

Understanding the Impacts of Gig Economy Platforms on Freelancers' Work Practices

Juan Carlos Alvarez de la Vega

PhD

2022

Understanding the Impacts of Gig Economy Platforms on Freelancers' Work Practices

Juan Carlos Alvarez de la Vega

A thesis submitted in partial fulfilment of the
requirements of the University of Northumbria at
Newcastle for the degree of Doctor of Philosophy

Research undertaken in the Department of Computer
and Information Sciences, Faculty of Engineering and
Environment

September 2022

Declaration

I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work. I also confirm that this work fully acknowledges opinions, ideas, and contributions from the work of others.

Any ethical clearance for the research presented in this thesis has been approved. Approval has been sought and granted by Northumbria Ethics Committee.

I declare that the word count of this thesis is 52,000 words.

Name: Juan Carlos Alvarez de la Vega

Date: 30/09/2022

Abstract

Freelancing platforms have enabled opportunities for millions of knowledge workers worldwide to pursue a freelance career. Freelancing platforms are part of an emerging work model characterised by technology companies mediating work relationships through algorithms that manage, monitor, and evaluate work – the gig economy. Previous literature has studied freelance workers’ practices, for instance, how they go about getting work, cultivating their reputation, and managing their work. However, most of this research has been conducted prior to the emergence of freelancing platforms, leaving a gap in our understanding of how platforms impact freelancers’ work.

This thesis comprises of three qualitative studies, engaging with views from a total of 476 freelancers, to understand the opportunities and challenges freelancing platforms introduce for their work practices. The first study explores how freelancers view online freelancing platforms through a qualitative analysis of discussions in four freelancing subforums. The findings suggests that platforms can enable opportunities to source clients, gain experience, and mitigate precarity while constraining control over their work choices, reputation, and client relationships. The second study focuses on understanding the impact of platforms on freelancers’ everyday work-life through a qualitative diary study followed by semi-structured interviews. Findings from this study illustrate how platform features and individual circumstances shape freelancers’ everyday life. Importantly platform features introduce new constraints on work availability, autonomy, and detachment. The last study builds from the previous two studies and literature recommendations to develop a design fiction that explored a model of online freelancing where platform features are designed to support (rather than constrain) freelancers’ work preferences. This design fiction is used as the basis for five focus groups, identifying novel areas for research and development to support freelancers’ autonomy, entrepreneurship, and peer support.

This thesis makes contributions to knowledge, design, and policy. Firstly, it contributes novel empirical knowledge to the impacts freelancing platforms have had on freelance work by unpacking core challenges and opportunities. Secondly, it contributes design implications that move towards thinking about ‘worker-centred’ research interventions, platform configurations, and features to mitigate challenges stemming from platforms. Thirdly, it contributes policy implications to regulate and hold platforms accountable, rethink social institutions to better support freelancers, and legislate emerging technologies that manage work.

Acknowledgements

First and foremost, this thesis has been possible thanks to the support and dedication of my two supervisors: *Marta Cecchinato* and *John Rooksby*. Marta has provided outstanding advice, thorough feedback, and kind, but straightforward, guidance throughout my PhD journey. She's always put my wellbeing before any work-related matter and reminded me of my achievements along the way, reminders that have kept me going during tough times. John has been an excellent 'voice of reason' by asking difficult questions, pushing me to think harder, and encouraging me to articulate in plain English my verbose ideas and thoughts. John has helped me become a better communicator. Most importantly, both have shown up whenever I've needed them most.

I want to thank a group of friends who, during their time at Open Lab (at Newcastle University), introduced me to human-computer interaction as a research field and inspired me to pursue a PhD. Without hearing your stories and working together at the Red Cross, I probably wouldn't have embarked on this research journey – thank you: *Dan Lambton-Howard*, *Jay Rainey*, *Dan Richardson*, *Tom Nappey*, and *Sarah Armouch*.

Several colleagues at Northumbria Social Computing Lab (NorSC Lab) have contributed to my thinking and made my PhD experience less isolating. I want to thank *Megan Doherty*, *Jamie Mahoney*, and *Chloe Kliman-Silver* who were at the office at different moments, always up for a chat. Colleagues *Lauren Scott*, *Joe Newbold*, *Mark Warner*, *Sarah Lewis*, *Gavin Wood*, *Nick Dalton*, and *Simran Chopra*, have helped me develop my thinking by either proofreading drafts, listening to my talks, being available for consultation, or simply as a 'sounding board' for me to talk through issues.

My research has benefited from the generosity of *Isabel Munoz* and *Oliver Bates* who have given their time to proofread drafts, have shared their constructive feedback, and have helped me develop my thoughts as experts in the gig economy field.

I am grateful with the team at Microsoft Research who, during my internship, helped me see my research from a different perspective. During this summer, I learned exceptional lessons about the future of work that shaped the rest of my PhD and career aspirations – thank you: *Siân Lindley*, *Richard Banks*, *Linda Yilin Wen*, *Max Meijer*, *Brita Burlin*, and *Reese Muntean*.

I had the fortune to be part of a "Friday Writing Group," which often included Wednesdays, that welcomed me despite coming from a vastly different discipline. These folks helped me

get through the finish line during my third year and were amazing listeners – I’m grateful with you all: *Miriam Liggins, Matteo Giacchè, Emily Upson, ‘Izzy’ Hollingdale, and Carrie Poon.*

I was fortunate to meet extraordinary people throughout my PhD journey and I have no doubt we’ll remain friends for the years to come. Firstly, I want to thank *Struan Kennedy* for his loyal friendship during the past three years, we’ve both come a long way since that freshers’ week ‘doctoral dilemmas’ event. I deeply enjoyed both our profound discussions and animated nights out to blow off some steam – you have made my time in Newcastle incredibly enjoyable and my research journey less daunting. Secondly, I want to offer my gratitude to *Sena Çerçi* for remaining available to chat, get together, and listen to my complaints about my PhD life. Thirdly, I want to thank my two closest Mexican friends in Newcastle: *Maria Fernanda Morales Salum* and *Pablo Hernández* – you two made me feel closer to home and were an outstanding source of support during difficult times. Lastly, I want to thank *Amy Allan, Fauhan Latheef, Ece Byacioglu, and Francis Christofis* for your companionship at the ‘Virtual Office’ during the various lockdowns.

My gratitude goes to three close friends who have stuck around with me over the years and have kept me grounded. Firstly, I am incredibly grateful with *Aarathi Krishnan* who has always reminded me to stay true to myself. She’s been a beacon of inspiration, life wisdom, and passion for social justice issues. Secondly, I want to thank *Fernando Farciert Flores* for his immense curiosity and openness; even though many years have passed, we can pick up a conversation right where we left it. Thirdly, I am thankful with *Emily Upton* who has been amazingly supportive, she’s been an incredible listener and paramount source of advice – I’m truly glad our friendship was reignited during the pandemic.

I want to give a special mention to *Jamie Marie Fraser* who followed along for most of this journey, encouraged me through frustrating moments, shared with me incredible adventures, and taught me many invaluable life lessons.

Finally, I’m indebted to my family and parents for all their love and financial support over the years. I’m grateful with my aunts *Laura* and *Rosy* for being curious about my research and being excellent proof-readers of this manuscript. I’m immensely fortunate to have *Hilda de la Vega Arevalo* and *Juan Carlos Alvarez Cruz* as parents – your unconditional love and guidance have made me who I am today.

This thesis was funded by a Northumbria University Research & Development Studentship.

Impact Statement

The research presented in this thesis has made impactful contributions to both academic and non-academic communities.

Within academia, the research presented in this thesis has been disseminated through six research publications, which are listed in the following section. These publications have been presented at top-tier venues in human-computer interaction (HCI). Two of the academic publications central to this thesis have received awards, including *best paper award* at the CHI Conference of Human Factors in Computing Systems 2021 and *honourable mention award* at the CHIWork Symposium of Human-Computer Interaction for Work 2022. Beyond publications, findings from this research have been presented at various academic institutions and venues: 33rd International BCS Human Computer Interaction Conference (at Keele University) 2020; Centre for Employment Relations, Innovation and Change (at University of Leeds) 2021; and Summer Seminars on the Future of Work (a join session between Syracuse University and Skidmore College) 2022.

The research presented in this thesis has also been disseminated to a wide range of non-academic communities, such as industry leaders and the public. Outputs from this thesis were presented at Microsoft Research New Future of Work Symposium in 2020 and then again at the Future of Work Group at Microsoft Research Lab, Cambridge in 2021. I co-organised and mediated an event called the Digital Worker Inquiry¹, which gathered workers, policymakers, and unions to present and discuss tools and approaches to drive better futures of work online. I spoke at Pint of Science 2022, an annual science festival aimed at disseminating research in an accessible way. A collection of videos, as research dissemination resources, related to this thesis are available at: <https://carlosalvarez.org/portfolio/videos/>

¹ <https://digitalworkerinquiry.com>

Publications

This thesis' research has been disseminated through the list of publications below. At the beginning of each relevant chapter, the related publication(s) is/are listed indicating its/their contribution to such chapter.

This paper has been published at PACM on Human Computer Interaction Vol. 7, CSCW1:

- **Alvarez de la Vega, J.C.**, Cecchinato, M.E., Rooksby, J., Newbold, J. (2023) Understanding Platform Mediated Work-Life: A Diary Study with Gig Economy Freelancers. Proceedings of the *ACM on Human Computer Interaction, CSCW1*, article 106.

This paper received an *honourable mention award* at CHIWork'22:

- **Alvarez de la Vega, J.C.**, Cecchinato, M.E., Rooksby, J. (2022) Design Opportunities for Freelancing Platform: Online Freelancers' Views on a Worker-Centred Design Fiction. *Proceedings of the Symposium on Human-Computer Interaction for Work*, 1-19

This paper received a *best paper award* at CHI'21:

- **Alvarez de la Vega, J.C.**, Cecchinato, M.E., Rooksby, J. (2021) "Why lose control?": A Study of Freelancers' Experiences with Gig Economy Platforms. *Proceedings of the SIGCHI Conference on Human Factors in Computing systems*, 1-14

This paper was presented at the Microsoft Research New Future of work Symposium in 2022:

- **Alvarez de la Vega, J.C.**, Cecchinato, M.E., Rooksby, J. (2020) The Gig Economy in Times of COVID-19: Designing for Gig Workers' Needs. *Proceedings of the New Future of Work Symposium*, Microsoft Research

The following papers are related to research conducted as part this PhD, but none of their content has been included because they do not align with the thesis' focus:

- **Alvarez de la Vega, J.C.** (2020) Making the Gig Economy Work for Workers: An Exploration of Freelancing Platforms. *Proceedings of the 33rd International BCS Human Computer Interaction Conference Doctoral Consortium*
- **Alvarez de la Vega, J.C.**, Cecchinato, M.E., Lambton-Howard, D., Harrison, D. (2021). Active and Passive Research through Social Media: The Case for Repurposing

Reddit, Instagram and WhatsApp Features in HCI Research Practices. *Workshop on Social Media as a Design and Research Site in HCI, CHI 2021*

Table of Contents

Declaration	3
Abstract.....	4
Acknowledgements	5
Impact Statement	7
Publications	8
Table of Contents	10
List of Figures.....	15
List of Tables.....	15
Acronyms	16
Preface	17
Doing a PhD during the COVID-19 pandemic	17
A note on “I” and “we”.....	18
Part I. Introduction.....	20
Chapter 1 Introduction	21
1.1 Motivation.....	21
1.2 Key Concepts and Research Scope.....	23
1.2.1 Freelancing platforms	23
1.2.2 Freelancers	24
1.2.3 A freelancer-centred stance.....	24
1.2.4 Shared and everyday practices.....	25
1.3 Research Question and Objectives.....	25
1.3.1 Research objective one (RO1)	25
1.3.2 Research objective two (RO2).....	26
1.3.3 Research objective three (RO3).....	26
1.3.4 Approach.....	26
1.4 Summary of Contributions.....	27
1.5 Thesis Structure	27
Part II. Literature Review & Background.....	31
Chapter 2 Freelance Practice.....	32

2.1	Shared and Everyday Practices	32
2.2	Work Autonomy	34
2.3	Social Capital	35
2.4	Entrepreneurship	36
2.5	Chapter Summary	38
Chapter 3	The Gig Economy.....	39
3.1	Two Gig Economy Characteristics	40
3.1.1	Technological factors	40
3.1.2	Socio-economic factors.....	41
3.2	Workers' Experiences with Gig Economy Platforms.....	42
3.2.1	Enabling flexible work alternatives	42
3.2.2	Experiencing algorithmic management	43
3.2.3	Shouldering added work	44
3.2.4	Self-organising to overcome platforms' shortcomings.....	44
3.3	Chapter Summary and Literature Gaps.....	45
Chapter 4	Freelancing Platforms.....	46
4.1	The Upwork Platform: An Overview	46
4.1.1	Hiring process	46
4.1.2	Contract types and work monitoring.....	48
4.1.3	Evaluation and rating	48
4.2	Freelancing Platforms' Characteristics	49
4.3	Impacts of Freelancing Platforms on Freelance Practice.....	50
4.4	Part II Summary and Final Remarks.....	52
Part III.	Methodology.....	54
Chapter 5	Methodology.....	55
5.1	Philosophical Assumptions of this Thesis	55
5.1.1	Ontology – Relativism	55
5.1.2	Epistemology – Interpretivism.....	56
5.1.3	Axiology – Interpretivism.....	57
5.2	Research Approach	58
5.2.1	Research design considerations	59
5.2.2	Data collection methods and body of data generated	59

5.2.3	Participant recruitment approach	63
5.2.4	Data analysis	63
5.2.5	Ethical considerations	65
5.3	Chapter Summary	66
Part IV.	Data Collection	67
Chapter 6	Exploring the Impact of Freelancing Platforms on Freelancers' Shared Practices	68
6.1	Introduction.....	68
6.2	Approach.....	69
6.2.1	Sample characteristics.....	69
6.2.2	Data collection	70
6.2.3	Analysis.....	72
6.2.4	Ethical considerations	72
6.3	Findings.....	72
6.3.1	Freelancers' perspectives on freelance work	73
6.3.2	Freelancers' perspectives on freelancing platforms.....	77
6.4	Discussion	84
6.4.1	A contemporary landscape of freelance work.....	85
6.4.2	Towards worker-centred design of freelancing platforms	88
6.5	Conclusions.....	90
Chapter 7	Understanding Platforms Impact on Freelancers' Everyday Practices	91
7.1	Introduction.....	91
7.2	Theoretical Background.....	92
7.3	Approach.....	94
7.3.1	Participants and recruitment.....	94
7.3.2	Diary design	95
7.3.3	Procedure	96
7.3.4	Data analysis	97
7.4	Findings.....	98
7.4.1	Everyday Considerations in Finding Work.....	98
7.4.2	Everyday Considerations in Doing Work	103
7.4.3	Everyday Considerations in Completing Work	109
7.5	Discussion.....	112

7.5.1	Freelance Everyday Work-Life as Influenced by Platform Use	112
7.5.2	Freelancers Everyday Practices as Influenced by Platform Design.....	116
7.6	Limitations and Future work.....	118
7.7	Conclusion	118
Chapter 8	Developing “Freelance Grow,” a Worker-Centred Design Fiction.....	119
8.1	Introduction.....	119
8.2	Design Fiction as an Empirical Research Tool.....	120
8.3	Approach.....	121
8.3.1	Phase 1: Literature assessment.....	121
8.3.2	Phase 2: Speculative design	122
8.4	Freelance Grow’s Speculative Features	123
8.4.1	(1) Apprenticeship Programme.....	123
8.4.2	(2) Super Peer Mentorship	124
8.4.3	(3) Progression Level System	125
8.4.4	(4) Double-Blind Evaluation.....	126
8.4.5	(5) Portable Reputation	127
8.4.6	(6) AI Buddy: Features for Entrepreneurial Development and Wellbeing.....	127
8.4.7	(7) AI Buddy: Features for Client-Freelancer Matching	128
8.4.8	(8) Optional Benefits.....	129
8.5	Conclusion	129
Chapter 9	Freelancers’ Views on Freelance Grow.....	131
9.1	Introduction.....	131
9.2	Approach.....	131
9.2.1	Participants.....	131
9.2.2	Introducing Freelance Grow and focus group structure.....	133
9.2.3	Data collection and analysis.....	133
9.3	Findings.....	134
9.3.1	Freelancers’ Views on Platform Support Getting Work.....	134
9.3.2	Freelancers’ Views on Entrepreneurial Development	136
9.3.3	Freelancers’ Views on Peer Cooperation.....	139
9.4	Discussion.....	142
9.4.1	Designing for greater autonomy	142

9.4.2	Supporting the development of entrepreneurial skills	143
9.4.3	Fostering meaningful peer support	144
9.5	Limitations	145
9.6	Conclusion	146
Part V.	Synopsis	147
Chapter 10	Discussion.....	148
10.1	Summary of Research Findings	148
10.2	Contributions to Knowledge	149
10.2.1	Work autonomy	152
10.2.2	Client relationships.....	154
10.2.3	Reputation.....	156
10.2.4	Entrepreneurship.....	157
10.3	Implications for Design.....	159
10.4	Implications for Policy.....	162
10.5	Limitations and Future Work.....	164
10.6	Conclusions.....	165
References	167
Appendix A	Chapter 7 Study Material.....	201
A1	Information Sheet for Participants	202
A2	Diary Transcript Example	206
A3	Interview Guide Example.....	214
A4	Consent Form and Recruitment Survey	217
Appendix B	Chapter 9 Study Materials	218
B1.	Information Sheet for Participants	219
B2.	Focus Groups Session Guide.....	223
B3.	Consent Form and Recruitment Survey	227

List of Figures

Figure 1: (left) Anonymised freelancer profile and (right) client information	47
Figure 2: Client feedback form at time of data collection (January-April 2021)	49
Figure 3: Overarching approach to data collection, adapted from the Double Diamond design process	58
Figure 4: Thread inclusion strategy. PRISMA flow diagram illustrating the selection criteria of sampled posts from top to bottom.	71
Figure 5: Orlikowski's (1992) Structuration Model of Technology	92
Figure 6: Diary design examples, participants' names have been removed.....	96
Figure 7: Structuration Model of freelancers' ongoing interaction with the Upwork platform, adapted from Orlikowski (1992)	112
Figure 8: Low-fidelity sketches of Freelance Grow's speculative features.	122
Figure 9: The on-boarding page describing features to get support when signing up to the platform, including the Apprenticeship Programme and Super Peer Support Mentorship. .	123
Figure 10: Freelance Grow's Progression Level System	125
Figure 11 Double-Blind Evaluation and Portable Reputation features	126
Figure 12: AI Buddy Insights for Entrepreneurial Development and Wellbeing. AI Buddy for Client-Freelancer Pre-Screening and Matching.....	128
Figure 13: A list of Freelance Grow's Fees and Optional Benefits.....	129

List of Tables

Table 1 Philosophical assumptions of this thesis	55
Table 2: Number of subforum members at the time of writing	69
Table 3: Overview of data included in the analysis.....	71

Table 4: Diary study participant information95

Table 5: Freelancers’ ongoing interaction with freelancing platforms..... 112

Table 6: Online focus groups participant information..... 132

Table 7 Freelance practices influenced by freelancing platforms 151

Acronyms

HCI	Human-Computer Interaction
CSCW	Computer-Supported Cooperative Work
AMT	Amazon Mechanical Turk
HITs	Human-Intelligence Tasks
AI	Artificial Intelligence
RO	Research Objective
TA	Thematic Analysis
ML	Machine Learning
WEF	World Economic Forum
ICTs	Information and Communication Technologies
US	United States of America
UK	United Kingdom

Preface

Doing a PhD during the COVID-19 pandemic

When I started my PhD in October 2019, I did not foresee how the rest of my programme would unfold. In early March 2020, Northumbria University (among many more institutions worldwide) mandated all research to be conducted online, in line with the UK COVID-19 restrictions. Tight lockdown measures in England were loosened in October 2021, however, the general guidance from Northumbria University remained to avoid face to face research where possible. Thus, all my research happened remotely, mostly done from an old desk positioned awkwardly tight next to my bed. The following account aims to describe my PhD experience during the pandemic and provide transparency of what it was like conducting research during this period.

Altogether 2020 and (most of) 2021 feel like a void in time, almost two years merged into a strange period that felt simultaneously incessant and brief. My routine mainly consisted of waking up, going for a walk to a neighbouring park, going back to my bedroom to start work, taking a half-hour lunch break, and continuing work until half past five. I finished my workday with another walk to the same park, except I did a reverse loop instead. Dinner time helped me get out of my room and stand up a bit while I cooked. Occasionally, I would have a chat with one of my flatmates, but most of them were gone to their families during the pandemic, so they were around intermittently. At about 19:30 I went back to my room. This time I would, again, turn to the same computer, different browser, where I would do my ‘non-work’ stuff like attending online ‘socials’ that happened during lockdowns. I might watch an episode of a show before going to bed. The next day would look incredibly similar, even weekends. This was roughly what my life looked like for about one and a half years.

Fortunately, none of my research was affected by the public health restrictions. The research topic at hand is perfectly suited for online methods (as I explain later). As a result, I often let work slip into my personal time because I convinced myself there was nothing else to do, so I might as well use my time ‘productively.’ It was easy to pick up where I left after dinner, never switching my browser, and squeezing in extra hours of work. This cycle was only possible because of my privilege as an abled, young male with little responsibilities beyond my PhD, for example, I was not caring for any family members, and had a secure income through my research stipend.

