ median income reported surpassed every other category of freelancers by more than $1,500 monthly. Figure 6 provides an overview of the median earnings by employment status while considering the intersectionality of race and gender.
Figure 6. Median monthly earnings by employment status, race and gender
Figure 7. Median monthly earnings across race and ethnicity

Figure 8. Median monthly earnings across race and ethnicity
**Occupational differences**: The data also show differences in earnings based on freelancers’ occupation category. In Round 1 (starting in December 2019), freelancers in Creative occupations reported the highest average earnings per month with freelancers in Technology occupations reporting the lowest earnings. In Round 2 (starting December 2020), average earnings decreased across all occupation categories, but Technology freelancers reported the highest earnings among the groups. Finally, in Round 3 (starting in December 2021), the average earnings among Administrative and Technology freelancers both increased from the previous year, and Technology freelancers reported the highest average monthly earnings.

Results indicate that freelancers in Technology occupations maintained more stable earnings, while the freelancers from Administrative and Creative occupations saw the greatest fluctuation in earnings, with both groups experiencing a large decrease in earnings in Round 2 (starting December 2020). However, unlike the gender and racial gap which remained consistent through the three years of data collection, there is not one occupational category that maintained either the highest or lowest average of earnings across all three rounds. Figures 9-10 provide an overview of the average monthly earnings based on freelancers’ occupational categories.
**Figure 9.** Average (mean) monthly earnings by occupation

**Figure 10.** Median monthly earnings by occupation

**Figure 11.** Average (mean) monthly earnings by occupation and gender
**Figure 12. Median monthly earnings by occupation and gender**

**Median Monthly Upwork Earnings**

<table>
<thead>
<tr>
<th>D-Cate..</th>
<th>D-Gender</th>
<th>Median 1-Monthly Earnings</th>
<th>Median 2-Monthly Earnings</th>
<th>Median 3-Monthly Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin</td>
<td>Female</td>
<td>450</td>
<td>350</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>1,600</td>
<td>900</td>
<td>450</td>
</tr>
<tr>
<td>Creative</td>
<td>Female</td>
<td>1,600</td>
<td>500</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>1,000</td>
<td>400</td>
<td>500</td>
</tr>
<tr>
<td>Tech</td>
<td>Female</td>
<td>1,000</td>
<td>1,000</td>
<td>750</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>1,300</td>
<td>1,600</td>
<td>1,250</td>
</tr>
</tbody>
</table>

**Figure 13. Average monthly earnings across identity dimensions**

**Average Monthly Upwork Earnings**

<table>
<thead>
<tr>
<th>D-Cate..</th>
<th>D-RaceGro..</th>
<th>D-Gender</th>
<th>Avg. 1-Monthly Earnings</th>
<th>Avg. 2-Monthly Earnings</th>
<th>Avg. 3-Monthly Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin</td>
<td>Non-White or Mixed-R.</td>
<td>Female</td>
<td>1,754</td>
<td>388</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>1,197</td>
<td>592</td>
<td>558</td>
</tr>
<tr>
<td>Creative</td>
<td>Non-White or Mixed-R.</td>
<td>Female</td>
<td>1,553</td>
<td>1,250</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>2,744</td>
<td>2,221</td>
<td>434</td>
</tr>
<tr>
<td>Tech</td>
<td>Non-White or Mixed-R.</td>
<td>Female</td>
<td>1,733</td>
<td>650</td>
<td>900</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>1,229</td>
<td>2,000</td>
<td>963</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>Female</td>
<td>910</td>
<td>867</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>2,600</td>
<td>1,200</td>
<td>1,000</td>
</tr>
</tbody>
</table>
**Figure 14. Median monthly earnings across identity dimensions**

![Median Monthly Upwork Earnings Chart]

**Figure 15. Average monthly earnings across gender, race, and occupation**

![Average Monthly Upwork Earnings Chart]
Findings make clear that across the intersection of race, gender, and occupation, White males in almost all categories of occupation report the highest average monthly earnings. For example, among Administrative freelancers, White males reported the highest earnings across all rounds (Rounds 1-3). Similarly, among Creative freelancers, White males also reported the highest earnings across all rounds (Rounds 1-3). The only exception was among technology freelancers, where in Round 1, White males reported the highest earnings, but they were the second highest earners in Rounds 2 and 3, where they were surpassed by non-White males and non-White females respectively.

Differences in earnings are also visible across education levels. Among male participants, those with Bachelor's and post-graduate degrees on average earn more than freelancers without a 4-year degree. This was the case among males across all three rounds of data collection. This pattern is not visible among the female participants.

**Figure 16. Median monthly earnings across gender, race, and occupation**
### Figure 17. Average monthly earnings across gender, race, and education

![Average Monthly Upwork Earnings](image1)

### Figure 18. Median monthly earnings across gender, race, and education

![Median Monthly Upwork Earnings](image2)
Figure 19. Average monthly earnings across gender, race, occupation and education

Finally, intersectionality in online freelancing is visible in freelancers’ reliance on income from Upwork. On average, female freelancers relied more on their freelance income. This was the case across racial categories and almost all rounds, with the exception of non-White females in Round 3, who reported a similar percentage of their earnings from Upwork as compared to their male counterparts. On average, White freelancers almost always reported a higher percentage of earnings from Upwork as compared to their non-White counterparts.
Figure 20. Reliance on income from Upwork across gender and race

Education was also an indicator of reliance on income from freelancing. As shown below, the freelancers without a four-year degree reported higher levels of percentage of income from Upwork as compared to freelancers with Bachelor’s and post-graduate degrees.

Figure 21. Reliance on income from Upwork across gender, race, and education
Figure 22. Reliance on income from Upwork across race and ethnicity

Figure 23. Reliance on income from Upwork across race and ethnicity
5.2 Changes in freelancers’ experiences over time (RQ2)

This section presents findings for the second research question, **RQ2: How do freelancers’ experiences and strategies change over time?** These findings highlight the changes to freelancers’ experiences, outcomes and trajectories on online freelancing platforms. The changes discussed in this section includes 1) changes in working arrangements and career trajectories; 2) changes to freelance efforts; and 3) changes to bidding strategy. I elaborate on each of these overarching themes next.

5.2.1 Changes to working arrangements

One of the changes in freelancers’ experiences supported by the interview and survey data is a change in their working arrangements due to different career opportunities and shifting career trajectories. Data highlight that while freelancers continue to value flexibility, they are finding ways to balance a need for income and stability with their desire for work flexibility. And freelancers are adjusting their working arrangements based on their changing preferences and expectations.

5.2.1.1 Decrease in reliance on earnings from online freelancing

Data in Figure 24 shows there is a decrease in the number of participants who report solely relying on income from freelancing (including income from Upwork). This trend is visible in the original participants in the study, who were recruited in 2019. Among this sample of freelancers, 40 out of 75 (53%) of the freelancers reported freelancing as their primary source of work. By 2022, only eight out of 66 (12%) freelancers reported working solely relying on income from Upwork. This highlights that freelancer preferences and career
arrangements have changed over the three years (2019 to 2022) of the study. By Round 3, there were 0 Hispanic, 3 Black, and 5 additional participants who relied solely on Upwork as an income source.

Figure 24. Changes to working arrangements over time
The changes in working arrangements and career trajectories among the study participants are in part driven by freelancers seeking a balance of flexibility, income and stability. For example, one freelancer said: “Upwork used to be my FT job, but I now use Upwork on a part-time basis to kind of supplement other things I’m doing. It’s funny, because I was actually freelancing for a while, and now I work part-time at a coffee shop. So I can still freelance, but I just needed more income, and I’ve just found that at least with the work I’m doing, it’s really hard just with the recession” (P07, Freelance Writer).

The change in preference away from freelancing was also due to increased availability of remote-work opportunities (e.g., P20, P37) while freelancers were seeking more employment stability (e.g., P06, P07, P66, P48). One freelancer said: “I’m extremely lucky right now... I’m in a situation where I don’t have to leave home and I still have full employment. In fact, they offered to convert me just recently from contractor to FT status, so it’s actually getting better for me in terms of stability of employment. This will probably mean, however, that there’s going to be less freelancing in the future” (P66, Graphic Designer).

Another freelancer emphasized the increase in opportunities, noting: “My freelance work was going really well and everything. Sometime over the summer, a full-time position just landed in my lap. I took it in the fall, the end of September. But one of the conditions for that position that I negotiated into my contract was that I could continue doing my freelance work as long as there were no conflicts of interest and time capacity, the ability to do the work” (P37, Urban Planner).
5.2.1.2 Work stability as an increasing priority

Data show that many of the freelancers we have been following prefer the stability of traditional FT work over freelancing when both options are available remotely. This is the case for online freelancers who indicated that freelancing was their primary source of income or secondary source of income. Over the course of 2021-2022, 16 out of 54 freelancers we interviewed had transitioned to new FT employment, with all but one freelancer transitioning to a remote work arrangement\textsuperscript{17}. Round 3 of data collection makes clear that FT remote options afford freelancers the spatial flexibility they seek (flexibility of where to work) while also providing work and income stability. Freelancers prefer FT remote arrangements as they are able to access freelancer protections and benefits that FT employment affords, such as health care and paid leave, which are unavailable to most freelancers (due to independent contractor status). For example, freelancers noted:

"Back in 2019 when I started freelancing [remote work] was not something that most employers offered in traditional positions so I went to freelancing and to Upwork. However, of course, due to the pandemic, a lot more employers are interested in offering either hybrid or fully remote opportunities. So once that taboo was kinda gone, especially in 2021, I was able to find a full-time position that offered fully remote, and of course offered more stable pay and also health benefits as well so that's what I transitioned into" (P41, Copy Editor).

"My full-time job is remote as well so I'm working from home either way. Probably I would have considered Upwork more if I had to go to work [physically]. Before the pandemic, less

\textsuperscript{17} Eight of these freelancers transitioned from doing freelancing and part-time work into FT remote employment, seven transitioned from one FT position to a different FT remote position, and one transitioned from freelancing to FT in-person employment.
employers offered remote jobs. That’s why I was working mostly on Upwork. But now since a lot of employers, a lot of companies, are offering remote jobs, full-time jobs, I prefer that. Because it’s more stable, and income is stable and you get paid leaves and all kinds of benefits of the FT job that Upwork doesn’t provide.” (P48, Accountant)

“So now that I have a [FT remote] job that is more promising, I feel more secure now, and I have benefits with the other job, too. That’s something I didn’t have when I was working with Upwork. I did enjoy the flexibility when I was a freelancer, but now that I have goals, I have more bills to pay, I actually appreciate that a company hired me” (P12, Virtual Assistant).

5.2.2 Changes to freelance efforts

Aligned with the changes in employment trajectories, the freelancers in our sample reported changes to their overall work hours devoted to online freelancing. Data show an overall reduction in working hours on freelancing platforms like Upwork. It also highlights a reduction in the number of hours spent doing unpaid efforts such as seeking work, submitting bids, and other non-paid work to secure freelancing jobs.

5.2.2.1 Reduction in freelancing hours

Findings show that the average number of hours worked per week on freelancing platforms varied across rounds and identities. On average female participants experienced a significant reduction in their working hours after Round 1 as compared to their male counterparts who reported consistent working hours through all three rounds of data collection. Non-White freelancers also experienced a greater decrease in hours after Round 1, as compared to White freelancers. Data show that freelancers in Technology occupations
maintained consistent weekly working hours in online freelancing as compared to other occupational groups.

**Figure 25. Average (mean) platform hours across identity dimensions**

In Round 1, data showed that female participants were more engaged with online freelancing, averaging 20 hours per week working on these platforms as compared to 15 hours weekly reported by male participants. Data also show that the average number of platform freelancing hours decreased after Round 1 (2019-20) among both female and male participants. The reduction in hours was significant among female participants, who reduced their freelancing working hours by half from about 20 hours per week in Round 1 to about 9 hours per week in Round 2. In Round 3, the number of freelancing hours per
week increased by one hour among female participants and decreased by one hour among male participants.

*Figure 26. Platform hours across gender*

Analysis shows that the number of hours worked was higher among both White and non-White participants during Round 1 as compared to Rounds 2 and 3. On average, non-White freelancers reduced their online freelancing hours from 22 hours in Round 1 to 11 weekly hours in Round 3. White freelancers also decreased their number of online freelancing hours at a smaller scale, from 15 hours in Round 1 to 11 hours in Round 3.
And, the data show that across all rounds, participants who had no FT employment reported more hours on freelancing platforms than participants who had FT employment. In Round 1, those without FT jobs reported working an average of 23 hours per week on freelancing platforms, whereas those with FT jobs reported 12 hours per week. In Rounds 2 and 3, the difference was approximately 13 hours (FT job) compared to 7 hours per week (no FT job). The trend of working hours across employment status was consistent across both genders, with both females and males without FT jobs working more hours each week than their counterparts with FT jobs. This difference was consistent across all three rounds of data collection.

Figure 27. Platform hours across employment status
Figure 28. Platform hours across gender and employment status

Analyzing the intersection of race and gender demonstrates that non-White female-identifying participants experienced the greatest reduction in working hours across the rounds. These freelancers reported an average of nearly 27 hours per week on freelancing platforms in Round 1, 10 hours in Round 2, and 11 hours in Round 3. In contrast, White male participants showed the least fluctuation in reported working hours, reporting 14 hours in Rounds 1 and 2 and 13 hours in Round 3. In addition, White male freelancers were the only group that did not as a whole experience a reduction in hours after Round 1, while all other groups saw a reduction in their working hours.
Figure 29. Platform hours across race

Figure 30. Platform hours across race and employment status

Figure 31. Platform hours across race and gender
Figure 32. Platform hours across employment status, race and gender

Across occupations, Creative freelancers in Round 1 (2019-20) averaged the highest reported weekly hours on freelancing platforms, nearly 20 hours per week, while Admin freelancers reported 18 hours per week and Technology freelancers reported nearly 16 hours per week on average this round. However, in Rounds 2 and 3, Technology freelancers reported the highest number of hours worked across online freelance platforms, with
approximately 16 hours on the platforms per week. Technology freelancers consistently increased their average number of working hours per week on freelancing platforms across the years of data collection. In contrast, Creative freelancers saw a decrease in reported working hours each round.

**Figure 33. Platform hours across occupation**

**Figure 34. Platform hours across occupation, gender and race**
5.2.2.2 Reduction in unpaid efforts

Online freelance freelancers reported differences in their average unpaid efforts per week on freelancing platforms (e.g., looking for and bidding for work, updating their profiles, etc.). Data show an overall reduction after Round 1 in the number of reported unpaid hours that freelancers spent on Upwork each week. This unpaid time includes activities that freelancers must do to secure jobs, but not part of Upwork jobs, such as: searching for jobs, developing and submitting proposals/bids, interviewing, and/or updating their profiles. Across all freelancers, the average (mean) number of unpaid weekly hours in Round 1 was 10.5 hours as compared to 3.3 hours in Round 2. The reduction was apparent among both freelancers with FT work and without FT work. Table 28 summarizes the average number of unpaid hours across the three rounds.

![Total Unpaid Hours Per Week](image)

*Figure 35. Average (mean) unpaid hours per week across rounds*

| Table 28: Average (mean) unpaid hours across employment status (in hours per week) |
|---|---|---|---|
| Round | Round 1 | Round 2 | Round 3 |
| Has FT work | 9.1 | 4.3 | 3.8 |
| No FT work | 11.7 | 2.9 | 4.9 |
The reduction in hours over time occurred across other categories of freelancers. In Round 1, freelancers across gender, race, and occupation reported more than double the number of unpaid hours on platforms as compared to Round 2. Even with an overall reduction in hours, male freelancers reported a higher average number of unpaid hours done weekly across all rounds. Non-White freelancers also reported a higher average number of unpaid hours per week across all rounds, doubling the unpaid hours of their White counterparts in Rounds 2 and 3.

Figure 36. Average unpaid hours per week across identity dimensions
The change in unpaid hours was less drastic from Round 2 to Round 3 - with the overall change in unpaid hours increasing from 3.3 hours to 4.5 hours. From Round 2 to 3, most categories showed a slight increase in the number of unpaid weekly hours, with the exception of Technology freelancers and freelancers with FT jobs.

Finally, unpaid hours on the platform decreased each round among White males (From 10.3 hours in Round 1 to 2.1 hours in Round 3) and Non-White females (9.6 hours in Round 1 to 3.6 hours in Round 3). In contrast, for White females and Non-White males, their weekly unpaid hours increased from Round 2 to Round 3.

![Figure 37. Average unpaid hours per week across race and gender](image)

### 5.2.3 Changes to bidding strategy

Beyond earning differences, survey data also illuminate changes in bidding strategy and bid success differences among online freelancers related to gender, race, and intersectional identities. Overall, the data illuminate that as freelancers reported fewer working hours and fewer unpaid work hours, they also reported a reduction in the number of jobs they submitted bids for. In addition, some freelancers also saw changes in their success rates for these bids.
5.2.3.1 Reduction of bidding

Aligned with a reduction in working hours and unpaid weekly hours, the freelancers experienced an overall reduction in the number of bids (or proposals for jobs) that they submitted each week. The average number of bids per freelancer decreased from an average (mean) of 7 bids in Round 1 to 3 bids in Round 2. This reduction occurred across categories of gender, race, occupation and employment status.

![Average bids per week](chart.png)

*Figure 38. Average number of bids per week*

Male freelancers experienced a greater decrease in weekly work bids (from 12 to 6 bids) as compared to female freelancers (from 5 to 2 bids) from Round 1 to Round 2. Non-White freelancers decreased their bids from 7 to 4 while White freelancers decreased their bids from 8 to 4 per week. Across occupations, Admin freelancers experienced the greatest drop in the number of reported bids, decreasing their bids from 9 to 5, while Creative freelancers decreased their bids from 6 to 3 and Tech freelancers from 5 to 4 bids per week.
Figure 39. Average number of bids per week across identity dimensions

Across employment categories, the reduction was greater among freelancers with a FT job outside of freelancing. Freelancers with a FT job reported submitting an average of 8 bids per week in Round 1 and an average of 1 bid per week in Round 2. Among freelancers without FT jobs, the average weekly bids dropped from 7 bids in Round 1 to 4 bids in Round 2.
5.2.3.2 Changes in bid success rates

There are also race- and occupation-based changes when it comes to bidding success. Despite a similar number of bids submitted in Rounds 1 and 2, on average, Non-White freelancers reported higher rates of success on their Upwork bids. For example in Round 1 Non-White freelancers reported a 33% bid success rate, as compared to White freelancers’ 25% success rate. While the Non-White freelancer’s success rate decreased and White freelancer’s success increased in Round 2, Non-White freelancers continued to have a higher success rate of 31% compared to White freelancers’ 29% success rate.

Among occupational groups, administrative freelancers both submit more bids per week on average, and this group also reported the highest levels of success with their reported bid success rate at 30% success in Round 2 and 35% in Round 3.
This section addresses the final research question, **RQ3: What is the role of platforms in mediating online freelancing outcomes?** The analysis suggests three overarching themes:

1) the role of the freelancer profile in platform inequality  
2) Deconstructing and filtering
identity and 3) strategies for presentation. I elaborate on each of these overarching themes next.

5.3.1 The role of the freelancer profile in platform inequality

Findings make clear that the design, policies, and norms on Upwork mediate freelancers’ identities, and as such influence freelancers’ experiences and outcomes on the platform. Data show that one of the ways the platform mediates freelancers’ experiences and outcomes is through the structure and content of the freelancer’s profile. Participants discussed several ways in which the platform enables clients to make decisions about their identities based on the data available on the freelancer profiles, including making assumptions about freelancer identities, including a person’s gender, race and ethnicity (e.g., P09, P17, P41, P32, P46, P47, P52, P89, P94, P104).

5.3.1.1 Identity through freelancer photos

One of the elements of the freelancer profile that shapes freelancers’ experiences and outcomes is the freelancer photo requirement. As of January 2023, Upwork continues to require all freelancers to upload a photo of themselves to their profile before they can bid for any jobs on the platform. The platform notes that profile images “must be an actual photo” of the freelancer and logos, clip-art group photos are not allowed. And, the freelancer’s face must be fully visible. To ensure freelancers are following the guidelines for an “actual” photo, the platform at times requires a verification process that compares the uploaded photo to a government-issued identification that the freelancer also has to include on their account.
Figure 42. Upwork photo guidelines

Data highlight that through the photo, some freelancers may be experiencing the negative impacts of persistent societal challenges related to race, gender, and intersectionality (among others) while other freelancers might be benefiting from the same social inequalities. This is because a freelancer’s photo allows clients to make (correct or incorrect) assumptions about the freelancer’s identity. One freelancer said “You have to put your picture, and that has to be verified, so people are going to know. And people are going to look you up. They’re going to look at your social media, they’re going to do whatever they can to kind of gauge that, and it’s just the normal thing” (P52, Male, Admin, White).

Several participants acknowledge their social positioning is helpful in their success on freelancing platforms. For example, one male freelancer said “...of course, coming from a position of privilege, it’s really hard for me to gauge, because if you’ve been given that privilege your entire life, it’s really hard to understand what the absence of that would look
like. But I definitely think that me being a White man, and also, of course, I have my picture up so they can see very clearly who I am, what I look like, I'm sure that impacts my success levels” (P41, Male, Creative, White and Asian).

Several Black participants highlighted the potential challenges associated with the profile photo. Another freelancer said “My photo shows I’m African American. I think that affects things” (P46, Male, Tech, Black or African American). And another female freelancer said “I always think a photo is very helpful, because I think it’s good where people can see your face. They can guess maturity; they can guess age. But I guess in some instances it could also hurt you, I think, maybe in some ways. You could come across someone that’s prejudiced” (P17, Female, Admin, Black or African American).

5.3.1.2 Identity and freelancer names

A freelancer’s name is another way the platform is mediating the freelancer’s identity on the platform. For example, several non-White/multi-racial participants highlighted that their names alone allow others to make inferences about their identity and their competence within their field. One noted that clients might pass up on freelancers as early as when they see the freelancer’s name in a proposal. “You submit a proposal and you have a unique name, people are going to be like, ‘No,’ you know, ‘Decline.’ Or something like that. That’s just naturally what humans do, unless you have someone that says, okay, they don’t take that mindset” (P52, Male, Admin, White).

Even as freelancers might not understand the repercussions of their names, they are still conscious of possible associations: “For example, I have a very...like my name is obviously of
African descent, even if you don’t know that it’s from Nigeria or from the Yoruba people. It’s unmistakably African descent, and I don’t like going by nicknames, because I’m very proud of my name” (P89, Male, Tech, Black or African American).

One freelancer highlighted the intersecting role of their identities, including how the combination of her name, her presentation as a Black Latin woman, and her age influence how people will perceive her in freelancing platforms. She notes, ”When people see my last name, they go like oh, is it Latin, or whatever... so people sometimes assume that my English won’t be good” (P32, Female, Creative, Black or African American).

Figure 43. Upwork profile name guidelines

5.3.1.3 Intersectionality in profile presentation

Some freelancers are aware of their intersectional identities and the effects these identities have on their online freelancing experiences (e.g., P09, P13, P15, P32, P41, P46, P92, P104).
The stereotypes associated with gender, racial and ethnic identities are exacerbated among participants who are occupying multiple burdened social identity positions. For example, several participants who identify themselves as Black females commented on their acute understanding of how they are being perceived in online work. One said “I know if people look at my profile picture, they’ll be like, ‘Oh, she’s a Black woman,’ and then they’ll think of all the stereotypes that come along with being Black and being a woman, and so that might deter people from asking me stuff” (P09, Female, Tech, Black).