Nevertheless, this work routine was unhealthy and unsustainable. I attended mental health counselling sessions for most of 2021 and had to take various weeks off. I was fortunate to have an incredibly supportive supervisory team that encouraged these breaks and were very understanding of the situation.

On the flipside, the various lockdowns helped me to slow down in many positive ways. I managed to explore, on foot, many areas of Newcastle that I probably wouldn't have seen otherwise. I re-connected with family and friends online – before the pandemic we rarely had time to call each other. In retrospect, many of these conversations were very useful to articulate my research and explain what I was doing. The pandemic put many things into perspective and prompted me to reflect on what really matters in my life moving forward. For example, I no longer see myself going into an office to a nine-to-five job (which is something I thought I wanted for a long time). I appreciate the hybridity of work that has emerged because of the pandemic restrictions. Again, these reflections were mostly possible because I was in a fortunate and privileged position during the pandemic.

Where I felt disadvantaged during the pandemic was mainly because of my position as an international student. As a newcomer to the UK and academia, I felt the pandemic restrictions stifled my social networking opportunities. I lost valuable chances to participate in events and develop strong social ties with other peers. There were many lonely moments, where I felt most apart from my loved ones, and feared the worst might happen whilst I was away. Fortunately, when restrictions loosen up, I was able to make the most out of my PhD experience, including in-person attendance to two conferences (which is something I looked forward to when I started my programme).

All in all, I look back to my pandemic experience as a period of growth that enabled reflection and self-awareness at many personal levels.

A note on “I” and “we”

I am the sole author of this thesis and conducted all the research described hereafter. I was responsible for all the research stages, including (but not limited to) designing the research, crafting research questions, applying suitable research methods, recruiting participants, assembling data for analysis, reporting results, and putting together this manuscript. That said, you (the reader) will notice that most of this thesis is written in the plural form of the first person – *we*.

I have decided to write this thesis in the plural form to honour the people who helped me shape my thinking and refine my research over the years. First and foremost, my PhD supervisors

were the ones who stayed closest to my research journey; we met regularly, exchanged ideas, and shared feedback. Despite this close relationship, the final research decisions and responsibilities always rested with me. Along my journey, there were also many peers, friends, family, loved ones, and even research participants who contributed to my thinking. I have had many discussions about my research topic in widely diverse settings, from formal academic conferences to late-night pub conversations. Through these discussions, I have honed my arguments, refined ideas, and (I believe) become a better researcher. To stay true to these communities who accompanied me along my research journey, the thesis is predominantly written in the plural, first person pronoun *we*.

I will use the first person singular in specific thesis' sections, for instance, when describing how my personal views, for example the account above describing *my* experience during the COVID-19 pandemic. I will remind you of this distinction within the relevant sections.

Part I. Introduction

Overview

This part encompasses Chapter 1. This chapter begins by motivating the research at hand, articulating the real-world issues this thesis seeks to address. It then summarises key concepts and clarifies the research scope. The next section introduces the research question and objectives. The following section moves on to summarise this thesis' contributions. The chapter concludes with a summary of the thesis structure.

Chapter 1 Introduction

1.1 Motivation

People have started to re-consider and re-design how their work fits into their lives. Recent research shows that people, especially those working in knowledge-intensive roles, increasingly want their work to be flexible in terms of work time and location, to offer multifaceted professional development, and to grant autonomy to directly influence organisational goals (Deal, 2016; Zaharee et al., 2018). These trends have only accelerated during the COVID-19 pandemic, when global labour markets saw a record-high of voluntarily turnover, a phenomenon referred to as the ‘Great Resignation’ (Rosenberg, 2022; Serenko, 2022). The pandemic allowed people to re-examine life priorities, such as avoiding long commutes, enjoying working from home, re-defining career goals, prioritising one’s health over work responsibilities, spending more time with family and friends, and having a job that is fulfilling (Amitabh, 2022; Dean & Hoff, 2021; Hymes, 2021). Hence more people have sought career opportunities that are better aligned with these new life priorities (Serenko, 2022).

The *gig economy* has emerged as a work model that promises to fulfil how work fits into one’s life. The gig economy can be summarised as the exchange of independent work services mediated via digital platforms (Woodcock & Graham, 2019). Essentially, independent workers (i.e., not legally tied to an employer) sign up to these platforms to be hired by customers to provide services or ‘gigs.’ In turn, platforms mediate all the logistics involved for a commission, such as matching a worker with a customer, handling payments, and overseeing that the service gets done properly (Vallas & Schor, 2020). There is a myriad of services that can be acquired through gig economy platforms, from everyday conveniences, such as taxi rides, food delivery, and household work, all through those requiring highly specialised skills, such as web development, logo design, and marketing branding. A key premise of the gig economy is that since workers are independent, they can work as much or as little as they want, whenever they see fit, and those providing highly specialised services even work from wherever they please (Bajwa et al., 2018). Because of this flexibility, people can turn to gig economy platforms as a ‘side-hustle’ to generate extra income or even make them their ‘full-time’ work, thereby enabling work opportunities that are no longer tethered to a traditional nine-to-five job or even a linear career path (Kessler, 2018).

Most types of work in the gig economy have not fundamentally changed, e.g., taxi drivers and highly specialised freelancers have been around for a long time – what is new is *how* work is

managed via platforms' features. Managerial activities traditionally performed by people have now been programmed into platform features to mediate service exchanges – referred to in academic literature as *algorithmic management* (Lee et al., 2015). Elements of algorithmic management include matching workers with customers, tracking workers' behaviour, evaluating workers' performance, and making decisions automatically (Möhlmann & Zalmanson, 2017). As an example, let's consider using a taxi service through a gig platform like Uber, the platform sorts through available drivers and matches one with a nearby client, the platform tracks the ride to suggest the fastest route, and, once the service has been completed, it prompts a review to evaluate the experience – all these managerial tasks are performed automatically by platforms' algorithms. In this way, gig economy platforms have been able to coordinate a distributed workforce at an unprecedented scale, making this coordination cost-effective, and tightly streamlined, leading to rapid growth (Frenken & Schor, 2017).

It is then unsurprising that participation in the gig economy and, consequentially, its capital has risen steadily. In the US alone, participation in gig economy platforms grew from 0.3% in 2013 to 1.6% in 2018 (Farrell et al., 2018). In the UK, at least 4.4 million people reported working in any form of gig work in 2021 (data from England and Wales) – that is nearly triple the number of gig workers since 2016 (Trades Union Congress, 2021). Demand for highly specialised services through gig economy platforms has increased about 65% since 2016, according to Oxford's Internet Institute Online Labour Index (Kässi & Lehdonvirta, 2018). Further, transactions via gig economy platforms are estimated to return over 310 billion US dollars in revenue by 2023 (Tay & Large, 2022). Although it is difficult to estimate the number of gig workers because of its fluctuating nature, e.g., some people might use more than one platform and work intermittently depending on their circumstances, existing trends show that the gig economy will continue to grow (Cornell University & The Aspen Institute, n.d.).

As the gig economy grows, various academic communities have examined workers' experiences with gig economy platforms. Researchers have uncovered that by workers being legally regarded as 'independent,' they bear most risks and costs associated with delivering services, for example, unpaid time while waiting to be hired, lack of safety protections, and expenses associated with their work, such as reliable internet plans (Jarrett, 2022; Lehdonvirta, 2018; Stefano, 2016; Toxtli et al., 2021; Woodcock & Graham, 2019). Paradoxically, while workers are regarded as independent, researchers have contended how platforms' algorithms dictate and heavily influence work outcomes, thereby violating such 'independent status' agreement (Friedman, 2014; Rosenblat, 2018; Rosenblat & Stark, 2016). Examples of these violations include nudging workers to be available during high-demand periods, penalising

moments of inactivity, dictating work supply and demand, and ‘firing’ workers via account suspensions (Rosenblat & Stark, 2016; Ticona et al., 2018; Waters & Woodcock, 2017). Further research has uncovered challenges stemming from algorithmic management, highlighting mechanisms of control such as information asymmetries, opaque decision-making processes, and encoded gender and ethnic biases (Chen et al., 2015; Dunn et al., 2021; Glöss et al., 2016b; Hannák et al., 2017; Irani & Silberman, 2013; Ma et al., 2022; Raval & Dourish, 2016; Yao et al., 2021). This prior research suggests that gig economy narratives of work flexibility, autonomy, and personal fulfilment can crumble apart when closely examining workers’ experiences.

To tie all the above arguments together, two driving factors motivate the research presented in this thesis. Firstly, people have started to re-evaluate how work fits into their lives and gig economy platforms have enabled opportunities to fit this purpose, however, gig work comes with risks and challenges that require further attention to truly live to its promised potential. This thesis outset to further articulate opportunities and challenges stemming from gig economy platforms. Secondly, given that gig economy platforms have encoded work process into algorithmic features, established work norms that predate platforms have been transformed. Consequently, the everyday activities in doing work have also been impacted by platforms’ algorithmic features. This thesis seeks to further explore the transformations work norms and activities caused by gig economy platforms.

1.2 Key Concepts and Research Scope

Before we² introduce our overall research question, this section gives an overview of key concepts that underpin this research, aiming to provide clarity on the research stance and scope. We further elaborate on these concepts throughout **Part II. Literature Review & Background**.

1.2.1 Freelancing platforms

Freelancing platforms are the specific type of gig economy platforms that concern this thesis (for a detailed review on freelancing platforms see Chapter 4). Freelancing platforms can be summarised as online marketplaces that take a commission from mediating the exchange of knowledge-based services, such as software development, graphic design, and marketing writing, between highly skilled freelancers and clients (Jarrahi, Sutherland, et al., 2020). Freelancing platforms streamline work processes by providing a wide range of features for freelancers and clients to arrange work as needed. Examples of these features include

² See the Preface for an explanation about writing this thesis in the third person plural – we.

standardised contracts (e.g., per hour, per project, or per task), work monitoring software (e.g., hourly tracking or milestone reviews), collaboration tools (e.g., chat, videoconference, and file-sharing), and work evaluation metrics (e.g., standardised forms and quantifying users' interactions with the platform). Lastly, freelancing platforms have enabled work to occur entirely online, meaning that freelancers and clients may be in different places and time zones.

1.2.2 Freelancers

In this thesis, we regard freelancers as independent professionals (i.e., detached from any organisation) contracted on a project or task basis and conducting knowledge work (Association of Independent Professionals and the Self-Employed, 2021). By knowledge work we mean the production and transmission of knowledge, intellectual skill and manipulation of abstractions, problem solving tied to creativity, and theoretical and technical knowledge (Erickson et al., 2014). While *not* all freelancers are knowledge workers, freelancing platforms – as the focus of this thesis – mediate forms of knowledge work, hence, we scope our population group to only encompass freelance knowledge workers and refer to them simply as freelancers. See the start of Chapter 2 for further elaboration on these concepts.

1.2.3 A freelancer-centred stance

Although a wide range of actors interact with freelancing platforms, such as freelancers, clients, platform decision-makers, customer support staff, to mention some (Jarrett, 2022; Kinder et al., 2019) – *this thesis is solely concerned about freelancers*. Inevitably, other actors are mentioned throughout the research, but they are not the foci of study or interest.

We focus on freelancers for three reasons. First, freelancers make up a significant userbase of freelancing platforms with various sources indicating there is an oversupply of labour and, in some work domains, a shortage of demand for their services (Fairwork, 2021a, 2022; Kässi & Lehdonvirta, 2018; Stephany et al., 2020). Second, there is robust evidence showing that platforms prioritise client satisfaction at the expense of freelancers' work preferences and wellbeing, thus more research is needed to mitigate these imbalances (Anwar & Graham, 2020a; M. Gray & Suri, 2019; Kessler, 2018; Shevchuk et al., 2021; Sutherland et al., 2019; A. J. Wood et al., 2019; A. Wood & Lehdonvirta, 2021). Third, freelancing platforms are an emerging area of the gig economy and freelancers' experiences have been understudied when compared to other gig workers, such as those conducting 'microtasks' on platforms like Amazon Mechanical Turk (B. Gray et al., 2020; Sutherland & Jarrahi, 2018; Woodcock & Graham, 2019). In sum, we take a freelancer-centred stance to this research because of the growing number of freelancers joining platforms, because freelancers' work preferences and wellbeing being overlooked by platforms, and as a way of addressing a knowledge gap in

understanding freelancers' experiences in the gig economy. These motivations are further justified when revising related literature trends and gaps in Chapter 3 and Chapter 4.

1.2.4 Shared and everyday practices

Practice is a central concept of this thesis as an element of observation and analysis. Specifically, we focus on *shared* and *everyday practices*. *Shared practices* are activities that are accepted and enacted by a particular group of people that interacts regularly (Barnes, 2005). In this sense, shared practices are mostly tacit and contingent on shared understandings and established social norms among the group of people that enact these practices (Schatzki, 2001). *Everyday practices* are activities that people perform regularly in ordinary cycles (Lave, 1988). As such, everyday practices are always contextually and historically grounded and, in this sense, more observable (Feldman & Orlikowski, 2011). Although we differentiate between shared and everyday practices for clarity, these two concepts are closely intertwined and mutually influence each other (Orlikowski, 2015). For example, everyday activities from a community of practitioners may reify their shared norms and practices of the community, even when enacted individually (Barnes, 2005). See 2.1 for more background on the concept of practice.

1.3 Research Question and Objectives

Having summarised key concepts and clarified our position in relation to the research scope, we present the research question that this thesis sets out to address:

What opportunities and challenges do freelancing platforms introduce for freelancers' practices?

To address this research question, we have defined three research objectives described below, motivated by various literature gaps, and building on findings as the research progressed.

1.3.1 Research objective one (RO1)

As we argue in Chapter 4, prior literature largely examines freelancers' interactions with freelancing platforms and work strategies resulting from such interactions, e.g., (Jarrahi & Sutherland, 2019; Kinder et al., 2019). However, most of this past research overlooks freelancers as having established *shared* practices and norms that predate platforms, such as entrepreneurial control and developing strong client relationships (which we review in

Chapter 2). It is unclear how freelancing platforms have impacted freelancers' shared practices. Therefore, our first research objective (RO1) is to:

- RO1: Generate an understanding of the impact freelancing platforms have on freelancer' *shared* practices.

1.3.2 Research objective two (RO2)

Insights from RO1 (addressed in Chapter 6) highlighted high-level relationships and tensions between freelancing platforms and freelancers' shared practices. However, it remained unclear how freelancers' *everyday* practices have been impacted by platforms. Although research has examined various activities that unfold during freelancers' everyday activities (e.g., (Ciolfi & Lockley, 2018; Erickson et al., 2019; B. Gray et al., 2020; Sadler, Robertson, Kan, et al., 2006)), most of this research either predates or does not consider the impact of platforms on freelancers' everyday practices. Therefore, our second research objective (RO2) aims to:

- RO2: Investigate the impact freelancing platforms have on freelancers' *everyday* practices.

1.3.3 Research objective three (RO3)

Findings from the previous two studies (addressed in Chapter 6 and Chapter 7) highlighted how platforms' features impact (both positively and negatively) freelancers' practices at the shared and everyday levels. In parallel to our research, there has been a push in HCI to put gig economy workers at the centre of future developments and interventions, a call for moving towards a "worker-centred design" of interventions (Fox et al., 2020; Glöss et al., 2016a; Gregory et al., 2021; Irani & Silberman, 2013; Lindsey et al., 2021; Salehi et al., 2015). Given that gig economy platforms prioritise client satisfaction and profit over fostering workers' practices, our final research objective aims to:

- RO3: Explore how new platform features can positively impact freelancers' practices.

1.3.4 Approach

To address these research question and objectives, we conducted three empirical studies, underpinned by a qualitative paradigm situated in relativist and interpretivist philosophies. For all the details on our approach see Chapter 5.

1.4 Summary of Contributions

This thesis makes three overarching contributions with implications for knowledge, design, and policy. The first contribution is new, empirical knowledge to the scholarship on freelance knowledge work and freelancing platforms. This thesis provides thorough evidence of how freelancing platforms impact freelancers' practices at the shared and everyday levels and how, in turn, freelancers' practices also influence platform use. Specifically, this thesis unpacks opportunities and challenges that freelancing platforms introduce for four elements akin to freelance practice: 1) work autonomy, 2) client relationships, 3) reputation, and 4) entrepreneurship (see Table 7 in 10.2 for an overview). This contribution is novel in that it considers freelance work as having established, shared and everyday practices and analysing how platforms have disrupted these practices. This empirical knowledge also considers the various factors that can lead to experience greater challenges at the individual level when using freelancing platforms.

The second contribution is a series of implications to move towards a 'worker-centred' design of interventions and tools aimed at mitigating the challenges freelancers experience while freelancing on platforms. These worker-centred implications stem from a reflection on and critique to the current freelancing platform model, which is designed to generate profit rather than support freelancers' practices. Therefore, our design implications focus on how researchers, designers, and activists might action our empirical knowledge to create more equitable experiences in the freelance gig economy.

The third contribution is a series of implications for policymakers to support freelancers. Firstly, we call for gig economy companies to have a corporate responsibility towards *all* their users (i.e., workers and clients). Secondly, we call for stronger legislation to hold freelancing platform companies accountable, acknowledging the challenges of regulating an online work marketplace. Thirdly, we call for robust social institutions, at the country-level, to better support independent workers as the future of work pictures increasingly unstable and detached from traditional organisations. Finally, we call for greater attention to regulating emerging technologies, such as AI, in relation to work management.

1.5 Thesis Structure

This thesis comprises eleven chapters arranged into *five parts* as described below:

Part I. Introduction encompasses this chapter (**Chapter 1**), which motivates, scopes, and frames the research undertaken in this thesis as well as summarising its contributions.

Part II. Literature Review & Background encompass three chapters **Chapter 2**, **Chapter 3**, and **Chapter 4**. These three chapters summarise related literature to freelance practice, the gig economy model, and freelancing platforms. This summary serves as background to motivate and situate our research, while also articulating research trends and gaps.

- In **Chapter 2**, we focus on reviewing the concept of *freelance practice*. The chapter begins by summarising the concept of freelance knowledge work. Then, it gives theoretical background to the two elements of practice that concern this thesis: shared and everyday practices. The remainder of the chapter revises literature related to three core elements, we argue, underpin freelancers' shared and everyday practices: work autonomy, social capital, and entrepreneurship. This chapter sets the scene to explore the opportunities and challenges freelancing platforms introduce for these three elements.
- In **Chapter 3**, we review literature related to the *gig economy* phenomena. We begin by characterising the gig economy, highlighting how both technological and socioeconomic conditions have shaped this emerging work model. We move on to review literature on workers' experiences with gig economy platforms, noting four research trends: work flexibility, experiences with algorithmic management, added work, and self-organisation and support. We conclude this chapter by arguing that freelancing platforms have been an understudied form of gig work and that practice-centred research has been an uncommon approach when studying gig workers' experiences.
- In **Chapter 4**, we focus on reviewing literature on *freelancing platforms*. The chapter begins with an overview of how a freelancing platform operates, using Upwork³ (one of the largest and most popular platforms to date) as an example. We then move on to characterise freelancing platforms and distinguishing them from other gig economy platforms. We follow to review research trends and gaps regarding the impact freelancing platforms have on freelancers' practices. We note an important gap in examining the opportunities and challenges platforms introduce for freelancers' shared and everyday practices.

Part III. Methodology covers **Chapter 5**. This chapter details the methodological approach taken in conducting this thesis' research. It begins by positioning the research approach in a qualitative paradigm underpinned by a relativist ontology and an interpretivist epistemology and axiology. Research validly, from these philosophical stances, resides on the researcher's thorough closeness with the research phenomena, providing a convicting, but partial and

³ <https://www.upwork.com>

contextual, account of the relevant meanings in the dataset for the research inquiry. The remainder of the chapter explained the research approach taken to address the thesis' research question and objectives. It discussed considerations in the research design, data collection methods, participant recruitment, data analysis, and research ethics.

Part IV. Data Collection encompasses four chapters that provide the corpus of data and findings of this thesis: **Chapter 6**, **Chapter 7**, **Chapter 8**, and **Chapter 9**.

- **Chapter 6** presents our first empirical study where we explore the impacts of freelancing platforms on freelancers' shared practices. We thematically analysed 528 posts with 7499 comments from four freelancing subforums on Reddit. Our qualitative findings suggest that key shared practices impacted by platforms include the amount of control freelancers have over getting work, and most importantly, over their business. Freelancing platforms were viewed as systems that provide opportunities to mitigate some of the precarity associated with freelance work, such as enabling professional development and access to global networks of clients. However, freelancers perceived platforms' management features as constraining the control over work demand, client relationships, and reputation, leading to new forms of precarity. This chapter begins to unpack high-level impacts platforms have had on established, shared practices of freelance work.
- In **Chapter 7**, we examine the impacts freelancing platforms have on freelancers' everyday practices. We report findings from a qualitative study, combining a 14-diary and semi-structured interviews with 15 freelancers. Our qualitative findings suggest that both platform features and individual context shape online freelancers' everyday practices. To balance platform demands and everyday activities, freelancers adopt practices that mitigate platform challenges but also reflect their individual preferences and circumstances. We found platform features introducing serious challenges for freelancers' availability, work autonomy, and work detachment. We conclude with a discussion of how platform designs are transforming instituted, shared practices of freelance work.
- In **Chapter 8**, we describe the process of developing a design fiction, "Freelance Grow," aimed at exploring technology concepts that might support freelancers' practices on platforms. The process to develop the design fiction involves a literature assessment, collating research recommendations and real-world examples to support freelancers' practices. The fiction also builds on research recommendations made in the previous two chapters. The purpose of developing this design fiction is twofold:

1) as a reflexive exercise to compile and make sense of the findings so far and 2) as the basis of an empirical study, presented in the following chapter.

- In **Chapter 9**, we present the third (and last) study of this thesis where we explore how the concepts from our design fiction (described in Chapter 8) might support freelancers' practices. We report on a qualitative study engaging with 23 freelancers across five online focus groups. Our qualitative findings suggest that freelancers appreciated Freelance Grow's features aimed at supporting their status as independent workers, fostering social learning opportunities, and developing entrepreneurial skills. Conversely, our findings highlight how some recommendations from previous work, even when applied to a fictional scenario, can be seen as a threat to freelancers' autonomy and individual success.

Part V. Synopsis comprises of **Chapter 10**.

- In **Chapter 10**, we present this thesis' general discussion. We begin by providing a research summary of the main findings. Then, we outline the core contributions of this thesis, starting with our contributions to knowledge, followed by design and policy implications. We conclude with a reflection on the general thesis limitations and avenues for future work.

Part II. Literature Review & Background

Overview

This part encompasses three chapters aimed at summarising literature, providing background information, and describing key terms that underpin our research. The first chapter of this part (Chapter 2) reviews literature on freelance practice, unpacking key concepts, such as practice and freelance work. The second chapter of this part (Chapter 3) reviews literature on the gig economy, describing its core characteristics and the sociotechnical backdrop of this work model. The third chapter of this part (Chapter 4) gives an overview of freelancing platforms, covering platforms' characteristics, existing literature trends, and research gaps. This part concludes with a summary, stating the need to research how freelancing platforms, as part of the gig economy, have impacted established freelancing practices.

Chapter 2 Freelance Practice

In this thesis we refer to *freelancers* as self-employed workers who ‘sell’ professional know-how and skills (rather than tangible goods) (Kazi et al., 2014). Although the term ‘freelance’ traces back to medieval mercenaries, contemporarily it refers to professionals working in a range of managerial, professional, and technical occupations (Jenkins, 2017). Freelancers are characterised by their detachment from organisations and responsibility for their professional career, e.g., professional development, sourcing employment, and work resources (Damian & Capatina, 2019).

The focus of this thesis is on freelancers conducting forms of knowledge work because this is the type of work predominantly mediated by freelancing platforms (Margaryan, 2019). By knowledge work we mean a type of work that involves a wide range of distinct features to produce and communicate knowledge, such as intellectual, problem solving and creative skills, manipulation of abstractions, theoretical and technical knowledge (usually acquired through formal education) (Davenport, 2005; Erickson et al., 2014; Megill, 2005). While we acknowledge ‘knowledge work’ is a contested term (Alvesson, 2001), debating its definition is outside of this thesis’ scope; we signpost the reader to chapter one in B. Gray et al. (2020) for a more nuanced discussion. We side with Erickson et al.’s (2014) definition to highlight that knowledge work is fundamentally cognitive – rather than physical – and its primary output is in the form of information and knowledge.

2.1 Shared and Everyday Practices

Practice has a rich, multidisciplinary history, however, discussing its philosophical nature falls outside of this thesis’ scope (for a thorough analysis see (Schatzki et al., 2001)). In this thesis, we focus on two types of practice as a lens of observation and analysis: *shared* and *everyday practices*. Shared practices refer to actions that are accepted and enacted by a particular group. Barnes (2005, p. 27) regards shared practices as “socially recognised forms of activity, done on the basis of what members learn from others (ibid).” Importantly, Barnes (2005) notes that even though practices can be performed individually, people are mindful of other practitioners’ tendencies and reify the accepted community norms during their practice. This view of practice – as a social activity – resonates with Wenger (1998)’s notion of practice as rooted in historical and social contexts that provide structure and relevance to a community of practice. To ground shared practices on freelance work, let’s consider common freelancing activities such as promoting work, interacting with clients, and self-managing workload.

Although performed individually, these practices are accepted activities that come with doing freelance work and are developed socially by interacting with other people, such as fellow freelancers, clients, and peers (White, 2015).

Everyday practices are understood (in this thesis) as “what people do in (...) ordinary cycles of activity (ibid)” (Lave, 1988, p. 15) as well as the social and material activities involved in these ordinary cycles. In this sense, everyday practices are always contextually and historically grounded (Feldman & Orlikowski, 2011). Everyday practices have been commonly examined in the context of people’s recurrent interaction with a given technology at work to render how such recurrent engagement reconfigures people’s use of the technology and alters their everyday activities (Orlikowski, 2000). This form of examining people’s everyday practices in relation to technology is particularly relevant for this thesis since the research question and objectives aim to generate empirical knowledge around freelancers and freelancing platforms’ influences (as detailed in 1.3). Grounded on freelance work, everyday practices might include the recurrent actions of having a routine where one might respond to client communications first thing in the morning, set aside time do ‘focused work’ before lunch, go for a walk, generate project leads in the afternoon, and finish the day by watching a TV show after dinner. This oversimplified example illustrates the ‘ordinary’ cycles of activity that a freelancer might follow on a given day.

We note that shared and everyday practices are closely interlinked and directly influence each other. To illustrate this close relationship and influence, let’s consider the interplay of everyday and practices when sourcing projects. Consider Sarah, a freelance writer, who has recurrent activities in place to source projects. These activities might include reaching out to her existing clients inquiring about new projects, maintaining an updated mailing list with client prospects she can reach out to, and posting samples of her work on her personal blog with a link to a contact form. These are examples of Sarah’s *everyday practices* to source projects. It is likely that Sarah learned these skills from various sources that required interactions with other people. For instance, reading other freelance writers’ blogs, attending meetups, or asking her network for advice on how to land new projects. These different sources might have a variety of approaches to find projects that Sarah engage with and found effective or ineffective for her situation. These are examples of how *practices* become *shared* and accepted in Sarah’s freelance writing community. Over time, Sarah, through her everyday practices, becomes more experienced and learns new approaches to sourcing projects that she might then pass on to other peers. In this sense, Sarah’s everyday practices contribute to developing shared practices. With this example, we want to illustrate how more observable everyday practices influence more tacit shared practices and *vice versa*.

The remainder of this chapter focuses on revising literature, through this practice lens, in relation to three core elements we have identified as relevant for freelance knowledge work whilst reviewing prior research: (1) work autonomy, (2) social capital, and (3) entrepreneurship.

2.2 Work Autonomy

People usually pursue freelance work predominantly seeking work autonomy, attempting to break away from rigid bureaucratic control (although some people are thrust into freelance work out of necessity (de Jager et al., 2016)) (Annink & den Dulk, 2012; de Jager et al., 2016; Hui et al., 2018; James, 2017; Kitching & Iskandarova, 2019; Tremblay & Genin, 2008). Freelance work is greatly driven by controlling when, where, and how one works, in other words, being highly autonomous (Jarrahi, Newlands, et al., 2020). For example, a freelance software engineer may choose how to go about developing a new software feature, and if the feature gets done in time, it does not matter when she writes the code or where from. Because of the nature of knowledge work (as primarily outputting information and knowledge artifacts), freelancers enjoy greater freedom to decide the practicalities and temporalities of their work (Mazmanian et al., 2013).

Work autonomy implies acting independently to solve tasks and work through problems that may emerge during a project or to address specific needs. Freelancers usually work on a project basis and own specific tasks (Barley & Kunda, 2006; Megill, 2005). Hence, they apply their judgement and creative thinking as products of their work and act with little oversight (Davenport, 2005). In their everyday practices, this autonomy manifests in harnessing a wide range of resources and tools (e.g., calendars, project management software, and hardware adaptors) to conduct their work effectively (Erickson et al., 2019). Being autonomous also means leveraging social resources (e.g., professional networks and peers) *ad hoc* depending on the project needs, for instance, when requiring specialised assistance to complete a project (Nardi et al., 2002). This prior research shows how both shared and everyday practices manifest in relation to freelancers' work autonomy (Erickson et al., 2019; Jarrahi, Newlands, et al., 2020).

A wide range of literature, especially in organisation and management studies, has highlighted benefits resulting from work autonomy. Feeling in control of how to conduct work is associated with work satisfaction, personal fulfilment, and ability to attend other non-work responsibilities (Annink & den Dulk, 2012; Breugh, 1999; Mazmanian et al., 2013). Recent research has shown a greater push from new generations to craft their own work tasks, schedules, and influence organisational value (Deal, 2016; Steiber & Alänge, 2013). In turn,

this form of autonomy results in greater job satisfaction and retention for modern corporations. Conversely, organisations that fail to adapt to these shifting work preferences have found themselves losing valuable talent who often shift to freelance work in search for this autonomy (Annink & den Dulk, 2012; Nemkova et al., 2019).

At the same time, high levels of work autonomy pose challenges for everyday practice. Even when enjoying the freedom to control aspects of their work, freelancers often side with restricting this autonomy, resulting in intensified workloads, blurred work and non-work boundaries, and long working hours (Mazmanian et al., 2013; Mazmanian & Erickson, 2014). Mazmanian et al. (2013) characterise this tension between work autonomy and responsibility as the product of workers' aspirations and commitments to perform effectively. Hence, although enjoying greater autonomy, freelancers usually prioritise work over other activities (Fraser & Gold, 2001).

Another great appeal resulting from work autonomy is time flexibility. Time flexibility allows to better plan work and non-work commitments and how they fit into one's routine (Kossek, 2016; Kossek & Michel, 2011). Paradoxically, this flexibility comes with the caveat of blurred work and non-work boundaries that can result in detrimental wellbeing (de Jager et al., 2016; Hammer et al., 2011). For example, by having control over how to schedule work around other personal commitments, freelancers can feel compelled to be 'always on', resulting in stress and anxiety (Hilbrecht & Lero, 2014). In their everyday practices, freelancers can deploy strategies to manage this tension, for example, by negotiating availability and expectations with work (e.g., clients) and non-work (e.g., family) actors (Sadler, Robertson, & Kan, 2006). While autonomy and flexibility are an appealing characteristic of freelance work, they come with caveats that must be carefully managed to avoid negative effects.

2.3 Social Capital

Building social capital is central to freelance work. Gandini (2016a) defines social capital as strategically developing and managing social relationships expecting economic value in return. Freelancers curate their public social media profiles to demonstrate their professional competencies, for instance, by engaging in industry debates and even generating highly curated content (Brems et al., 2017). These activities of self-branding and self-promotion are examples of shared practices whereby freelancers display a "public and social self across social networking sites (...) [to] build reputation and status" (Gandini, 2016a, p. 134). Everyday engagement, such as tinkering with one's content and having an active profile, is expected to return capital in work leads, referrals, and forms of business.

Prior research has identified three challenges that come with building social capital online. First, albeit expecting self-branding to pay off in future projects, everyday practices of generating content goes unremunerated and consumes valuable time that could be allocated to other work tasks (Gandini, 2016b). Second, as a form of shared practice, freelancers' work persona becomes enmeshed with their identity, resulting in porous boundaries and reduced privacy as they become open to their network scrutiny (Petriglieri et al., 2019). Third, while freelancers are arguably in control of curating and developing their professional brand, Gandini (2016a) argues social media sites' algorithms also play a role in constraining the outreach of freelancers' content. Added work, curated professional identities, and third-party sites are three known challenges for developing a freelance reputation that can return work value.

Offline social networks are equally important for freelance work. For example, previous research has shown how freelancers leverage personal social networks, such as family, friends, and former collaborators to find projects and clients (Grugulis & Stoyanova, 2011; Massey & Elmore, 2011; Norbäck & Styhre, 2019; White, 2015). Further, in the absence of organisational support, freelancers seek mentorship and collaboration through individual connections (Hui et al., 2018; Jacobs et al., 2019). Further, because freelance work happens mostly in isolation and individually, shared, physical spaces, such as co-working offices and cafés, become a source of valuable socialisation (Avdikos & Kalogeresis, 2017). Even though the trend of freelancing online points upwards, accelerated by the COVID-19 pandemic, it is worth highlighting the importance of offline, social practices for freelancers.

Cultivating client relationships is another form of developing social capital. Once a project has been landed, freelancers must ensure clients are satisfied with their work to nurture their reputation and ensure repeated projects and referrals (Hesmondhalgh & Baker, 2010). Gold & Mustafa (2013) have referred to this relationship development as 'client colonisation' because freelancers tend to prioritise their clients over other non-work commitments. At the same time, relationships with clients are frequently negotiated and freelancers also set expectations to balance time and project commitments (White, 2015). Freelancers see client relationships as effective way to establish a reputation, hence they invest heavily in ensuring work satisfaction sometimes even when this means work bleeding into their non-work time.

2.4 Entrepreneurship

Freelance work can be seen as a form of 'solopreneurship' where freelancers consider themselves as the 'CEO of [their] own brand' (Damian & Capatina, 2019, p. 213). Therefore, freelancers embrace their work as part of their identity as noted by freelance author Adam

Sinicki (2019, p. 151) “If you are a [freelancer], then effectively you *are* your business. In that way, your business and your personal life are effectively inseparable (ibid, author’s emphasis).” Petriglieri et al. (2019) suggest that by lacking organisational ‘holding environments’, freelancers turn to productivity and their work as the bedrock of their identity. Working for an organisation (rather than independently) comes with various benefits, such as belonging to a community with shared goals (Wenger et al., 2002), employment stability, and access to resources. In the absence of such support systems, it is this ‘inseparable’ work-life quality that create tensions and anxieties (B. Gray et al., 2020).

Three shared practices have been identified in response to such entrepreneurial struggles. Firstly, freelancers develop strong emotional ties to their workspaces and endow them with meaning to conduct work – these spaces ‘hold’ part of their identity (B. Gray et al., 2020; Petriglieri et al., 2019). Secondly, developing predictable routines as anchors that provide stability. In their book, B. Gray et al. (2020) describe the ‘routinisation of worklife’ whereby freelancers craft routines that either decrease or rigidly schedule non-work activities as a practice to cope with unpredictable work demands. These routines provide stability to an otherwise consuming work identity that may interfere with personal commitments. Thirdly, freelancers cultivate strong work identities that provide them with a broader sense of purpose. This means pursuing work that is fulfilling as a practice to help reconcile the moments of uncertainty and precarity (Caza et al., 2018; Sandoval, 2018). Cultivating places, routines and connection to career purpose are shared identity practices that freelancers adopt to mitigate the treacherous challenges of self-employment, such as financial instability.

Freelancers’ everyday entrepreneurial practices are twofold. Firstly freelancers must orchestrate a wide array of administrative task related to their business (Sinicki, 2019). Unlike employees with ready access to organisational resources (e.g., admin, finance, legal, and IT departments), freelancers must take care of the backstage operation of their business, for instance, sourcing clients, billing for their services, writing contracts, filling taxes, updating their skills (White, 2015). Freelancers must be incredibly self-disciplined to manage these multiple aspects of their business, resulting in working long and atypical hours, juggling multiple work and non-work responsibilities, and having unpredictable routines (Ciolfi & Lockley, 2018; Hesmondhalgh & Baker, 2010). Also, freelancers are responsible for their self-actualisation, resulting in additional work and pressure (Avle et al., 2019).

Secondly freelancers must perform their ‘actual’ project work. Examples of project work involve, performing work activities (e.g., writing, programming, designing, editing, to mention some), collaborating with clients (e.g., sending an update, troubleshooting issues, responding to emails, etc.), and planning workload (e.g., adjusting deadlines, breaking down

tasks, etc.). Some project work might come with a regular re-allocation of resources. For instance, meeting with clients, attending worksites, or travelling for work. We consider these everyday practices as a different dimension of work that require the mobilisation of both material (e.g., devices) and social (e.g., clients) resources (Ciolfi & Lockley, 2017, 2018).

2.5 Chapter Summary

In this chapter we have delimited the definition of freelancers practice to guide our literature review. We have reviewed three elements (we consider) core to freelance knowledge work: work autonomy, social capital, and entrepreneurship. Work autonomy relates to being in control over when, where, and how one works. This means having freedom to schedule and perform work flexibly in relation to other activities. Social capital means investing in social relationships expecting economic value in return. Freelancers cultivate social capital on- and -off-line with clients, peers, and relatives to build a reputation and secure projects. Finally, freelance work is closely related with entrepreneurship, meaning freelancers run their independent business. As a result, freelancers cope with moments of uncertainty and ambiguity, and operation activities required to generate profit. By reviewing these three core elements of freelance practice, we set the scene to explore the opportunities and challenges freelancing platforms (reviewed in Chapter 4) introduce for these elements.

Chapter 3 The Gig Economy

Parts of this chapter have been published in (Alvarez de la Vega et al., 2020, 2021a, 2022)

The world of work has changed dramatically over the past decade. Work arrangements have become increasingly temporary, unstable, and detached from organisations, an economic trend that has risen since the late nineties (Barley & Kunda, 2011; Felstead & Jewson, 1999). During this global shift, technology companies have become major players in mediating labour relationships between independent workers and service requesters through digital platforms, perhaps Uber being one of the most iconic examples of this work model (Kessler, 2018; Rosenblat, 2018). This revolutionary work model has become elusive to define. Researchers and media outlets have used multiple terms such as ‘gig economy’, ‘platform economy’, ‘sharing economy’, ‘digital labour’, ‘crowdwork’, ‘on-demand platforms’, to mention a few terms (Heeks, 2017). Debating its terminology falls outside of this thesis’ scope, for a more thorough discussion see Heeks (2017). Hereafter, we use the term *gig economy* to refer to the exchange of independent work services mediated via digital platforms (Woodcock & Graham, 2019).

Srnicek defines a platform as the “digital infrastructures that enable two or more groups to interact” (Srnicek, 2017, p. 43). Hence, gig economy companies, through their platforms, have a strategic position to be intermediaries of various actors, such as customers and workers, and mediate labour relationships. Usually, gig economy platforms provide digital tools, e.g., standardised profiles, ratings, and features to facilitate work exchanges. Put differently, gig economy platforms are marketplaces where work interactions are technology mediated (Jarrahi, Sutherland, et al., 2020).

Woodcock & Graham (2019) differentiate two broad categories of gig economy platforms: location-based and online (cloud-based). Location-based gig work requires workers to be in a particular location to fulfil their work tasks, for example, Uber drivers are tethered to a particular geographical space to provide ride-hailing services. By contrast, online gig work does not require workers and clients to share the same temporal space to complete their tasks, for example, a graphic designer in Kenya can edit photos for a client in Canada through platforms, such as Upwork or Fiverr. It is important to differentiate between these two categories because each of these models come with different challenges and opportunities for workers.

3.1 Two Gig Economy Characteristics

While types of gig work, such as taxi driving and knowledge-based freelancing, have existed for a long time, we argue that technological and socioeconomic factors underpinning gig work have transformed these professions. In this subsection we elaborate on these two factors.

3.1.1 Technological factors

Technology advancements have enabled an unprecedented shift in terms of work management. Woodcock & Graham (2020) argue that work has become easily quantifiable and easy to trace through digital means. Since all work interactions occur within the platform environment, gig economy companies are in a unique position to collect, process, and analyse data to further optimise work processes (Srniczek, 2017).

Gig economy platforms operate through a wide range of information-based decision systems that automate work processes, referred to as *algorithmic management* (Lee et al., 2015; Möhlmann & Zalmanson, 2017). Algorithmic management has minimised the need for human intervention in managerial processes, thereby enabling a quick, cost-effective, and scalable organisation of work (Duggan et al., 2020). Möhlmann & Zalmanson (2017) define three main characteristics of algorithmic management: tracking of worker behaviour, evaluating worker performance, and automating decision-making. Uber, a location-based mobility and delivery platform, tracks drivers' behaviour by monitoring their driving speed, idle time, and even their breaking patterns (Rosenblat, 2018). Drivers' performance is regularly being evaluated both by passengers and the platform that tracks how many trips they accept (Baudin, 2007; Kasera et al., 2016). Workers' accounts can be automatically suspended if some of their metrics fall below certain thresholds (Ticona et al., 2018). Because in gig work "workers interact with a 'system' rather than with humans" (Möhlmann & Zalmanson, 2017, p. 4) there is a need to understand the impact algorithmic management has on workers' practices.

Gig economy companies have brought about a fundamental shift by treating workers like datapoints rather than a human resource. A notable example is Amazon Mechanical Turk (AMT), a platform mediating online 'microtasks', such as image labelling and short transcriptions. AMT developed an Application Programme Interface (API) for clients to push tasks onto workers, erasing, by design, any worker-client interactions (M. Gray & Suri, 2019; Irani & Silberman, 2013). Uber has been another gig economy company treating drivers as data nodes to merely serve supply and demand algorithms (Chen et al., 2015; Rosenblat, 2018). Companies' capitalistic values of maximising revenue spur these system design decisions, whereby platforms command workers' data, harness it to optimise their algorithms,

and obscure key functionalities (e.g., matchmaking algorithms and rating calculations) from workers (Qadri, 2021b; Srnicek, 2017; van Doorn & Badger, 2020). Put differently, these technological advancements and treating worker as data is a core feature of gig economy companies to generate competitive value.