Another freelancer highlighted the intersecting role of their identities, including how the combination of her name, her presentation as a Black Latin woman, and her age influence how people will perceive her in freelancing platforms. “I think I am the minority. I’m an editor in a male environment; I am a black woman, and I’m Latin, so people sometimes assume that my English won’t be good. They assume three hundred things. I produce and write in three languages, but I’m not going to oversell myself” (P32 Female, Creative, Black or African American).

As noted, even as minoritized identities are sometimes a benefit to workers, intersectional identities are likely to impact their experiences, making it more difficult for workers to secure work. Another Black female worker said “As a minority and female presenting, and all of that, I’m sure that it does have some effect, because I guess statistically there’s the perception that a dark-skinned woman is not going to have the qualitative or quantitative skillset even if she does have an advanced degree. I’m sure that probably does play a role in making it harder for me to find positions, but for certain clients it can be a plus, but it’s not always. So in terms of what I’m thinking I’ll do full-time, like in the long run, there are some
advantages to being a woman of color. But on Upwork, I don’t think that they really apply” (P104, Admin, Female, Black).

Some workers with several privileged intersectional identities discussed their position of relative advantage. One White and Asian Male said “For sure. I can’t imagine, and I’ve talked to some copywriters who are women and also international women, international women who are people of color, and it is extremely hard for them to get anywhere in the ballpark of what I get. So I’m extremely privileged” (P41, Male, Creative, White and Asian).

5.3.2 Deconstructing and filtering identity

Data capture the voices of freelancers who experience platform-enabled standardization and classification of their identity attributes beyond their freelancer profiles. For example, Upwork provides multiple features that disassemble freelancers’ identity attributes into readily searchable identity identifiers such as location and linguistic proficiency (e.g., P01, P40, P59, P78). These filtering features allow clients to deconstruct and exclude freelancers that align with certain identity categories.

5.3.2.1 Geographical exclusion

Upwork offers a toggle button (Figure 44) that enables clients to include freelancers from the United States while excluding freelancers from other countries. Freelancers are aware that their visibility on the platform can be filtered out by clients due to their geographical location. One female freelancer said “They can specify only, sometimes they can specify people only from the U.S. can apply to this job. Some will specify only people from Asia or something like that too. I’ve applied to several jobs before, and I didn’t even realize that, ‘Oh,
they are only hiring people from this certain country” (P01 Female, Tech, Native Hawaiian or Pacific Islander).

**Figure 44. Upwork offers this filtering option**

5.3.2.2 Language exclusion

Upwork also offers search filters for selecting languages that a freelancer speaks. While the platform has over 100 language options, it has a separate feature that classifies freelancers based only on their English proficiency (Figure 45). Analysis shows that freelancers perceive English as a major attribute factored into hiring decisions. Some of our study participants encountered clients who had a specific preference for English-speaking freelancers. The platform accommodated such a preference by providing a freelancer search filter that categorizes freelancers based on their language ability. One freelancer notes “As you can see, my English level is not 100% professional. Even if I have been working in the U.S.A. for years, but my specialties are with the Spanish markets and Spanish-speaking companies. When I try to obtain a job that is full American, I understand that for the people that is in front of me that is trying to hire someone that is absolutely an American speaker” (P78 Male, Admin, White). Another male freelancer said “Ethnicity could be [another important] factor in that if English was not their first language, although I’ve known plenty of people whose first language is not English and they’re probably more literate than I am” (P40 Male, Creative, White).
Beyond the filtering feature, the issue of perceived English fluency/proficiency is also demonstrated among US-native White freelancers whose names are perceived as non-White: “I’ve applied for a few jobs, and it will come back and say to me, ‘The client is looking for English only candidates.’ I don’t know why it comes back that way, because English is the only language I know. That’s on my profile. Maybe it’s just a glitch on Upwork’s part. I don’t know. The name [removed], people may wonder is that a man or a woman. Is he English only, because that is kind of an ethnic sounding name?... I don’t think it’s affected it too much, based on the number of job offers I’ve received, but I don’t know. It’s been in the back of my mind a little bit. That’s happened like two or three times. I think that’s more of a technical glitch. I’ve even contacted Upwork about it. The response I got was that you have to set your profile to say English only. It’s there” (P59 Male, Creative, White).

![English proficiency levels on Upwork](image)

*Figure 45. English proficiency levels on Upwork*
5.3.3 Strategizing platform identity

Data make clear that freelancers have developed strategies for dealing with identity-based bias in online freelancing (e.g., P08, P46, P47, P66, P92). Several participants discussed the need to over-amplify their identity by putting their photos up to avoid having negative experiences related to bias. These freelancers have adopted a strategy that makes their identity more visible, including on Upwork, their personal websites or other profiles. These freelancers note that they have learned these strategies after several previous experiences of bias. For example one freelancer said “A lot of times I get leads and people don’t know my ethnicity, but then when I send them a Gmail they see my picture, and all of a sudden it got cold. That happens a lot, and after a while, you start saying the only thing that changed is you saw who I was. I actually put up a picture of myself recently on my website, because I got so tired of that” (P46 Male, Tech, Black or African American).

Similarly, another freelancer noted how she intentionally displays her photo to present her identity. “One of the things that I do as a woman of color is I put my picture out there, so if you have a problem with me being African American or a woman, you know that from [the] jump, so you can skip over me and we can not even have to talk. I understand that that is potentially something that some people might look at, so that’s why I definitely put my picture everywhere. On my Upwork, on my website it’s there, so people know what they’re getting, there are no surprises and all that, and that never really has to come up... because those issues have existed... If you don’t want to hire me because I’m Black, I’m just going to put it out there: ‘Hey, I’m Black, and I’m a woman, and if you don’t already know by my name I’m a woman, it’s out there. So if you don’t want to hire someone to handle your books because
they're a woman or because they're Black and you feel some sort of way, I never have to come in contact with you and have to have that uncomfortable conversation of putting you in your place or whatever the issue is, and we can just never come in contact with each other.' But I guess, for me, just because of the experiences I've had, I've always been that way: just put it out there, and hopefully, it weeds out any of that so I don't have to deal with it” (P92 Female, Admin, Black or African American).

Another strategy shared by participants includes using different names (e.g., going by a nickname as Upwork allows workers to adopt a variation of the worker’s “verified name” as long as it aligns with their guidelines, see Figure 46). This name change strategy is adopted for freelancers to align their online presentation with the expectations from clients. One male freelancer mentioned his experiences with freelancers who avoided using racially identifiable names to circumvent potential discrimination from clients and secure their attention on the platform. “Other people’s strategies have popped out at me in the past, like I have met a couple of Black people on Upwork who do not use their birth certificate names because they look quote-unquote ‘too Black’ and that actually does affect how much attention they receive. Like I knew somebody named Daynette, which is not a standard, like, White name. It just statistically isn't. So she would go by something else” (P66 Male, Creative, White).
Some freelancers are aware of the importance of identity presentation and seek to control aspects of their presentation that they have control over. Freelancers from our study actively seek to augment the visible aspects of professional persona to appeal to clients. For example, one female freelancer said: “I think some people don't even realize it matters when they look at a profile, but it all does. That's why I try to focus on just being as friendly looking, friendly sounding, proficient, all the things that I hope people are looking for” (P08 Female, Tech, White).

While such identity presentation practices could be required for both male and female freelancers, women freelancers believe they require more effort to deploy distinct strategies to have the same effect as their male counterparts on the platform. One freelancer highlighted that “Gender is undoubtedly one of those things that figures into that profile persona, and women who are translators may have to present themselves somewhat differently to achieve the same effect. It's probably like race as well. This is something I've
thought about because your profile picture is right there, and I do think that profile picture is really important. You just want to come across as being super confident, super skilled, and I’m happy to work with you, but don’t mess with me. There’s a way to pull that off for men and there’s a way to pull that off for women, but it’s probably a slightly different way” (P47 Male, Creative, White).

Accordingly, female freelancers were more likely to believe their gender matters in online freelancing platforms. Similarly, non-White participants were more likely to say that their race or ethnicity matters in these platforms. And finally, male and White freelancers are more likely to believe that there are more important factors other than gender, race, and ethnicity that matter more in online freelancing platforms. Table 29 summarizes the frequency of workers who discussed the role of gender, race, and identity.

Table 29. Number of participants discussing the role of identity in online freelancing

<table>
<thead>
<tr>
<th>Codes</th>
<th>Non-White Female</th>
<th>Non-White Male</th>
<th>White Female</th>
<th>White Male</th>
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<td>10</td>
<td>11</td>
<td>6</td>
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<td>0</td>
</tr>
<tr>
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<td>5</td>
<td>6</td>
<td>5</td>
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</tr>
<tr>
<td>Race matters</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>
Figure 47. Perceptions of the influence of gender and race in online freelancing
5.4 Chapter summary

This chapter contains a report of findings related to the experiences and outcomes of online freelancers on Upwork. Table 30 provides a synthesis of the key findings that align with the study's research questions about the differences in platform-mediated experiences (RQ1), changes in freelancers’ experiences over time (RQ2), and the role of platforms in online freelancing (RQ3).

Table 30. Research questions and related findings

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Section</th>
<th>Theme</th>
<th>Supporting Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1: How do the platform-mediated experiences of freelancers from marginalized populations differ from those of other freelancers? (Section 5.1: Differences in Platform-mediated Experiences)</td>
<td>5.1.1</td>
<td>Gender Differences in Online Freelancing</td>
<td>➔ Gendered occupational expectations ➔ Gendered responsibilities expectations ➔ Gendered value of work</td>
</tr>
<tr>
<td></td>
<td>5.1.2</td>
<td>Racial Differences in Online Freelancing</td>
<td>➔ Racial stereotypes &amp; biased expectations ➔ Marginalized identities as an asset</td>
</tr>
<tr>
<td></td>
<td>5.1.3</td>
<td>Earning Differences in Online Freelancing</td>
<td>➔ Gender gap: differences in male and female freelancer earnings ➔ Racial gap: differences in White and Non-White freelancer earnings ➔ Intersectionality in online freelancing</td>
</tr>
<tr>
<td>RQ2: How do freelancers’ experiences and strategies change over time? (Section 5.2: Changes in Freelancers’)</td>
<td>5.2.1</td>
<td>Changes to Working Arrangements</td>
<td>➔ Decrease in reliance on earnings from online freelancing ➔ Work stability as an increasing priority</td>
</tr>
<tr>
<td></td>
<td>5.2.2</td>
<td>Changes to Freelance Efforts</td>
<td>➔ Reduction in freelancing hours ➔ Reduction in unpaid efforts</td>
</tr>
<tr>
<td></td>
<td>5.2.3</td>
<td>Changes to Bidding Strategy</td>
<td>➔ Reduction of bidding ➔ Changes in bid success rates</td>
</tr>
</tbody>
</table>
Addressing the first research question, findings highlight how the platform-mediated experiences of freelancers from marginalized populations including those of female and non-White freelancers, differ from those of other freelancers. Findings illustrate that there are differences related to gender, race and intersectional identity attributes like work arrangements and occupation. Relevant gender-based differences in the data include 1) gendered occupational expectations, 2) gendered responsibilities expectations, and 3) gendered value of work. Additionally, racial differences that were observed in the data include 1) racial stereotypes & biased expectations and 2) marginalized identities as an asset. The data also illustrates that there are earning differences including a gender gap, racial gap and differences based on intersectional identities.

The findings also address relevant changes in freelancers’ experiences, addressing the second research question. I discuss the changes to working arrangements, including 1) a decrease in reliance on earnings from online freelancing and 2) work stability as an
increasing priority. I also outline changes to freelancing efforts, including 1) a reduction in freelancing hours and 2) a reduction in unpaid efforts. In addition, I also highlight the changes to freelancers’ bidding strategy, including 1) a reduction in bidding and 2) changes in bid success rates.

Finally, to address the third research question, I outline three themes related to the role of platforms in online freelancing. First, I highlight the role of the freelancer profile in platform inequality, including 1) identity through freelancer photos and 2) identity through freelancer names. Second, I discuss deconstructing and filtering identity on the platform through 1) geographic exclusion and 2) language exclusion. Third, I outline how freelancers are strategizing their platform identity given the current requirements and guidelines imposed by the platform.

Together these findings illustrate some of the differences in freelancers’ experiences in online freelancing platforms. I demonstrate ways in which freelancers’ identity attributes like gender, race, ethnicity, and occupation are mediating their overall experiences with online freelancing and the role Upwork plays in freelancers’ outcomes.
Chapter 6: Discussion

This chapter contains a discussion of the findings, organized to explicitly reflect on each research question, then to contribute to the existing literature as discussed in Chapter 2. The overall aim of this study was to discern the difference among workers from marginalized groups in online freelancing and expand our understanding of online freelancing experiences and outcomes. This is with the goal of advancing insights about these online workers as well as the freelancing platforms enabling this form of work.

While there is a long history of studies documenting inequality and discrimination in the traditional labor market, the experiences of platform-based work are overlooked (Fiers, 2023). In this dissertation, I explored the experiences of online freelancers working on one labor platform: Upwork.com. This study allowed me to analyze the ways in which online freelancers are navigating their work arrangements and build insight into the differences workers experience in online labor.

The findings presented in Chapter 5 contrast with the narrative of digital labor platforms - and the digital labor markets that they enable - as neutral actors in online freelancing. Here, I discuss my interpretation of the findings, including how identity biases, stereotypes and expectations are embedded into online freelance work. I then discuss how the platformization of gender, race and other attributes allowed for continued marginalization in online freelancing. I conclude the discussion with the implications of these findings and provide directions for future work.
6.1 Gender, Race, and Earning inequalities (RQ1)

Findings make clear that the identity-based stereotypes, biases, and expectations which have long been documented in traditional offline work are also visible in online freelance work. This study showcases ways in which online freelancing reinforces work biases and inequality through 1) gendered expectations; 2) racial stereotypes and biased expectations; 3) earnings gap between male and female freelancers; and 4) earnings gap among non-White freelancers.

6.1.1 Online freelancing reinforces gender stereotypes and biases

Analysis shows that even as participants are divided regarding perceptions of the role and importance of gender and race within online freelance work, the lived experiences of the online freelancers demonstrate the persistence of long-standing identity issues at work, including stereotyping, biases and differential expectations in online freelancing platforms. The findings from this study mirror existing literature on the differential experiences of workers in the gig economy based on their gender, including inequality in earnings (Anjali Anwar et al., 2021; Foong et al., 2018; Foong & Gerber, 2021c; Galperin, 2021; Ma et al., 2022b). Studies by Barzilay, Foong, Vyas and others have previously provided empirical evidence on gender differences, including pay inequality, on labor platforms (A. Barzilay, 2019a; A. R. Barzilay & Ben-David, 2016-2017; Churchill & Craig, 2019; Foong et al., 2018; Gupta, 2020; Vyas, 2020).

The findings from this study align with prior work and demonstrate that both male and female workers tend to face gendered stereotypes and biases in online work. And these
biases align with previous studies on gender differences at work in traditional (offline) working arrangements (Heilman, 2012; Trentham & Larwood, 1998). Female freelancers in particular highlight how the internalization of socially normalized gender expectations affects the process and outcomes of online work such as setting and negotiating fair pay rates for their work.

Data also illuminate the experiences of female workers who are hesitant to assert their worth because they fear doing so would contradict socially desirable or anticipated gender roles. As a result, female workers may choose to offer their work for lower pay rates than they believe they deserve. Aligned with these limitations, females are earning less on platforms than their male counterparts. This finding is consistent with earlier studies that reveal female freelancers ask for significantly less per hour than their male counterparts on a digital labor platform (Foong et al., 2018). I provide empirical support to this finding by highlighting underlying conditions that shape the undervaluing of work among female workers and the differential treatment across genders in this form of work.

The consequence of socially normalized gender expectations is not limited to how much male and female freelancers earn on digital labor platforms. It also influences what jobs they could perform. Findings show workers are subjected to occupation and skill stereotyping in online freelancing. For female workers, this means that they are assumed to be more likely to possess certain skills like communication and relationship-building. This translates to women facing expectations, stereotyping, and being limited to jobs that they are perceived to be more suited for (e.g. virtual assistant). This gendered occupational competency affects each gender, and the types of jobs for which each gender is expected to
apply to and be hired in. The data shows that both male and female freelancers believe clients have conscious or unconscious biases toward occupational skills based on a given gender. This finding aligns with previous research that found that female workers are more likely to be hired for traditionally female-typed occupations despite having comparable qualifications (Galperin, 2021; Webster & Zhang, 2020).

6.1.2 Online freelancing reinforces race and ethnicity stereotypes and biases

My analysis provides evidence of the effects of race and ethnicity in online freelancing. What comes clear is that freelancers’ race and ethnicity mediate their experiences in online freelancing as workers are likely to be subjected to known stereotypes. These include assumptions about levels of English proficiency, occupational fit, and overall ability to complete certain jobs. Black and Hispanic workers in the study were more likely to discuss issues and challenges associated with these biases than any other racial/ethnic groups. Freelance workers from these traditionally marginalized racial/ethnic identities highlighted experiences of being perceived as less competent based on their race and/or ethnicity. Freelancers believe clients will make assumptions about their skills and abilities, judging on stereotypes about who is “technically capable” or what type of race should be giving “business advice”.

Findings also highlight that the online freelancing platform also allows clients to make erroneous assumptions about workers’ language abilities. We provide evidence of hesitancy among clients to work with individuals who do not fit their view of someone with English proficiency, regardless of the worker’s actual English language proficiency. Even as the platform currently enables workers to self-report their proficiency, clients have
inherent biases about workers from minoritized backgrounds and their expected proficiency. This is supported by data across several freelancers from both marginalized and non-marginalized communities, suggesting that clients have perceptions about the workers based on their platform identity presentation (including their name, profile photo, and other profile information).

Even as some workers discussed the challenges associated with bias and inequality, workers also highlighted instances in which their minoritized identities have been beneficial. For example, one positive outcome of a historically marginalized identity occurs when clients actively seek to hire workers from these historically marginalized or underrepresented groups. Several freelancers who identify as Black and/or Hispanic highlighted positive experiences when a client wanted to work with them explicitly based on their race or ethnicity. In these cases, platform identity presentation was tied to positive experiences and outcomes on the platform.

6.1.3 Persistent earning inequality

Even despite the positive instances of selective hiring among minority groups, the findings from the study highlight a disparity in earnings across freelancers based on different identity dimensions. The data shows that gender was a consistent indicator of earnings across rounds, with female freelancers earning less than males. This gender earnings gap persisted and widened from the first round to the third round of data collection. There was a gap in the mean earnings between male and female freelancers across all rounds, and a gap in median earnings in Rounds 1 and 3. Race was another identity dimension that made a difference in monthly earnings across freelancers. The median and mean earnings
showed a gap in earnings across all three rounds, with White freelancers outearning non-White freelancers each month. Inequality in online freelancing earnings suggests that both gender and race continue to be critical to individuals’ differential experiences with this form of work. These gaps are consistent with the gaps in the traditional labor markets, where women earn significantly less than men (*Earnings Disparities by Race and Ethnicity*, n.d.). And studies have continually demonstrated that workers who are penalized for both their race and gender such as women of color face even greater earning gaps (Gomez, 2021; Hegewisch & Mefferd, 2021).

The difference in earnings suggests that while online freelancing is perceived to provide opportunities for workers from historically marginalized workers, the outcomes of workers do not necessarily align with the perceived possibilities and promises of online work. Together, the findings on gender, race and earning differences illuminate that online freelancing reinforces the issues of inequality and bias that are embedded in traditional work organizations, which include: (1) allocative discrimination, in which how women and minorities are sorted into certain types of jobs and pay during hiring, promotion or termination processes; (2) within-job wage disparities, where women and minorities are paid less for the same work as their White male counterparts; and (3) valuative discrimination, which refers to how certain groups are paid less despite equal skills requirements and other factors because they are valued less (Castilla, 2008). This suggests that the effects of intersectionality on work require continued attention as workers occupying multiple burdened social positions are likely facing heightened biases and discrimination in online freelancing.
6.2 Changes in freelancers' experiences (RQ2)

Data demonstrate that workers' participation in freelancing is evolving as they gain experience. The longitudinal nature of the study allowed me to observe changes in workers’ experiences and outcomes with online freelancing. Findings suggest there are three primary changes. First, there are shifts in workers’ arrangements and their career trajectories. Second, workers are changing their freelancing efforts. Third: workers are adjusting their bidding strategies. These are three interrelated changes that point to a broader shift in priorities and expectations among workers.

6.2.1 Evolving working arrangements

Findings suggest that, over time, freelancers are adopting new working arrangements that reflect their changing priorities. Interviews suggest that workers who do online freelance work as a primary or supplemental source of income are doing so in part because they are interested in the “flexibility” this form of work affords them. However, after speaking with these freelancers over time, many become more interested in finding a balance between flexibility, income and stability. Online freelancing provides workers flexibility in when and where they work. However, the challenges of online freelancing include a lack of a steady income stream and a lack of overall work stability. Even the most established freelancers can experience instability on freelancing platforms, as noted in the second and third rounds of interviews with these workers.

As such, the findings suggest that even though workers value the flexibility offered by online freelancing-- this is not enough to keep them pursuing Upwork as a primary source
of income. On the contrary, even though many freelancers aspired to make freelancing part of their long-term strategy, workers instead are moving toward taking on part-time and full-time jobs that afforded them more income and more overall work stability.

6.2.2 Reduction in freelance efforts

Aligned with the changing working arrangements, freelancers reported an overall reduction in the average number of hours worked on freelancing platforms like Upwork over time. This was in part due to other work landscape changes, including a pronounced shift toward remote work since the onset of the COVID-19 market shock. The increase in the availability of remote work has led workers to reconsider their career trajectories and working arrangements. This rethinking is evident in the significant number of voluntary separations recently, amounting to over 25% of the workforce (Tappe & CNN Business, 2022), and the steady rise of online employment options. As more part- and full-time opportunities offered remote and hybrid working arrangements, workers shifted away from online freelancing opportunities which are characterized by less stability.

In addition to changing arrangements and the move away from freelancing, workers are also changing their bidding strategy. Across freelancers in the study, there was a reduction in the average amount of unpaid work that freelancers reported each week. Over the years, freelancers also reduced the number of bids they submitted on freelancing platforms. The average number of bids was reduced by 50% on average from round 1 to round 2. This decrease was observed across categories of gender, race, occupation and employment status.
The findings from this study align with prior work that highlights workers’ differential work arrangements and motivation for pursuing this form of work. For example, (Dunn, 2020) found that there are important differentiators that help define why workers are engaging in gig work, including their key motivations and strategies. Dunn highlights five types of workers: 1) Searchers, unemployed workers who heavily depend on their gig work income; 2) Lifers, who see gig work as a lifelong career to leverage opportunities and maximize pay; 3) Short-timers, who use gig work as an opportunity to earn extra income, but who are not dependent or emotionally invested in gig work; 4) Long-rangers, who rely on gig work to ease their financial burden; and 5) Dabblers, doing gig work for non-economic reasons. Thus, workers’ motivations for pursuing gig work influence workers’ arrangements as well as workers’ perception of job quality.