3.1.2 Socio-economic factors

Since the 1970's the various economic crises have paved the way for a significant amount of capital to be invested in gig economy ventures (Srnicek, 2017). In her book, Sarah Kessler (2018) narrates the hype created around Silicon Valley start-ups to find the next 'Uber for X'. Srnicek (2017) argues that lax monetary policies in the Global North (notably the US) have enabled massive corporations, such as Apple and Google, to hoard tremendous amounts of cash investments, seeking decent returns in the tech start-up market. In turn, Srnicek continues, technology corporations have capitalised on tax heavens to hold their revenue, stressing local economies, and exacerbating austerity in developed economies. This is a key point because government austerity is part of work insecurity and unemployment trends that are central to understanding the gig economy model.

Also, neoliberal economic trends have spurred realities of work that are increasingly precarious. Woodcock & Graham (2020) argue that workers' rights and bargaining power have been significantly weakened since post-industrial movements. These conditions have resulted in new work arrangements that casualise work relationships, shifting risks from employers to workers (Stefano, 2016). Gig economy companies have capitalised on this condition to 'hyper-outsource' workers who are responsible for their own work materials (e.g., devices), training (e.g., developing skills), and welfare (e.g., insurance and time off) (Friedman, 2014). Such traits enable companies to maximise their profit by cutting out workers' benefits, such as sick pay, overtime, maintenance, to mention some (Srnicek, 2017). This is an important element to bear in mind because we shall examine how workers consider such conditions when working on these platforms.

At the same time, there is a global push for jobs that enable greater work flexibility, broadly speaking, in terms of how work fits into people's lives. Gray & Suri (2019) paint a rich picture of the job market reality for many people performing every day, low-paid work, such as customer service and retail. These jobs come with significant time constraints, e.g., shifts are often unpredictable, and professional development is minimal to transition into other careers (M. Gray & Suri, 2019). Such conditions make joining the gig economy an appealing choice to be in control over one's working hours and learn new skills, especially in online forms of gig work (Kittur et al., 2013; Raval & Pal, 2019; Rivera & Lee, 2021). While it is true that the

gig economy has become an alternative to unstable service jobs with unpredictable shifts and dead-end careers, this flexibility comes at the expense of precarity “at a much finer scale, down to the second, and onto a global scale (ibid)” (Woodcock & Graham, 2019, p. 38).

To bring these arguments together, while tempting to view the gig economy as a pure technological shift, there are socio-economic conditions at play that have enabled gig work as a viable source of work for millions of people worldwide. We have argued that gig economy companies are a product of technology advancements against a backdrop of economic crises. Work data has become incredibly easy to quantify and used to manage workers through algorithmic means. This level of cost-effective, scalable management was unrealistic until the the entire workflow (from hiring to evaluating work) has been constrained to a single platform environment. In parallel, rising un- and under-employment rates have pushed people to seek work alternatives that allow them to control their time and seek career progression, making gig work appealing. Examining these conditions allow us to engage with how gig economy platforms’ technological and socio-economic impact workers’ experiences in the gig economy.

3.2 Workers’ Experiences with Gig Economy Platforms

The combination of technological and socioeconomic factors reviewed above has impacted how gig work is done. In this subsection, we summarise prior literature highlighting workers’ experiences with platforms and identifying prior research trends.

3.2.1 Enabling flexible work alternatives

The gig economy has enabled flexible work alternatives. Research from various disciplines, such as economics, sociology, and geography, has found that gig workers value the ability to integrate gig work with other personal commitments, such as caring responsibilities, other part-time work, and even self-managing health conditions and disabilities (T. Berger et al., 2019; James, 2022; Nemkova et al., 2019; Ravenelle, 2019). Indeed, gig work can be a valuable source of extra income that does not require full-time or sustained commitment that comes with traditional employment (Bajwa et al., 2018). These opportunities are experienced more positively when workers have access to other work alternatives and income sources (Ma & Hanrahan, 2019; Schor, 2021). While this prior research shows that gig work introduces appealing opportunities for the future of work, we must not lose sight of the precarious conditions outlined above regarding work casualisation, lack of basic benefits, and algorithmic management (Anwar & Graham, 2020a; Graham & Shaw, 2017; Sutherland et al., 2019; A. Wood & Lehdonvirta, 2021).

3.2.2 Experiencing algorithmic management

Extensive research has problematised the negative impacts algorithmic management has on gig workers. Gig economy companies exert worker control through information asymmetries, for instance, by only partially disclosing how work is evaluated and what type of data is collected whilst working on the platform (Lee, 2018; Lord et al., 2022; Shapiro, 2018). As a result, workers are unable to understand important evaluation metrics that determine their ability to secure work (Rahman, 2021; A. J. Wood et al., 2019; A. Wood & Lehdonvirta, 2021). In location-based gig platforms, such as Uber and Deliveroo, work allocation and wages are unpredictable, resulting in workers standing idle for long periods of time and prices shifting unexpectedly (Graham & Shaw, 2017; Lee et al., 2015; Möhlmann & Zalmanson, 2017; Waters & Woodcock, 2017). While gig platforms are designed to streamline work processes, workers' livelihoods, wages, and time are negatively impacted by opaque and ever-shifting algorithms.

Also, prior research has shown the inequalities and biases that result from algorithmic management and platform designs. Ma et al. (2022) found that location-based gig platforms lack critical safety features and policies, leaving women workers disproportionately affected by bias and harassment. Hannák et al. (2017) found that Black freelancers receive significantly lower rating scores in freelancing platforms, with scores being even lower for Black women. Foong et al. (2018) found important wage disparities between women and men freelancers. Because of work unpredictability and low wages, gig workers in various contexts overwork, experience exhaustion, and social isolation (Anjali Anwar et al., 2021; Anwar & Graham, 2020a; Lascau et al., 2019; Williams et al., 2019). This prior research illustrates that platforms' promise to flexible and fair work opportunities does not hold for gig workers who have been historically marginalised in more traditional labour markets (Munoz, Sawyer, et al., 2022).

It is worth noting that given these challenges with algorithmic management, researchers have called for worker-centred approaches to study and improve workers' experiences with these systems (Fox et al., 2020; Glöss et al., 2016b; Lindsey et al., 2021). Researchers have studied alternative gig economy models that employ less intrusive and more transparent forms of algorithmic management (Kusk & Bossen, 2022). Researchers have sought pathways for workers to envision and design algorithmic systems that better serve their everyday work (Kirman, 2022; Zhang et al., 2022). There has been an adoption of speculative design methods to envision worker-centred platforms that prioritise workers' preferences (Switch Gig, 2020). At the same time, there is a need for more research to explore interventions and alternatives to algorithmic management challenges.

3.2.3 Shouldering added work

Workers often shoulder added work while using gig economy platforms. Workers in multiple platforms often spend significant time sensemaking platforms' functionalities (Lee et al., 2015; Ticona et al., 2018; A. J. Wood et al., 2018). Microworkers on AMT spend about 33% of their workday in activities that go unpaid, such as managing their payments and finding profitable tasks (Toxtli et al., 2021), and this percentage is much higher for novice microworkers (Sannon & Cosley, 2019). This research has been further expanded finding that on average online workers spend 8.5 hours every week on unpaid tasks such as sifting through potential projects and bidding for work (Fairwork, 2022). Gig workers are responsible for maintaining their work resources, e.g. vehicles and devices, to conduct their work, bearing significant risks should issues arise with their work tools (Abhinav et al., 2018; Blaising et al., 2019; Suzuki et al., 2016). A great part of gig workers everyday work entails engaging in work activities that go unpaid and fall outside of the 'actual' tasks they conduct on the platform.

Gig workers perform different forms of emotional work to succeed on platforms. For instance, drivers on ridesharing apps, such as Uber and Lyft, go 'above and beyond' to ensure their rides are a 'pleasurable' experience for customers (E. Bucher et al., 2020; Glöss et al., 2016b; Lee et al., 2015; Raval & Dourish, 2016; Sehrawat et al., 2021). On-demand beauty and caregiving platforms associate emotional work, predominantly from women workers, as qualities to perform their work competently (Raval & Pal, 2019; Ticona et al., 2018; Ticona & Mateescu, 2018). A longitudinal, qualitative study with online freelancers reported "emotional overhead" stemming from spending significant time self-managing their workload and remaining constantly available in a fast-paced work marketplace (Blaising, Kotturi, et al., 2020). Emotional work has various forms in the gig economy, platforms expect workers to exceed client expectations and remain available, taking the toll on workers' wellbeing.

3.2.4 Self-organising to overcome platforms' shortcomings

Most of gig work happens in isolation with platforms providing limited assistance and guidance, thus workers often self-organise to provide mutual support. Online communities and forums are spaces where workers ask questions, exchange advice, and seek to solve issues (Martin et al., 2014; A. J. Wood et al., 2018; Yao et al., 2021). Qadri (2021a) examined the role of 'aid networks' with Indonesian mobility workers (e.g., taxi drivers and couriers) during the early waves of the COVID-19 pandemic in 2020, finding these networks being a substantial source of emotional support, informational resources, and protective equipment. In the UK, courier working on Deliveroo collectively organised online to bargain better working conditions and protest pay drops (Waters & Woodcock, 2017). AMT microworkers

with researchers Lili Irani & Six Silberman (2013) have maintained Turkopticon, a community-driven tool where workers rate clients to avoid unfair requests (e.g., underpaid, or unreasonable). Sannon et al. (2022) examined how workers share privacy and safety strategies in online communities to make up for platforms' lack of transparency and protection features. This prior literature shows that despite platforms providing limited support, workers have found ways to self-organise, collectively solve issues, and help each other.

3.3 Chapter Summary and Literature Gaps

In this chapter, we have proposed four common issues and research trends that underpin gig work. The first research trend relates to examining work opportunities the gig economy creates, critically contrasting these opportunities with precarious working conditions. The second research trend relates to studying workers experiences with platform management, highlighting negative impacts on workers' wellbeing, biases and inequalities, and research efforts to re-imagine algorithmic management with workers. The third research trend relates to exploring the different forms of added labour that come with doing gig work, showing several additional practices required to be successful on platforms, including substantial emotional work. The final research trend we have proposed relates to examining the types of support networks and communities that workers create to cope with a wide range of challenges while doing gig work. Two notable research gaps emerge in exploring these research trends. Firstly, online freelancing has received little attention in comparison with other forms of gig work. Prior literature has mostly focused on studying location-based forms of gig work. And prior research examining online gig work has mostly focused on 'microwork' done through platforms like Amazon Mechanical Turk (AMT), as it has also been pointed out in prior reviews (Sutherland & Jarrahi, 2018). Secondly, little research has explored how gig economy platforms have impacted established norms of professions that predate gig economy platforms. The limited research attention online freelancing has received and the absence of studies examining the impacts of the gig economy platforms on established work practices motivate this thesis (as introduced in 1.3).

Chapter 4 Freelancing Platforms

Parts of this chapter have been published in (Alvarez de la Vega et al., 2020, 2021a, 2022, 2023)

Freelancing platforms embody an emerging dimension of the gig economy. These platforms have enabled a ‘planetary labour market’ (Graham & Anwar, 2019) for freelance work, whereby on-demand talent can be hired around the clock across geographies. Platforms like Upwork have introduced unprecedented opportunities within a global marketplace of clients and knowledge-based services. In this chapter, we argue that a wide range of freelance practices (described above in Chapter 2) have been encoded in algorithms bringing new opportunities and challenges for the future of freelancing.

4.1 The Upwork Platform: An Overview

In this section, we give an overview of Upwork, a popular freelancing platform, to illustrate how freelancing platforms work. We chose Upwork because of its membership size and relevance amongst online gig work literature. Upwork has an estimated of three million jobs posted yearly (Kässi & Lehdonvirta, 2018; World Economic Forum, n.d.) and 12 million registered freelancers in 2020 (Dunn et al., 2020; Upwork, n.d.-b).

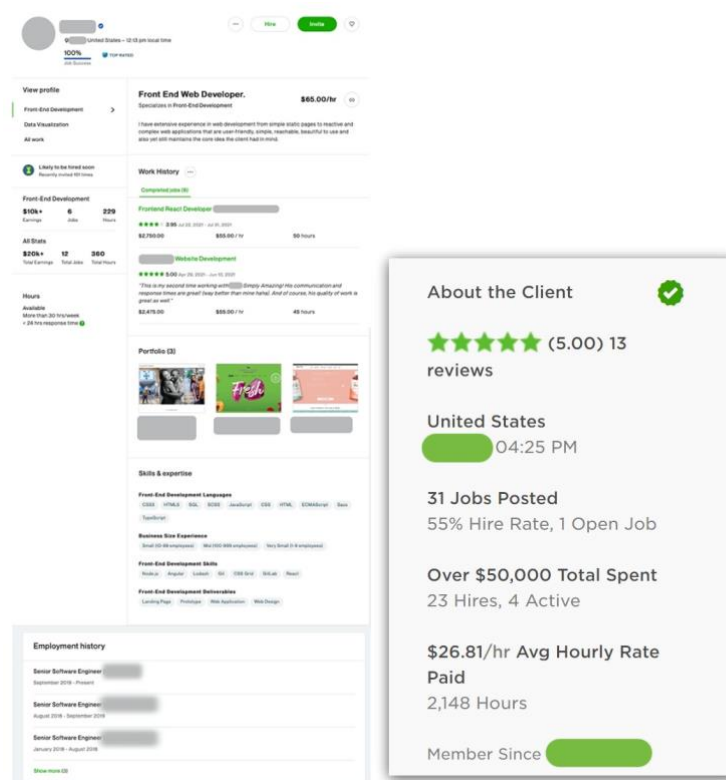
As the focus of this thesis is on freelancers, this overview centres on how freelancers interact with the platform, following the linear structure of hiring, monitoring, and evaluating work. We centre on Upwork’s features and terms of use at the time of this thesis’ data collection: January 2019 - December 2021. Previous studies, e.g., (Blaising & Dabbish, 2022; Jarrahi, Sutherland, et al., 2020; Kinder et al., 2019), have identified a need to contextualise research in this way because platform’s terms of use and algorithms are in constant flux.

4.1.1 Hiring process

During our data collection period, Upwork had two main hiring models: requests for proposals and project invites. Request for proposals involves clients posting a project description and hiring freelancers from a pool of applications. To apply to this request for proposals, freelancers use ‘Connects’, Upwork’s virtual currency (Upwork, n.d.-a). Freelancers get 10 free Connects each month and more can be bought at any point.

Project invites consist of clients looking through freelancers' profiles, messaging them privately, and inviting them to take on their proposed project. To help freelancers' profiles stand out to potential clients, Upwork displays detailed information about freelancers' qualifications and reputation (see Figure 1 (left)). Noteworthy profile elements include total earnings and number of hours worked on Upwork, client-reported ratings (represented on a scale from 1 to 5), client written reviews, and samples of completed projects. After meeting certain requirements (e.g., completing several projects), freelancers get an aggregated 'Job Success Score' (JSS) that "measures clients' satisfaction with overall work history on Upwork" (Upwork, n.d.-c) alongside other badges (Upwork Global Inc., n.d.-c).

Figure 1: (left) Anonymised freelancer profile and (right) client information



Clients' profiles include elements such as location (e.g., city and country), number of jobs posted, hire rate, overall money spent, average payment rate, and whether their payment method has been verified by Upwork (see an example in Figure 1 (right)). Freelancers can access the client's general information when they get contacted or invited to take on a new project.

Upwork's terms of use requires all communications between clients and freelancers to remain through the platform's chat and video calling tools, including during the hiring negotiations (Upwork, 2019). Failing to adhere to these terms of use can result in penalties and even account suspension.

4.1.2 Contract types and work monitoring

Upwork has two types of contracts: fixed-price and hourly (Upwork Global Inc., n.d.-a). Fixed-price contracts have set deliverables and budget for an entire project. Before initiating a contract, clients and freelancers must negotiate and agree on project milestones, for example, a 1500-word blog post to be delivered in five business days. Once an agreement has been reached, the client logs and funds the milestones on the platform. The funds are held on Upwork's 'Escrow' system and released to the freelancer once the client has reviewed and approved the milestone deliverable. For this type of contract, the work monitoring is achieved through the milestone and Escrow system. Freelancers have greater flexibility to organise their workload leading up to the milestone deadline since the client only reviews the final deliverable (although sending regular updates to the client is considered good practice as has been reported in (Kinder et al., 2019)).

Hourly contracts involve clients and freelancers agreeing on an hourly rate and maximum number of hours freelancers can bill for weekly. For example, up to six hours of proofreading per week at a \$25/hr rate. Upon reaching an agreement, clients decide how freelancers log their hours whether through the Upwork Desktop App or manually. Hours logged through the Upwork Desktop App have payment protection for the freelancer in case of a dispute, whereas hours logged manually are not covered. Work monitoring for hourly contracts occurs through Upwork's "Work Diary", a software where clients can keep track of freelancer's activity and hours worked (Upwork, n.d.-c). For hours logged through the Upwork Desktop App, the software automatically compiles "work in progress snapshots", allocated into six 10-minute billing segments per hour and include randomised screenshots, total number of mouse clicks, scroll actions, and keystrokes (Upwork Global Inc., n.d.-d). For hours logged manually, the freelancer adds their work segments into their Work Diary. Freelancers can review their Work Diary and delete any segments they do not wish to share with the client, however, deleting the chunk of time billed on the project means losing the money associated with that time chunk.

4.1.3 Evaluation and rating

Upon ending a contract, which can be done by either party, both freelancers and clients provide feedback regarding their experience. Clients give private and public feedback by filling in a form (Figure 2). Private feedback is not disclosed to the freelancer and is used to assess the freelancer's 'job success' (Upwork Global Inc., n.d.-b). Public feedback involves comments and a star rating aggregation that appear on the freelancer's profile. Freelancers give only public feedback, which includes comments and a star rating aggregation on the client's information. The feedback system is double-blind, meaning that feedback is visible only once

both parties have given a review for each other or after 14 days if only one party gives feedback.

Figure 2: Client feedback form at time of data collection (January-April 2021)

Share your experience! Your honest feedback provides helpful information to both the freelancer and the Upwork community.

Private Feedback
This feedback will be kept anonymous and never shared directly with the freelancer. [Learn more](#)

Reason for ending contract:
Please select...

How likely are you to recommend this freelancer to a friend or a colleague?
Not at all likely 0 1 2 3 4 5 6 7 8 9 10 Extremely likely

Public Feedback
This feedback will be shared on your freelancer's profile only after they've left feedback for you. [Learn more](#)

Feedback to Freelancer
★★★★★ Availability
★★★★★ Communication
★★★★★ Adherence to Schedule
★★★★★ Skills
★★★★★ Quality of Work
★★★★★ Cooperation
Total Score: **0.00**

Share your experience with this freelancer to the Upwork community:

[See an example of appropriate feedback](#)

Ending this contract will permanently lock your freelancer's Work Diary for this project. We'll let your freelancer know the job is done and send you a final statement for any unpaid work

End Contract Cancel

4.2 Freelancing Platforms' Characteristics

Freelancing platforms differ from other forms of gig work in several respects. Firstly, freelancing platforms primarily mediate knowledge-based forms of work, such as graphic design, software development, and creative writing (Bukht & Heeks, 2018). This type of knowledge-based work contrasts with microwork, such as photo tagging and data entry akin to platforms like AMT, which typically does not require specialised knowledge (Margaryan, 2019). Secondly, freelancing platforms are commonly used for completing larger and more complex projects where freelancers and clients collaborate to arrange projects as opposed to be hired 'on the spot' (M. Gray & Suri, 2019). Thirdly, as described above, freelancing platforms have a unique combination of sociotechnical practices and algorithmic decisions to manage work, defined by Jarrahi et al. (2020) as a *platformic management*. Platformic management facilitates an appropriation of platforms' resources, such as an internal chat and video feature, project milestone escrow systems, and even work surveillance technologies that quantify keystrokes for clients to monitor freelancers' progress. Unlike microwork where work collaboration between clients and workers is avoided by design (M. Gray & Suri, 2019;

Lascău et al., n.d.), freelancing platforms represent a unique form of platform work that allows for greater flexibility and collaboration.

Freelancing platforms' managerial processes are shaped by the need to mediate forms of knowledge work. Freelance knowledge work, such as software development and creative writing, require specialised knowledge, frequent collaboration between freelancers and clients, and flexibility to monitor projects that widely vary in scope and duration. Thus, freelancing platforms tap into complex managerial elements that support these processes, for example, detailed profiles that promote freelancers' expertise, different hiring formats (e.g. per hour, per fixed project, or per portfolio item), and on-platform tools that support collaboration, such as transferring files, videoconferencing features, and project tracking software (Kinder et al., 2019; Sutherland & Jarrahi, 2018). Because of these complex functionalities, freelancers develop strategies to work with and around platformic management (Jarrahi & Sutherland, 2019; Sutherland et al., 2019).

Previous research has highlighted how freelancing platforms' characteristics problematise freelance work. For example, by platforms using standardised profiles, freelancers from historically marginalised populations, e.g. Black and Latinx (inclusive for Latin American identities (Wong-Villacres et al., 2021)) have been discriminated with lower client ratings and hire rates (Hannák et al., 2017; Munoz, Dunn, et al., 2022; Munoz, Sawyer, et al., 2022). Women bill less for their services than their male counterparts even with similar (or even higher) levels of experience (Dubey et al., 2017; Foong et al., 2018). Intrusive work monitoring features, such as Upwork's Work Diary (Upwork Global Inc., n.d.-e), pose challenges for freelancers' privacy and work activities whereby work get monitored down to the second and the platform captures freelancers' personal information (Sannon et al., 2022). This evidence shows that by platforms encoding managerial tasks onto features, they can introduce biases and inequalities that have serious consequences for freelancers' income, especially for freelancers who have already been historically disadvantaged in more traditional work settings like women and people of colour. Also, by platforms introducing work monitoring technologies, they create privacy and work surveillance issues.

4.3 Impacts of Freelancing Platforms on Freelance Practice

In 2.1, we defined and reviewed freelancers' shared and everyday practices. In this section we critically engage with literature on freelancing platforms, to explore existing research trends and gaps in relation to how they impact these practices.

Prior research has explored what is like to freelance on platforms. Blaising et al. (2020) conducted a longitudinal study of freelancers' experiences with platforms, finding financial, emotional, relational, and reputational challenges stemming from working on platforms to the point where some of their participants stopped freelancing on platforms entirely by the end of their study. Similarly, Nemkova et al. (2019) found that freelancing platforms' elements, such as rigid review systems, standardised procedures, and high levels of competition can undermine the sense of fulfilment that comes with freelancing in a more traditional fashion. Wood et al. (2019) examined the experiences of hundreds of freelancers located in Southeast Asia and Sub-Saharan Africa, finding that even when platforms enabled greater temporal and spatial flexibility to conduct work, many participants ended up working long hours and in social isolation, dispelling this apparent flexibility. From this previous research, shared practices of traditional freelance work, such as financial uncertainty, long working hours, seem to remain while working on platforms. However, this prior research begins to unpack new types of challenges unique to platforms, such as the standardisation of work undermining perceived fulfilment. More research is needed to further unpack the new challenges and opportunities that platforms introduce for freelancers' shared practices.

Prior work has examined unique work practices that come with freelancing on platforms. Jarrahi et al. (2019) found that freelancers must frequently update their knowledge of platforms' algorithms, e.g. understanding how clients rate their services, to stand out in a highly competitive marketplace and secure work. These findings resonate with Bucher et al. (2021)'s examination of freelancers' strategies to comply with platforms' algorithmic management, showing how freelancers modify their behaviours to avoid algorithmic disciplining features. Foong & Gerber (2021) found that freelancers set their prices by considering multiple factors specific to platforms, such as, analysing services in high demand and assessing peers' profiles. Hsieh et al. (2022) identified freelancers' strategies around 'standardising' their communication and self-presentation with clients to boost their earnings. This previous research shows that working on freelancing platforms requires an emerging set of everyday practices to be successful and remain competitive, however, it remains unclear how platforms might transform more established everyday activities of freelance work.

At the same time, prior research has found opportunities that freelancing platforms introduce for freelance practice. Freelancers can use platforms to explore new career opportunities or transition into new domain areas, for example, a graphic designer might transition into website design by being exposed to the diversity of project opportunities through the platform marketplace (Blaising, Kotturi, et al., 2020; Nemkova et al., 2019). Platforms can also be a convenient entrepreneurial resource by providing a dedicated space to find clients,

build an online brand, and even provide supplementary income (Blaising & Dabbish, 2022; Sutherland et al., 2019). We agree that freelancing platforms present opportunities, but also note it is freelancers rather than platforms that are carving the career and entrepreneurial opportunities that prior work mentions. Platforms serve as a useful resource for freelancers, but more research is needed on how platforms themselves can positively impact other elements akin to freelancers' shared practices, such as the development of social capital.

Finally, researchers have developed targeted interventions to support freelancers' work experiences on freelancing platforms. For example, Suzuki et al. (2016) developed a 'micro-internship' system to connect novice freelancers with experienced peers who provided regular feedback on their initial Upwork tasks, resulting in a boost of confidence and higher profit. Salehi & Bernstein (2018) developed a system that lowered the barriers for hiring freelancers by embedding their services in web tutorials, showing improvements in freelancers' hire rates. Foong et al. (2021) designed a peer-based system for freelancers to access quick and reliable feedback on their portfolio to enhance their impression management. While these research approaches have been successful in implementing isolated interventions to support freelancers, much less is known about how platforms should change their features to support work practices that better align with freelancers' preferences.

4.4 Part II Summary and Final Remarks

Part II Literature Review & Background comprised three chapters: Chapter 2 Freelance Practice, Chapter 3 The Gig Economy, and Chapter 4 Freelancing Platforms. This summary brings together key arguments from each chapter to further motivate our research.

This thesis focuses on exploring the opportunities and challenges freelancing platforms introduce for freelance practice. To set the scene, in Chapter 2, we defined shared and everyday practices as two key concepts of analysis and observation in relation to freelance (knowledge) work. We considered three core elements to freelancers' shared and everyday practices: work autonomy, social capital, and entrepreneurship. Although each of these three elements come with associated challenges, we noted that freelancers value the high levels of control they have over their work both at the mutually shared (e.g., owning a business that gives them purpose) and everyday level (e.g., deciding how they allocate their work tasks in relation other everyday responsibilities).

In Chapter 3, we focused on examining the gig economy phenomena, that is, the exchange of independent work services mediated via digital platforms. We distinguished two types of gig economy platforms: location-based and online. Then, we argued that while a variety of jobs

predated the gig economy phenomena (e.g., taxi driving and highly skilled freelancing), the combination of technology factors, such as algorithmic management, and socioeconomic factors, such as casualised work interactions, have fundamentally shifted work practices. The chapter followed to examine existing research trends and gaps in workers' experiences with gig economy platforms. We noted a gap in studying online freelancing platforms as most prior research has focused on location-based gig work and online microwork.

In Chapter 4, we revised literature on freelancing platforms. The chapter began with an overview of Upwork, one of the largest freelancing platforms, illustrating how freelancing platforms mediate work. Then, we reviewed freelancing platforms' characteristics, including how they differ from other forms of online gig work, such as microwork, their distinctive work management features, and how these features can be problematic for freelance work. Finally, we reviewed research trends and gaps regarding the impact freelancing platforms have in shaping freelance practice. We noted an important gap in examining the opportunities and challenges platforms introduce for established practices of freelance work.

Here, we want to highlight three apparent tensions and gaps between freelance practice and freelancing platforms stemming from the literature revised so far. First, freelancers highly value working autonomously. Platforms – as work intermediaries – pose challenges for this valued autonomy, however, it is unclear how much mediation freelancers are willing to accept or how they might mitigate this tension. Second, freelancers spend a significant amount of time cultivating social capital, e.g., networking, marketing their work, and developing relationships with clients. Gig economy platforms have been successful in bringing workers and clients together, however, the impact this ready-access to social capital has on freelance work remains unclear. Third, freelance work has been around for decades and has strong shared practices between freelancers. Prior literature has shown how the gig economy has transformed other established professions, such as taxi driving, to the point where drivers' shared practices have totally changed. However, it remains unclear how shared freelancing practices have changed because of platforms. This thesis addresses these three tensions and gaps.

Part III. Methodology

Overview

This Part describes the methodological approach adopted in this thesis. The chapter begins by situating the research approach under a qualitative paradigm, underpinned by subjectivist and interpretivist philosophies. The chapter follows to describe overall research approach of this thesis in relation to the thesis research question and objectives, including research design considerations, data collection methods, approach to participant recruitment, data analysis, and ethical considerations.

Chapter 5 Methodology

Parts of this chapter have been published in (Alvarez de la Vega et al., 2021b, 2022)

5.1 Philosophical Assumptions of this Thesis

This thesis seeks to generate empirical knowledge about opportunities and challenges freelancing platforms introduce for freelance practice. This research is underpinned by a qualitative paradigm, meaning that approaches to knowledge generation are aligned with philosophies that embrace multiple interpretations of reality, get close to the phenomena under investigation, and researcher’s values are part of the knowledge generation process (Creswell, 2007). This section aims to make these philosophical assumptions explicit and describe the implications for conducting research, for an overview see Table 1.

Table 1 Philosophical assumptions of this thesis

Philosophy	Concern	Philosophical Position	Characteristics
Ontology	What is then nature of reality and being?	Relativism	Reality is the product of social interactions and is always contextual and partial.
Epistemology	What is the nature of knowledge and how can knowledge be generated?	Interpretivism	Knowledge is situated in social production; hence knowledge can be generated by interpretations and meanings conveyed by social actors.
Axiology	What is the role and place of values in the research process?	Interpretivism	Research is value-laden, and researcher’s position and biases are disclosed and acknowledged.

5.1.1 Ontology – Relativism

Ontology refers to the nature of reality and being – *what* can be known about the world (Braun & Clarke, 2021). The ontological position taken in this thesis is *relativism*. Relativism posits reality as the product of social interactions and rejects the assumption of a single reality that exists detached from human practices (Braun & Clarke, 2021). Hence, social reality (from a relativist perspective) is always contextual. Put differently, relativism regards reality as limited to what individuals experience in a particular context (Duarte & Baranauskas, 2016). In relativism, the truth of reality is always subjective and the product of a social process; in

this case, a scholarly process to demonstrate evidence of the studied reality (Braun & Clarke, 2021).

Researchers from a relativist standpoint acknowledge their active role as part of the social reality that they seek to understand and communicate through their research. Researchers provide an inevitably partial but thorough interpretation of participants' realities (Braun & Clarke, 2021). As such, qualitative data (e.g., whether recorded or written language) is treated as an entry point to access how participants view their realities (Burrell & Morgan, 1979). Thus, relativist qualitative research seeks to provide a convicting account of the meanings of the dataset and articulate their relevance for the research inquiry, rather than seeking a single truth about reality.

Relativism philosophy has shaped various elements of how this thesis has been structured and the research approaches that have been chosen. For instance, the Preface seeks to recognise and acknowledge some of the realities (e.g., the COVID-19 pandemic) and actors that have shaped the thinking around the research topic. Another example is providing a clear position on taking a worker-centred approach and the reasoning behind this position, as stated in 1.2.3. In terms of research approach, qualitative methods that generate rich experiential data were chosen (as detailed below in 5.2.2) to gain a thorough understanding of freelancers' experiences. In terms of analysis, findings strive to provide a detailed, nuanced narration of freelancers' experiences in relation to the research inquiry. Subjectivism accepts participants to have contentious and contradicting views about the research reality, and it is the researcher's role to surface and comment on these seemingly opposing views (Braun & Clarke, 2021).

5.1.2 Epistemology – Interpretivism

Epistemology is concerned with the nature of knowledge – *how* knowledge about the world can be generated (Braun & Clarke, 2021). The epistemological position taken in this thesis is *interpretivism*. Interpretivism posits knowledge as a social product, inseparable of the social actors that construct and give meaning to reality (Orlikowski & Baroudi, 1991). As such, knowledge from an interpretive stance is always contextual, partial, and perspective. Interpretivist research seeks to generate in-depth understandings and interpretations of social phenomena through individuals' actions and interactions. Language plays a significant role in interpretivism because meaning and intentional descriptions of social practices are what constitutes those practices (Burrell & Morgan, 1979).

From an interpretivist perspective, researchers strive to get as close as possible to the research phenomena and social actors involved (Creswell, 2007). Hence, recurrent interactions between researcher and participants are crucial to understanding the research phenomena

(Duarte & Baranauskas, 2016). Researchers are in a position of capturing and collecting what is meaningful to research participants to generate new, rich understandings of social worlds and contexts (Saunders et al., 2019). Interpretivist research requires being comfortable with complexity, contradictions, and rich meaning-making (Orlikowski & Baroudi, 1991).

Interpretivist philosophy underpins how the research in this thesis has been designed, framed, analysed, and presented. The various qualitative methods (described below in 5.2.2) are suited to approach the research phenomena from different angles and get as close as possible to the social actors involved. An emphasis has been put on participants' language, meaning how they describe their experiences and realities related to the research phenomena. Hence, conversations have been recorded and carefully transcribed for a thorough, systematic engagement with these recounts. It is through this careful and recurrent engagement with the research phenomena that new knowledge is generated.

5.1.3 Axiology – Interpretivism

Axiology is concerned with the role and place of values in the research process (Creswell, 2007). The axiological position of this thesis is also interpretivist, whereby the researcher plays an active role in this process and can never assume a “value-neutral stance” (Orlikowski & Baroudi, 1991, p. 15). As such the researcher's values and beliefs play a significant role throughout the research process. Researcher reflexivity, empathy (with the research context and participants), and critical thinking are central throughout the research process (Braun & Clarke, 2021; Saunders et al., 2019). These approaches serve to reflect on and acknowledge the researcher's place and values towards the research topic (Liang et al., 2021).

The values and researcher position of this thesis are disclosed in the Preface and positionality statement in 1.2.3. Articulating these values and position was achieved through regular *reflexivity*. The purpose of reflexivity in qualitative research is to recognise and take responsibility for one's position within the research topic, how this position might impact research participants, the questions that are asked, data that are collected, and how data are interpreted (R. Berger, 2015). Reflexivity also develops awareness of researcher's assumptions and values and how they might enable or constrain certain lines of inquiry and interpretation during research (Braun & Clarke, 2021). In short, the values summarised in the Preface and positionality statement in 1.2.3 **Error! Reference source not found.** aim to explain my (here speaking as the sole author of this thesis) axiological stance and values towards the research topic, which carry over throughout the thesis.

5.2 Research Approach

The methodological practicalities (e.g. method design, recruitment approach, analysing data) for each study are detailed in their respective chapter encompassed in Part IV. This section describes the overarching research approach of this thesis.

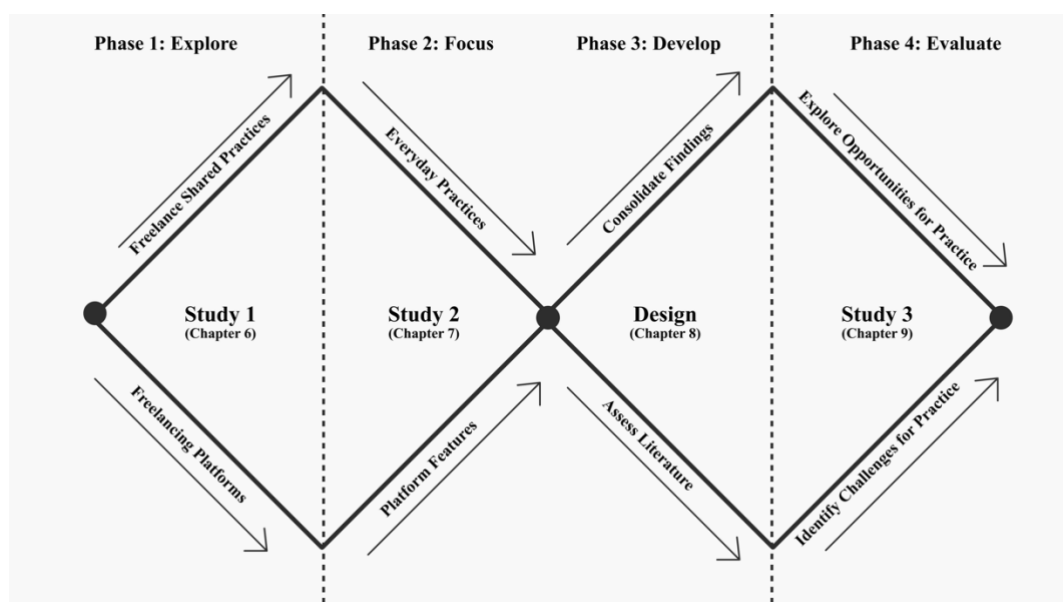
As introduced in 1.3, this thesis' research question and objectives (RO) are:

What opportunities and challenges do online freelancing platforms introduce for freelancers' practices?

- RO1: Generate an understanding of how freelancing platforms impact freelancers' *shared* practices.
- RO2: Investigate the impact of freelancing platforms on freelancers' *everyday* practices.
- RO3: Explore how new platform features can positively impact freelancers' practices.

The overall research approach resembles a 'double diamond' portraying how research phases build upon each other (see Figure 3). Although the double diamond is akin to design scholarship (Gustafsson, 2019), it nicely depicts the exploratory nature of our research approach, whereby lines of inquiry and findings built on each other as the research progressed.

Figure 3: Overarching approach to data collection, adapted from the Double Diamond design process



The four research phases of this thesis are as follows:

- Phase 1 (Chapter 4) addresses RO1 by **exploring** the problem space and generating a rich understanding of the impact of freelancing platforms have on freelancers' *shared* practices.
- Phase 2 (Chapter 7) addresses RO2 by **focusing** on investigating the impact freelancing platforms have on freelancers' *everyday* practices.
- Phase 3 (Chapter 8) addresses RO3 by consolidating the findings so far and surveying existing literature to **develop** a design fiction that allows for further exploration of opportunities and challenges for online freelancers' practices.
- Phase 4 (Chapter 9) also addresses RO3 by **evaluating** the design fiction and exploring how platform features can impact (both positively and negatively) freelancers' practices.

5.2.1 Research design considerations

As stated in the Preface, most of this research was conducted when in-person-research was not allowed because of the COVID-19 pandemic. In March 2020, Northumbria University (among many more institutions worldwide) mandated all data collection to take place online to prevent health risks and in line with UK lockdown restrictions. During this period, Phase 1 (Figure 3) was already underway. UK Government tight restrictions were loosened in October 2021, meaning face-to-face research could resume. At that time, Phase 3 (Figure 3) of this research was ongoing. However, the general guidance from Northumbria University remained to avoid face-to-face research where possible. As a result, all the research phases described above, and data collection took place online.

Online methods are well suited to investigate the phenomena at hand. The whole premise of freelancing platforms is to create a work exchange marketplace mediated entirely online, regardless of freelancers and clients' geographical location, as we described in Chapter 4. Also, freelancers often turn to online communities to share their experiences and collectively solve problems, as we reviewed in 3.2.4. Moreover, freelancers are proficient with multiple information and communication technologies which are essential for managing their professional relationships (Kinder et al., 2019), hence, online methods have proven adequate and successful in engaging freelancers and generating rich qualitative data.

5.2.2 Data collection methods and body of data generated

Here, we present the chosen methods for each of the studies presented in Part IV. The purpose of this subsection is to clarify the rationale behind each data collection method and discuss its

advantages and how limitations were mitigated. The practicalities and details of the methods are further elaborated in their respective chapter.

5.2.2.1 *Online subforums' data*

For Phase 1 (Chapter 6), the data collection method consisted of systematically collating posts and comments from four popular freelancing subforums on Reddit (a popular social media site). The final body of data considered for analysis comprised 528 posts, created by a total of 438 unique users, and had 7499 associated comments, see 6.2.2 for inclusion and exclusion criteria.

Online subforums enable opportunities for exploratory research in a naturalistic setting (i.e., without researchers' influence), suited to observe and explore how communities develop and negotiate *shared* practices. Subforums generate rich, unfiltered insight into social interactions of groups (Smedley & Coulson, 2018). As such, subforums allow to explore how freelancers discuss, negotiate, and develop accepted –shared – norms around their practice. Moreover, subforums on Reddit enable access to how freelancers talk about freelancing platforms without direct platforms' staff (or algorithms) oversight, enabling candour about their discussions. By observing and analysing these two elements, we can begin to unpack the impact of platforms on freelancers' shared practices.

Notwithstanding, we are aware of the limitations of studying online subforums. Firstly, the discussions in these subforums are constrained to their membership, overlooking those people who do not to engage with these communities (Smedley & Coulson, 2018). Secondly, in the case of Reddit as a platform with pseudonymous users, it is impossible to contextualise members' demographics and their individual circumstances. Thirdly, the audience engaging with these particular freelancing subforums are mostly English-speaking freelancers, and while the most prominent freelancing platforms conduct business in the English language, an important number of freelancers are from diverse geographies (Kässi & Lehdonvirta, 2018). Finally, looking at a subset of posts during a set period of time limits our understanding of a phenomenon, in our case members' views on platforms over four-time spans of 2019, thus not accounting for platforms' features and terms of use changes beyond that point. We have considered and addressed these limitations in the design of following studies.

5.2.2.2 *Elicitation diary*

In Phase 2 (Chapter 7), the data collection method consisted of a 14-day elicitation diary with 15 freelancers. In an elicitation diary, the researcher guides participants in capturing events and actions for later discussion in interviews (usually following a semi-structured format)

(Carter & Mankoff, 2005). This data collection method was chosen because it enables access to in-depth insight of freelancers' *everyday* practices as they occur. Also, this data collection method complements limitations from the previous approach (subforum data), where accessing knowledge about users' individual context was impossible.

Diary studies are well-suited for the investigation of individual's everyday practices for three reasons. First, individuals can capture their situated practices as they unfold, mitigating potential recollection biases as it is the case with other qualitative methods such as interviews (Czerwinski et al., 2004). Second, individuals can detail information about their practice and the circumstances under which they happen, such as routines, social and technological interactions, and attitudes towards their practice (Salazar, 2016). Importantly, as diary studies usually span across several days the nuances of these qualities become more apparent (Carter & Mankoff, 2005). Third, diary studies allow for data collection under multiple potentially overlapping contexts, such as work and home (Jarrahi, Goray, et al., 2021). These affordances make a diary method particularly useful to study online freelancers' everyday practices and how platforms might impact them.

Diary studies have challenges and limitations like any other method. Diary studies require significant sustained engagement, such as keeping daily entries for several days and participating in additional interviews (Lallemand, 2012). Similarly, recording diary entries may distract participants from their everyday activities and become intrusive if not designed carefully (Bolger et al., 2003a). To mitigate these challenges, we incorporated daily reminders in our diary design as well as flexible capturing times so that participants could log their entries when it was convenient for them. Lastly, prior research suggests that introducing and onboarding participants to a new technology to capture their diary entries may be a barrier for participation (Carter & Mankoff, 2005). As such, we decided to conduct our diary using WhatsApp, a popular messaging app that participants were already familiar with and has various multimedia capturing and sharing formats (e.g. text, voice, photo, and video).