The findings of the current dissertation study align with Dunn’s (2020) findings, but also provide additional insight into how workers’ motivations and strategies change over time. Findings showcase that even when workers’ motivations are initially to be “Lifers” or see gig work as part of their long-term plan, workers are likely to change their motivations and strategies over time. The reduction in working hours and evolving worker arrangements showcase that financial precarity and changing worker priorities lead workers to pursue different part and full-time employment opportunities apart from or in conjunction with gig work. Even though many of the freelancers in the sample might have initially identified as “Lifers”, after three rounds of data collection, the majority of the workers in the sample would be more likely to be classified as “Long-rangers” given the reported financial conditions and reliance on income from gig work from the workers in the sample.
6.3 Platform’s mediating roles (RQ3)

Findings make clear that beyond extending traditional views of identity attributes, online freelance work leads to the ‘platformization’ of race and gender. Here, I view platformization as the process of defining workers’ various identity dimensions like gender and race through technology. Data show workers are aware of the ways their identity dimensions could be used in the hiring process on the platform and some highlight how intersectionality may also be affecting their opportunities.

6.3.1 Platformization of gender and race

Upwork has specified a structure for how workers can perform their identity and embedded restrictions and norms for workers and clients to process these identity attributes (Munoz, Dunn, Sawyer, et al., 2022). This means online freelancers are subjected to the platformization of their race and gender. In this way, far from being neutral actors, Upwork and other similar online freelancing platforms are designed to mediate gender, race and other identity attributes.

By design, all platforms embed values, norms, and expectations through their requirements, features and affordances (Winner, 1989). On Upwork, identity dimensions such as gender and race are embedded in the platform through the strict guidelines and surveillance of workers’ identity and language proficiency scales, among other design decisions. Each of these design decisions influences how workers are presented and perceived. This is supported by the lived experiences of the freelancers in this study. Black and Hispanic workers highlighted the potential disadvantages of their identity presentation
on the platform while other workers also noted instances of privilege based on the same platform design decisions.

For example, respondents noted that the requirement to provide a photo of their face allows clients to make (correct or incorrect) assumptions about identity. As a freelancer on the platform, workers must include a verifiable name and photo before they are allowed to bid for jobs. This challenges the view of gender and race as a non-issue given that the platforms’ guidelines and verification processes enable clients to make assumptions about freelancers’ identity attributes and their competence based on existing stereotypes, as suggested earlier. And while the requirements can be a challenge for some workers, these can be an advantage for others. For example, one freelancer articulated that his photos impact his success. “...of course, coming from a position of privilege, it’s really hard for me to gauge, because if you’ve been given that privilege your entire life, it’s really hard to understand what the absence of that would look like. But I definitely think that me, being a white man, and also, of course, I have my picture up so they can see very clearly who I am, what I look like, I’m sure that impacts my success levels” (P41, Male, Creative, White and Asian).

The platformization of race and gender is also manifested through the “filtering” mechanisms embedded in the platform. Upwork provides multiple features that disassemble freelancers’ identity attributes into readily searchable identifiers such as location and linguistic proficiency. These filtering features afford a context for interaction in which clients make search and hiring decisions by controlling the visibility of workers based on their identities. For instance, Upwork offers a toggle button that enables clients to
include freelancers from the United States while excluding freelancers from other countries. This is the case even though the work done through the Upwork platform is performed remotely.

The filtering of workers is visible in other design choices such as the introduction of “Diversity Certifications”. In October 2021, Upwork rolled out “Diversity Certifications”. The goal of these freelancer profile badges was “to create a more inclusive platform by providing underrepresented groups access to economic opportunities”. The diversity badges offer an additional filtering technique to further break down freelancers into specific attributes. Diversity badges allow clients to sift through the freelancing talent to pick workers that have acquired (and verified through Upwork) external certifications such as “Minority-owned”, “Woman-owned”, “U.S. veteran-owned”, “Disability-owned”, “LGBTQ+-owned”. Clients who pay for the higher tier “Enterprise” and “Business” Upwork plans are able to filter by these diversity categories. And, these badges are limited to US-based workers with registered businesses that qualify for each certification. Thus, even as these badges are intended to support diverse suppliers/diverse businesses, it also shows the ability of the platform to enable discrimination. By design, clients can choose to narrow down their search and exclude individuals based on specific criteria.

As such, the platformization of gender and race enables marginalization within online freelancing platforms. Findings make clear that rather than addressing inequality or bias, the platform’s communicative and discursive design practices drive continued marginalization. The platform’s US-only filter and English proficiency level classification feature communicate preferred hiring eligibility for workers through visual signals. The
prioritization of geographical location and linguistic proficiency may reflect the platform's adaptation of existing discourse, such as the economic value of English in labor markets (Grin, 2001). However, such design decisions allow clients to make discriminatory hiring decisions. Simultaneously, these options create an entry barrier to workers from diverse geographical and linguistic backgrounds, potentially reinforcing the predominance of workers with pre-given or earned geographical presence and linguistic capability. Regardless of their other professional qualifications and experiences, the presence of workers whose identity presentation does not conform to such design choices is eliminated at the onset of the client’s hiring process.

6.3.2 Marginalization and discrimination by design

Together, the findings from this study call into question the argument that digital labor platforms empower workers from geographically disadvantaged groups by providing them access to the global labor market (Drahokoupil & Jepsen, 2017; Graham et al., 2017; Sannon & Cosley, 2022). The findings suggest that rather than being inclusive, Upwork’s design mediates the exclusion of workers, even as it positions itself as a global labor marketplace. While there are currently no gender, ethnicity, or race filters on the Upwork platform, the findings from this study demonstrate that the design of worker profiles and filtering options are currently providing a means for the exclusion and marginalization of freelancers.

Upwork’s design extends inequalities by reinforcing the biases and discrimination that exist in the traditional labor force - and society more broadly. For example, the findings from my dissertation suggest that workers are subjected to traditional gendered occupational
stereotypes and racial biases regarding workers’ English language abilities based on workers’ presentation on the Upwork platform. And the lack of regulation for these labor platforms makes it easier to continue to enable discriminatory practices that are illegal in the traditional workplace (e.g., discriminating on the basis of gender, race and other protected identity categories).

The work presented in this dissertation aligns with findings of gender and racial marginalization from prior studies on TaskRabbit, Airbnb, and Yelp among other digital platforms (Aneja et al., 2023; Churchill & Craig, 2019; B. Edelman et al., 2017; B. G. Edelman & Luca, 2014; Hannák et al., 2017c). For example, findings from an experiment on Airbnb (B. Edelman et al., 2017) show that applicants with distinctively African American names are 16% less likely than applicants with distinctively White names to be accepted on the platform. This means that an individual’s name alone has a significant impact on the use of services on digital platforms. Edelman et al. (2017) argue that with the rise of the sharing economy, there has been an increasing level of discrimination that is not acceptable or possible in other contexts. They highlight that “Clearly, the manager of a Holiday Inn cannot examine names of potential guests and reject them based on race or socioeconomic status, or some combination of the two. Yet, this is commonplace on Airbnb, which now accounts for a growing share of the short-term rental market” (p.17).

Similar research designs have shown the prevalence and effects of gender, racial and ethnic identity in the employment process. For example, (Bertrand & Mullainathan, 2004) demonstrated that resumes with African-American-sounding names were far less likely to receive callbacks from potential employers as compared to those with White-sounding
names. And this pattern of discrimination has been documented in other contexts, such as in ride-sharing and online auction platforms as well (Ayres et al., 2015; Ge et al., 2020).

However, the pattern of discrimination will continue until there are changes in the employment and other decision-making processes as well as changes to the platforms that enable these processes. Platforms themselves play a large part in continuing or curbing these discriminatory practices because they are designing the architecture of these transactions. Simply put, “Because online platforms choose which information is available to parties during a transaction, they can prevent the transmission of information that is irrelevant or potentially pernicious…If a platform aspires to provide a discrimination-free environment, its rules must be designed accordingly” [per (B. Edelman et al., 2017) p. 17-18].

Prior work has showcased that there are ways to make hiring processes more inclusive. For example, in 2000, Goldin and Rouse highlighted how the adoption of “blind” auditions in symphony orchestra auditions increased the probability that a woman would advance in the audition process and ultimately be hired. Their data found that masking the musician's identity increased by 50% the probability that a woman would advance from preliminary rounds and increased by severalfold. This study showcases the power of anonymity in lowering biases during the hiring process.

Aligned with removing irrelevant personal information, (B. Edelman et al., 2017) discuss several options for Airbnb bookings that are also relevant to Upwork and other online freelancing platforms, including concealing worker names and photos, or allowing the use
of pseudonyms and automatic salutations. Thus, there are specific design choices that platforms are making that increase the bias and discrimination experienced by marginalized folks on digital platforms. The results of this and prior platform studies suggest that increasingly used digital platforms have important tradeoffs to resolve, including in deciding what and how much information is available and actionable at the time of a transaction (B. Edelman et al., 2017; B. G. Edelman & Luca, 2014; Hannák et al., 2017c). While platforms benefit from “increasing the information flow within a platform… [there are situations in which] platforms may be providing too much information” [[B. Edelman et al., 2017] p.18].

6.4 Contributions

The goal of this study has been to better understand online freelance worker’s differential experiences, trajectories and outcomes on digital freelancing platforms. The findings make clear that workers’ identities mediate their online freelance work, as it does in the traditional labor force (Bertrand & Mullainathan, 2004; Castilla, 2008; Hegewisch & Mefferd, 2021; Kabat-Farr & Cortina, 2012; Pager & Shepherd, 2008). Despite earlier research suggesting that online labor could provide more opportunities for workers from historically marginalized communities, this dissertation study underscores how intersectionality and marginalization are mediated through labor platforms through various design features. Here, I discuss three contributions 1) elaboration on platform-mediated intersectionality, 2) elaboration on platform-mediated marginalization, and 3) empirical insight on the transitory role of online freelancing. These contributions illuminate the ways his study builds on our understanding of how intersectionality frames
marginalization in online labor. I also discuss how the findings contribute to our border understanding of online freelancers’ trajectories and how workers are using online freelancing to navigate through career priorities. Table 31 summarizes the study’s contributions and examples of these contributions.

Table 31. Study contributions

<table>
<thead>
<tr>
<th>Contribution</th>
<th>Description</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Elaboration on platform-mediated intersectionality</td>
<td>Platform-mediated intersectionality can extend our understanding of intersectionality not just as 1) the interconnectedness of the workers’ offline identity dimensions, but also 2) the interconnectedness of the identity elements making up a workers’ digital presentation, leading to the production of social practices of exclusion.</td>
<td>Includes the intersectional markers/characteristics presented through the platform such as persons’ perceived gender, race, and ethnicity mediated through the freelancer profile; includes their language, location, education, occupation, skills, talent badges, reviews, and job success score, among other elements.</td>
</tr>
<tr>
<td>Elaboration on platform-mediated marginalization</td>
<td>Platform-mediated marginalization is focused on examining the procedure and consequences of ‘othering’ individuals, including being socially excluded from opportunities, or being categorized into positions of unequal standing based on platform features, guidelines, and parameters.</td>
<td>In online freelancing platforms, marginalization occurs through filtering or excluding workers across intersecting identities to create 1) differences of experiences, 3) earning disparities and 3) acknowledgment of privilege or lack thereof on the platform.</td>
</tr>
<tr>
<td>Empirical insight on the transitory role of online freelancing</td>
<td>Findings provide insight into the role of online freelance markets and workers’ trajectories as they navigate different working arrangements. The data suggest that online freelancing provides a transitory means of building</td>
<td>Data show that fewer workers are pursuing Upwork as a singular form of income. Workers are also reducing their overall efforts on freelancing platforms (Demonstrated by a reduction in freelancing hours,</td>
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</table>
experience and income for many workers. unpaid time on Upwork and the number of bids).

6.4.1 Elaboration on platform-mediated intersectionality

To date, intersectionality provides a framework for understanding how identity is both multifaceted and intertwined, creating different modes of discrimination and privilege (K. Crenshaw, 1989, 1991; K. W. Crenshaw, 2017). Intersectionality was originally introduced to illuminate the compounded inequalities faced among Black and brown women in the legal system. Kimberle Crenshaw views intersectionality as a “method and a disposition, a heuristic and analytic tool” to understand the marginalization of (including the exclusion and violence against) Black women through the law, and through antiracist theory and politics (Carbado, p. 303). Yet the concept of intersectionality is useful across other domains and contexts and has been applied across research to analyze a range of complex social processes, including to analyze social identities and multiple access of difference, such as class, sexual orientation, nation, citizenship and immigration status, disability and religion. Here, I discuss how platform-mediated intersectionality impacts individuals who are engaging in online freelance work.

Within online freelancing, intersectionality is mediated through the digital platforms that enable this form of work. As supported by the findings, these platforms facilitate the presentation of workers’ identities primarily through the freelancer profile. In this context of fully remote freelance work, we can extend our understanding of intersectionality not just as 1) the interconnectedness of the workers’ offline identity dimensions, but also 2) the
interconnectedness of the identity elements making up a workers’ digital presentation, leading to the production of social practices of exclusion. Interwoven markers of an individual’s identity lead to marginality, exacerbated by algorithms and filtering features that facilitate exclusion across several axes of difference.

For online freelancers, platform-mediated intersectionality is directly tied to the identity characteristics that a worker has made visible on a digital platform. For example, the findings in this study suggest that on Upwork, intersecting identity markers/characteristics are presented through the freelancer profile and enforced by platform guidelines and terms of use. These markers include a person’s perceived gender, race, and ethnicity mediated through several freelancer profile elements including their required profile photo and name. Beyond these identity elements, a workers’ digital presentation also includes their language, location, education, occupation, skills, talent badges, reviews, and job success score, among other elements.

As highlighted by earlier research, workers’ identities are deconstructed and standardized on freelancing platforms to enable an efficient marketplace for project-based work (Munoz, Dunn, Sawyer, et al., 2022). This allows the platform and clients to sort through freelancers, filtering out workers across different skills, language proficiency, badges, and more. The findings presented in this study show how this design and mechanisms for sorting freelancers on Upwork, also facilitate exclusion and marginalization. Freelancers illuminate how the platform allows clients to “other” freelancers across geographical exclusion through features like the “U.S. only” filter (to exclude workers who live outside of the country), “Location” preferences, or the “English-level” scale (including the options of Any
level, Basic, Conversational, Fluent, and Native or bilingual). These examples show how platform-mediated intersectionality creates modes of discrimination and privilege.

These platform mechanisms that are designed to exclude are not isolated but interwoven. Clients are allowed to select their preferences across a variety of these filters and categories of workers, effectively setting up boundaries of inclusion and exclusion. And the feed of freelancers based on a client's parameters is just one step where exclusion occurs. Further exclusion and marginalization likely occur in the selection, hiring and evaluation processes. The platform design introduces human biases and potential for discrimination by 1) allowing clients to invite a selection of workers to bid on their jobs; 2) enabling clients to choose who they will interview and hire for a job; 3) facilitating client-driven evaluations and reviews of the freelancers. All of these processes are without much oversight or regulation of biases and discriminatory practices, despite a long history of known biases in hiring, worker evaluation and promotion.

The impact of platform-mediated intersectionality is visible in this study's findings of occupational, gender and race stereotyping, clients’ biased expectations, and workers’ earning disparities. While the findings of this study are limited to workers’ self-reported experiences and outcomes in online freelancing, this work provides a foundation to build additional insight into the roles and effects of platform-mediated intersectionality. This concept may be explored on other digital freelance platforms and gig work platforms more broadly. Patterns and effects of intersectionality can be investigated in future work by analyzing differences across worker participation and worker outcomes.
6.4.2 Elaboration on platform-mediated marginalization

Upwork has attracted workers and clients from across the globe in cloud-based project work. Its global reach, low barrier to entry and digital nature have led some to believe that this and other digital labor platforms are more flexible, equitable and inclusive. Indeed, they call themselves “The World’s Marketplace.” Their platform’s design is framed as a benefit for individuals that have traditionally been marginalized, including 1) women; 2) minorities; and 3) workers in socially disadvantaged locations (Fieseler et al., 2019). The fully-remote nature of these labor platforms had the potential to provide more inclusive labor conditions and promises for more equitable worker outcomes (Bertram, 2016; D’Cruz & Noronha, 2016; Howcroft & Rubery, 2019). Yet, this study highlights how an online freelancing market’s design enables platform-mediated intersectionality and worker marginalization.

Marginalization is understood as the ‘othering’ of people or groups based on perceived differences (Trudeau & McMorran, 2011). As such, marginalization is typically examined in relation to the procedure and consequences of being socially excluded from essential services and opportunities. Similar to the findings across other studies demonstrating marginalization across healthcare, housing, education and traditional employment; this study provides evidence of continued marginalization in digital labor markets. Findings highlight how platform-mediated intersectionality facilitates differential worker participation and outcomes. As such, this work builds on Trudeau & McMorran’s (2011) as well as others’ earlier conceptualization of marginalization. Here, platform-mediated marginalization can be understood as the procedure and consequences of ‘othering’
individuals, including being socially excluded from opportunities or being categorized into positions of unequal standing based on platform features, guidelines, or parameters.

In this study, marginalization in online freelancing was discernible through 1) differences of experiences, 3) earning disparities and 3) acknowledgment of privilege or lack thereof on the platform. For example, female freelancers highlighted how occupational stereotyping and perceived home responsibilities are affecting their online work opportunities and their outcomes of participation in this online labor marketplace. Black and Hispanic workers also highlighted issues of perceived ‘technical’ ability and language proficiency. Some workers are aware of their privileged platform presentation and how their presentation is likely tied to their success while others are aware of the ways in which they are likely excluded from certain opportunities based on their perceived identity.

As illuminated in the findings, marginalization is facilitated through the platform design, including its facilitation of an online identity presentation leading to the platformization of identity elements like gender and race, as well as the exploitation of platform-mediated intersectionality. Freelancing platforms facilitate exclusion through opaque algorithms and filtering capabilities to exclude workers across profile elements that are required for participation in the online labor marketplace. This demonstrates that rather than eliminating inequality, online labor markets like Upwork, reinforce, and exacerbate practices of bias, discrimination and inequality that have continually been documented in traditional labor markets.
6.4.1 Empirical insight on the transitory role of online freelancing

More broadly, findings from this study contribute to our understanding of the role of online freelance markets and workers’ trajectories as they navigate different working arrangements. The data suggest that online freelancing provides a transitory means of building experience and income for many workers. Despite the flexibility of fully-remote freelance work, the instability of online freelancing jobs, clients, and income, makes it difficult for workers to rely on online freelancing as a primary source of income. Data show that even the workers that were initially motivated to use freelance work as a primary source of income, many of these individuals are shifting toward more traditional employment arrangements.

The reduction of workers’ efforts on freelancing platforms demonstrates a move away from freelancing as a primary source of income. The data also illuminate that online freelancing continues to be a precarious form of work. Previous studies have highlighted precarity in this form of work, including the instability of work and earnings. Online freelancers are dependent on a labor market that has shifts in supply and demand (Aroles et al., 2019; Stephany, Dunn, Sawyer, et al., 2020; Wood et al., 2019a). The workers in this study highlighted this lack of stability in the later rounds of data collection, especially with many still recovering from the market shock driven by the onset of the COVID-19 pandemic. The response among many of the freelancers was a shift in prioritizing earnings and stability over the flexibility of online freelancing. Thus, even as workers continue to take on freelance work as a supplemental source of income, the availability of more stable, or
better-paid work opportunities is attracting some of the labor pool from online labor marketplaces.

With the rise of remote employment options (including contract work as well as part- and full-time employment), the flexibility of working remotely alone may no longer be a sufficient reason to keep workers on online freelance marketplaces long term. This is supported by data across the workforce that estimates nearly 70% of full-time “white collar” workers are already working remotely in some capacity (Lydia Saad, 2021). This shift in the labor landscape toward remote work was in part ushered by the rise of these digital labor markets and accelerated by the market shock of COVID-19. Studies have shown that while the desire for flexibility predates the onset of COVID-19, the shock of the pandemic expedited the pace of flexible work arrangements (Lydia Saad, 2021; Managing Flexible Work Arrangements, n.d.; Thier, 2022). As such, freelance markets are likely going to continue to experience a churn in their active workers, as workers continue to experience online freelancing as a transitory role in their career trajectories or as part of supplemental efforts, secondary to other more stable working arrangements.

6.5 Implications and future work

The findings and contributions of this study provide at least three design implications and three broader implications for policy discussions. Here, I also suggest directions future research may take to continue to advance our understanding of labor platforms and the differential experiences of workers (see Table 32 for a summary of implications and future research opportunities).
### Table 32. Study implications and opportunities for future work

<table>
<thead>
<tr>
<th>Implications &amp; Future Work</th>
<th>Description</th>
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<td>Platform design</td>
<td>Reconsideration of identity presentation and impression management</td>
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<td></td>
<td>Re-examination of the ability to see and filter intersectional characteristics</td>
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<td></td>
<td>Revamping platform information asymmetry</td>
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<td>Policy</td>
<td>Basic social standards for platform operation in the global and digital economy</td>
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<td>Revamping protections against discrimination, to embed these protections in digital labor platforms</td>
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#### 6.5.1 Platform design implications

This study demonstrates that the design choices embedded at the platform level in online freelancing platforms like Upwork are mediating workers’ experiences. This means that even as clients might introduce conscious or unconscious biases to the platform, the design
of the platform itself is also facilitating bias and discrimination at the platform level. Building from these findings and discussion, there are several design possibilities for digital labor platforms as they continue to evolve platforms features, functions and terms of use.

First is a reconsideration of the identity presentation and impression management features on the platform. As noted earlier, design choices that explicitly mediate a workers’ identity, and in particular make visible the traits that are associated with historically marginalized groups, will inevitably lead to reinforced and exacerbated bias, discrimination, and inequality in online labor platforms. This has been shown to be the case in prior studies of other platforms, such as Airbnb, Craigslist, and Taskrabbit (Doleac & Stein, 2013; B. Edelman et al., 2017; B. G. Edelman & Luca, 2014; Hannák et al., 2017c).

Modifying the strict name and photo requirements might lead to a more inclusive experience for workers (B. Edelman et al., 2017). The choice of requiring verifiable names and photos to bid for jobs might be perceived as a positive benefit for clients on the platform, but this same design choice has an outsized impact on workers who are occupying one or more marginalized identities. If the goal of the platform is inclusion, there needs to be a careful re-design of the identity presentation of workers on the platform.

A second design possibility is a re-examination of the transparency and filterability of intersectional freelancer characteristics. The clients on Upwork have access to a variety of filters, public reviews, and other ways to compare and exclude talent on the platform. This includes platform-driven “talent quality” badges, location-based filters and success score filtering, among other ways of setting parameters of worker characteristics. One of the
issues with this transparency and filterability is that this might enable predatory and discriminatory behavior on the platform. For example, clients could use the English level, or location filters to find workers that will accept lower rates. These features also promote exclusion and likely reduce opportunities for qualified workers that do not align with the assigned client parameters.

Finally, design decisions can also reduce or exacerbate the asymmetry of information on online freelancing platforms. Even as clients are able to determine parameters of inclusion and exclusion, freelancers have little to no information about the clients. Earlier studies have called out the platform asymmetry in gig work (Anjali Anwar et al., 2021; Aroles et al., 2019; Fieseler et al., 2019; Horton, 2010; Jarrahi & Sutherland, 2019; Rosenblat & Stark, 2016). Yet the lack of information about clients on freelancing platforms is especially relevant given that these clients have a significant amount of agency in their freelancer search and hiring process. Digital labor platforms can provide more guidance about the client’s hiring process, evaluation of workers, and other relevant patterns to freelancers. Balancing out the access to information on the platform may empower workers to be selective about who they chose to work with and it could also enable the platform to proactively flag patterns of marginalization or otherwise predatory behavior on the part of the clients.