5.2.2.3 Design fiction

In Phase 3 (Chapter 8), the approach consisted of developing a design fiction intended to be used as a prompt for discussion and reflection in a later study. Our approach to developing the design fiction was twofold. Firstly, consolidating research findings from the previous two phases that could help us think about potential platform features to support freelancers shared and everyday practices. We drew heavily from the design implications presented in 6.4.2 and published in (Alvarez de la Vega et al., 2021b). Secondly, we followed Schultz et al. (2016)'s recommendations to develop a design fiction that was grounded on prior literature and real-

world challenges. Therefore, we conducted a literature assessment where we identified 26 sources, including real-world examples, published papers, and policy documents, that aided in the development of the features presented in the fiction.

We want to acknowledge two limitations of our design fiction. Firstly, the design fiction embodied *our* interpretations of existing literature and examples. Secondly, while we strived to ground our fiction on existing challenges, it is likely that our assessment missed other prevalent issues as well as other important recommendations from the literature. Nonetheless, the point of the design fiction was “coming to grips with possible futures” (Baumer et al., 2020, p. 08) for freelance practice, rather than to accurately depicting an ‘ideal’ platform. As such, we see these as minor limitations.

5.2.2.4 Online focus group discussions

Phase 4 (Chapter 9), consisted of discussing fictional platform features developed in Phase 3 with 23 freelancers through five online focus groups. We chose online focus groups to provoke discussion among freelancers about our design fiction and further explore how freelancers negotiated and debated potential technologies to support their practice.

Online focus groups offer three benefits to engage with online freelancers. Firstly, online focus groups enable geographically dispersed freelancers to come together in a virtual synchronous environment (unlike subforums where discussions are community directed and sometimes asynchronous). Secondly, online focus groups allow for nuanced discussions among participants, and a form of ‘collective sensemaking’ (Braun & Clarke, 2013). This approach complements previous phases by gathering simultaneous (researcher-directed) opinions about the online freelancing experience (rather than in a one-on-one setting, Phase 2, and in unstructured subforum discussions, Phase 1). Thirdly, Hughes & Lang (2004) suggest the added value of online focus groups to discuss phenomena that occurs online, especially with tech-savvy participants. These were the main drivers for using online forums groups to evaluate the ideas in our design fiction.

We acknowledge the challenges and limitations that online focus groups pose for data collection. Online methods can, at times, amplify the limitations from face-to-face methods (Fielding et al., 2017). For example, in online focus groups it is harder for the moderator to energise a group with low levels of engagement because of limited social queues (Hughes & Lang, 2004). Therefore, we followed Hughes & Lang (2004) suggestions to engage with smaller groups (3-5 participants) to allow for smoother facilitation and give the opportunity for participants to have greater input. Another challenge is keeping participants engaged and limit distractions occurring in their environments, e.g. attending other tasks instead of listening

to fellow participants (Gaiser & Abrams, 2017). We acknowledge that these challenges exist even when laying out the ground rules and requesting participants to remain attentive. So, we decided to rely on our participant's goodwill. Finally, we were mindful of potential technical breakdowns and put alternative discussion channels in place, however, all five focus groups ran without any technical issues.

5.2.3 Participant recruitment approach

Phases 1 and 3 did not involve participant recruitment as the data was collected from secondary sources (subforums and documents) and therefore are not mentioned in this subsection.

Phases 2 and 4 had similar approaches to participant recruitment. Both studies had a dedicated recruitment website⁴, detailing the research aims, what was expected from participants, types of data to be collected, and their participation rights (as described in Appendix A and Appendix B). On these websites, participants could download a document with all this information. Also, these websites had a link to a recruitment survey where they granted informed consent to be contacted for the study and shared demographic information. We decided to have this information on a website so that the study information could be easily shared and advertised.

Given our familiarity with freelancing subforums on Reddit (from Phase 1), we used these channels to advertise our studies. We sought consent from community moderators to post the link to our recruitment website. Some moderators declined our request because this type of post would go against their community rules, however, one of them suggested paying for Reddit advertisement targeted to users engaged with freelancing communities. We followed their advice and ran paid ads targeting various freelancing subreddits. For the study described in Phase 4, we also ran paid ads on LinkedIn to increase our reach.

In addition, we posted the link to our study websites on Twitter, on freelancing groups on Facebook and LinkedIn, and freelancing communities on Discord and Slack.

5.2.4 Data analysis

The body of data in this thesis was analysed using thematic analysis (TA). TA is a qualitative method of analysis for “exploring, interpreting, and reporting *relevant* patterns of meaning across the dataset (original emphasis)” (Braun & Clarke, 2021, p. 223). TA's theoretical

⁴ See an example of the recruitment website associated with the study conducted in Phase 2: <https://carlos-alvarezdelavega.github.io/freelance-balance/>

flexibility allows for engaging with a wide range of qualitative data and under different theoretical assumptions (importantly, these assumptions must be consistent with the knowledge aimed to be generated) (Braun & Clarke, 2006c). TA consists of six phases to systematically engaging with qualitative data (Braun & Clarke, 2021): 1) familiarising with the data, 2) coding the dataset, 3) generating initial themes, 4) developing and reviewing themes, 5) defining and naming themes, and 6) writing the report. Although these phases seem linear, in practice, doing thematic analysis involves moving back and forth between phases and cultivating a ‘qualitative sensibility’, i.e., getting comfortable with subjectivity and uncertainty, and practising regular reflexivity (Braun & Clarke, 2021).

TA’s flexibility allowed us to engage with the diverse corpus of data described above. For instance, in Phase 1 (Chapter 6) we use TA in an *inductive* way, i.e., categorising the data without any pre-determined theoretical frames. We used an inductive approach because of the exploratory nature of studying freelancing subforums. In Phase 2 (Chapter 7), we retained the inductive approach to analysing our diary study dataset. However, we added theoretical depth when discussing our findings, drawing from Orlikowski’s (1992) Structuration Model of Technology to render the interplay between freelancers’ everyday practices and platforms’ features. Finally, in Phase 4 (Chapter 9), we used TA *deductively*, meaning that the analysis was driven by set research questions (Braun & Clarke, 2006a). We sided with a deductive approach for this final study because we were specifically interested in identifying opportunities and challenges that platform features introduced for freelance practice, hence the analysis focused on deductively organising themes into challenges and opportunities. We expand on the specific nuances of our analysis in each study chapter.

We triangulated the data from all research phases by carefully mapping out recurrent themes emerging from our mixed methods. This theme development followed an inductive approach once all data collection was completed, and the studies were written up separately, meaning a thorough analysis had been achieved at this point. We were guided by our research objectives described at the beginning of this subsection. The purpose of this triangulation was to add depth and complement findings, which resulted in the discussion presented in Chapter 10.

5.2.4.1 Impacts of the COVID-19 pandemic on the analysis

The COVID-19 pandemic likely impacted how I⁵ analysed and interpreted the data. The pandemic has changed my perception of the world (what I, as the sole author of this thesis, consider meaningful). For example, during the height of the pandemic, I experienced first-

⁵ Here, I speak as the sole author of this thesis to reflect my own experience. See an explanation on using the first and third person in the Preface.

hand the blurred boundaries of working and living in the same space, mainly in isolation, allowing me to further empathise with participants who were going through similar situations. The various lockdowns highlighted how much I underappreciated my routines and shared social experiences. These conditions widened my understanding of the crucial role these elements may have for freelancers, who often lack organisational social structures (Caza et al., 2021; Petriglieri et al., 2019). Had I not been through these experiences due to the pandemic, I maybe would have viewed the data differently. Engaging in regular reflexive activities, such as journaling and having regular discussions with my supervisors, helped me question, challenge, and further make sense of the reality around me and how it shaped my take on the data.

5.2.5 Ethical considerations

The research conducted in this thesis complies with Northumbria University's ethics guidelines (Northumbria University, 2019). All research phases described above were reviewed and approved by our internal ethics board. The materials for review included: a detailed description of our research project, a risk assessment for participant's and researcher's wellbeing, a description of our recruitment strategy, type of data to be collected and steps to protect it (e.g., secure storage), and participant confidentiality notice. These materials were thoroughly assessed by two internal reviewers before any research was conducted.

Beyond the ethical procedures mentioned above, we want to discuss three ethical considerations that are more specific to doing research with freelancers in the gig economy. Firstly, given that prior literature on the gig economy has found the unbalanced power dynamics platforms exert on workers through their algorithms and policies (Rahman, 2021; Shapiro, 2018; Sutherland et al., 2019), we wanted to avoid any interactions that might cause any harm to freelancers' livelihood. As such, we familiarised ourselves with Upwork and Fiverr's terms of use, since these were the two platforms we focused on at the beginning of the research. We found that platforms stringently police client-freelancer interaction to prevent platform disintermediation from the relationship (Jarrahi, Sutherland, et al., 2020) and a violation to this policy can result in freelancers' accounts suspension. Therefore, we refrained from interacting with freelancers via the platform because our research activities often involved actions that might be considered as "taking the relationship off-platform", e.g., communicating via WhatsApp (in Phase 2) or attending an online focus group (in Phase 4).

Secondly, protecting freelancers' privacy was at the heat of our studies to prevent any potential retaliation from platform management. In this case, privacy meant preventing the identification of individuals' identities. Although avoiding interactions with freelancers

directly through the platforms already safeguards, to an extent, their privacy from platform management, we anonymised all participant data as it is common practice when conducting research with human participants (Molich, 2001). Furthermore, protecting freelancers' privacy meant only collecting essential and relevant data to address our research objectives, avoiding collecting overly detailed data, such as work niche, that might give away their identities.

Thirdly, prior literature has shown that scams and illegitimate work opportunities are rife on online gig economy platforms (Jarrahi, Sutherland, et al., 2020; Sannon et al., 2022; Sannon & Cosley, 2019; Sutherland et al., 2019). Therefore, we were careful in how our research was advertised. This meant being upfront with our research objectives, our status as academic researchers, and the expectations we had from participants. While communicating these expectations is common research practice, we put extra effort in creating recruitment materials (e.g., study websites) that were straightforward and legitimised the research at hand.

5.3 Chapter Summary

This chapter detailed the methodological approach taken in conducting this thesis' research. It began by positioning the research approach in a qualitative paradigm underpinned by a relativist ontology and an interpretivist epistemology and axiology. Research vality, from these philosophical stances, resides on the researcher's thorough closeness with the research phenomena, providing a convicting, but partial and contextual, account of the relevant meanings in the dataset for the research inquiry. The remainder of the chapter explained the research approach taken to address the thesis' research question and objectives. It discussed considerations in the research design, data collection methods, participant recruitment, data analysis, and research ethics.

Part IV. Data Collection

Overview

This part comprises four chapters and three original qualitative studies that contain the corpus of data collected and presented in this thesis. Chapter 6 examines the impact of freelancing platforms on freelancers' shared practices through a qualitative analysis of 528 posts with 7499 comments posted in four freelancing subforums. Chapter 7 explores the impact of freelancing platforms on freelancers' everyday practices through an in-depth qualitative study combining a 14-day diary and semi-structured interviews with 15 freelancers. Chapter 8 presents the development process of a design fiction aimed at exploring concepts to support various freelancing practices. Finally, Chapter 9 explores freelancers' the design fiction concepts and generates insights on design opportunities and barriers to support freelancers' practices through five online focus groups engaging a total of 23 freelancers.

Chapter 6 Exploring the Impact of Freelancing Platforms on Freelancers' Shared Practices

Parts of this chapter have been published in (Alvarez de la Vega et al., 2021b)

6.1 Introduction

In Chapter 3, we painted a rich picture of how online gig economy platforms have quickly become a popular source of work. Still, most HCI research has focused on studying the work experience of online workers that perform microwork and much less attention has been paid to freelance knowledge workers (Sutherland & Jarrahi, 2018). Examples of prior research include who microworkers are (M. Gray & Suri, 2019), what motivates them (Shafiei Gol et al., 2018), and how they perform their work (Lascau et al., 2019; Martin et al., 2014; Williams et al., 2019). In contrast, much less is known about online freelancers and their experiences with freelancing platforms. Therefore, this study explores freelancers' views on gig economy platforms and how platforms impact their work.

In Chapter 4, we noted broad tensions from the literature regarding how gig economy platforms might impact shared practices freelancers value from their work, such as work autonomy, client relationships, and entrepreneurship. However, prior research has yet to consider how platforms have impacted these shared practices. This study also examines the relationship between freelancers' shared practices and gig economy platforms.

Lastly, because of the fragmented and geographically distributed nature of online gig work, many workers find and provide support through online communities, such as Reddit subforums, as we detailed in 3.2.4. As such, online subforums introduce an opportunity to explore how freelancers' shared practices have been impacted by freelancing platforms in a naturalistic setting. Previous HCI literature has studied gig economy online communities in the context of ridesharing (Lee et al., 2015; Yao et al., 2021) and microwork (Martin et al., 2014), but this approach has yet to be taken in the online freelancing context. To address these gaps, this study focuses on three research questions:

1. How do freelancers view and discuss shared practices of freelance work?
2. How do online freelancers view and discuss freelancing platforms?
3. What are the perceived opportunities and challenges that platforms introduce for freelancers' shared practices?

6.2 Approach

We sampled and qualitatively analysed discussions from four Reddit subforums to explore the impact of freelancing platforms on freelancers' shared practices. In this section, we discuss the characteristics of our chosen subforums, data collection, analysis approach, and ethical considerations.

6.2.1 Sample characteristics

The website Reddit is “home to thousands of communities, endless conversations, and authentic human connection” (Reddit, n.d.). Reddit subforums, commonly known as ‘subreddits’, are categorised by areas of interest, such as programming or design, in which pseudonymous users post, comment and rate content (Anderson, 2015). In this chapter, we refer to those users who start a post as *posters* and those who comment within those threads as *responders*. We refer to the combination of a post and its associated comments as *threads*. When alluding to a particular thread, we mention the subforum they belong to, followed by its thread labelled number (see Table 3), e.g., “/r/Fiverr, thread 31”.

The chosen subforums for this study were “/r/Fiverr”, “/r/freelance”, “/r/freelanceUK”, and “/r/Upwork”. These subforums were chosen due to their membership size (see Table 2) for number of members, active participation, public accessibility, and direct relation to the topics freelancing platforms and freelance work more broadly.

Table 2: Number of subforum members at the time of writing

Subforum	Members (Sept. 2020)
/r/Fiverr	10.8k
/r/freelance	156k
/r/freelanceUK	2.0k
/r/Upwork	12.9k

“/r/Fiverr” and “/r/Upwork” were the largest and most active Reddit subforums discussing freelancing platforms at the time of writing this chapter (September 2020). We observed these subforums were mostly a source of platform-specific advice. For example, users requested broad guidance on how to land a project on Upwork: “*Tips for scoring my first gig?*” (/r/Upwork, thread 192). Also, these subforums enabled spaces for requesting support in

handling difficult situations. For instance, dealing with an abusive client on Fiverr: “[*Help*] *I'm being blackmailed from buyer on fiverr*” (/r/Fiverr, thread 36). Even though Upwork and Fiverr operate differently, we found these subforums shared several similarities in terms of discussing platform use and exchanging advice.

On the other hand, we were interested in studying “/r/freelance” and “/r/freelanceUK” as subforums that converse about freelance work more broadly, allowing us to get closer to freelancers’ shared practices. We observed that “/r/freelance” enabled a space for freelancers to discuss issues they encounter in their everyday work. For instance, moral dilemmas: “*Should I take down a website if there was no contract and the owner changes his mind all the time.*” (/r/freelance, thread 128) and productivity support: “*How do you stay sane working from home?*” (/r/freelance, thread 179). Interestingly, we found some threads on these subforums also mentioned freelancing platforms, debating their usefulness and how they impact freelance work. Even though, on the surface, the four subreddits might seem different, all of them discuss elements of freelance work and shared practices from different perspectives; whether it is discussing how to get work or deal with difficult situations (on- and off-platforms).

6.2.2 Data collection

A total of 1551 initial posts were retrieved from the chosen subforums using the Pushshift Reddit application programme interface⁶ (API) (Baumgartner, 2019; *Reddit API*, n.d.). The posts were then imported to Microsoft Excel for data management. The data included the title and body of the post, poster username, timestamp, id, unique URL, and total number of comments. From the initial dataset, we excluded all posts that were not available (e.g., those removed by the community moderators), spam, and self-promotion (e.g., posters advertising their services), leaving us with a total of 759 posts and 8719 comments. From these, we conducted an inductive complete coding approach (Braun & Clarke, 2013) (see 6.2.3 Analysis). We then excluded those threads (post and associated comments) which did not have at least one code associated with them. These excluded threads were normally outside of the scope of this research project such as threads related to a specific tool. For instance: “*Best types of portfolio items for audio/music production and voice over?*” (/r/Upwork, thread excluded from the analysis). The final dataset included in the analysis comprised of 528 posts written by 438 original posters and had 7499 related comments (AVG = 14.20; SD = 14.75; MAX = 112; MIN = 0). We manually retrieved all accessible comment data per post and thoroughly recreated the conversation threads in preparation for analysis. See Table 3 for an

⁶ The code we used to parse this data is available at: <https://github.com/carlos-alvarezdelavega/Reddit-Data-Parser>

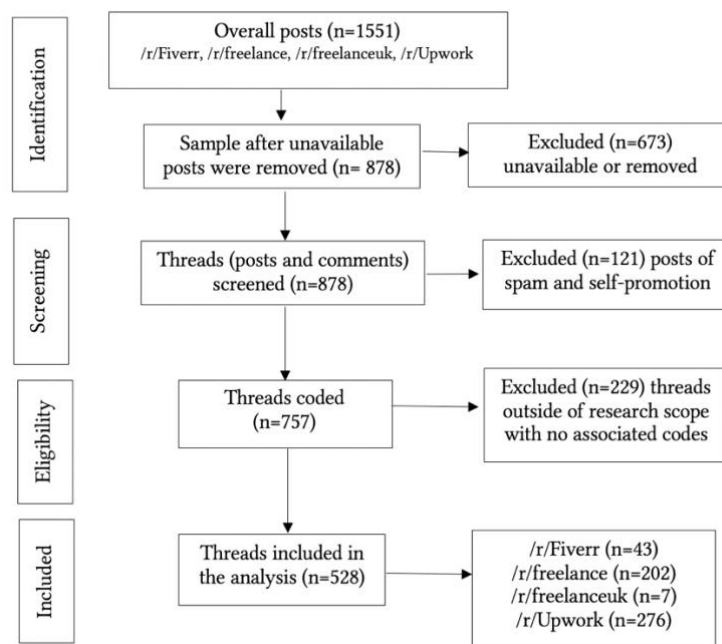
overview of the data included in the analysis and Figure 4 for clarification of the inclusion and exclusion process.

We sampled data from different periods of 2019 to capture discussions at regular intervals throughout the year and account for any season variability. We arbitrarily chose to extract data from all subforums for the whole month of January to familiarise ourselves with the dataset. Once the January sample was analysed, we arbitrarily crawled one-week samples of the months of March, July, and November to capture a broader range of perspectives at different moments of the year. Given the large amount of data generated from the subforums, we only decided to include one-week samples rather than the whole month.

Table 3: Overview of data included in the analysis

Subforum	Included posts and labelled thread numbers per subforum	Original posters	Comments	Avg. num. of comments per post	Sd. num. of comments per post	Max. num. of comments per post	Min. num. of comments per post
/r/Fiverr	43	26	328	7.62	8.5	36	0
/r/freelance	202	194	3332	16.49	17.47	112	0
/r/freelanceUK	7	6	19	2.71	3.14	8	0
/r/Upwork	275	220	3820	12.98	12.98	104	0
Total	528	438	7499	14.20	14.75	112	0

Figure 4: Thread inclusion strategy. PRISMA flow diagram illustrating the selection criteria of sampled posts from top to bottom.



6.2.3 Analysis

All the data were thoroughly collated into the software NVivo (version 12) (QSR, n.d.) for analysis. An inductive thematic analysis was performed on this data (Braun & Clarke, 2006b, 2013), guided by the focus on freelancers' discussions of freelance shared practices and freelancing platforms. The approach to coding aimed to identify as many codes as possible that related to the research questions stated at the beginning of this chapter (Braun & Clarke, 2013). Familiarity with the data was gained by systematically reading threads from the 4 subforums, starting with the whole sample of January. In turn, these codes were iterated and discussed in various occasions with this thesis' supervisors, which resulted in an initial codebook. After that, the codebook was applied to the one-week samples of March, July, and November. Then, codes were sorted in mind maps to identify patterns across the dataset. Two broad themes were constructed which are presented in the findings as separate subsections in: 6.3.1 Freelancers' Perspectives on Freelance Work; and 6.3.2 Freelancers' Perspectives on Freelancing Platforms.

6.2.4 Ethical considerations

In addition to our institution's ethics board approval, we sought to minimise ethical risks for subforum posters and responders. Therefore, following guidance from Hewson et al. (2017), all quotes presented throughout this chapter have been anonymised and information that would provide unnecessary discoverability has been omitted. To address privacy concerns, we decided to collect and analyse publicly available data from pseudonymous users which agreed to Reddit's (2018) privacy policy and did not include any posts that were removed by the original poster, but still retrievable through the Pushshift Reddit API. We recognise that previous literature engaging with sensitive topics on Reddit (e.g., (Andalibi et al., 2016, 2018)) has altered the wording of their findings to prevent them from being traced back. However, as we discussed in 5.2.5, our main consideration to protect freelancers' privacy was avoiding the disclosure of their identity. Given Reddit's pseudonymous nature, even when quotes could be traced back, freelancers' personal information remains safe. Therefore, we have not altered any quotes.

6.3 Findings

Our findings present two constructed themes from the analysis. Firstly, we present posters' perspectives on freelancers' shared practices, including what elements of freelance work are valued, and what forms of complexity and precarity are associated with freelancing. Secondly, we present posters' perspectives on freelancing platforms and how they impact freelance

practice. Platforms are seen as sociotechnical systems that bring opportunities for mitigating precarity associated with freelance work, but simultaneously create disruptions in freelancing and negating aspects of working life that freelancers value.

6.3.1 Freelancers' perspectives on freelance work

Across our sample, posters discussed their perceived advantages and motivations for pursuing freelance work, as well as the complexities and precarity that encompass this profession. This theme captures the nuances of freelancers' shared practices and sets the scene for the subsequent theme.

6.3.1.1 *Being in control*

A common sentiment that we found in our sample is that posters pursue freelance work because it grants high levels of autonomy. Being a freelancer means having control of how work is accommodated into everyday life, as well as control in deciding the types of work that are accepted. Control is a key theme in this research. For example, in a discussion of motivations for being a freelancer, one responder explained that they value the control freelancing enables:

(/r/freelance, thread 50) "For me it's kind of simple. I like getting to decide what jobs I do and also getting to choose how I do them. Essentially I like to be in control and freelancing lets me be in control."

Similarly, a different responder under the same thread explained that their motivation for pursuing freelance work was to have control of their time:

(/r/freelance, thread 50) "I have greater control of my time. I don't necessarily work less than if I had a jobby-job [regular job], but I can control when I work and fit it around my life rather than the other way [a]round."

Indeed, being in control of work arrangements allows for a better integration of work and personal life. This seems to be a greater motivating factor for many freelancers than money. Having control over this work-life integration can be particularly beneficial for people who live with chronic health conditions or have caring responsibilities (Massey & Elmore, 2011). For instance, one responder recounted how, despite earning less money, they preferred the autonomy of freelancing because they could better attend to their wellbeing and look after personal matters, something that would have been difficult with a more rigid job:

(/r/freelance, thread 108) "I've freelanced on and off for the past few years,

mostly recently, and I'm picking up some work: roughly 30% or less of my previous full-time income. Since quitting my job, I've been able to take care of health issues, be with my family while a relative was on his deathbed, and babysit my dying pup. It's also nice to split the day up how I want to and go for a simple afternoon walk to wake up."

At the same time, freelancers recognise that the high levels of autonomy and control come with greater responsibility. Being a freelancer requires the ability to manage an array of activities which often go beyond professional skills. Tasks such as finding clients and administrating finances are part of freelance work that demand a significant amount of time and typically go unpaid. For instance, in a thread discussing advice to transition from regular employment to freelance, one responder advised:

(/r/freelance, thread 64) "Recognize that most likely you will need to work more than you do at your full time role to try and make your business successful and that most of the time you're working will not be paid (trying to find business, networking, exploring paths to drum up business, writing up proposals that aren't accepted, setting up website, shopping for business needs, etc)"

Beyond business-related responsibilities, the high levels of control over work also necessitate a particular attitude. Freelancers must carefully plan for periods of intermittent work, be driven to work autonomously, and endure periods of work in isolation. These trade-offs of being in control might be, as mentioned by one responder, 'not for everyone':

(/r/freelance, thread 50) "I definitely know that self-employment / business ownership is not for everyone - can you pay the school fees if you don't have any clients for a month? can you self-motivate when nobody will know you're watching Netflix instead? do you need regular interaction with other people (like work colleagues, although co-working spaces can help with that)?"

Posters viewed having control over their work and how it is incorporated into their lives as a shared benefit of freelance work. However, they recognised that being in control also requires a wide range of responsibilities that often go beyond their professional expertise and necessitate a particular mindset to have a successful freelance career.

6.3.1.2 *Cultivating networks of clients*

Closely linked to being in control of work is the ability to determine how to collaborate with clients to fulfil their projects. Contrary to the manager-employee relationship akin to regular employment, freelancers have a relationship that resembles a business collaboration with their clients. As a result, freelancers have control to negotiate work arrangements, milestones, and the best approach to meet clients' objectives. When discussing the benefits of freelance work, one responder mentioned:

(/r/freelance, thread 10) "One of the nice things about this kind of work [freelance] is that it's more of a business-to-business kind of relationship than the master-subordinate relationship you usually see with employment. You're judged by what you get done (and what it costs, of course) and mostly you just do what your experience and judgement tell you will solve the problem and get good results most efficiently and effectively."

Indeed, this 'business-to-business' relationship is central to the freelance shared identity of being in control. Seeing clients as equal partners – rather than employers – enables a dynamic that provides freelancers agency to draw boundaries and push back against abusive practices. Exemplified by one responder:

(/r/freelance, thread 110) "you should really think of people as clients and not employers. You are not an employee and it's an important legal distinction plus it's important to treat clients like clients so you can have a healthy freelance relationship with them and make sure you[re] not treated like an employee and taken advantage of."

Another crucial aspect of freelance work is cultivating networks of clients (Nardi et al., 2002). Having a positive reputation among a network of clients creates a ripple effect that leads to new work opportunities. These relationships are cultivated by trust and high-quality service rather than extraordinary skills in a particular professional domain. One responder explained how reputation and these networks of clients often exceed skills as the avenue to successful freelance work:

(/r/freelance, thread 50) "In the Freelance world, Skills are overrated, while Reputation and Relationships are underrated. You need the competence to do what you'll say you'll do of course; but cultivating a small network of clients who know you, like you, and trust you to deliver will lead to repeat and referral business that will keep you busy."

Likewise, another responder stressed that in fact freelance work becomes much more profitable when having a network of clients that enjoy the work one delivers:

(/r/freelance, thread 64) “Freelancing can be extremely lucrative if you're good at what you do and have a wide network of people who you ENJOY working with”

Constructing a positive reputation with a network of clients and having a genuine collaboration with them are core elements of a shared freelance practice. Posters viewed client relationships as equal partnerships that not only create a beneficial source of work but also enable control to push back against demanding clients.

6.3.1.3 Precarity

Freelance work, nonetheless, has associated precarity. Work uncertainty, and its linked financial pressures, were issues that featured extensively in our sample. A common difficulty of freelance work, especially when getting started, is building a network of clients. For instance, one responder shared how underestimating the process of finding clients led them to struggle with paying the rent in their early days as a freelancer:

(/r/freelance, thread 65) “The biggest thing I did poorly when transitioning to freelance was being naive about how damn hard it is to find new clients, and I paid for it big time with months of really close calls back in 2014. Talking about not being able to pay rent type of close calls.”

Pursuing freelance work requires careful planning for moments of ‘feast or famine’ (White, 2015). Due to the contingent nature of the freelance work, budgeting for unexpected circumstances can be difficult. Also, freelance work demands prudent management of business finances, such as filing taxes, that are typically taken care of by employers in traditional employment. A responder narrated how they exhausted their savings in a short period due to a combination of factors that were beyond their control:

(/r/freelance, thread 64) “The long term retainer based client I had (which at the time gave me 80% of my income) cut my hours in half in January. Then I miscalculated the tax owing and I needed to pay a lot more than I expected in March. Then my dog got really sick and spent 10 days in the emergency vet clinic. I had, over two or three months, depleted all my savings.”

Prioritising work over personal life is another aspect that negatively impacts freelancers when not managed carefully (Gold & Mustafa, 2013). Working long, irregular hours to manage

responsibilities and deliver high quality work can easily blur the lines between work and personal life. Furthermore, detaching from work can be especially difficult in freelance work because of the notion that time invested in the business can be an opportunity to generate income. One responder stressed how establishing work-life boundaries is particularly important in freelance work:

(/r/freelance, thread 142) “I find a common stresser [sic] for freelancers (because understandably their lives depend on their work) is never setting office hours. I'd be stressed too if I worked a 16-hour day and as those days pile on, one tends to miss things. Set standard office hours. Organize tasks. Set reminders. Keep to your office hours and do not answer correspondence during off-hours (no worth-while client is going to otherwise dump you because they had to wait 14 hours for a response between 6pm-8am).”

Closely related to the concept of cultivating networks is remaining available for clients around the clock. As others have found (Cecchinato et al., 2015, 2017), this constant availability can hinder freelancers' work-life balance, and lead to difficulties detaching from work. Mirroring Gold & Mustafa (2013) notion that ‘work always wins’ (over personal life) for freelancers, one responder encouraged a poster to take time off and learn how to decline projects:

(/r/freelance, thread 47) “As a freelancer I know it can feel like you need to say “yes” to every project, especially from current clients that you want to retain, but remember a healthy work/life balance isn't just good for you, it keeps you fresh and ready to produce quality work for your clients, too.”

Posters recognised precarity is an accepted and expected characteristic of freelance work. Especially novice freelancers mentioned the challenges of finding clients, resulting on periods of severe financial pressure. Even though freelancers appreciate being in control of how work integrates into their lives, they also recognise the difficulties of detaching from work and working long and irregular hours to meet the business demands. If not managed carefully, work uncertainty can spillover into freelancers' personal lives, leading to stress and poor wellbeing.

6.3.2 Freelancers' perspectives on freelancing platforms

In the previous section, we unpacked how freelancers discussed shared practices of freelance, for instance, being in control of their careers even when experiencing precarity and, at times, less money than regular employment. In this section, we unpack how freelancing platforms

impact aspects of control that freelancers value in their work, while at the same time bring new opportunities.

6.3.2.1 Losing control

Freelancing platforms create an arrangement of work that reduce freelancers' autonomy and control (A. J. Wood et al., 2019). At the same time, contrary to the work arrangements of regular employment, freelancing platforms do not need to follow the same regulations as an employer would for protecting workers. Therefore, when using freelancing platforms, freelancers bear the typical risks and precarity, while having reduced control. As these responders put it, it's 'the worst of both worlds', like 'being employed' without any of the benefits:

(/r/freelance, thread 101) "[Responder 1] [...] Putting other people in the driver's seat of your career is usually called 'being employed'. So why lose the control while also having no benefits, job security, legal rights etc?"

"[Responder 2] [...] You're completely right, handing over your career to Upwork is like having a boss but also being a freelancer... the worst of both worlds."

Freelancing platforms' technological features and guidelines are designed to ensure that profit is generated (Jarrahi, Sutherland, et al., 2020; Kinder et al., 2019). This means that their systems control work arrangements and prioritise client convenience with the goal of creating profit. This sentiment was voiced by one responder who felt that platforms were to benefit the client not the worker:

(/r/freelance, thread 46) "Upwork isn't a freelancing platform. It's a gig economy platform. That means they set all of the rules and guidelines, control supply and demand, and ensure that their customers are happy."

A concrete example of such a technological feature that constrains control over work is the worker rating system that platforms typically use. With these systems a client rates the work of a freelancer (e.g., giving them stars out of 5). Rating systems, similar to other forms of gig work (Lee et al., 2015; Martin et al., 2014), create an unbalanced power dynamic between freelancers and clients. This mainly results in clients having a more advantageous position of power when evaluating freelancers. For example, one responder shared that ratings impact their ability to find work, but have little effect on the client side:

(/r/Upwork, thread 151) "I swear it terrifies me every time I take on a new

client. If there's one major thing I don't like about Upwork it's the clients have the upper hand IMO [in my opinion]. I feel like a bad rating hurts freelancers much more than employers on Upwork.”

This conception of power imbalance mirrors Kinder et al.'s (2019) findings of rating systems as elements that reduce freelancers' autonomy. Another way in which ratings constrain freelancers' control over work is by adding pressure to provide additional (usually unpaid) work to their clients to avoid a bad review. For instance, on Fiverr once the project is delivered clients can request modifications before accepting the project and rating the freelancer. This system can lead to frictions and unbalanced power relationships between freelancers and clients (Dubey et al., 2017; Jarrahi, Sutherland, et al., 2020). For example, one poster narrated how their client kept demanding additional modifications, and they felt disempowered to push back because of the risk of getting a negative rating:

(/r/Fiverr, thread 3) “I am doing illustrations on Fiverr for a long time [...] I have this client that is super demanding, even though I sent him a sketch and he approved it, he keeps suggesting changes to the final product saying he isn't happy with it (he paid 20\$ [sic], doesn't wanna pay more for revisions). I would just refund him but I already spent so much time, I feel like I deserve the money...But I am afraid he will give me a bad rating being this picky.”

Platforms' guidelines also make very clear that they can suspend freelancers' accounts at their discretion (Jarrahi, Sutherland, et al., 2020). By suspending freelancers' accounts, platforms dismiss a record of work that involves considerable time and effort. Most importantly, for freelancers' losing their account potentially means losing their earnings. Echoing Gray & Suri's (2019) concept of algorithmic cruelty where platforms overlook in their designs the human labour that goes into their systems; one poster shared how their account was suspended with no clear explanation, losing access to work opportunities as well as the money they earned in their last project:

(/r/Upwork, thread 80) “My account was suspended [a] few days ago and I contacted upwork via twitter since I could access none of their support (help support and community). They told me I had violated their TOS [terms of service], something I am very sure was not the case. [...] I have no problem with them suspending my account even if I neither drove clients out of upwork nor got paid outside upwork. But I got paid just before the suspension and I have no access to that money. It seems very fishy that they held back the money without giving me (at least an email) details of the Violation.”

In other cases, account suspensions were caused by mere glitches in the system and could be restored through human intervention. Even though accounts can be restored, the emotional burden of losing access to a source of income can hardly fade away. For example, one poster narrated how their account was automatically suspended after an identity verification error. They emphasised how Upwork could have attempted to corroborate their identity in other forms rather than suspending their account. It was not until they reached out through Twitter that they got their account back:

(/r/Upwork, thread 177) “Last week I uploaded my ID when I noticed there was an additional badge I could list on my profile. It's the same ID I showed during the video verification I did two years ago. A few days later my account was suspended. [...] This seems like a drastic measure to take when the issue could be resolved with a 1 minute phone call or another video call where I hold my ID up to my face or I provide other forms of ID. [...] I @ them [on Twitter] and they got back to me within a few minutes asking for my UpWork username/email through DM which I gave. Within an hour I received an email that my account had been fully restored.”

Freelancers recognise the amount of control platforms exert over their work. Technological features such as rating systems constrain the types and variety of jobs that freelancers can obtain. Rating systems can also disempower freelancers to push back against abusive clients because of the possibility of damaging their reputation. Ultimately, whether deliberately or not, platforms control freelancers' earning potential, and even hold total discretion over the suspension or termination of accounts.

6.3.2.2 Gatekeeping networks of clients

Freelancing involves cultivating networks of clients. This is true of freelancing platforms, but the client-freelancer relationship is heavily policed and constrained. Freelancing platforms are designed to prevent the development of relationships between clients and freelancers outside of their systems (Kinder et al., 2019). Because platforms profit from client-freelancer transactions, they design their systems to protect this interest and terminate the accounts of those users who jeopardise their profit. One responder viewed platforms intentionally disrupting and controlling the client relationship to generate profit and freelancers having little agency to dispute this control:

(/r/freelance, thread 101) “Upwork et al does everything in their power to disrupt this [client-freelancer] relationship and erect a wall between you and your clients, because this is how they scoop the cream off the top of everything

you do. They will ban your ass in a heartbeat if you try to circumvent this wall, because their existence depends on it. By strictly controlling the client relationship, they own you and your business because you can't leave unless you start over from scratch.”

Another example in which platforms disrupt the creation of a network of clients is by limiting the information of freelancers' profiles outside their systems. For example, mirroring Jarrahi et al.'s (2020) concept of platforms gatekeeping information to control relationships, one responder shared how Upwork displays incomplete profile information to prevent freelancers from promoting their work:

(/r/Upwork, thread 142) “Upwork intentionally makes your profile page less robust/winning when it appears outside of Upwork because they don't want you to be able to use it to promote yourself to direct clients and leave them out of the payment pipeline.”

Account suspension was a topic of recurrent discussion that not only showcased platforms' control, but also closely linked to platforms preventing client-freelancer relationships to be developed outside of their systems. For instance, one poster illustrated how their account was terminated for having their contact information displayed on their profile:

(/r/Upwork, thread 180) “Upwork shut down my profile [...] because I had my portfolio linked in my bio, which had my contact information. Apparently, Upwork doesn't want the client to be able to find your contact info through your Upwork profile, because then Upwork gets cut out of the deal and doesn't get paid.”

Another poster shared how they were suspended for directly proposing to work outside the platform environment to a client:

(/r/Upwork, thread 133) “I had suggested work aside from the active Upwork job to be done outside of Upwork. A bot caught that and banned me.”

Another element that factors into developing networks of clients in freelancing platforms is the high levels of competition, particularly in saturated markets. Finding clients on platforms in the beginning can be challenging without having ratings corroborating freelancers' skills. Even those freelancers with prior professional experience can struggle to secure projects until they develop positive ratings. One responder compared the experience to manual, artisan labour to exemplify the importance of profile reputation to find work on Upwork:

(/r/Upwork, thread 126) “Getting started [on Upwork] can be hard and there's a lot of luck involved. Your former experience doesn't matter if you don't have a solid portfolio / online presence backing it. Consider UpWork to be a god forgotten town in the wild west. You are a new comer that claims to be an experienced carpenter. Nobody's going to believe you until someone entrusts you with fixing their roof. Things are tough especially if you are in an over saturated market like software development or design. Once you get your first 1, 2, 3 jobs everything will change.”

Even though freelancing platforms create highly competitive markets, some freelancers leverage this competition to boost their skills and attract more clients. Platforms, as digital marketplaces, provide access to viewing freelancers' portfolios, former clients, and featured skills. Freelancers can appropriate these functionalities to benchmark top users in their same market and draw inspiration to hone their profiles. One responder shared how, when getting started on Upwork, they adopted a strategy of screening the profiles of freelancers who got hired for bids they lost. Based on these screenings, they updated their profile and kept up with the skills in high demand:

*(/r/Upwork, thread 25) “the freelancing world *is* tough, even more in a site like Upwork where you are basically competing with the rest of the world. [...] One of the most humbling activities I did on Upwork when I wasn't getting any [work] was to check past proposals where I seemed like the perfect fit, and see who they ended up hiring. And I say it was humbling because I then realized how "uncompetitive" I was, to put it lightly, when compared to the rest of the world. But it was a good thing, as that allowed me to re-work myself, my profile, my skills, what I was selling, to who and how (and getting jobs in consequence).”*

Cultivating a network of clients on freelancing platforms is heavily constrained by technological features and guidelines as well as highly competitive markets. Freelancers recognise that platforms severely penalise the formation of networks outside their systems by suspending the accounts of those who circumvent platforms' guidelines. Moreover, forming networks of clients within platforms can be highly competitive and require the development of a reputation in their system. Unlike networks of clients in traditional freelance work, freelancing platforms play a fundamental role in mediating and disrupting how relationships are created.

6.3.2.3 *Mitigating precarity*

Platforms facilitate an infrastructure that eases the process of finding work. This infrastructure for finding clients was perceived as a core advantage that make it worth losing control by adhering to platforms' structures and allowing them to mediate relationships with clients. Echoing Jarrahi et al.'s (2020) study of the affordances of Upwork, a responder positively described this platform as a 'middle man' to reduce effort and precarity:

(/r/freelance, thread 169) "it is hard to find clients the traditional way. [...] Upwork was a great idea. A middle man till work is completed."

Platforms were recognised as a beneficial source of work and experience for those people new to freelance work. One responder described how they used Upwork to gain freelance experience, while also stressing the importance of not depending entirely on the platform for finding all their clients:

(/r/Upwork, thread 248) "I started out on upwork with zero FL [freelance] experience while a sophomore in college, and now I'm basically an intermediate FL [freelancer]. What I've realized is that Upwork should just be one area where we get clients. We should NOT depend on Upwork for say, more than one third of our clients."

Similarly, another responder acknowledged that using Fiverr gave them the opportunity to gain experience, but that ultimately a goal for advancing their career was to stop relying on platforms to find work. This responder highlighted the importance of progressing as a freelancer by becoming independent from third party sources of work:

(/r/Fiverr, thread 22) "If nothing else, Fiverr is a good place to start and get some experience/feedback. That's what I did, the same thing goes to upwork, pph [People Per Hour] and the others. No matter your career, if you are freelancing your objective should be to one day "Grow up" and "Move out" of the job boards."

Finding other sources of work outside freelancing platforms was often encouraged to alleviate the precarity of freelance work and mitigate the control that platforms exert over freelancers. A way for freelancers to achieve this goal of becoming independent from platforms is by developing a social capital (Gandini, 2016a). For instance, one responder brought attention to the importance of having a 'freelancer mindset', in other words, being in control of running an autonomous business without the need for a platform:

(/r/Upwork, thread 228) “If you want to be a serious freelancer, you need to get out of the mindset that you need to use a freelancing platform to be successful. While platforms are helpful, you are running a business, so you should learn how to market yourself and find clients on your own.”