6.5.2 Policy implications

Even as platform design changes might lead to some improvements for the workers on labor platforms, the study also leads to policy implications. Findings suggest that online freelancing platforms like Upwork are not proactively limiting or forbidding discrimination.
Instead, the designs of these online labor markets may actually exacerbate bias, inequality and discrimination. And since these platforms are enabling contract work rather than other forms of work, they are able to evade the regulations placed on work organizations that hire part and full-time employees.

This issue of worker regulation across employment categories has been an increasingly relevant issue as more work is outsourced to independent contractors / freelancers, rapidly accelerated by the adoption of global labor platforms. Gamito (2016) highlights that “The disruption of the Platform Economy has come hand in hand with a broader transformation: the emergence of a post-regulatory society, which feels more and more comfortable with transacting outside conventional legal and regulatory frameworks” (Gamito, 2016).

Given the global reach of digital labor platforms, universal regulation is difficult if not impossible. Yet, findings make clear that more needs to be done to protect workers against blatant discrimination. The findings presented in this study suggest that policy/regulation changes are necessary to limit worker precarity. Three policy directions that would help reduce the overall precarity faced by these workers include 1) basic social standards, 2) protection against discrimination and 3) protection for worker well-being.

Basic social standards are necessary for platform operation in our global and digital economy. For example, (Perulli & Treu, 2020) discuss the need for basic rights and labor regulations to be applied across workers, despite “the legal status of their work contracts” to preserve universal principles of the dignity of human labor. These universal standards might set basic requirements for social rights and standards across these platforms that are
operating across a multitude of contexts and conditions. These basic standards might include requirements for meeting the minimum wages across countries or regulation for scams and other predatory practices on the platform to protect workers.

Additionally, protection against discrimination needs to be embedded in labor platforms. In the US where Upwork and other major labor platforms are headquartered, there are explicit regulations forbidding work discrimination. Yet, independent contractors are excluded from the protections against discrimination that govern other employment categories. This means that policy updates are necessary to promote fair labor practices and safeguard fair wages and equal pay.

Finally, beyond discrimination protections, there is a need for a policy that protects worker well-being. Platforms are currently operating in a fragmented regulatory space that does not consider the overall welfare of its workforce. The increased use of labor platforms means policy updates are required to re-think the systems that did not account for the level of worker precarity enabled by contract/project-based working arrangements. This study highlights the transient nature of online freelancing in part due to freelancers' current lack of access to income stability, health benefits, and other protections that historically have been associated with traditional employment. This means rethinking our collective agreements to protect workers' health and safety--including working time limits, premiums on overtime, access to health insurance, sick leave, etc. As work and technology evolve, the regulations governing these evolving spaces (including shifting societal and labor structures) also need to be updated to reflect relevant shifts.
6.5.3 Opportunities for future research

To date, few studies have investigated how labor platforms mediate bias, discrimination and inequality. Yet this is a direction that continues to demand research attention, especially as platforms have control over design features that may address or exacerbate inequality and discrimination (Noble, 2018). Below, I discuss how additional research would benefit from investigating 1) granular differences across identities, 2) client behaviors and patterns, 3) evolutions of platform designs and guidelines, and 4) cross-platform studies.

Fiers (2023) recently highlighted that studies on inequality, discrimination or bias in the gig economy have primarily focused on outcome variables related to having been hired and having received a payment (p. 16). More work could be useful to understand the role of intersectionality and marginalization on these platforms earlier in the process of seeking work. Patterns and effects of intersectionality can be investigated in future work by analyzing other granular differences across worker participation and worker outcomes. To get a more complete understanding of bias, inequality and discrimination in online labor platforms, future studies may analyze worker-based differences in asking rates, number of reviews, and content of evaluations, for example.

Future research would also benefit from analyzing client behaviors and patterns. Most of the research to date on online freelancing markets has focused on the worker. Future research that investigates the three primary elements in online freelancing transactions (the workers, clients, and the platform) would be beneficial. Field experiments are one way to further investigate the role of labor platforms. This could build additional insights about
how design choices around platform reviews, ratings, and badges are also mediating clients’ behaviors and biases in this form of work.

Research on the changing nature of platforms, including the reasoning for and the effects of platform design or policy changes should also continue to be investigated. Platforms are constantly changing, and oftentimes the changes are not transparent to the platform participants or to researchers. While the findings presented here provide several examples of the ways freelancers’ gender, race and other identities are visible and used in online freelancing, platforms like Upwork will continue to evolve. For example, over the course of this study, Upwork rolled out several new features over the course of the study. And even as the longitudinal nature of the study made it possible to capture some of these changes, this means that constant research attention is required to monitor how freelancing and other labor platforms are enabling or addressing marginalization in this form of work. Capturing the evolution of these platforms is a challenge requiring future research attention.

Finally, because online freelancing and other forms of gig work occur across a variety of digital labor platforms, future research could also focus on cross-platform differences. Research exploring differences across platforms would allow us to build additional insight into the roles of different features that are associated with each platform. Other freelancing platforms such as Fiverr have different guidelines and terms of use, which mean that workers’ experiences of intersectionality and marginalization will vary across these platforms. For example, Fiverr, unlike Upwork, allows freelancers more leeway in the profile photo selection, including allowing an original image of 1) the freelancer, 2) their company logo, or 3) an image that represents their service. This means that workers’ experiences are
likely to vary across the ecosystem of online labor platforms. As platforms continue to emerge and evolve, cross-platform studies will become more relevant and important to advance our insight.

6.6 Chapter Summary

Chapter six contains the interpretation of the findings outlined in the previous chapter. I discuss how this study relates to other literature, including how the findings relate to earlier studies on gender and race inequality on digital labor platforms. I also discuss the empirical and conceptual contributions of this work and conclude the chapter with discussions on future research opportunities.
Conclusion

This study investigates how platforms and identity attributes such as gender, race, and occupation mediate individuals’ experiences in online freelance work. In doing so, Chapter 1 provides an overview of the study’s motivation, research goals, and key terms and definitions. Chapter 2 highlights relevant literature related to changes in work and the role of identity in online freelancing to frame the research gap this investigation addresses. Chapter 3 outlines the research framework, including the theoretical approach that allows me to build on concepts like intersectionality and marginalization. Chapter 4 lays out the research design and analysis approaches for this longitudinal study incorporating survey, interview and platform data. Chapter 5 draws out the findings based on the analysis and is focused on the differences in platform-mediated experiences, changes in freelancers’ experiences and the role of the platform in online freelancing. Finally, Chapter 6 provides an interpretation of the findings, discusses the empirical and conceptual contributions, and outlines directions for future research.

For this research, I draw data from a longitudinal panel study of 108 US-based online freelancers across three years of data collection. The data show ways platforms reinforce and exacerbate identity-based stereotypes, bias and expectations in online freelance work. Gender, race, and ethnicity are some of the attributes that are related to workers’ differential experiences and outcomes in this form of work. These differences were visible in reinforced occupational stereotypes, biased expectations and workers’ earning disparities.
Platform and interview findings also illuminate how these identity attributes are not mutually exclusive, but instead are interrelated when mediated through the platform. For example, the earnings gap between White males and Black and Hispanic females in the study showcases one of the ways in which intersectionality is mediating online freelancing outcomes. Additionally, the concerns and strategies discussed among Black participants regarding their digital identity presentation showcase the continued importance of investigating bias, discrimination and inequality in online freelancing and in the gig economy more broadly.

This research advances our understanding of platform-mediated intersectionality and platform-mediated marginalization. I discuss how platform-mediated intersectionality can be used as a framework to investigate how individuals are characterized, and excluded (or included) across varying and intersecting identity characteristics on digital labor platforms. Continued research is necessary to expand on how gender, race and additional digital identity characteristics (like education, age, and others) are interrelated and can lead to different outcomes of privilege and marginalization on freelancing platforms.

The implications of this research include platform design reconsiderations focused on workers’ identity presentation and impression management; the filterability of intersectional characteristics; and platforms’ information asymmetry. Future policy discussions may also benefit from this study’s findings to advance regulation for basic social standards for platform operation; protections against discrimination on digital labor platforms; and collective well-being agreements. As digital labor platforms continue to operate globally, more work is necessary to understand and address platform-mediated
biases, discrimination and inequality to better serve the digital workforce. The data and contributions from this study are just one step toward informing future policy, technology design, and training for more inclusive futures of work.
Appendices

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## Appendix 1: Round 1 Survey Questions

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<th>Options</th>
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<tbody>
<tr>
<td>How would you classify your current employment status?</td>
<td>Full time, Part time, Unemployed</td>
</tr>
<tr>
<td>Is freelance work your:</td>
<td>Primary Source of employment, Additional source of employment</td>
</tr>
<tr>
<td>Is this additional source of income:</td>
<td>A long term effort for supplemental income, A short term solution for extra income, A temporary solution to unemployment, A bridge between jobs</td>
</tr>
<tr>
<td>How long have you been doing freelance work? Please round to the nearest year:</td>
<td></td>
</tr>
<tr>
<td>How long have you been doing work on digital and online platforms? Please round to the nearest year:</td>
<td></td>
</tr>
<tr>
<td>All in all, how satisfied are you with online freelancing?</td>
<td>Extremely satisfied, Somewhat satisfied, Neither satisfied nor dissatisfied</td>
</tr>
</tbody>
</table>
- Somewhat dissatisfied
- Extremely dissatisfied

How long have you been working on Upwork (elance, oDesk)? Please round to the nearest year:

<table>
<thead>
<tr>
<th>What percentage of your overall work is done on Upwork? - Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>What percentage of your weekly earnings is it responsible for? - Percentage</td>
</tr>
<tr>
<td>How many jobs do you bid for in a typical week?</td>
</tr>
<tr>
<td>Besides Upwork, what other online platforms do go to for work? (click all that apply)</td>
</tr>
</tbody>
</table>
  - Fiverr
  - LinkedIn ProFinder
  - Freelancer
  - Toptal
  - Guru
  - Gigster
  - Other:________
| What percentage of your overall work is done on these other platforms? - Percentage |
| What percentage of your weekly earnings is it responsible for? - Percentage |
| Approximately how many hours a week do you spend across all platforms? (including Upwork) - Hours |
| Approximately how many hours a week are you looking for work? (beyond what you get paid to do) - Hours |
Typically, what days do you log on to any of the digital work platforms such as Upwork, LinkedIn ProFinder, Gigster, etc.?

How would you categorize the job opportunities for somebody with your skills and education in your local area?

If you didn't have access to freelance work, like Upwork, would you be forced to look for work in another city?

- Hard to find
- Easy to find
- Lots of work
- Not sure

How predictable are your weekly earnings?

- Very Predictable
- Somewhat predictable
- Not predictable

How satisfied are you with the fairness of your pay?

- Extremely satisfied
- Satisfied
- Dissatisfied
- Extremely dissatisfied

In an average week, how much do you earn? Please enter the amount to the nearest $50

Yearly Income

Do you have health benefits?
- Yes
- No

You have indicated you have health benefits, please tell us how you secured those benefits.

Are you able to save or contribute to a retirement plan?
- Yes
- No

Do you have a savings, rainy-day fund, or nest-egg in case of emergency or long period of unemployment?
- Yes
- No

If yes, about how many weeks could you depend on your savings, rainy-day fund, or nest egg? - weeks

How valuable to your freelance work is your formal schooling?
- Very valuable
- Valuable
- Somewhat valuable
- Not at all valuable

How valuable to your freelance work are the skills and knowledge you have gained from your other work experiences?
- Very valuable
- Valuable
- Somewhat valuable
- Not at all valuable

Which of the following do you use for professional purposes?

- Website:__________
- Facebook group/s
- LinkedIn:__________
- Other social media:_______

What is your gender?

What is your age in years?

What is your Zip Code?

How long have you lived at your current Zip Code? - Years

Have you ever moved to another city/state/country because of a job?

How settled would you say you are in your current location?

What is your highest level of education?

What is your marital status?

How many children do you have?

How many people, including yourself, live in your household?

Are you considered your household’s "primary breadwinner"?

Are you Hispanic, or Latinx?

Choose one or more races that you consider yourself to be:
Appendix 2: Round 1 Interview Guide

*Opening*

Before we get started with the interview, we want to get a sense of how the current scenario is affecting you?

*Section 1: Overview of their work (introductory section to get situated)*

1. Would you please tell me what it is that you’ve been doing on UpWork?
   a. What was your previous work situation before you started doing gig work?
   b. What made you start doing this work?
   c. How/where did you learn about this platform/work?
   d. What has been the biggest surprise about this work?

2. What role does your freelancing (or your work on UpWork) play in your employment strategy?
   a. Do you see this work as your career or something temporary?
   b. If temporary, how long do you imagine yourself doing this?
   c. Are you looking for a more traditional employment relationship (how hard)?
   d. When somebody asks you what you do for a living, what do you tell them (and why)

*Section 2: What is their labor strategy, their approach to working?*

3. Since you’ve started on UpWork, how has your working style or approach to work changed?
   a. Probes: Check on work changes, location changes, technology changes, time changes…
b. Was Upwork your first place to try freelancing?

4. Talk me through how you decide what work you start doing, (job/project/task)?

Section 3: How do they spend their work time (Employment effort)

5. What is your strategy or approach to seeking work?
   a. Probes: How constant is job-seeking (every day, rarely?)
   b. How do you decide when to spend time doing so?
   c. Do you rely on interpersonal (your own) networks, online sites, or other methods?
   d. How often do you tweak your Upwork profile (or/and other online profiles)?
   e. Do you set aside time to seek work or is it something you just … do?

6. How do you take advantage of the work flexibility?
   a. Are you able to take time off, go on vacation or do other things? Do you?
   b. How hard would it be if you had to take time off during your work to take care of personal or family matters?

7. Compared to other work you’ve done, do you feel you are paid fairly for online or freelancing work?
   a. Why or why not?
   b. Have you ever had a client pay you less than agreed upon or did not pay you at all for your work? Or just made payment difficult in general?

Section 4: How do they organize for work
8. We would like to know a bit more about how you’re organized for doing freelance work, specifically:
   a. Where do you do your work (details)? Where physically do you work (in your home? coworking space?)
   b. How do you keep in contact (email, text, phone) and how do you decide.
   c. Do you use UpWork to contact clients over other methods?
   d. Talk me through how you share materials and deliverables with clients.
   e. Can you explain how you get ready for your work (do you have a routine, are there things that you always have to do, or seem to forget, is it different now than when you worked full time)?

Section 5: Freelance experiences

9. What challenges have you found with freelancing?

10. What advice would you give a new freelancer (and why)?

Closing

11. Can you describe one or two of the most “interesting” or unexpected freelancing experiences you’ve had..
   a. We are looking for unique or memorable experiences (good and or difficult)
   b. Any aspect -- stories you’d tell others (about clients, work to be done, schedules, interactions)

12. Now that you know a bit more about what we are asking, can you think of someone else we should talk to about their work?

13. Is there something we should have asked, but did not (or is there any additional information you would like to share with us)?
14. We are hoping to send periodic updates on the findings and insights from this project and we are collecting emails to send this out, would you like to be included? If so, what email would you like to receive the updates?

15. We are also hoping to do follow up research with participants, would you be interested? If so, do we have your consent to contact you when the project gets started? (probe if the same email is fine)
Appendix 3: Round 1 Protocol

(log in details, and links to spreadsheet and survey removed for simplicity)

1. Log on to Upwork (upwork.com with Digital Work Group account info)
2. Look to google sheet for block of names you are interviewing
3. With name, invite them to the job via Upwork
4. When they accept, send them the survey via Upwork message (use the pre-drafted message with survey link)
5. When they complete the survey, ask for the freelancer's availability and schedule a Zoom interview. Once they let you know that they have completed the survey (or you see the email in digitalwork@syr.edu).
6. Ensure the zoom meeting is set up with the recording enabled for cloud storage.
7. Share zoom invite with the freelancer on Upwork. Click “copy invitation” and paste Zoom link material into Upwork message.
8. Send them the overview of interview (via message in Upwork)
9. Be sure to update spreadsheet with the interview details:
10. Check Digitalwork@syr.edu email account to see if the person has done the survey.
11. Review (and print) interview guide
12. Have at the interview! Take notes.
   a. Connect via Zoom & have at it! Be sure to keep it to 45 minutes. If you start to run long, ask if they are willing to keep going. They can stop at ANY time, no extra pay.
   b. Take as many notes along the way as you can.
c. When done, be sure to thank them!

13. After interview, follow-up in Upwork with message to thank them

14. Close out the contract
   a. To do so, first pay them
   b. Rate them 5 stars
   c. Provide them the generic review text

15. As soon as you can, after the call, jot down notes
   a. The process (what went well, what was bumpy)
   b. Particular issues, interesting topics, etc.
   c. Also right up your thoughts (YOUR impressions)

16. Update the freelancer spreadsheet to note the interview is complete

17. Download audio file to dropbox (via Slack or directly)

18. Finally, share any insights and experiences from the interviews to the Slack channel
   interview-insights
## Appendix 4: Round 2 Survey Questions

### How do you classify your current employment status (check all that apply)?
- I work solely on Upwork
- I work on Upwork and also have one or more additional less-than-full-time jobs
- I have full-time work and Upwork provides me additional income
- I am looking for full-time work and Upwork is helping me bridge the gap
- I have other plans, as follows:__________

### Please help us understand your current thinking about Upwork:
- I see this as part of my long-term plan
- I see this as helping me for the next few months (to a year)
- I need the work, but am not sure about how long I will stay on Upwork
- Have not really thought about this until you asked

### Please indicate how important are these factors to you when pursuing freelance work online?
- I need the income
- To keep current with skills
- To challenge myself
- To build a portfolio of jobs
- To stay connected to my profession
- To develop a client base
- For work flexibility (to work when I want)
- For other reasons: __________

All in all, how satisfied are you with online freelancing?
- Extremely satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Extremely dissatisfied

On average, what percentage of your monthly earnings comes from Upwork jobs? - Percentage

On average, how many hours per week are you working (in all forms)? - Hours

On average, how many hours per week are you working on Upwork (so, if you are working solely on Upwork, this will be the same response as above)? - Hours

On average, how many hours per week are you looking for new jobs and doing other work-related efforts on Upwork that are not directly part of a paid job? - Hours

Approximately how many of your working hours are done from Monday to Friday? - Hours

Approximately how many of your working hours are done on Saturday and Sunday? - Hours

How many proposals for jobs on Upwork do you submit for in a typical week?

What percentage of these proposals for Upwork jobs are accepted? - % accepted

Do clients contact you directly with hiring offers or opportunities?
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often are you contacted for such opportunities?</td>
<td>Multiple times a week, Weekly, Monthly, Rarely</td>
</tr>
<tr>
<td>How predictable are your monthly earnings?</td>
<td>Predictable, Somewhat predictable, Not very predictable, Unpredictable</td>
</tr>
<tr>
<td>Are you paid fairly for the work you do on Upwork?</td>
<td>Yes, Somewhat/Mostly, Not really, No</td>
</tr>
<tr>
<td>In a typical month, about how much do you earn via Upwork (a rough estimate is all we seek)?</td>
<td></td>
</tr>
<tr>
<td>At this time, are your earnings from Upwork - and any other income sources - allowing you to meet your current financial obligations?</td>
<td>Absolutely</td>
</tr>
</tbody>
</table>
- Mostly
- Almost
- Not at all

How would you rate your current financial security?
- Very insecure
- Insecure
- Neither insecure nor secure
- Secure
- Very secure

Has your level of financial security changed over the past year?
- Yes: I am more financially secure
- Yes: I am less financially secure
- No: My level of financial stability is mostly unchanged

Who regularly contributes financially to your household income?
- Just me
- Me and others

What percentage of the household income are you responsible for providing? - Percentage

Have there been changes in your health care coverage?
- Yes
- No

What about your health care coverage has changed?
- I have lost my health care coverage
- I have changed health care coverage
- I have secured health care coverage
- Other: ___________

Are you able to save or contribute to a retirement plan?
- Yes
- No

Do you have a savings, rainy-day fund, or nest-egg in case of emergency or long period of unemployment?
- Yes
- No

If yes, about how many months could you depend on your savings, rainy-day fund, or nest egg?

Would you be willing to you share with us your LinkedIn profile URL (https://www.linkedin.com/in/username)?

If not, leave blank and move on!

In addition to our current effort, we are also keen to learn more about your uses of LinkedIn.

If you are willing to talk with us in more depth about your LinkedIn uses, please check this box so we know to contact you specifically about this side project. And, of course, we will pay you for your time.

If your Zip Code has changed since we last talked, what is your current Zip Code?
Appendix 5: Round 2 Interview Guide

Opening

0. Before we get to the full interview, the world has changed since we last spoke. So, can you give us a sense of how COVID-19 is affecting your work? If no effects/issues, why? If many issues, be sure to note so you can connect to questions below

Section 1: Household/Family working arrangements

If the respondent is alone/indicates no family/household/caregiving responsibilities skip to question 3

1. We would like to know more about your household arrangements & responsibilities relative to being able to do work.
   a. How does your household & family balance caregiving responsibilities?
   b. How do you decide who is responsible for these responsibilities?
   c. What other household maintenance roles are you responsible for?
   d. How much time do you spend on these responsibilities?
   e. When do you find time to do this work across a day or week?
   f. How do you prioritize what gets done, when?
   g. Are you satisfied with the way these arrangements have developed?

2. Since we last spoke, what changes (if any) have you had to make in your family arrangements, due to work?
   a. How have you sorted out who does what?
3. One of the great benefits of freelancing is flexibility. So, how do you fit freelance work into your typical daily schedule (do you have a typical daily schedule / has it changed, why)?
   a. Does this include time spent bidding for jobs, looking for work, updating your profile, etc.?
   b. How do you decide what to spend your time doing?

4. Is what you are currently doing stable or sustainable? How long can you keep up with your current arrangement?
   a. If yes, great, why? If no or …, what needs to change?
   b. Probe for a sense of temporal scale (no leading :) Can this go one a few more weeks, or months, for the long term, or?

   **Section 2: Reviewing what you are doing for work**

5. Since last we talked, how has your work changed?
   a. Probing on each to see if change is related to COVID. And, if not, what is driving change?
   b. Listening for changes to employment, hours worked, bids, types of work, changes at home/in household, with health

6. Has the work you get through Upwork changed since last we spoke?
   a. Has the work you get outside of Upwork changed since we last spoke? (please check the survey response to see if they do other work) …
   b. Have clients changed what they seek from you or need?
   c. Have you changed your approach to seeking work (More, less, different, …)?
   d. Have you changed your approach to bidding for work?
e. What has been the biggest challenge or success in all of this? (e.g., Covid, home arrangements, new jobs, bidding, your life)

7. Have you seen or experienced any changes by or on Upwork (e.g., more people bidding, changes to the features, issues with profile or access to jobs, etc, …)?

8. In light of all of this, any thoughts about what this means for your career plans or employment strategy?

Section 3: How do you set your pricing/bidding?

9. What is your bidding strategy or approach to proposals?
   a. How did you come to this strategy or approach?
   b. How do you set your hourly rate or pricing when you bid?
   c. How did you learn how to set your prices? (from what sources?)
   d. Do you compare your hourly rate and pricing with others (Why)?
   e. How often do you get your asking rate?
   f. How do you negotiate prices (do you negotiate price)?
   g. Has COVID had any effect on how you price and bid?

10. How has your pricing changed since you’ve been on Upwork?
   a. Does your rating influence your pricing?

11. Do you pay attention to your job rating score, why or why not?
   a. What do you do to be sure the score goes up/stays high?

12. You said on the survey that you were/were not fairly compensated? Must look at their survey response
   a. Why or why not?
   b. Do you think that your gender matters? Why or why not?
13. Do you think that your gender influences or matters to the clients who hire you (examples, reasoning, experiences to share)?

14. One of the things we learned from our first round of data collection is that women ask for less money per hour, even controlling for experience and skill: Any thoughts as to why?

Section 4: Your Online Identity

15. What is your strategy for presenting yourself in your Upwork profile?
   a. Do you have more than one profile (and why)? If so, pick one of these that is most interesting to you to talk about
   b. How did you pick your profile picture?
   c. How did you decide what to put in your description?
   d. Why did you choose what you did for your work history?
   e. Has a client ever commented on your profile or picture or?
   f. Has Upwork ever asked or required you to update your profile? Did they explain why?
   g. Under what circumstances would you consider editing/tweaking your profile?
   h. Do you think of this as personal branding?
   i. Do you think your gender or ethnicity or other attributes other than your experience matters?

16. Are you active on LinkedIn?

17. Is your branding strategy the same for LinkedIn as it is for Upwork?
   a. If not, how does it differ?
b. Is your LinkedIn profile complete (education, skills, …)

c. Did you choose a different profile picture for Linkedin (v. Upwork)?

d. Is your work history/experience listed differently on LinkedIn than on Upwork?

e. Do you ask clients or others for endorsements?

18. Is freelancing mentioned on your LinkedIn profile?

a. If it is not mentioned, why is that?

19. Have any of your LinkedIn efforts resulted in a new client or new job?

20. Do you belong to any groups on LinkedIn?

a. Which ones (if you are willing to share)?

b. Why/what for?

21. Do you connect with or network with other freelancers on LinkedIn?

a. Why/why not?

b. If you do, how do you decide who to connect with?

22. Are you a member of any freelancing groups?

a. If yes: which ones?

b. Why/what does belonging to one of these provide you?

Section 5: Freelance Network or Community

23. Are there any other online platforms, social media accounts, profiles or personal web presences that you leverage for seeking work, making professional connections, and presenting yourself online (aside from LinkedIn or Upwork)? E.g., Monster, Indeed, Fiverr, Freelancer.com, care.com, Craigslist, AMT, your own web presences ….
a. Do you think of these as connected, or independent (an ecology or separate)?

b. How do you decide which to use, when, and why?

c. Do you present similar or different things on these?

d. Can you tell us about how you decide?

e. Have you ever found a freelance job or new client on these other platforms?

f. Can someone identify you as a freelancer on any or all of these?

24. Do you have friends, colleagues, previous co-workers or others that you talk with about your work (e.g., clients, bidding, freelancing, etc).?

a. Do you think of this as a community or a network or ...?

b. Do you look at Reddit or Facebook groups or other forums for guidance and support for your freelancing-Probe on people, online forums, video and articles, videos, blogs

Section 6: Closing

25. We are interested in understanding Upwork client’s experiences and interests. Have you ever hired somebody on Upwork?

a. If yes, would you be willing to talk with us about this experience at another time?

26. Would you be willing to point us to a previous or current client that we can speak with for a future project?

27. Any neat tips, tricks or hacks about freelancing and Upwork that you are willing to share?

28. Is there something we should have asked, but did not (or is there any additional information you would like to share with us)?
29. ASK FOR THEIR EMAIL (ONLY IF WE DON’T HAVE IT)

Thank you for your time!

We will be updating you on what we are learning in the late winter of 2021
Appendix 6: Round 2 Protocol

(log in details, and links to spreadsheet and survey removed for simplicity)

1. Hire Freelancer: Go to freelance interview spreadsheet, and figure out which freelancer you will be inviting: (Freelance interview Spreadsheet)

2. Log into upwork.com
   a. From Upwork page, go to job (called “Academic Research - Follow-up Interview” under postings), then click “my hires” and find the freelancer you want to hire from the list
   b. Once you find the freelancer, click the “Hire” button and a new page will open up
   c. Click the acknowledgement checkbox and click the green hire button
   d. Under related job posting, double check that the correct job is listed (Academic Research - Follow-up Interview). It should autofill the terms as a fixed deposit and a filled out work description.
   e. The next page states “Are you done hiring for the job 'Academic Research - Follow-up Interview’”? Click “I plan to hire more freelancers for this job.”

3. Return to the freelance interview spreadsheet (as detailed below) and enter the date that you’ve hired the freelancer.

4. Monitor Upwork messages (click messages in top menu of upwork) for notification that the freelancer accepted the job. Once they accept the job, be sure to update the spreadsheet that the job has been accepted.
5. When they accept, send them the survey via Upwork message: Copy and paste this from here or slack, and feel free to personalize with a sentence if that warrants, and to USE THEIR NAME.

   Hi (name),

   Thank you for your interest in our research project!

   Kindly find the survey questionnaire at this link: (link)

   Once we receive your response, we will reach out to you regarding interview scheduling.

   Best Regards,

   Digital Work Research Team

6. Update the spreadsheet when the link is sent.

7. When they have done the survey, schedule a Zoom interview. Monitor digital work email for the qualtrics survey completion confirmation, and also monitor the upwork messages in case the freelancer messages that they have completed the survey.

8. Once you have confirmed that the survey has been completed, send the following message via upwork messages:

   Hi [NAME]!

   We received your questionnaire and would like to schedule a time for the interview this week. If you could please send your availability, we would greatly appreciate it.

   Thank you,

   Digital Work Research Team
9. Monitor the upwork messages for a response from the freelancer. Once they share availability, consult the freelance interview spreadsheet to confirm that zoom will be available.

10. Go to Zoom.us and log in.

11. Schedule the interview on zoom platform, then return to the upwork messaging and share the zoom invite with the freelancer. Click “copy invitation” and paste Zoom link material into Upwork message.

12. Update the spreadsheet when the survey is completed and interview is scheduled.

13. Prior to the interview, check Digitalwork GMAIL account to review/ print the participant’s survey results. Likely best to print this out, review it and match up to questions.

14. Perhaps a day ahead of the interview, send them the overview of the interview (via message in Upwork).

15. Check the freelance interview spreadsheet to see if we need to get their email.

   (question 27 in the interview guide)

16. Have at the interview! Likely best to print out the interview questions, so you can take notes. Once logged into zoom, click the meetings on the side menu and click “start” for the scheduled zoom interview.

   a. Be sure to keep it to 45 or so minutes. If you start to run long, ask if they are willing to keep going. They can stop at ANY time, no extra pay. Take as many notes along the way as you can. ***At the end, thank them!***
17. As soon as you can, after the call, jot down notes about the process (what went well, what was bumpy, particular issues, interesting topics, etc.) Also, write up your thoughts (YOUR impressions); probably will be at least a page or more.

18. Then, follow-up in Upwork with a message to thank them

19. Pay the freelancer and close the contract on Upwork. Be sure to give them a 5 star rating and comment “<NAME> was easy to work with. They were prompt, professional and articulate. We look forward to hiring them again!”

20. Update spreadsheet.

21. Audio file will be automatically downloaded to dropbox. If you want to confirm the upload has gone through here is the log in to dropbox (the upload may take several hours to complete)

22. Your notes, insights and experiences from the interviews go to the Slack channel - #InterviewInsights
Appendix 7: R2-Summer 2021 Survey Questions

This survey was adapted from the Round 1 survey—only slightly different.

<table>
<thead>
<tr>
<th>Upwork Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>How would you classify your current employment status?</td>
</tr>
<tr>
<td>• Full time</td>
</tr>
<tr>
<td>• Part time</td>
</tr>
<tr>
<td>• Unemployed</td>
</tr>
</tbody>
</table>

| Is freelance work your: |
| • Primary Source of employment |
| • Additional source of employment |

| Is this additional source of income: |
| • A long term effort for supplemental income |
| • A short term solution for extra income |
| • A temporary solution to unemployment |
| • A bridge between jobs |

<p>| How long have you been doing freelance work? Please round to the nearest year: |
| How long have you been doing work on digital and online platforms? Please round to the nearest year: |
| How long have you been working on Upwork (elance, oDesk)? Please round to the nearest year: |
| What percentage of your overall work is done on Upwork? - Percentage |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>What percentage of your monthly earnings is it responsible for? - Percentage</td>
<td>Percentage</td>
</tr>
<tr>
<td>- Fiverr</td>
<td>percentage</td>
</tr>
<tr>
<td>- LinkedIn ProFinder</td>
<td>percentage</td>
</tr>
<tr>
<td>- Freelancer</td>
<td>percentage</td>
</tr>
<tr>
<td>- Toptal</td>
<td>percentage</td>
</tr>
<tr>
<td>- Guru</td>
<td>percentage</td>
</tr>
<tr>
<td>- Gigster</td>
<td>percentage</td>
</tr>
<tr>
<td>- Other:_________</td>
<td>percentage</td>
</tr>
<tr>
<td>What percentage of your overall work is done on these other platforms? - Percentage</td>
<td>percentage</td>
</tr>
<tr>
<td>What percentage of your monthly earnings is it responsible for? - Percentage</td>
<td>percentage</td>
</tr>
<tr>
<td>Approximately how many hours a week do you spend across all platforms? (including Upwork) - Hours</td>
<td>hours</td>
</tr>
<tr>
<td>Typically, what days do you log on to any of the digital work platforms such as Upwork, LinkedIn ProFinder, Gigster, etc.?</td>
<td>days</td>
</tr>
<tr>
<td>How would you categorize the job opportunities for somebody with your skills and education in your local area?</td>
<td>opportunities</td>
</tr>
<tr>
<td>If you didn't have access to freelance work, like Upwork, would you be forced to look for work in another city?</td>
<td>city</td>
</tr>
<tr>
<td>- Hard to find</td>
<td>city</td>
</tr>
<tr>
<td>- Easy to find</td>
<td>city</td>
</tr>
<tr>
<td>- Lots of work</td>
<td>city</td>
</tr>
<tr>
<td>Question</td>
<td>Options</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>How predictable are your weekly earnings?</td>
<td>- Not sure</td>
</tr>
<tr>
<td></td>
<td>- Very Predictable</td>
</tr>
<tr>
<td></td>
<td>- Somewhat predictable</td>
</tr>
<tr>
<td></td>
<td>- Not predictable</td>
</tr>
<tr>
<td>How satisfied are you with the fairness of your pay?</td>
<td>- Extremely satisfied</td>
</tr>
<tr>
<td></td>
<td>- Satisfied</td>
</tr>
<tr>
<td></td>
<td>- Dissatisfied</td>
</tr>
<tr>
<td></td>
<td>- Extremely dissatisfied</td>
</tr>
<tr>
<td>In an average month, how much do you earn? Please enter the amount to the nearest $50</td>
<td></td>
</tr>
<tr>
<td>Do you have health benefits?</td>
<td>- Yes</td>
</tr>
<tr>
<td></td>
<td>- No</td>
</tr>
<tr>
<td>You have indicated you have health benefits, please tell us how you secured those benefits.</td>
<td></td>
</tr>
<tr>
<td>Are you able to save or contribute to a retirement plan?</td>
<td>- Yes</td>
</tr>
<tr>
<td></td>
<td>- No</td>
</tr>
<tr>
<td>Do you have a savings, rainy-day fund, or nest-egg in case of emergency or long period of unemployment?</td>
<td>- Yes</td>
</tr>
<tr>
<td>Question</td>
<td>Options</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>If yes, about how many months could you depend on your savings, rainy-day fund, or nest egg? - weeks</td>
<td>• No</td>
</tr>
<tr>
<td>Have you had to dip into your savings because of pandemic circumstances?</td>
<td>• Yes, • No</td>
</tr>
<tr>
<td>All in all, how satisfied are you with online freelancing?</td>
<td>• Extremely satisfied, • Somewhat satisfied, • Neither satisfied nor dissatisfied, • Somewhat dissatisfied, • Extremely dissatisfied</td>
</tr>
<tr>
<td>How valuable to your freelance work is your formal schooling?</td>
<td>• Very valuable, • Valuable, • Somewhat valuable, • Not at all valuable</td>
</tr>
<tr>
<td>How valuable to your freelance work are the skills and knowledge you have gained from your other work experiences?</td>
<td>• Very valuable, • Valuable, • Somewhat valuable</td>
</tr>
</tbody>
</table>
- Not at all valuable

Which of the following do you use for professional purposes?

- Website:__________
- Facebook group/s
- LinkedIn:__________
- Other social media:_______

What is your gender?

What is your age in years?

What is your Zip Code?

How long have you lived at your current Zip Code? - Years

Have you ever moved to another city/state/country because of a job?

How settled would you say you are in your current location?

What is your highest level of education?

What is your marital status?

How many children do you have?

How many people, including yourself, live in your household?

Are you considered your household’s "primary breadwinner"?

Are you Hispanic, or Latinx?

Choose one or more races that you consider yourself to be:
Appendix 8: R2-Summer 2021 Interview Guide

This interview guide was adapted from the Round 1 and Round 2 interview guides to integrate participants in this group to the broader panel study.

Section 1: Overview of your work (introductory section to get situated)

1. As we get going, I’d like to know why you decided to start seeking jobs on Upwork?
   a. What was your previous work situation before you started doing gig work?
   b. How/where did you learn about this platform/work?

2. Would you please tell me what it is that you've been doing on UpWork?
   a. What has been the biggest surprise about this work?
   b. How has the pandemic changed what you are doing on Upwork/for work?

3. What role does your freelancing (or your work on UpWork) play in your employment strategy?
   a. Do you see this work as your career or something temporary?
   b. If temporary, how long do you imagine yourself doing this?
   c. Are you looking for a more traditional employment relationship (how hard)?

4. When somebody asks you what you do for a living, what do you tell them (and why)?

Section 2: How do you spend your work time (Employment effort)?

5. What is your strategy or approach to seeking work?

6. How constant is job-seeking (every day, rarely?)

7. How do you decide when to spend time doing so?

8. Do you rely on interpersonal (your own) networks, online sites, or other methods?

9. Do you set aside time to seek work or is it something you just … do?
10. How often do you tweak your Upwork profile (or/and other online profiles)?

11. Do you have a strategy for bidding?
   a. How did you come to this strategy or approach?
   b. How did you learn how to set your prices? (from what sources?)
   c. How do you negotiate prices (do you negotiate price)?
   d. Did COVID affect any of this?

12. One of the great benefits of freelancing is flexibility. Knowing this, how do you fit freelance work into your typical daily schedule (e.g., Do you have a typical daily schedule / has it changed, why)?
   a. Does this include time spent bidding for jobs, looking for work, updating your profile, etc.
   b. Are you able to take time off, go on vacation or do other things? Do you?
   c. How hard would it be if you had to take time off during your work to take care of personal or family matters?

13. Is what you are currently doing stable or sustainable? How long can you keep up with your current arrangement?
   a. If yes, great, why?
   b. If no or …, what needs to change?
   c. Probe for a sense of temporal scale (no leading :), e.g., ---> Can this go one a few more weeks, or months, for the long term, or?

14. Compared to other work you’ve done, do you feel you are paid fairly for the work you are doing on Upwork (or freelancing more generally)?
   a. Why or why not?
15. Is your experience with compensation/pay on Upwork different from other freelance or full time work experiences

16. Have you ever had a client pay you less than agreed upon or did not pay you at all for your work? Or just made payment difficult in general?

17. Have you ever taken action or stopped working with a difficult client?

18. Do you pay attention to your job rating score (why or why not)?

19. What was your strategy for presenting yourself in your Upwork profile?

**Section 3: Freelance experiences**

20. What challenges have you found with freelancing?
   
a. Do you think your gender, ethnicity, language, nationality, previous experiences have made these challenges easier or?

21. Do you think that your gender influenced or mattered to the clients who hired you (examples, reasoning, experiences to share)?

22. Do you think that your ethnicity, nationality or race influenced or mattered to the clients who hired you (examples, reasoning, experiences to share)?

23. Do you connect with or network with other freelancers (e.g., on LinkedIn)?

**Closing**

24. Can you describe one or two of the most “interesting” or unexpected freelancing experiences you’ve had..
   
a. We are looking for unique or memorable experiences (good and or difficult)
   
b. Any stories you’d tell others (about clients, work to be done, schedules, interactions)?

25. What advice would you give a new freelancer (and why)?
26. Now that you know a bit more about what we are asking, can you think of someone else we should talk to about their work?

27. Is there something we should have asked, but did not (or is there any additional information you would like to share with us)?

28. We are hoping to send periodic updates on the findings and insights from this project and we are collecting emails to send this out, would you like to be included? If so, what email would you like to receive the updates?

29. We are also hoping to do follow up research with participants, would you be interested? If so, do we have your consent to contact you when the project gets started?

   a. If yes: Is it best to contact you through Upwork (which we prefer) or by email?
Appendix 9: R2-Summer 2021 Protocol

1. Hire Freelancer: Go to freelance interview spreadsheet, and figure out which freelancer you will be inviting; (Freelance interview Spreadsheet)

2. Log into upwork.com

3. From the spreadsheet (2021 Summer tab), click a freelancer URL (column A). This will take you to the freelancers profile. Then, click “HIRE”. Then you will be able to choose our job “Academic Research - Summer 2021.” It should autofill the terms as a fixed deposit and a filled out work description.

   a. IMPORTANT - On the next page it asks “Are you done hiring for the job ‘Academic Research - Follow-up Interview’”? Click “I plan to hire more freelancers for this job.”

4. Return to the freelance interview spreadsheet (as detailed below) and enter the date that you’ve hired the freelancer (to keep track of progress)

5. Monitor Upwork messages (click messages in top menu of upwork) for notification that the freelancer accepted the job. Once they accept the job, be sure to update the spreadsheet that the job has been accepted.

6. When they accept, send them the survey via Upwork message. Copy and paste this from here or slack, and feel free to personalize with a sentence if that warrants, and to USE THEIR NAME:

   Hi (name),

   Thank you for your interest in our research project!

   Kindly find the survey questionnaire at this link:
https://syracuseuniversity.qualtrics.com/jfe/form/SV_czItWm8hwtxlBQ

Once we receive your response, we will reach out to you regarding interview scheduling.

Best Regards,

Digital Work Research Team

7. Update the spreadsheet when the link is sent.

8. When they have done the survey, schedule a Zoom interview.

9. Monitor digital work email for the qualtrics survey completion confirmation, and also monitor the upwork messages in case the freelancer messages that they have completed the survey.

10. Once you have confirmed that the survey has been completed, send the following message via upwork messages:

   Hi [NAME]!

   We received your questionnaire and would like to schedule a time for the interview this week. If you could please send your availability, we would greatly appreciate it.

   Thank you,

   Digital Work Research Team

11. Monitor the upwork messages for a response from the freelancer. Once they share availability, consult the freelance interview spreadsheet to confirm that zoom will be available.

12. Go to Zoom.us and log in (might be best if you download the app to run on your computer. There’s also an app that runs on your phone):
13. Schedule the interview on Zoom platform, then return to the upwork messaging and share the Zoom invite with the freelancer.

Process to set up Zoom Meeting:

Click “meeting” on the left toolbar

Input information (important)

For Topic - Put academic research - “name of freelancer to be interviewed”

Ensure that video is turned off for both you and participant

Click “automatically record interview on cloud”

Click save

Click “copy invitation” and paste Zoom link material into Upwork message.

14. Update the spreadsheet when the survey is completed and interview is scheduled.

15. Prior to the interview, check Digitalwork GMAIL account to review/ print the participant’s survey results.

16. Best to print out the survey responses, to help prepare for the interview.

17. Perhaps a day ahead of the interview, send them a message in Upwork to (nicely) remind them (e.g., “I am looking forward to talking with you tomorrow”).

18. Enjoy doing the interview! Likely best to print out the interview questions, so you can take notes

   a. Log into the zoom portal.

   b. Once logged into zoom, click the meetings on the side menu and click “start” for the scheduled zoom interview.

   c. Be sure to keep it to 45 or so minutes. If you start to run long, ask if they are willing to keep going. They can stop at ANY time, no extra pay.
d. Take as many notes along the way as you can. ***At the end, thank them!***

19. As soon as you can, after the call, jot down notes about the process (what went well, what was bumpy, particular issues, interesting topics, etc.) Also, write up your thoughts (YOUR impressions); probably will be at least a page or more.

20. Add these notes to the Slack channel “Interview Insights”

21. Then, follow-up in Upwork with a message to thank them. Be sure to:
   
   a. Pay the freelancer on upwork
   
   b. CLOSE their contract
   
   c. Give them a 5 star rating and
   
   d. Add comment “<NAME> was easy to work with. They were prompt, professional and articulate. We look forward to hiring them again!”

22. Update spreadsheet

23. Audio file will be automatically downloaded to dropbox.

24. Your notes, insights and experiences from the interviews go to the Slack channel - #

   Interview Insights
### Appendix 10: Round 3 Survey Questions

**How do you classify your current employment status (check all that apply)?**

- I work solely on Upwork
- I work on Upwork and also have one or more additional less-than-full-time jobs
- I have full-time work and Upwork provides me additional income
- I am looking for full-time work and Upwork is helping me bridge the gap
- I have other plans, as follows: __________

**Please let us know (again) your thinking about freelancing via Upwork:**

- I see this as part of my long-term plan
- I see this as helping me for the next few months (to a year)
- I need the work, but am not sure about how long I will stay on Upwork
- Have not really thought about this very much

**Please tell us what matters to you as you pursue freelance work online: (rate as Important, Neutral, or Unimportant)**

- I need the income
- To keep current with skills
- To challenge myself
- To build a portfolio of jobs
- To stay connected to my profession
- To develop a client base
- For work flexibility (to work when I want)
- For other reasons: __________

How satisfied are you with online freelancing?

- Extremely satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Extremely dissatisfied

On average, what percentage of your monthly earnings comes from Upwork jobs? - Percentage

On average, how many hours per week are you working (in all forms)?

On average, how many hours per week are you working on Upwork (so, if you are working solely on Upwork, this will be the same response as above)?

On average, how many hours per week are you looking for new jobs and doing other work-related efforts on Upwork that are not directly part of a paid job?

Approximately how many hours do you typically work Monday through Friday?

Approximately how many hours do you typically work Saturday and Sunday?

How many bids on Upwork do you submit in a typical week?

What percentage of these bids for Upwork jobs are accepted? - % accepted

At this time, how predictable are your monthly earnings?
- Predictable
- Somewhat predictable
- Not very predictable
- Unpredictable

<table>
<thead>
<tr>
<th>In a typical month, approximately how much do you earn via Upwork? - $</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>At this time, are your earnings from Upwork - and any other income sources - allowing you to meet your current financial obligations?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Absolutely</td>
</tr>
<tr>
<td>- Mostly</td>
</tr>
<tr>
<td>- Almost</td>
</tr>
<tr>
<td>- Not at all</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What percentage of your household income are you responsible for providing? - %</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Has your level of financial security changed over the past year?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Yes: I am more financially secure</td>
</tr>
<tr>
<td>- Yes: I am less financially secure</td>
</tr>
<tr>
<td>- No: My level of financial stability is mostly unchanged</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Over the past year have you been able to put money into savings and/or a retirement plan (select all the apply)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Yes, because of Pandemic-related stimulus funds</td>
</tr>
<tr>
<td>- Yes, because I have secured more work</td>
</tr>
<tr>
<td>- Yes (please explain): __________</td>
</tr>
</tbody>
</table>
- No (please explain): __________

Do you have a savings, rainy-day fund, or nest-egg?

If yes, about how many weeks could you depend on your savings? - weeks

Please tell us about where you do freelance work (check all that apply):

- I move around my home, wherever I can find space
- I have a dedicated space in my home
- I try and work outside my home (in coffee shops, libraries, hotel lobbies, etc)
- Other: __________

Have your experiences during the Pandemic led you to think differently about where you do your freelance work?

- Yes
- No

Can you tell us more about how your thinking has changed?

What percent of time do you access Upwork via the ... (must add to 100%)?

- Web
- Mobile app
- Desktop app

How helpful are the following Upwork features for your work?

(Rate as: Very helpful, Sometimes helpful, Unhelpful, Unaware of this, Not Applicable)

- Multiple profiles
- Badges (e.g., rising talent, top rated, etc.)
- Upwork Readiness Test
- Invoicing
- Client Reviews
- Proposal Boost (Boosting connects)
- Flagging/reporting issues
- Upwork Reports
- Work Diary
- Direct contracts
- Messaging on platform
- Dispute resolution
- Other:____________

What percentage of work on Upwork do you do on an hourly basis, as compared to project-based work?

- Hourly work %
- Project-based work %

What percentage of work on Upwork do you do on an hourly basis, as compared to project-based work?

In what ways have you interacted with Upwork (for support/other issues)?

- Via Upwork Community discussions threads
- Via Upwork Help support request chat
- Called Upwork offices
- Called Upwork enterprise
- Via Upwork's Facebook
- Via Upwork's LinkedIn page
- Upwork's Twitter
- Upwork's Instagram
- Upwork's YouTube Channel
- Other ways? __________

Has Upwork ever contacted you about messages/chats you've sent or received?

- Yes
- No

Why were you contacted?

Upwork's platform, and particularly the work diary, supports activity and productivity monitoring features. Please let us know your thoughts about these: (Select: Ok by me; Aware, but uncomfortable; or Did not know about this)

- Capturing screenshots
- Clicks and keystrokes tracking
- Mouse movements
- Webcam photos
- Time-tracking
- Chat monitoring

Do you ever look at your competitors/other freelancer's profiles on Upwork?

- Yes
<table>
<thead>
<tr>
<th>Why (check all that apply)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>● To see what others are charging</td>
</tr>
<tr>
<td>● To see what people say about their experience</td>
</tr>
<tr>
<td>● To look at others’ portfolios</td>
</tr>
<tr>
<td>● To look at reviews</td>
</tr>
<tr>
<td>● To see job success score and other ratings</td>
</tr>
<tr>
<td>● To see how much others have earned</td>
</tr>
<tr>
<td>● To see how many projects they’ve worked on</td>
</tr>
<tr>
<td>● Other (please tell us more): __________</td>
</tr>
</tbody>
</table>

Check the resources you find most useful for:

(Select: Keeping up with changes to Upwork, Learning about tips and tricks about Upwork, Navigating a problem on Upwork).

- Upwork messages
- Upwork community announcements/press center
- Upwork blog
- Upwork FAQs
- Private groups to which you belong (e.g. on Facebook)
- Peers
- Family/Friends
- Email Updates
- Reddit/forum discussions
- Social media channels (such as:)
- Other:__________
Appendix 11: Round 3 Interview Guide

Section 1: Updating how you pursue work

Overview: In this section the goal is to learn about how things have changed/evolved since the last time we spoke with them (and, for most, this was Feb-Apr 2021).

1. Has anything about your work changed?
   a. From where you are getting work?
   b. Clients you are working with?
   c. Type of work? Work schedule?
   d. Have you changed your approach to seeking/bidding for work?
   e. Have they changed their pricing?
   f. Changes at home/in household, with health?

2. Why? What is driving these changes?
   a. Did COVID affect any of this? Normalize?

3. Has your strategy for presenting yourself online changed in the last year? (e.g. Your profile picture, description, portfolio elements)
   a. What aspects of your profile do you believe are most helpful/unhelpful for your success on Upwork? Why?
   b. Have you ever changed anything about your profile/how you represent yourself online? If so, why did you change those things?

4. At this point in time, would you say that you’re happy with where you are with your work, or are you looking for something different?
   a. If you are looking for something different, what is driving you to do so?
b. If happy with where you are at, are you anticipating looking for something
different in next few years
c. How does accommodating family or personal needs play a role in your plans?
5. There’s been a lot going on this year. Has this made you rethink your career plans or
how you pick/pursue work.
6. What does career success look like for you?
   a. Are there sources (e.g., guides, templates …) that help you plan on and work
toward your career goals?
   b. Any thoughts on what other sources/resources/insight/guidance would help
you meet these goals?

Section 2: Platform Experiences

Overview - here’s what we are seeking to get from this section: How are people
experiencing Upwork? How do they identify and respond to changes on Upwork?
Specifically issues with tracking changes to the platform, surveillance

7. Since you started working on the platform, what changes to Upwork’s features or
   functions have you noticed/experienced? (e.g., changes in the level of competition,
   change to platform features, etc …)

8. Why do you think Upwork made these changes? (E.g., User issues, profit, client
   needs?)
   a. Do you see these <changes> as net positives for you (or for them)?

9. In what ways have these changes to Upwork’s features and functions led to changes
   in your pay, added costs, or other changes? E.g., Change to bids, rates, client
   interaction, profile updates, etc.
a. Any issues with trust with these changes?

10. How do you deal with a problem with the Upwork platform (with pay, or placing a bid, with your profile, with people messaging you, etc)?
   a. How do you work through issues, as we know you don't have a manager or coworkers to ask?

11. So, what new platform features or functions would help you with your work?

12. Have you had any experiences with the Upwork time tracker or work diary?
   a. Have clients asked about message scanning, other forms of tracking?

13. What are your thoughts about the work diary/time tracking features?
   a. Has there been a situation in which the work diary or time tracking data has helped or hindered you?
   b. What other work and effort monitoring features have you experienced?

14. Have you ever been challenged by your client on your effort or hours worked?
   a. If so, what happened?

Section 3: How you organize for work

Overview - here’s what we are seeking to get from this section: How are people creating workspaces? Are they? Are they thinking about their set up/sophisticated spaces now? In what tools or arrangements are these workers investing?

15. When you began doing freelance work online, how did you decide where to set up and do this work?

16. Tell me about your strategy (or approach) for setting up your workspace? E.g., do you have a set place, or need windows/quiet, or able to work anywhere.
a. Do you have some must-have elements (e.g., earbuds, two monitors, power)
b. Can you tell us about what you do to get going with work?

17. How have your arrangements changed since you started working? E.g., have you had to purchase new equipment/monitors/etc.
   a. Why / what led you to making these changes?
   b. Has it worked out as you expected/hoped (was the change/investment worth it)?

18. What additional tools or resources would help you in doing this work?

Section 4: Community and social support

19. When you first started online/on Upwork, how did you ‘learn the ropes?’ E.g., did you looking at FB groups, LinkedIn, Reddit, talk to others, etc
   a. Is there a particular resource you found most helpful?
      i. Did you ever talk to anyone in person about how to succeed on Upwork/learning the ropes?

20. Can you tell us about your efforts to network and build relationships for work/career purposes? Were your efforts successful? (online and offline efforts)
   a. Who do you turn to for social support?
   b. Who/where do you typically turn to when you need advice about your work?
   c. Who/where do you go to build new skills?
   d. Who/where do you go to learn about new jobs?
   e. Who/where do you go to for advice about your career/advancement?
21. Are you a part of any organizations/clubs/groups related to work (e.g., LinkedIn group)?
   a. Formal or informal, Online or offline (in person)
   b. About working online, your profession/work
   c. How valuable do you find these?
   d. Tell us about the value you get from them.

22. How is this networking/community building different because you’re online?
   a. What are the advantages and disadvantages?

23. Are there features (on Upwork) that make it easier/harder to connect with others?

24. What changes to the platform would make it easier to build trust and connections with other freelancers?
   a. Would you like to have a community? internal/external to upwork?

25. Who are the people you trust to talk about work and working?
   a. See also Q20, just in case it overlaps - (if they don’t, then ask what they do)
   b. Who is part of this network/community?
   c. Are any of these people outside of your family (e.g., mentors, career coaches)?
   d. Where/how did you meet these trusted souls?

Section 5: Closing

26. Is what you are currently doing stable or sustainable?
   a. How long can you keep up with your current arrangement?

27. If you could talk to the executives/designers of Upwork about improvements, what would you say?
28. In thinking about your work, is there certain information/skills/resources that you would like access to (e.g., how to price a bid, or how to keep track of projects)?
   a. Anything that would help you improve your work?
   b. Improve your overall well-being?
   c. Is there something you’d like to know more about?

29. Anything else you would like to share or anything we should have asked?

Thank you for your time!

Ask them if they have had a chance to complete the survey?

If no, cut and paste the survey link into the chat for them: (link)

Let them know we will be updating them in the early Spring of 2022 on what we are learning.
Appendix 12: Round 3 Protocol

1. Co-Presidents of Data Collection, Emily and Gabby, will hire Freelancers: Emily or Gabby will go to freelance interview spreadsheet, and figure out which freelancer you will be inviting: (Freelance interview Spreadsheet)

2. Then, log into our account on upwork.com

3. From our Upwork page, go to job (called “Academic Research - Fall 2021 Interview” under postings), then click “my hires” and find the freelancer you want to hire from the list

   a. Once you find the freelancer, click the “Hire” button and a new page will open up.

   b. Click the acknowledgement checkbox and click the green hire button

   c. Under related job posting, double check that the correct job is listed (Academic Research - Fall 2021 Interview). This should autofill the terms as a fixed deposit and a filled out work description.

   d. Be sure of this! The next page states “Are you done hiring for the job ‘Academic Research - Follow-up Interview’”? Click “I plan to hire more freelancers for this job.”

4. Return to the freelance interview spreadsheet (Freelance interview Spreadsheet) and enter the date that you’ve hired the freelancer.
5. Monitor Upwork messages (click messages in top menu of upwork) for notification that the freelancer accepted the job. Once they accept the job, be sure to update the spreadsheet that the job has been accepted.

6. When the Freelancer accepts, Emily or Gabby will find a time for the interview.

7. Copy and paste this from here or slack, and feel free to personalize with a sentence if that warrants, and to USE THEIR NAME

   Hi (name),

   Thank you for your interest in our research project!

   This job has two parts: a 45’ interview and a 10’ survey.

   You are welcome to complete the survey either before or after the interview.

   Survey link: (link)

   To get going on the interview, could you provide us with times in your schedule across the next week?

   Best Regards,

   Digital Work Research Team

8. Gabby and Emily monitor Upwork, and when the Freelancer responds, will schedule a Zoom interview. This means monitoring the Digital Work email or going to Upwork to see messages.

9. Once the Freelancer shares their availability, consult the freelance interview spreadsheet to confirm that Zoom will be available.

10. Emily and Gabby will reach out to the interview team to see who can do the
interview (and when).

11. Once a time is decided, Emily and Gabby go to Zoom and log in.

12. Schedule the interview on Zoom platform, then return to the Upwork messaging and share the Zoom invite with the freelancer. Be sure to also share this interview invite with the interviewer!!!

   Hi (name),

   We look forward to speaking with you on (Add date/time). Here's the link for the meeting: (add zoom link).

   In the meantime, you can fill out our survey, which should take you about 10 minutes:

   Thanks again for participating in our project and we look forward to speaking with you soon!

   Digital Work Research Team

13. Emily and Gabby will try to send a reminder to Freelancer and Interviewer the day of…. We all hope they remember :)

14. Update the (Freelance interview Spreadsheet) when the interview is scheduled.

15. Interviewers, Have at the interview! Likely best to print out the interview questions, so you can take notes (and be ready to share interview insights to Slack after the interview).

16. Log into Zoom. Once logged into Zoom, click the meetings on the side menu and click “start” for the scheduled zoom interview.
17. Be sure to keep it to 45 or so minutes. If you start to run long, ask if they are willing
to keep going. They can stop at ANY time, no extra pay. Take as many notes along the
way as you can. ***At the end of the interview, be sure to thank them!***

18. As soon as you can, after the call, jot down notes about the process (what went well,
what was bumpy, particular issues, interesting topics, etc.). Also, write up your
thoughts (YOUR impressions); probably will be at least a page or more.

19. Interviewer contacts Emily and Gabby that the interview is completed.

20. Emily or Gabby follow-up in Upwork with a message to the Freelancer to thank
them:

   Dear (name);
   
   Thank you, again for sharing your experiences with us. If you haven’t done so,
   
   please do complete the survey by clicking on this link: [link]
   
   We appreciate your time and contribution.
   
   And, in early Winter 2022, we will be sending out some of what we have learned
   
   from this round of interviews.
   
   Thank you;
   
   The Digital Work Research Team

21. Then: Pay the freelancer on upwork, CLOSE their contract, and Give the freelancer a
5 star rating. Add comment “<NAME> was easy to work with. They were prompt,
professional and articulate. We look forward to hiring them again!”

22. Update spreadsheet: Freelance interview Spreadsheet.
23. Audio file will be automatically uploaded to Dropbox.

24. Paste/post your notes, insights and experiences from the interviews to the Slack channel - # Interview Insights
Appendix 13: About Upwork

What is Upwork?

Upwork is a US-based online marketplace that facilitates project-based work transactions—the platform matches freelancers (supply) with clients and jobs (demand). Both clients and freelancers can register for an Upwork account (basic/free option or upgraded option) and use the platform on the web, or as a desktop or phone app. Freelancers use Upwork to find clients and apply for work; while clients can search for, interview, hire, and work with freelancers and freelance agencies (Figure 1 shows Upwork's homepage).

Figure 1: Images from the Upwork website’s home page, captured on July 19, 2022.

Today, the Upwork platform is used by millions of workers and clients across a variety of industries and from all across the globe. In 2021, this market involved 8,000,000 freelancers and more than 2,500,000 businesses, with approximately 152,000 core active clients that are spending at least $5,000 on contracts per year. This makes Upwork one of

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\textbf{The Platform Services:} Upwork is positioned as the marketplace, and as such determines the use-policies, terms and conditions, features, and services. Currently Upwork provides several services for clients/freelancers, including 1) The Talent Marketplace, where clients can post a job and hire a freelancer; 2) The Project Catalog, where clients can browse and buy freelancers' pre-packaged projects/services with a clear scope and price; and 3) Talent Scout, where clients partner with Upwork recruiters to fill key roles with pre-vetted freelancers. To access these services, the platform offers several tiers of client plans\textsuperscript{20}, which include Upwork Basic, Upwork Business, Upwork Plus, and Upwork Enterprise, each with different benefits.

More broadly, Upwork provides the platform for the interaction between freelancers and clients: including the job and talent feeds, client-freelancer communication interface (messaging), escrow and payment services, mediation during disputes, and additional work management tools (time and milestones tracking, and keyboard strokes monitoring). In exchange for their services, Upwork charges both clients and freelancers a fee per

\textsuperscript{19} Other online freelancing platforms/ online labor markets include: Fiverr (https://www.fiverr.com/), Toptal (https://www.toptal.com/), Freelancer (https://www.freelancer.com/), and many others.
\textsuperscript{20} Upwork client membership plans: https://support.upwork.com/hc/en-us/sections/360003424773-Membership-Plans
transaction (in addition to the subscription costs). The platform typically charges 3%-5% to the client, and 5%-20% to the freelancer per transaction, which is based on both the client and freelancers’ membership plan (Basic/Plus/Enterprise) and the freelancers’ earnings on the platform.

Figure 2: Image from Upwork’s website showcasing information for clients, captured on July 19, 2022.

**The Client Process:** The process for clients’ initial use of the platform involves a client signing up and creating a company profile. Once they are set up on the platform, the steps for hiring freelancers on the platform include 1) writing a job post; 2) choosing hourly or 

22 For more on how Upwork works: [https://www.upwork.com/infographics/how-does-upwork-work#:~:text=It's%20simple%20to%20get%20started%20securely%20pay%20for%20your%20project](https://www.upwork.com/infographics/how-does-upwork-work#:~:text=It's%20simple%20to%20get%20started%20securely%20pay%20for%20your%20project)
fixed-price rate for the project; 3) posting the job or searching for talent to invite to apply for the job; 4) reviewing proposals; 5) interviewing talent; and 6) hiring the selected talent for any given job. Clients must go through a process for verifying their billing information through Upwork, which lets freelancers know the client has included a form of payment for any transactions done through the platform (However, it is not necessary for clients to verify payment method before posting a job or selecting a freelancer).

Figure 3: Image from Upwork’s website showcasing information for freelancers, captured on July 19, 2022.

The Freelancer Process: Freelancers can get started by signing up for Upwork and creating a profile. Before applying for jobs, freelancers must complete at least 60% of their profile, which includes having a profile photo, a title, an overview description, work history, and at

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23 Getting started as a freelancer:
https://www.upwork.com/resources/how-to-get-started-on-upwork-as-a-freelancer
least one skill tag. Freelancers can also add other elements to their profile-- such as education, languages, portfolio elements, etc.-- so they can be better positioned for the Upwork market. Freelancers are also often asked to upload government-issued photo ID documentation to verify their identity.24

Once a profile is at least 60% complete (per Upwork requirements), then freelancers are able to apply to general job postings or be invited to apply directly. To apply, freelancers must 1) select a job and 2) submit a bid/proposal to highlight their qualifications and fit for the job. After clients review the proposals, they may invite a number of freelancers for an interview before making their final selection. And once selected, freelancers have an opportunity to accept or decline the job offer.

The virtual currency of Upwork is called “Connects”25. Freelancers use “Connects” as a form of token on Upwork to apply for jobs (Applying for a job costs 1-6 Connects depending on the job). Connects can also be used to boost the visibility of a proposal, so that it is one of the first few a client sees. Freelancers can use as many Connects as they like on a proposal, and the three freelancers who bid the highest number of Connects get the top slots on a job. Connects were introduced to Upwork in 2019 to limit the number of proposals that a freelancer can submit. Freelancers can buy Connects ($0.15 USD) or earn them at sign up, by getting invited for a project interview, reaching a badge, or completing skill certifications on Upwork. When invited directly, workers don’t need to use the “Connects”, and if they are

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25 Upwork connects: https://support.upwork.com/hc/en-us/articles/211062898
invited for an interview for the job, freelancers get their Connects they used on the project back.

**The Evolving Nature of Upwork:** Since its origins--Emerging in 2013 from a merger of two former companies Elance and oDesk--Upwork has evolved, updating its interface, service categories, features, plans, and policies. As such, this research site is evolving as I study it. This description of Upwork reflects the platform in its current state (In July, 2022), even as I pay close attention to changes that occur (both to changes that are announced and unannounced by Upwork).
Figure 4: Graphic of the client process on Upwork, captured on July 19, 2022
Appendix 14: Scoping Attributes for Intersectional Analysis

The scoping of identity attributes is outlined in the table below, with comments on how I came to these decisions and how the data was reported in the findings from the study:

<table>
<thead>
<tr>
<th>Identity Attribute</th>
<th>Categories</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation</td>
<td>- Administrative</td>
<td>Participants were assigned to one of these categories based on their primary Upwork occupation. This is based on earlier studies adopting these categories for simplicity and comparison across a wide range of freelancing job functions (Dunn et al., 2021; Stephany, Dunn, &amp; Sawyer, 2020).</td>
</tr>
<tr>
<td></td>
<td>- Creative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Technology</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>- Male</td>
<td>Participants self-reported their gender, choosing between <em>male, female, non-binary</em> or <em>other (participant specified)</em>. There was only one respondent who identified as non-binary, but they did not complete most of the survey questions, as such there is no survey data reported by them.</td>
</tr>
<tr>
<td></td>
<td>- Female</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Non-binary</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>- White</td>
<td>Participants were broadly grouped into <em>White</em> or <em>non-White</em> for comparison. This was a choice based on the limited number of participants across specific minority race categories. Individuals who selected multiple races were all considered <em>non-White</em> for the purposes of this research.</td>
</tr>
<tr>
<td></td>
<td>- Non-White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Black</td>
<td>For further analysis, I also report on comparisons across <em>Black, White</em>, and <em>Other Race</em> in the sample. <em>Other Race</em> grouped the smaller number of participants who self-identified as one or more of the following: Asian, Native Hawaiian or Pacific Islander, American Indian or Alaska Native, or Other (participant specified).</td>
</tr>
<tr>
<td></td>
<td>- White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Other Race</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>- Hispanic</td>
<td>Participants self-reported their ethnicity, selecting...</td>
</tr>
<tr>
<td>Employment status</td>
<td>- Non-Hispanic</td>
<td>from the Hispanic/non-Hispanic options.</td>
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<td>-------------------</td>
<td>---------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td></td>
<td>- Has FT Job</td>
<td>Participants were grouped based on their work arrangements to compare between those with full-time employment and those without, as this attribute is important to understand worker experiences. The Has FT Job / No FT Job attribute value was determined each round based on participant’s survey responses about their work arrangements.</td>
</tr>
<tr>
<td></td>
<td>- No FT Job</td>
<td></td>
</tr>
</tbody>
</table>

| Education         | - No degree   | Education was self-reported by the participants. To simplify the comparison across this attribute, participants with High School education, and some or no college degree are grouped together (No degree). Additionally, Masters and other post graduate degrees are grouped into the broader group of Post-graduate degree. |
|                   | - Associates degree |                                        |
|                   | - Bachelor's degree |                                        |
|                   | - Post-graduate degree |                                        |
Appendix 15: IRB Documents

IRB documents and approval of Isabel Munoz as a researcher for the project are included in the next few pages.
SYRACUSE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD  
Full Board Review or Expedited Review Application

Check which type of review is requested:

☐ Expedited Review- One signed copy of my application for expedited review. 
Expedited review covers research that involves only minimal risk procedures. See Standard Operating Procedure 012.  

☐ Full Board Review- One original signed hard copy plus 13 copies (14 total) of my application 
Includes research that cannot be reviewed using the expedited process involving more than minimal risk to the 
participant and requires review by the full IRB. See Standard Operating Procedure 013.  

Application Checklist:
☐ All questions on the application have been answered.  
☐ The application has been signed by the investigator/faculty advisor and when appropriate, the student.  
☐ Copies of all appropriate, consent and/or assent documents (written, electronic, or oral consent script) are included.  
☐ Copies of any research instruments (surveys, questionnaires, interview questions, etc.) are included.  
☐ Copies of all recruitment tools (flyers, emails, posters, newspaper ads, etc.) are included.  
☐ All required appendices, including a list of references are included.  
☐ Copies of other IRB approvals or letters of cooperation are included. When the investigation is to be carried out in 
cooperation with another institution or with an investigator at another institution, a letter indicating the willingness of 
the institution to cooperate in the study must be included with the proposal.  
☐ The principal investigator/faculty member and student/research staff have completed the appropriate Collaborative 
Institutional Training Initiative (CITI) Web-based Training Program for Human Subjects required by SU.*  
☐ All students/research staff or any other individuals listed in the application who will have direct contact with 
participants and/or identifiable human participant data have completed the appropriate Collaborative Institutional 
Training Initiative (CITI) Web-based Training Program for Human Subjects required by SU.*  
* Submission of CITI Training Certificate is required only if CITI training was completed at another institution.

I/We assure the IRB that the following statements are true: All information provided in this form is correct. I have evaluated this 
protocol and determined that I have the resources necessary to protect participants, such as appropriately trained staff, necessary 
facilities and equipment. I will seek and obtain prior written approval from the IRB for any modifications including changes in 
procedures, investigators/research staff, consent forms, questionnaires, surveys, etc. I will promptly report any unanticipated problems 
that may occur in the course of this study. I will report any significant findings which may affect the risks and benefits to participation. 
I will not begin my research until I have received written notification of final IRB approval. I will comply with all IRB requests to 
report on the status of my study. I will maintain records of this research according to IRB standards. If any of the above conditions are not 
met, I understand that approval of this research may be suspended or terminated.

Faculty Member/Principal Investigator  
Signed __________________________ Date: 5 July, 2019
Name (typed): Steve Sawyer

Student/Research Staff  
Signed: __________________________ Date: ___
Name (typed): ______

This application must be typewritten and all questions must be answered. To complete form, tab to each field. Incomplete forms will be returned to the investigator for additional information. Outdated applications will not be accepted for review.

To edit the content of the form, unprotected the document as follows:

For Office 2003 Users (or below)
- Browse to View > Toolbars > Forms. The Forms toolbar will pop up.
- Click on the padlock icon on the right side. This will unlock the form.
- To protect the document again when you need to click on a checkbox, click on padlock.

For Office 2007 Users
- On the ribbon choose Review > Protect Document > Restrict Formatting and Editing > Stop Protection.
- To protect the document again when you need to click on a checkbox, click on > Yes, Start Enforcing Protection > OK.

1. Protocol Information

   Title of Protocol: TRAJECTORIES OF WORK IN THE GIG-WORK ECONOMY

   Principal Investigator Eligibility: Faculty at the assistant, associate, or full professor level, academic, research, or professor-of-practice faculty, department chair/dean, or administrative staff with the position of director or higher may serve as the Principal Investigator (PI) or Co-Investigator (Co-PI). If you have any questions regarding this Syracuse University institutional policy, call the IRB office at 315.443.3013 for guidance.

   Principal Investigator/Faculty Member Information
   
   First Name: Steven  Middle Initial: B  Last Name: Sawyer
   Title: Professor and Director, Doctoral Programs
   Department: N/A  College: Information Studies (School of)
   Campus Address: 344 Hinds Hall
   Campus Phone: (315) 443-4167  Fax: (315) 443-2906
   Email: ssawyer@syr.edu  Cell Phone (optional): (315) 552-4195

   Student/Research Staff Information  NA
   
   First Name:  Last Name:
   [ ] Graduate Student [ ] Undergraduate Student  [ ] Other:
   Department:  College:
   Local/Campus Address:  Fax:
   Local/Campus Phone:  Cell Phone (optional):

2. Funding Information

2.1. Will/has the research been submitted as a grant or contract proposal?  [ ] No  [ ] Yes

   Will/has the research been submitted through OSP?  [ ] No  [ ] Yes

   If yes, who is the proposed sponsor and what is the title of the proposal submitted to OSP?

   Sponsor: This is current a Cuse Grant-funded project, as noted in 2.2. Between August and December, 2019, we intend to submit proposals to the following three external funders: Russell Sage Foundation, Sloan Foundation, & National Science Foundation.

   Title: CUSE Grant: Trajectories of Work in the Gig-work Economy. The proposals to be submitted will use some variations of this title....

2.2. Is this research currently being funded in part or in whole?  [ ] No  [ ] Yes (indicate below)

   [ ] Internal Funding (check all that apply):
   [ ] Departmental Funds  [ ] No cost study  [ ] Personal Funds

Rev. 01/2019
2.3. Has the research been reviewed before the IRB? ☒ No ☒ Yes
If yes, please give the date of the review: _____ and the IRB# (if known): _____

2.4. Is this research to be performed:
for faculty research ☐ No ☒ Yes
for a masters thesis ☐ No ☒ Yes
for a doctoral dissertation ☐ No ☒ Yes
as part of a course requirement ☐ No ☒ Yes
as an honors thesis ☐ No ☒ Yes
Other (explain): _____

3. Study Rationale
3.1. Using non-technical language, describe the objective of this proposed research including purpose, research question, hypothesis, etc. From your description, the IRB should be able to determine how this proposed study adds to the knowledge on the research topic in order to judge the risks and benefits to the research participants. NOTE: A reference list citing relevant background information must be provided as an appendix with this application.
This project focuses attention to understanding the ways in which online-platform-driven gig (or project-based) workers make their way in contemporary labor markets. We are specifically focused on knowledge-based work—that which demands cognitive labor, often working with abstractions and concepts, and often reliant on digital technologies (and digital forms of data and information) to complete. So, the gig work we pursue are the stuff of Airbnb, Uber and Amazon’s Mechanical Turk (AMT). We see knowledge-based gig work as a proxy for the ‘good jobs’ in the knowledge economy. Our goal is to articulate the trajectories contemporary workers are taking to pursue their work careers. We also know that there is a broad range of what counts as knowledge work, spanning work that relies on unique skills, such as crisis communications, to the expectations of much service-based knowledge work such as graphic design or customer service. This puts a premium on sampling a representative selection of knowledge-based workers.

4. Methods
4.1. Provide a detailed description of what participants will be required to do; including any technical terms or procedures.
Our primary data collection method will be extensive, semi-structured interviews. Interviews will be conducted in person whenever possible, otherwise via Skype. We will follow a prepared interview protocol that is modified from an existing protocol. All interviews will be tape recorded, with a subject’s permission, and subsequently transcribed.
Interviewees will also be asked to complete an online survey (again, building from prior work using a similar approach and worksheet). The two of them are linked, so we want the participant to complete the online survey ahead of the interview. But, experience has taught us this may not always be possible. So, the interview protocol is designed to accommodate this.
We are looking to interview 60 people in two rounds of data collection, spaced one year apart. We will be talking with participants who volunteered to speak with us in previous studies.

4.2. Describe how you will have sufficient time to conduct and complete the research?
The project is designed to be two year’s duration. The research design builds on prior projects done by sociologists at the University of North Carolina, Chapel Hill.

4.3. Surveys, interviews, questionnaires will be conducted:

☐ No (Skip to 4.4)
☒ Yes Include all research instruments including surveys, questionnaires, sample interview questions, etc. as separate appendices. If the survey instrument is commonly used in your discipline, only provide a citation to the instrument.

4.4. Community Based Participatory Research (CBPR) is described as research that is conducted as an equal partnership between traditionally trained “experts” and members of a community. Is this research categorized as CBPR?

☐ No. (Skip to 4.5)
☒ Yes. Please explain: 

4.4.1. In CBPR research studies, the community participates fully in all aspects of the research process including conception, design, and analysis.

With this in mind, describe how you plan to engage community members in your research study:

☐ No. (Skip to 4.6)

4.4.2. Describe how you plan to provide community members with appropriate training for human subjects research? Include in your description what training will be provided.

4.4.3. Describe your plan to disseminate research findings with members of the community throughout the course of your study.

☐ No. (Skip to Section 5)

4.5. Will this research be conducted by SU investigators in foreign countries?

☐ No. (Skip to 4.6)
☒ Yes. An International Research Form must be completed and submitted with this application. 

4.6. Will this research involve genetic testing?

☐ No. (Skip to Section 5)
☒ Yes. A Genetic Research Form must be completed and submitted with this application. 

5. Performance Site Information

5.1. Describe how you will have adequate facilities to conduct your study.

Data collection is to be done in person or via Skype. We have Skype on our laptops and have included funds to support going to meet people in place (locally). We will use Syracuse University’s qualtrics platform to host the secondary survey.

5.2. List all Performance Sites Other than SU (insert additional rows if needed). (This may apply when a SU investigator collaborates with a non-SU investigator or institution or an agency/organization will provide space to perform the research. Please check all that apply and add additional sites. Each will require a letter of cooperation and/or IRB approval.)

<table>
<thead>
<tr>
<th>Check all that apply</th>
<th>Name of Performance Site (list all participating sites below)</th>
<th>IRB Approval and/or Letter of Cooperation</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>SUNY Upstate Medical University</td>
<td>Attached Pending</td>
</tr>
<tr>
<td>☐</td>
<td>*Syracuse City Schools</td>
<td>Attached Pending</td>
</tr>
<tr>
<td>☐</td>
<td>*Other, specify site: _____</td>
<td>Attached Pending</td>
</tr>
</tbody>
</table>
*The following additional information is required: contact information for the site, if the site has an IRB, and whether the IRB has approved the research, or plans to defer review to SU’s IRB:

---

5.3. Will this research be conducted in a school or is it funded by the US Department of Education?  
☐ No (Skip to 5.4)  
☐ Yes. If yes, complete the form found at:  

5.4. Is this a multi-center research project in which Syracuse University will function as the coordinating center/lead institution?  
(A multi-center study is one where different PIs at different institutions are conducting the same study.)

☐ No  
☐ Yes. If yes, describe the plans to manage information obtained in multi-site research that may be relevant to the protection of research participants such as: unanticipated problems involving risks to participants or others, interim results, and protocol modifications:

---

6. Research Qualifications

CITI training is required for the faculty member listed below and all researchers and research staff who have direct contact with participants and/or identifiable human participant data. NOTE: If training is not completed at the time of submission, approval of your application will be delayed.

6.1. List the names and research qualifications of the primary investigator/faculty advisor listed in Section 1 of this application. Briefly describe the qualifications of the person listed including: Professional Experience, Education (earned degrees only), Licensure (when applicable), Research Experience, CITI Human Research Training modules. Please do not copy and paste your resume or C.V. qualifications.

Qualifications should be appropriate to the type of research being conducted and the targeted population(s) involved in the research.

Steve Sawyer, Professor and Director of the Doctoral Programs, and core faculty in the Renee Crown Honors Program, has been a Principal Investigator of multiple research grants from National Science Foundation and other funding agencies.

Sawyer’s doctoral training in field-based research began in graduate school (during which he was study director of a multi-year field based research project).

Sawyer has 20 years of field research experience and has supervised or participated on the masters and doctoral committees of dozens of graduate students who have also pursued field-based research.

Sawyer currently has one active grant using similar field-based methods currently approved by Syracuse University’s IRB.

CITI training is current, PIs CITI training ID # is 1832281, on file with ORIP

To repeat what is provided on that certificate that is file with ORP, CITI Training includes:

Belmont Report and CITI Course Introduction (ID: 1127) History and Ethical Principles - SBE (ID: 490)

Defining Research with Human Subjects - SBE (ID: 491)

The Federal Regulations - SBE (ID: 502)

Assessing Risk - SBE (ID: 503)

Informed Consent - SBE (ID: 504)

Privacy and Confidentiality - SBE (ID: 505)
6.2. List the names and research qualifications of the student/research staff listed in Section 1 of this application. Qualifications should be appropriate to the type of research being conducted and the targeted population/s involved in the research. This might include any pertinent coursework and/or involvement in other research projects. Please add CITI training certification information.
N/A at this time

6.3. List the name(s) and research qualifications of all other individuals who will be involved in this research and will have direct contact with participants and/or identifiable human participant data. Qualifications should be appropriate to the type of research being conducted and the targeted population/s involved in the research. This might include any pertinent coursework and/or involvement in other research projects. Please add CITI training certification information.

Ritika Shetty, Project Manager. Shetty is a first year graduate student at the School of Information Studies (School) at Syracuse University and is pursuing a Master’s degree in Information Management and Technology. Her ability to organize, maintain, and track the project’s progress are what qualify her to be involved in this research.

Alaina Caruso, Undergraduate Research Fellow. Caruso is a second-year undergraduate student at the S.I. Newhouse School of Public Communications at Syracuse University and is majoring in Public Relations. She also is pursuing a minor in Finance. Her ability to conduct secondary data collection from the web, assist with research administrative paperwork, and do analysis are what qualify her to be involved in this research.

Haley Weller, Undergraduate Research Fellow. Weller is a second-year undergraduate at the Maxwell School of Citizenship and Public Affairs at Syracuse University and is majoring in Policy Studies. She is also pursuing a minor in Information Management and Technology. Her ability to conduct secondary data collection from the web, assist with research administrative paperwork, and do analysis are what qualify her to be involved in this research.

6.4. How will you ensure that all persons listed in Section 6 will remain informed about the protocol and their research related duties and functions (e.g., weekly meetings, via email, phone, etc.)? Responsibilities of additional staff include weekly meetings and periodic training workshops.

6.5. Explain why you do not need additional qualified staff, other than those listed in Sections 1 and 6, to conduct your study.

Shetty, Caruso, and Weller are sufficient for the data collection effort at this time.

7. Characteristics of Participants

7.1. Approximate Number of Participants to be recruited: 5-10

7.2. Sex:  M□ F□ Both □

7.3. Age Range-Check all that apply:
☐ 0-6 (Include parental consent form and oral assent script)
☐ 7-17 (Include parental consent form and child assent form)
□ 18-64
□ 65 and older

Exact ages to be included: ______

7.4. When the age range indicates an upper limit, provide justification: ______

7.5. Does this study target one gender or specific social/ethnic group(s)?
□ No. (Skip to 7.6)
□ Yes. If yes, answer 7.5.1. and 7.5.2. below.
7.5.1. If yes, check all that are targeted/vulnerable populations and when appropriate provide a copy of the required form. *The forms can be found on the IRB Website under Special Populations:
http://researchintegrity.syr.edu/human-research/forms/
□ Children/minors - *Requires additional form*
□ Decisionally impaired - *Requires additional form*
□ Prisoners - *Requires additional form*
□ Pregnant women - *Requires additional form*
□ Legally restricted, non-prisoner
□ Educationally disadvantaged
□ Economically disadvantaged
□ Elderly/aged
□ Other, specify: _____
*Note*: These additional forms can be found on the IRB Website (under Special Populations):
http://researchintegrity.syr.edu/human-research/forms/

7.5.2. Explain the rationale for using this particular group(s): _____

7.6. List all study specific inclusion/eligibility criteria (e.g. population characteristics, age, location, etc.):
We want participants to be registered users on the online-work platform upwork.com. This is the world's largest freelance platform and the population of participants is what we seek to sample.

7.7. List all study specific the exclusion/ineligibility criteria. The exclusion criteria must parallel the inclusion criteria:
We are not seeking full-time workers (those working for a single employer, since this is the exact inverse of the population of workers we seek) and people who are not actively working at the time we contact them. _____

7.8. Does this research involve participants likely to be vulnerable to coercion or undue influence?
☑ No. (Skip to 7.9)
□ Yes. If yes, describe the additional protections included in the protocol to protect their rights and welfare.

7.9. General state of Health: ("Unknown" unless you will obtain health data on participants prior to beginning the study.)
Unknown

8. Recruitment of Participants
8.1. Describe in detail how participants will be identified and recruited. Include in your description how you will have access to a population that will allow recruitment for the number of participants required for your research. Do not merely state "Volunteers."
We are contacting a specific group of participants that have volunteered to speak with us in previous studies. The design and goal of the current study is to treat this group as a panel for longitudinal study. All of these participants are active on an online platform (upwork.com) -- which is why we are focusing on them.

8.2. Describe who will recruit participants.
The PI will be the primary recruiter with assistance by student-researchers.

8.3. Identify all applicable recruitment methods that apply: *Note*: Copies of all advertising materials including flyers, posters, ads, letters, scripts or detailed descriptions; including graphics MUST be provided with your application. (See SOP 036 for Recruitment/Advertising).
□ Flyers
☑ E-mail
□ SU Today News Service
8.4. Will participants be compensated?

☐ No. (Skip to Section 9)
☒ Yes. If yes, answer 8.4.1 and 8.4.2 below.

Note: All information regarding compensation must be included in consent/assent documents.

8.4.1. If Yes, specify the method of compensation (e.g. monetary, course credit, gift card, toy, etc.), the amount of compensation, and how the compensation will be awarded (per task, per session, etc.). We will provide each participant $35 to participate, using the compensation function that is built into upwork.com. This way the participants are aware of the compensation and can verify that we are going to pay them for participating.

8.4.2. Describe how compensation will be awarded if the participant withdraws after beginning the study. Compensation cannot be contingent upon full participation and must be pro-rated in a manner that recognizes the time and effort of the participant prior to withdrawal. Provide a copy of the pro-rating schedule.
We will pay them in full if they begin, even if they drop out.

9. Informed Consent Procedures

Consent is required for all human subject participants. Final copies of ALL consent/assent documents (including electronic or oral scripts) must be provided for IRB approval and date stamping. Informed consent/assent documents must be on official SU departmental letterhead.

Must use NEW consent form templates as indicated for the type of consent you plan to use.

9.1. How many consent documents are included with this application? One

9.2. How many assent documents are included with this application? None

9.3. Is more than one consent/assent document included with this application?

☒ No. (Skip to 9.4)

☐ Yes. If yes, follow instructions below (9.3.1 and 9.3.2).

9.3.1. Assign form numbers to each individual document and add it to the footer of the document e.g. Consent form 1, Consent form 2, Assent form 1, etc.

9.3.2. Create a separate log as an appendices identifying each document e.g. Consent form 1, parental consent, Consent form 2, adult participant consent, Assent form 1, child assent, etc.

9.4. Indicate the type of consent you will obtain for your study (check all that apply).

Provide a brief statement of what will be said when the consent process is initiated. For example, how will consent be introduced/explained to participants.

We are going to be working with people who have already participated, so much of the this is a review of consent. We will emphasize the following five points:

1. Participation is voluntary, and the participant can stop at any time, decline to respond to all or part of any question, and withdraw without consequences (and will be paid).

2. Participant's identity will be protected -- no reader of our work will be able to trace back to any real person based on what we present.
3. This will be fun and useful for the participant. We have found that participants value the experience, sometimes learn from the conversations and reflections, and often enjoy the chance to share their experiences and learn from the research team about what others in similar lines of work are doing.

4. We will be doing a combination of interviews, observation and perhaps getting people together into focus groups. We will work with you on all of this to fit your interests, schedule and level of willingness.

5. Finally, all of this research is done within the framework of the Federal rules and Syracuse University policies regarding research. Part of this is that we will both read and sign the informed consent that outlines everything we have said (and more).

9.4.2. Electronic Consent ☒ (ATTACH SCRIPT) *(This is a request to waive the required element of documentation of written consent, e.g. internet studies.) NEW Template:*


Provide the justification for the waiver of written consent:

________

Provide a brief statement of what will be said when the consent process is initiated. For example, how will consent be introduced/explained to participants.

________

9.4.4. N/A ☐ Data Analysis Only, no consent form required.

9.5. Provide the name/s of the members of the research team listed in Sections 1 and/or 6 who will conduct the consent interview?
The PI, Weller, and Caruso will conduct the consent interviews.

9.6. How will you ensure that prospective participants have sufficient opportunity to consider whether or not to participate in your study?
They will have the opportunity to read about the study and the informed consent prior to agreeing to participate. They will be able to contact us by email or phone ahead of agreeing to participate and after they have read the material.

9.7. What steps will be taken to minimize the possibility of coercion or undue influence?
We rely on three steps to to minimize these concerns:

1. Training and attention to the rights of the participants.

2. Training regarding paying attention to the needs of the participants. As an aside, the ability to develop awareness and affinity with participants is one hallmark of excellence in field research and something we strive to achieve.

3. Constant reinforcement regarding participant’s rights and issues in the research team meetings.

9.8. An ASSENT statement is required for participants who cannot legally give consent themselves. Assent statement:
☒ No (Skip to 9.9)
☒ Yes (ATTACH COPY)

9.8.1. From whom will consent be obtained and by what means for minors or the individuals considered to be cognitively impaired in their decision making ability? ☐ N/A

9.8.2. If subjects are minors, will they still be involved in the study when they reach the age of majority (18)?
☐ No
9.9. Will non-English speaking individuals be participants in the research?

☐ No (skip to Section 10)
☐ Yes If yes, indicate how consent will be documented from non-English speaking participants?

☐ A translated written informed consent document in a language understandable to the participant. This should be an accurate translation of the full informed consent. (ATTACH COPY)

- Identify the name of the individual or translation service that provided the translation of the consent document.

- List the qualifications of the individual or translation service that provided the translation of the consent document.

☐ Orally, using a qualified translator to translate the English informed consent document to the participant, and a translated short form in a language understandable to the participant (ATTACH COPY)

- Identify the name of the individual or translation service that will provide translation for the consent process and during the conduct of the research.

- List the qualifications of the individual or translation service that will provide translation for the consent process and during the conduct of the research.

☐ A signed confidentiality statement is required (link to form: http://researchintegrity.syr.edu/wp-content/uploads/2016/10/Confidentiality-Agreement-Template-SAMPLE.doc)

10. Potential Financial Conflict of Interest

A conflict of interest exists when any investigator or personnel listed in this research protocol’s financial interests may reasonably be affected by research, scholarship, educational or other externally funded activity. Or, when the immediate family* of anyone in such a role, have significant financial interests that may compromise, or have the appearance of compromising, an investigator’s professional judgment that could directly and significantly affect the design, conduct, or reporting of the research, proposed or funded.

Federal Guidelines emphasize the importance of assuring there are no conflicts of interest in research projects that could affect the welfare of human participants. If this study involves or presents a potential conflict of interest, additional information will need to be provided to the Vice President for Research.

The following significant financial interests must be disclosed if interest is in the sponsor of the research or the product being tested:

Anything of monetary value - aggregated for the Investigator and the Investigator’s spouse, domestic partner, and dependent children - including but not limited to the following:

a. Salary or other payment for services (e.g. consulting fees) of $10,000 or greater in the past year when aggregated for the immediate family;

b. Any equity interest (e.g. stocks, stock options or other ownership interests) unless it meets the following three tests:
   i. less than $10,000 in value as determined through reference to public prices or other reasonable measures of fair market value (e.g. most recent sales price recognized by the company),
   ii. constitutes less than a 5% ownership interest in any single entity, or
   iii. publicly traded on a national stock exchange,
iv. no arrangements have been made where the value of the interest will be affected by the outcome of the research.

c. Intellectual property rights (e.g. patents, copyrights and royalties from such rights).

d. Services as an officer, director, or in any other executive position in an outside business, whether or not remuneration is received for such service.

e. Any compensation or equity interests that may be influenced by a particular outcome in sponsor-funded research, even if the identified thresholds are not met.

Syracuse University Policy on Conflict of Interest for Research Investigators:


*Immediate family means a spouse, domestic partner or dependent children.

10.1 Do any of the investigators or personnel listed in this research protocol, or members of the immediate family of the investigator or personnel, have a financial interest associated with this study that requires disclosure?

☐ No (Skip to question 10.3)
☐ Yes; If yes, identify the individual(s): ______

10.2 Has this financial interest been disclosed and managed?

☐ Yes. The Office of Research Integrity and Protections will verify that a management plan is in place with the Vice President for Research.

☐ No. If the Vice President for Research does not have an approved management plan for this research, complete Parts I and II of the Disclosure of Significant Financial Interest Form (http://osp.syr.edu/forms%20and%20pages/Forms/COI%20-%20Disclosure%20of%20Financial%20Interests%20Form.PDF) and submit it to the Office of the Vice President for Research, 304 Lyman Hall.

10.3 To your knowledge, did the University, or your School/Department receive a gift or equipment donation, or promises thereof, from commercial sponsors of this research project?

☐ No
☐ Yes; If yes, identify the sponsor: ______

Final IRB approval cannot be granted until all potential conflict matters are settled. The IRB requires a recommendation from the Vice President for Research regarding disclosure to participants and management of the conflict.

11. Data Collection, Storage of Data and/or Confidentiality

Confidentiality pertains to the treatment of information that an individual has disclosed in a relationship of trust with the expectation that it will not be divulged to others in ways that are inconsistent with the understanding of the original disclosure without permission.

11.1 PRIOR TO CODING: Simply list the individually identifiable data you will obtain, use or disclose others (e.g. participant names, email/home addresses, phone numbers, audio/video recording, photographs, IP addresses, or any other identifiable data that can link the participant to the data being collected).

No individually identifiable data will be disclosed to others. We will de-identify all data collected (removing the names of all individuals and companies, any contact information, and details of the work and work arrangements from any material we collect. We will replace names with pseudonyms on all transcribed interviews and any notes used in analysis. ______

11.2 Describe: a) How data will be maintained (e.g., paper or electronic spreadsheet, desktop computer, laptop or other portable device); b) How you will maintain the confidentiality and data security, (e.g., password protected computer, encrypted files, locked cabinet and office); and c) Who will have access to the data (e.g., research team, sponsors, consultants).

Digital data will be stored on a university-maintained drive that has controlled access -- with access control maintained by director of the iSchool IT's group and decisions on access made by PI.
Paper-based forms will be stored in an folder (that is labeled with a project pseudonym in lieu of the actual project name). This folder will be kept in a locked file cabinet inside my University office (which is also locked).

11.3. If you will be sharing data between members of the research team and/or with others, describe how data will be transferred (e.g., courier, mail or transmitted (e.g., file transfer software, file sharing, email). Specify whether the data you will share is identifiable. Any data that is shared will be accessed via digital devices that have to be password protected, the access to the data will be allowed only for those who are part of the project
and who have been granted access per 11.2.

11.4. If you plan to code the data linking to the participant, describe the method in which it will be coded (e.g., use of pseudonyms, assignment of ID#, etc.) and provide the names of the members of the research team that will have access to the key to the code. The PI will have access to the code sheet where we list the names of participants and the pseudonyms. This will be paper ONLY, and locked in file cabinet in the PI’s University office.

11.5. How has Principal Investigator educated the student researcher/research staff to ensure appropriate measures are in place to protect the privacy interests of the participants and the confidentiality of data collected; in the research design and while the research is being conducted. We will put in place a written procedure and reinforce it in our meetings.

Privacy can be defined in terms of having control over the extent, timing, and circumstances of sharing oneself (physically, behaviorally, or intellectually) with others.

11.6. Describe what provisions are in place to protect the privacy interests of participants, where “privacy interest of participants” refers to the participant’s desire to limit interventions or interactions with others and to limit access of others to their private information. Examples include: location of data collection (private location vs. public location), method of data collection (focus groups vs. one-on-one interview, questionnaires vs. interviews, telephone, email and mail communications), type of information (written vs. oral), recruitment methods and cultural norms.

All data collection will be driven by the privacy interests of the participants. We will meet where they want us to meet. We will arrange for places to speak and interact as they see fit. We will provide transportation to participants to these places as needed. In 25+ years of doing fieldwork, I have learned that working with participants to be sure that they feel safe, comfortable, and that it is clear we are doing everything to value their privacy, their interests and their insights is the only way to conduct this work.

11.7. Will audio/video/film recording or photographs be used?
☐ No. (Skip to Section 12)
☒ Yes. If yes, specify the medium you will use:

1. Audio recordings of interviews, with permission.

11.7.1. Describe how and where the recordings/photographs will be stored and provide the names of the members of the research team that will have access to them.

Digital materials will be stored on a drive that requires both University access and special permission be granted by the PI. The PI will have access, if other researchers join the project, they will also be granted access.

Per the request for modifications, the audio files will not exist on a recorder. They will begin as files on a mobile device, then be moved to the SU drives for deidentification before being transcribed.

11.7.2. How long will the recordings be kept and what is the disposition of the recordings once the research is complete.
One year after the project ends, the original recordings will be deleted from the storage drive. The de-identified transcripts will be archived in either a University-sanctioned data repository or in one of the several data repositories that are emerging. We intend to do this to honor the goal of making such data more accessible for scholars. As part of this we will develop a codebook to describe the ways in which the data were collected and organized.

**NOTE:** Specific permission for each type of recording must be sought in the consent form and should be indicated at the end of the document using checkboxes (I agree to be audio recorded _Yes_ _No_; I agree to be videotaped _Yes_ _No_, etc.)

12. **Risk to Participants**

12.1. Describe in detail any possible physical, psychological, social, political, legal, economic, or other risks to the participants, either immediate or long range. Risk may be minimal but never totally absent. Do not say "No Risk".

Risks are minimal. We are asking participants to talk about their work and issues with doing this. To date, in similar studies, participants have highlighted how beneficial participation has been to helping them reflect on their practices. We expect that some participants might become more reflective about their own practices. We expect that some participants might seek to try new things and learn from these actions. We expect that some participants will face problematic situations and worry about loss of face or prestige when speaking with us (and we can then assure them of the de-identification and confidentiality practices to which we adhere). Participants might worry that speaking with us will take them away from possible work interactions, which is why we are providing $30 to speak with us.

12.2. Describe what procedures will be used to minimize each risk you have stated above. Also, include in your description the availability of medical or psychological resources that participants might require as a consequence of the research, if applicable. If participants need to be debriefed at the end of the study, a copy of the debriefing statement must be attached.

We will focus on encouraging participants to be comfortable speaking with us, to know that we both admire and respect their work, that we will protect their privacy, and that our practices are designed to ensure confidentiality. And, as an aside, this trust-building is a second core characteristics of excellence in field research. We take this very seriously, as the absence of trust and comfort leads to the participant ceasing participation.

12.3. Does this research involve more than minimal risks to participants?

- [ ] No. (Skip to Section 13)
- [✓] Yes. If yes, please provide plan for monitoring the data collected to ensure the safety of participants. (Your data safety monitoring plan must include the following: Description of who will monitor the data, what data will be monitored, how frequently will it be monitored, what analysis will be performed on the data, what decision rules (e.g. stopping rules) will be considered, if unexpected harms will be detected promptly, if an increased frequency or severity of unexpected harms will be detected promptly, if the protocol will be stopped once harms are proven to outweigh benefits.).
13. Benefits

13.1. Describe any benefits to the participants in general. Incentives, such as course credit, payment, gift cards, entry into a raffle, etc. are considered an inducement to participate in the research and should NOT be described as a benefit.

Participants are likely to learn from reflection and interaction with the researcher. They are also likely to benefit from the feedback they will get when we complete the study and share out some of our findings and thoughts.

13.2. Society at large.
We are focused on improving our empirical and conceptual understanding of how workers from under-represented populations gain entry to the gig or project economy, and how they marshall digital and material resources to accomplish this. Findings will help improve workforce training policies provide entrepreneurs some additional ideas and guidance on how to assemble and leverage digital resources, and may help to alter project work contracting and performance evaluation.

13.3. Explain how the benefits outweigh the risks involved.

The small potential for discomfort (based on reflecting on one's practices) or the potential risk from experimenting with might be learned (through participating in this study) are small relative to the improved understanding of workplace approaches to succeeding in a project or gig-based economy.

A number will be assigned to your protocol. Please refer to it whenever calling or writing for information.

- All supporting documentation including list of references, consent and/or assent form(s), survey instruments, interview questions, recruitment materials, letters of support, IRB approvals from other institutions, etc. must be included with the application.
- Applications can be submitted via campus/US mail, hand delivery to 214 Lyman Hall, or as an attachment to an email sent to orip@syr.edu.
- All correspondence will be directed to the Principal Investigator listed in the protocol. Other persons listed in Section 1 will be cc’d only on email correspondence.

Office of Research Integrity and Protections
214 Lyman Hall
Syracuse University
Syracuse, NY 13244
Phone: 315-443-3013
Email: orip@syr.edu
SYRACUSE UNIVERSITY
School of Information Studies

Protocol Title: Trajectories of Work in The Gig Economy (IRB 19-201)

Introduction

My name is Steve Sawyer, and I am a Professor at Syracuse University’s School of Information Studies (the “iSchool”): http://ischool.syr.edu and Principal Investigator of this study. You can contact me by email (ssawyer@syr.edu) or phone (315.443.6147).

This is the consent form approved by Syracuse University's Institutional Review Board (IRB)

The purpose for this research study is ...
To better understand roles that gig work and freelancing play in people’s working lives and career plans. Given your experience, we are particularly eager to speak with you!

If you are willing to participate in the study, we are asking you to:
1. Complete a short online survey about finding work (about 15 minutes of effort).
2. Speak with us for about 45 minutes during which you will be asked to talk about your work practices, how you decide which jobs to take, how you organize your schedule, and how gig work and freelancing fit into your work and career plans.

Your involvement in this research study is voluntary, detailed below, and we will be pleased to compensate you $35 for your participation.

The possible risks of participation in this research study are minimal:

One possible risk would be that in the course of the interview you find yourself reflecting on aspects of your work or working arrangements that were uncomfortable or disappointing.

It is also important to note that whenever one works with digital documents and systems there is always the risk of compromising privacy, confidentiality, and/or anonymity. Your confidentiality will be maintained to the degree permitted by the technological arrangements we are using. Please know that while we can make no guarantees regarding third parties intercepting our interactions, we are committed to minimizing these risks.

The possible benefits of participation include:

Participants in similar projects we have done report that their involvement them a change to reflect on their work practices and work plans, and that they enjoyed the chance to speak about their successes and issues with work.

We post the publications and presentations from our studies to the project web presence (http://digitalwork.syr.edu), and you are welcome to visit the site, download and use what you like (with attribution) and to contact us with questions!
We offer participants the option to receive updates from us about related research and findings on a twice-a-year basis. Most people who have participated in previous studies with us appreciate getting these updates (and you can opt out or opt in at any time).

Your privacy will be protected:

We will have the audio transcribed and all personal data, real names (of people, organizations and places) replaced with pseudonyms. The original audio will be deleted once it is transcribed, and the drive wiped clean.

The document containing the pseudonyms and matches will only exist on paper, and be locked in a file drawer that is locked in a faculty office. Only the Principal Investigator will have the key and be allowed access.

Likewise, all digital forms of data will be stored in a secure drive within the electronic boundaries of Syracuse University, with the Principal Investigator having sole access.

Approved members of the research team may be allowed to use these transcribed audio recordings to support data analysis. All papers and presentations will report only aggregated insights. We may use specific de-identified comments in publications and presentations, to help illustrate what we are learning.

The confidentiality of your data will be ensured by ...

Our commitment to you that no data will be shared outside of the certified and trained members of the research team during the life of this project.

Once complete, the de-identified data will be archived according to the standards of the archiving facility. In saying this we acknowledge that the de-identified data may be used for future research studies or distributed to another investigator for future research studies without additional consent being sought.

We will use de-identified data for coding and analysis, so that any of your comments and ideas will be drawn together with others, further reducing the potential for anyone to re-identify or attribute statements, insights or ideas to any one person.

We would like to audio-record the voluntary interview:

By clicking or ticking below to indicate your consent, you will be audio recorded during the interview, as detailed above. Please know we will be glad to speak with you even if you do not agree to be audio recorded.

___ I agree to be audio recorded   ___ I do not agree to be audio recorded

You will receive compensation for participation:

As noted above, you will receive $35 in compensation for participating in this study, even if you do not complete either or both of the elements.
Please also note that there is no commercial value to this endeavor (your data are not being used to create products or materials for sale).

**As a research participant, you have the following rights:**
Your participation is voluntary
You may skip and/or refuse to respond to any question, for any reason.
You are free to withdraw from this research study at any time without penalty.

**If you have any questions about ...**
The research study, contact the Principal Investigator (Steve Sawyer) at
sawyer@syrc.edu or 315.443.6147.
Your rights as a research participant, contact Syracuse University's Institutional Review Board (IRB) at 315.443.3013.

Finally, please let us know if it would be permissible to speak with you again:

___ I am willing to be contacted again ___ I do not want to be contacted again.

By continuing, you agree that you are 18 years of age or older, that you understand what participation in this research involves, that you have a copy of this form for your personal records, and that you are willing to participate.

Thank you for your time.

Dr. Steve Sawyer
School of Information Studies
Syracuse University
TO: Steve Sawyer  
DATE: October 8, 2020  
SUBJECT: Amendment Approval - Use of Human Participants  
IRB#: 19-201  
AMENDMENT#: 1 – Addition of Research Staff (Isabel Munoz)  
TITLE: Trajectories of Work in the Gig-Work Economy

The amendment to the above referenced human participants protocol has been reviewed and approved by Institutional Review Board (IRB).

If you have amended your currently approved consent/assent form and/or added a new consent/assent form, a copy of this document is attached. Your revised document has been date stamped with the amendment approval date. If you have amended your consent/assent form, the amended document replaces the original approved document and is to be used in your informed consent/assent process.

Federal regulations require that each participant indicate their willingness to participate by signing the informed consent/assent document and be provided with a copy of the signed form. Regulations also require that you keep a copy of this document for a minimum of three years.

This protocol was approved as of November 1, 2019. An Expedited Status Report will be requested annually until you request your study be closed.

You are reminded that formal amendment requests are required for any additional proposed changes to this protocol. It is important to note that changes cannot be initiated prior to IRB review and approval; except when such changes are essential to eliminate apparent immediate harm to the participants. In this instance, changes must be reported to the IRB within five days. All protocol changes must be submitted on an amendment request form available on the IRB website at: Amendment-Request-Form.doc.

Any unanticipated problems involving risks to subjects or others must be reported to the IRB within 10 working days of occurrence on the Report of Unanticipated Problems form located on the IRB website at: Report-of-Unanticipated-Problems.doc.

Thank you for your cooperation in our shared efforts to assure that the rights and welfare of people participating in research are protected.

Katherine McDonald  
IRB Chair

DEPT: Information Studies, 344 Hinds Hall
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My CV is included in the next few pages.
Isabel Munoz

Email: iimunoz@syr.edu
Phone: +1-307-871-9549
Website: jisabelmun.com
LinkedIn: linkedin.com/in/iisabelmunoz/
Orcid ID: 0000-0003-1672-2860
Google Scholar: bit.ly/Munoz-Scholar

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**Research Interests**

Technology and the future of work
Digital labor, gig economy, and online freelancing
Sociotechnical perspectives
Intersectionality / Identity dimensions

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**Education**

Present  
**Ph.D., Information Science & Technology, Syracuse University**  
Advisor: Dr. Steve Sawyer  
Committee: Drs. Jeff Hemsley, Jasmina Tacheva, Michael Dunn

2018  
**M.A., Communication, University of Wyoming**  
Advisor: Dr. Kristen Landreville  
Committee: Drs. Sandy Hsu, Cindy Price-Schultz, Diana Baumbach

2015  
**B.A., Communication, University of Wyoming**

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**Research Experience**

2020-Present  
**Principal Researcher**, Digital Work Group, Syracuse University  
*PI: Dr. Steve Sawyer, Co-PI: Dr. Michael Dunn*  
(Funding: NSF grants Nos. 1665386, 2121624; CUSE grants)  
- Lead researcher, guiding the data analysis for a multi-year longitudinal study focused on online labor platforms, freelancers’ work trajectories and workers from historically marginalized communities.
- Guide undergraduate students across research activities (e.g., interview & survey data collection, analysis, and visualization).

2019-Present  
*PI: Dr. Josh Introne*
- Co-lead research about sustainable and accessible social support for stigmatized groups, using interview, focus group and participatory methods.
- Collaborate with partners in the field (including a network of rural HIV clinics and an IT company) to develop digital resources for the target population.
- Manage the development and launch of a mobile application and website for people living with HIV, guiding student researchers in the process.

2020 **Lead Researcher**, Human Centered Computing and Design Lab  
*Syracuse University, PI: Dr. Brian McKernan, Co-PI: Bryan Semaan*
- Led planning and implementation of a qualitative research study about historically marginalized populations during COVID-19.
- Mentored undergraduate students through the research process.

2019 **Research Collaborator**, Social Media and Democracy Project  
*Newhouse School, Syracuse University, PI: Dr. Lu Xiao*
- Collaborated with a group of undergraduate students to develop a survey about college students’ views on democracy, misinformation, and social media consumption patterns.
- Analyzed survey responses and developed data-driven visualizations which were displayed in a university exhibition.

2019 **Graduate Researcher**  
*Department of Communication and Journalism, University of Wyoming*
- Conducted independent research on the challenges of professional development among Latinas in Wyoming; presented findings at MALCS & NACCS, two national Latino/a Studies conferences.
- Designed and conducted independent research to advance insights regarding website design preferences and the challenges of artist brand development.
- Interviewed local social justice activists/artists and developed web articles on their work and challenges.

### Journal Articles & Refereed Conference Proceedings


***Awarded Recognition for Contribution to Diversity & Inclusion***


**Working Papers**


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**Conference Papers & Workshop Position Papers**


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**Conference Presentations & Panel Participation**


Sawyer, S., **Munoz, I.**, and Dunn, M. (2022). “Upwork just did what? Studying digital platforms (or how to observe something that does not want to be observed)”. Workshop on the Changing Nature of Work (CnoW), Copenhagen, DK, December 2022.


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**Teaching Experience**

2020-2021

**Course development/planning, IST 300 – Dr. Rachel Clarke**

*Syracuse University School of Information Studies*

*Course: The Power of Information, IST 300 (Sophomore-level, 3-credit course)*

- Collaborated on developing a course on information and technology literacy.
- Co-developed course syllabus; evaluated readings, activities, and assessments to evaluate learning outcomes.
- Collaborate in weekly course planning meetings with the instructor.
- Designed and led a lab on information access and the digital divide.

2020

**Discussion/quiz planning, IST 343 – Dr. Jennifer Stromer-Galley**

*Syracuse University School of Information Studies*

*Course: Data and Society, IST 343 (Junior-level, 3-credit course)*

- Served as a discussion leader and grading assistant for a large course.
- Planned and delivered a guest lecture on the uses of data in election cycles: “Hacking the Electorate: The Public Code of Racialized Electioneering”.

2016-2018

**Graduate Instructor**

*University of Wyoming, Department of Communication and Journalism*

*Course: Media Writing (Previously called “Reporting and News Writing”)*

- Taught six sections of a sophomore-level news writing course (COJO 2100).
- Responsible for developing quizzes, grading, and weekly course preparation.

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**Service**

**Institutional Service**

2021-2022  Search Committee, Syracuse University iSchool
2020-2021  Faculty Committee, PhD Representative, Syracuse University iSchool
2019-2020  PhD Admissions Reviewer, Syracuse University iSchool
2020      PhD Community Engagement, Retreat Organizer, Syracuse University iSchool
2016-2018  Student Interaction Committee, University of Wyoming, Communication Dept.
2016      Scholarship and Awards, Graduate Reviewer, University of Wyoming, Communication Dept.

**Journal and Conference Service**

2022-Present  Program committee, Symposium on Human-Computer Interaction for Work (CHIWORK) 2023
2021-Present  Manuscript reviewer, Association for Computing Machinery Conferences: CHI 2021 Late-Breaking Work, CSCW 2021, CHI 2023
2021      Manuscript reviewer, CHIWORK 2022 (Symposium on Human-Computer Interaction for Work) Annual Meeting
2021      Manuscript reviewer, Journal of Computer-Supported Cooperative Work
(JCSCW)


2015-2018  Volunteer board member for the Wyoming Latina Youth Conference


Other Service

2022-Present  Volunteer (web chair), Symposium on Human-Computer Interaction for Work (CHIWORK)

2021-2022  Volunteer (publicity chair), Symposium on Human-Computer Interaction for Work (CHIWORK)

Student Mentoring & Advising

Present  Bernadette Berner, Skidmore College
  Clea O’Neil, Skidmore College
  Ellie Owen, Skidmore College
  Esther Thomas, Syracuse University
  Heba Salman, Skidmore College
  Lauren Coop, Syracuse University
  Rebecca Farrell, Syracuse University
  Sofia Shore, Skidmore College

2020-2022  Aishwarya Raj, Syracuse University ’21
  Alaina Caruso, Syracuse University ’21
  Bethanya Philipos, Syracuse University ’22
  Gabby Vaccaro, Skidmore College ’22
  Gillian Follett, Syracuse University ’22
  Emily Michaels, Syracuse University ’22
  Lily Feldman, Skidmore College ’22
  Louisa Williams, Syracuse University ’21

Awards & Honors


2020  Research Excellence Doctoral Funding (REDF) Fellow, Syracuse University
  Amount: $12,875 (Fall 2020)

2019  Research Excellence Doctoral Funding (REDF) Fellow, Syracuse University
  Amount: $25,000 (Academic Year 2019-2020)

2018  Graduate Student Recognition for Excellence Award, University of Wyoming

2018  Willena Stanford Commitment to Diversity Finalist, University of Wyoming
2017 Dreinhofer Award for Outstanding Achievement in Student Publications, University of Wyoming
2017 Amy and Eric Burger Journalism Scholarship, University of Wyoming
2015 Outstanding M.E.Ch.A. Co-Chair Award, University of Wyoming
2015 Outstanding Assistant Editor in Student Media Award, University of Wyoming
2015 John W. Hoyt Scholarship, University of Wyoming
2014 Hearst Scholars Award Scholarship, University of Wyoming

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**Professional Affiliations**

2021- Present Association for Computing Machinery (ACM), Student member
2020-Present Association of Internet Researchers (AoIR), Student member
2020-Present National Communication Association (NCA), Student member
2020-2022 Women in Science and Engineering - Future Professionals Program, Member
2019-2022 Syracuse University Future Professoriate Program, Member
2018-2019 Laramie Young Professionals, Member

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**Professional Experience**

2019-2021 **Graduate Program Assistant & Graduate Mentor**
*Women in Science and Engineering, Syracuse University, Syracuse, NY*
- Assisted with program implementation for 70 events for women in STEM in 2020 and 101 events in 2021 (an increase from ~40 events in past years).
- Managed marketing and social media strategy, content development, and scheduling.

2018-2019 **Proposal Coordinator**
*Trihydro Corporation, Laramie, WY*
- Managed the development of engineering/environmental project proposals.
- Collaborated across teams of specialists (e.g., engineering, water, technology, and air consultants) and marketing staff to coordinate proposal writing, editing, and formatting.

2017-2018 **Marketing Assistant**
*Trihydro Corporation, Laramie, WY*
- Developed technical articles and copy for marketing and communication materials (both for web and print).
- Managed the company’s social media strategy and content development.
- Created and led semi-annual employee LinkedIn and social media training.

2017-2018 **Marketing and Media Relations Director**
*Wyoming Latina Youth Conference, Laramie, WY*
- Collaborated in planning and securing funding for a conference empowering Latina youth in the state of Wyoming.
- Conducted research on Wyoming Latina’s educational and professional trajectories and presented results at a national conference.