Likewise, other posters shared advice on how freelancers can promote their work to attract other sources of clients. For example, when asked about alternatives to Upwork, one responder mentioned that the best option is to create a portfolio and learn ways to promote it independently:

(/r/Upwork, thread 208) “The best place for most people to migrate is going to be their own website. Make your own portfolio and do some work to SEO it so it shows up for the right keywords, run some social media, cold call some peeps, hustle yourself some solid clients and you won't have to share a % [percentage].”

Also freelancers can, in principle, use multiple platforms but it seemed there was a shortage of appealing platform options. For instance, one responder explained how they appreciated Upwork as a place to find work but acknowledged that being reliant on a single platform is very risky. Despite this tension, they did not think there were solid alternatives:

(/r/Upwork, thread 123) “I've tried literally every other platform to try and diversify from Upwork and they have all been utterly shit. It's quite amazing how disliked amongst freelancer's [sic] Upwork is and yet it continues to be the only really viable platform out there. I personally don't have an issue with it, it's been very good to me, but having so much of my income reliant on a single channel makes me very nervous.”

Posters voiced the precarity and difficulties of finding clients, and thus freelancing platforms present an opportunity to mitigate these challenges. Freelancing platforms were recognised as spaces to get started, gain exposure and experience, but ultimately introduce other forms of precarity that required freelancers to consider other alternatives to generate income. A strategy to counterbalance these drawbacks is to promote one's portfolio independently, thereby avoiding the reliance of platforms as unique sources of work.

6.4 Discussion

In this chapter, we have explored freelancers' views of freelancing platforms and their impact on freelance work. In this section, we first discuss the role of freelancing platforms in the

context of freelancers' shared practices. We also discuss how our findings reveal nuances of freelancers' shared practices and trade-offs that freelancing platforms offer. Then, we extend the discussion of our findings and previous literature, by providing worker-centred implications and critiques of freelancing platforms.

6.4.1 A contemporary landscape of freelance work

We have found tensions and trade-offs between freelancers' shared practices and what freelancing platforms offer. Our findings extend the conceptual understanding of freelancers' shared practices and situates freelancing platforms in what we describe as a contemporary landscape of freelance work. In this section we further discuss how three crosscutting subthemes stemming from our findings (control, networks, and precarity) surface implications for the future of freelance practice.

6.4.1.1 Control

Control was explored in sections 6.3.1.1 and 6.3.2.1. A shared practice that came across strongly among posters was freelance work as enabling high degrees of control over work. Work-life balance appeared to be behind much of the reasoning for this. Echoing Massie & Elmore (2011), posters voiced how freelance work gives them control to accommodate work into their personal life as they see fit, as opposed to regular employment which often comes with rigid schedules and work arrangements. Being in control of types of work that are accepted and how to approach them was also viewed as a significant advantage of freelance work. Still, our findings suggest that while experiencing high levels of autonomy and independence, much of the success depends on "individuals' own efforts" (Ashford et al., 2018, p. 26). This "complicated version of freedom" (Hesmondhalgh & Baker, 2010, p. 18) has been akin to freelancers' shared practices for over a decade in creative industries such as film and television (Sadler, Robertson, & Kan, 2006), suggesting little has changed in this respect.

Platforms' impact was seen as reducing control over the benefits of autonomy, while at the same time, enabling opportunities to ease common challenges of freelance practice. On the one hand, platforms were perceived to control the supply and demand of work, disrupt the power relationship freelancers have with clients, and hold the power to suspend work and access with no warning or reasons given. On the other hand, some platforms' features, such as accessing competitors' profiles, were viewed as opportunities to develop skills and land projects. Similar to previous research (Graham & Anwar, 2019; Jarrahi, Sutherland, et al., 2020), our findings speak to administrative conveniences platforms provide to find clients, which was particularly appreciated by those getting started as freelancers.

As freelance work continues to grow, freelancing platforms have the potential to open opportunities to new work alternatives. However, we found that posters discussed strategies to resist platforms' stringent rules and stay in control of their careers by limiting platform dependence. This notion echoes research discussing disproportionate perception of algorithmic control when workers rely on gig work for significant portions of their income (Anwar & Graham, 2020a; Blaising, Kotturi, et al., 2020; Kuhn & Maleki, 2017). At the same time, our findings cast a light on the value of freelancing platforms for developing skills and gaining experience for novice freelancers, while enabling a diversified portfolio of work for more experienced freelancers. A more pressing question for future work is how can platforms support rather than hinder work autonomy as a strong anchor of freelancing shared practices?

6.4.1.2 Networks

Networks were explored in 6.3.1.2 and 6.3.2.2. Like Nardi et al.'s (2002) concept of 'intensional networks' intended as deliberate creation, maintenance, and activation of one's social networks among knowledge workers, posters mentioned the importance of carefully cultivating professional relationships with clients as a form of shared practice. These client relationships were intrinsic to their work, but also to their status and identity as knowledge workers. Client relationships were seen as business-to-business relationships with a balance of power between the two and dignity on both sides. Freelancers' core value of 'control' was viewed because of having a collaboration with clients as equal partners with which work can be arranged flexibly on a project basis.

Freelancing platforms has a twofold impact on client networks. On the one hand, platforms could reduce the amount of networking required, giving access to a global market of clients. On the other hand, platforms – by design – introduced crucial barriers for developing successful client relationships. In contrast with the perception of a 'business-to-business' collaboration with clients, platforms' management mechanisms, such as ratings, cause an unbalanced power dynamic where freelancers can feel disempowered to push back against clients' demands to avoid damaging their reputation. This perception of rating systems as disempowering elements mirrors previous studies of freelancing platforms (Nemkova et al., 2019; Sutherland et al., 2019; A. J. Wood et al., 2019). Kinder et al.'s (2019) proposition of platforms preventing disintermediation also was mentioned as a critical constraint of autonomy. By platforms holding power to suspend and terminate freelancers' accounts under their discretion, they ultimately control freelancers' networks, making it nearly impossible to recuperate the effort invested in their work should they leave the platform.

In a contemporary landscape of freelance work, we argue that freelancers can strategise for diverse work sources, however, different networks ought to be built across different platforms and through offline networks. Fostering both types of networks (*on* and *offline*) is not an easy process as freelancing platforms actively gatekeep freelancers' relationships and reputation, leaving freelancers to develop strategies to resist these barriers, such as marketing their own website. A key question for future research is how to support the development of networks off- and on-line given that platforms profit from mediating relationships and have little incentives to re-think this model.

6.4.1.3 Precarity

Precarity was explored in sections 6.3.1.3 and 6.3.2.3. We found that periods of being unable to find work are an accepted norm in freelance work and something that freelancers say they must plan for. As a result, freelancers experience financial instability that can pressure them into accepting more work when it is available, and thus undermine their work-life balance. Indeed, these tensions between sustaining a healthy work-life balance and developing financial stability have been studied previously in HCI and beyond (Damian & Capatina, 2019; Gold & Mustafa, 2013; Hesmondhalgh & Baker, 2010; Sadler, Robertson, Kan, et al., 2006). In our sample, posters were candid about these issues and supported each other to mitigate these trade-offs, highlighting the relevance of online communities for freelancers to develop share practices.

Paradoxically, freelancing platforms can mitigate some precarious aspects of freelance work, while also generating new forms of precarity through algorithmic management features. When analysing posters' views on freelancing platforms, we found that the opportunity to find work was perceived as the primary advantage of using these systems, echoing Jarrahi et al. (2020). However, platforms bring about new forms of precarity through management systems that constrain the autonomy that freelancers value of their work, especially when it comes to being subjected to platforms' rules, such as account suspension, work assessment features, and work supply and demand.

By diversifying their sources of work, freelancers could mitigate the contingent nature of freelance work. Yet, in their current state, freelancing platforms do not allow for easily diversifying freelancers' sources of work and, in fact, prevent disintermediation from their systems. We found that various forms of algorithmic management were perceived as mechanisms that discourage freelancers to view these systems as a reliable source of work (Jarrahi, Sutherland, et al., 2020). As the gig economy model continues to expand across multiple professions, freelance work might no longer merely grapple with work uncertainty

and financial pressures, as mentioned in literature predating platforms (Gold & Mustafa, 2013; Sadler, Robertson, & Kan, 2006). Instead, contemporary freelance work has begun to grapple with algorithmic management, work surveillance, and market mediation, reducing the entrepreneurial control that is valued as a shared freelance practice.

6.4.2 Towards worker-centred design of freelancing platforms

We found that freelancers call for greater control over their careers, reputation, client relationships, and work arrangements. These calls for independence contrast with calls for improvements in location-based gig work, such as granting workers' rights, employment benefits, and safety nets (Fairwork, 2020; Kumar et al., 2018; Stefano, 2016; Ticona et al., 2018). We also found that freelancing platforms were sometimes viewed as steppingstones to gain experience and support career trajectories, mirroring recent work in (Blaising, Kotturi, et al., 2020; Blaising, Kulkarni, et al., 2020). It is uncommon that other forms of gig work provide workers with opportunities to develop professional skills and explore career possibilities. Typically, gig work, such as ride-sharing and microwork, provide little incentives for workers to grow professionally (Rivera & Lee, 2021). Similarly, interest from workers to cultivate long-lasting relationships with clients is rare in other forms of gig work, perhaps except for domestic services and selling material goods (Ticona et al., 2018).

Building on our findings and previous literature (e.g., (Fox et al., 2020; Glöss et al., 2016b; Kasera et al., 2016)), we take a worker-centred perspective to provide design directions for improving freelancing platforms. We propose four directions to amplify the shared practices freelancers value from their work.

6.4.2.1 *Worker-centred platform design should provide transparent ratings and contracts*

In our analysis, we found that rating systems can negatively impact the working experience and challenge shared practices from freelance work, such as being in control over finding work and collaborating with clients. A worker-centred stance on rating systems requires transparent review processes that go beyond a star or a percentage and gives freelancers constructive feedback to improve their services. Glöss et al. (2016b) have suggested implementing a qualitative approach to ratings where workers' evaluations are visualised with words rather than numbers. In turn, having transparent and less rigid rating systems should contribute to a more balanced collaboration with clients. We propose that future platform interventions should protect freelancers from providing additional work, fearing a bad review.

6.4.2.2 *Worker-centred platform design should encourage professional development*

Intertwined with rating systems is freelancers' reputation and the tension of losing it once freelancers leave or are suspended from the platform. A worker-centred reputation system would allow freelancers to 'carry their ratings' (Stipp, 2017) across different gig economy platforms, thus granting greater control over freelancers' portfolio, reputation, and career path (should freelancers wish to transfer their reputation). Also, our findings show how platforms are used to gain experience and, in some cases, even appropriating some of their features to develop skills, such as self-presentation. There is scope for platform designers to enable career path opportunities for freelancers to develop their skills in particular niches, echoing Blaising et al.'s (2020) call for platforms promoting training for freelancers to adapt to market fluctuations and demands. At the same time, platforms should provide stronger support for those freelancers getting started on their systems to navigate the market, platforms' rules, and land projects.

6.4.2.3 *Worker-centred platform design should enable ecologies of systems*

We identified freelancers' perceived value of cultivating a network of clients. As our findings and previous work suggest (Kinder et al., 2019), freelancing platforms are designed to prevent disintermediation. A worker-centred reimagination of these systems would champion the promotion of freelancers' profiles outside of their environments. In this scenario, platforms could play the role of mediating secure monetary exchanges and skill-matching rather than having a managerial role. Also, freelancing platforms could support an ecosystem of applications for collaboration among freelancers and clients rather than gatekeeping communications through their systems. A prime example of successfully implementing ecologies of cooperation systems is the platform LeadGenius⁷, which – by design – enables structures of worker cooperation and support to tackle specific business objectives, resulting in benefits for all involved parties (M. Gray & Suri, 2019).

6.4.2.4 *Worker-centred platform design should prevent power asymmetries*

Finally, in their current state, platforms' guidelines and features favour clients' needs and profit generation rather than supporting the development of freelancers' shared practices. Innovative approaches are necessary to lessen this imbalance. For example, platform designers may want to consider mechanisms that enable collaboration between clients and freelancers to define the project scope and its evaluation metrics, thereby reducing this imbalanced 'top-down' dynamic that pushes freelancers to provide additional unpaid work fearing a negative

⁷ <https://www.leadgenius.com/>

review. This also has implications for policymakers, as we argue that more enterprises who hire freelancers through platforms should implement guidelines that strive for reducing power asymmetries. Lustig et al. (2020) have begun exploring how clients can support freelancers in having fair experiences through hiring guidelines and task structures. Nonetheless, more research is needed from the client side to ensure that the freelance experience through freelancing platforms is optimised to have a genuine collaboration.

6.5 Conclusions

This chapter has contributed an empirical understanding of the impact of freelancing platforms on freelancers' shared practices through a qualitative analysis of four relevant freelancing subforums on Reddit. Our findings suggest that a key shared practice impacted by platforms is the amount of control freelancers have over getting work, and most importantly, over their business. Freelancing platforms were viewed as systems that provide opportunities to mitigate some of the precarity associated with freelance work, such as enabling opportunities for professional development and access to global networks of clients. However, freelancers perceived platforms' management features as constraining the control over work demand, client relationships, and reputation, leading to new forms of precarity. Thus, we argue that in the way they are currently designed, freelancing platforms should not be assumed to be the same as traditional forms of freelance work because their features and guidelines ultimately impact fundamental, shared practices of freelance work.

Chapter 7 Understanding Platforms Impact on Freelancers' Everyday Practices

Parts of this chapter have been published in (Alvarez de la Vega et al., 2023)

7.1 Introduction

The previous chapter highlighted tensions and opportunities platforms introduce for freelancers' *shared* practices (i.e., actions and norms accepted and enacted by a particular group that interacts regularly). In this chapter, the focus is on exploring the impact of platform on freelancers' *everyday* practices (i.e., actions performed regularly in ordinary cycles of activity (Lave, 1988)).

One underpinning rhetoric of freelancing platforms is the ostensible flexibility freelancers have over their everyday life (Bajwa et al., 2018). Arguably, freelancers can incorporate platform work into their routines as they see fit, making it especially appealing for professionals with caring duties, disabilities, and simply those who do not feel welcome in more bureaucratic settings (James, 2017, 2022; Kessler, 2018; Munoz, Sawyer, et al., 2022). However, platforms incentivise competition in a global marketplace with an oversupply of workers, which often translates into long working hours, social isolation, and difficulty to switch off (Anwar & Graham, 2020a; Lehdonvirta, 2018; Shevchuk et al., 2019; A. J. Wood et al., 2019). Despite the advertised flexibility and autonomy, research has shown that platforms do not deliver on this promise for all freelancers (Blaising, Kotturi, et al., 2020). Therefore, this chapter examines how online freelancing platforms' features impact freelancers' everyday practices through an in-depth qualitative study.

Following Jane Lave's (1988, p. 15) definition of everyday practices, we regard them as actions people do "daily, weekly, monthly, ordinary in cycles of activity." As such, for this study, we regard freelancers' everyday practices to encompass both work and non-work (i.e., non-remunerated labour) activities, sometimes used interchangeably with the term work-life. Prior literature has characterised freelancers as having blurred work-life boundaries at the margins of their workspaces, time, tasks, and tools (notably, technological devices) (Ciolfi et al., 2020; Ciolfi & Lockley, 2018; B. Gray et al., 2020; Sutherland & Jarrahi, 2017). The aim of this chapter is to expand this prior research by considering freelancing platforms in this

already complex everyday picture. Therefore, we focus on the following three research questions:

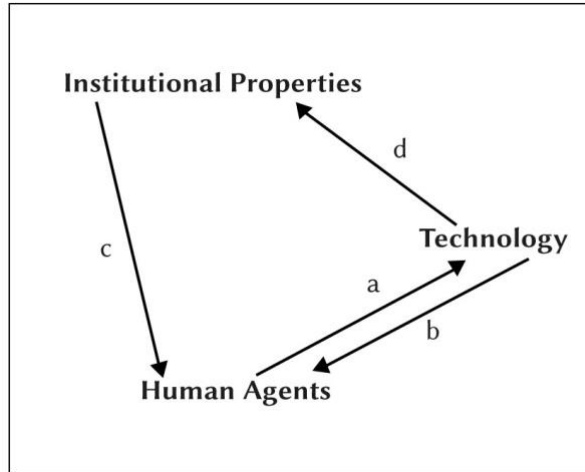
- How do freelancers manage their everyday practices?
- What challenges do freelancers experience while combining their platform work with their everyday activities?
- What freelancing platform features, if any, impact freelancers' management of their everyday practices?

7.2 Theoretical Background

In this chapter, we will draw upon Wanda J. Orlikowski's (1992) Structuration Model of Technology to discuss and frame our findings. Orlikowski argued that technology provides limits and opportunities for work practices. She explored the interrelationship between information technology, social practice, and institutional contexts in which social practice is articulated and embedded (Kallinikos, 2011). Orlikowski drew upon Giddens's (1984) concept of structuration which regards social structures as 'dual', making them an enabler and outcome of human practice (Feldman & Orlikowski, 2011; Sewell, 1992). For Orlikowski, technology holds this duality, enabling but not determining work practices and holding an 'interpretive flexibility'. In Orlikowski's view there is also an institutional context to the use of technology that serves to provide norms, know-how and perspectives on use, and which is itself influenced by technology.

Orlikowski proposed a model with three components (Figure 5). The first component is "human agents", which can encompass those involved in the process of developing the technology as well as using it. The second component of the model is "technology" such as information systems. The final component is "institutional properties" which can encompass culture, ideology, and socio-political conditions.

Figure 5: Orlikowski's (1992) Structuration Model of Technology



In the model (Figure 5) there are four arrows linking components. Arrow “a” connects “human agents” to “technology”, depicting technology as the product of human action. Arrow “b” connects “technology” to “human agents”, portraying technology as the mediation of human action and thus an enabler and constrainer of work practices. Arrow “c” connects “institutional properties” to “human agents”, representing that human agents are influenced by existing knowledge, resources, and norms. Finally, arrow “d” connects “technology” to “institutional properties”, depicting how technology, acts upon, transforms, and reinforces social norms.

In discussions of how the model can be applied, Orlikowski differentiated between understanding technology in *design mode* and *use mode*. When technology is being designed, it is far more likely that the human actors will exert a greater influence on the technology (arrow a) than when it is in use, and new technology will likely be more disruptive of institutional properties (arrow d) than during ordinary use. However, as Orlikowski points out, technology never finishes being (re)designed during its lifetime, and users of a system might appropriate, reinterpret, and customise it.

In our usage of the model, the technology in question is the freelancing platform ‘Upwork’ (detailed in 4.1) and the human agents are freelancers. Other human agents, including clients and platform developers could also be considered in versions of the model but they are not the focus of this study. Given that freelancers typically work independently rather than in teams and organisations, we regard this institutional property as more akin to the shared practices of more traditional forms of freelance work, such as client relationships, self-managing work, and cultivating a reputation (discussed in detail in Chapter 2).

7.3 Approach

We took an in-depth qualitative approach to examine the everyday practices of 15 online freelancers using the platform Upwork. We recruited freelancers using Upwork to have consistency in terms of platform features. We followed an “elicitation diary” approach described in Carter & Mankoff (2005), asking participants to keep daily diary entries for 14 days, followed by semi-structured interviews. Through this approach, we gained a rich understanding of participants’ everyday practices, their challenges, and the impact that Upwork’s features have in enacting their practices.

7.3.1 Participants and recruitment

We recruited participants who had freelanced on Upwork for at least three months, used Upwork as their primary freelancing platform, and had active projects throughout the study period. We aimed to recruit a diverse sample across gender, age, nationality, professional domain, and experience freelancing online. Given that prior research has focused on US-based freelancers in recent CSCW literature, e.g. (Blaising, Kotturi, et al., 2020; Blaising & Dabbish, 2022; Foong & Gerber, 2021; Munoz, Dunn, et al., 2022), we considered crucial to expand our sample to encompass freelancers based in different countries. We advertised the study in different online communities, including Reddit subforums (e.g., r/Upwork), Facebook and LinkedIn groups, and freelancing Discord servers, including paid ads during February 2021 on Reddit linking to our screening survey. 94 people filled in our screening survey, of which only 19 responded to our follow-up message, 16 completed all the stages of the study (see 7.3.3 for details), and one person requested their data to be removed from any research outputs several months after the study (this was part of their participation rights see Appendix A). During our withdrawal confirmation, we made clear that because the analysis phase had concluded, our reflections on their data may still be present in our findings. Nevertheless, all their data (e.g., information and quotes) were deleted in compliance with our ethical considerations (discussed in 5.2.5).

Our sample comprised nine participants who self-identified as female and six as male. Participants’ ages ranged from 18 to 52. 53.33% of participants had freelanced on Upwork between one and over four years, whereas 46.66% had used it between three and six months. 80% reported Upwork as their primary source of income, while 20% reported using Upwork as a supplementary source of income. Participants were from 11 different nationalities located across 10 countries – all fluent English speakers. See Table 4 for an overview of participants’ information.

Table 4: Diary study participant information

ID	Gender	Age Range	Nationality	Country of Residence (during the study)	Amount of Time Using Upwork	Income Reliance on Upwork	Types of Services Provided	Self-Reported Time Spent on Upwork
1	F	18-24	Singaporean	Czech Republic	3 months	Supplementary income	Writing	< 20 hours a week
2	F	25-31	American	UK	1-2 years	Primary income	Market Research	30-40 hours a week
3	F	32-28	British	UK	1-2 years	Primary income	Academic Editing	< 20 hours a week
4	M	25-31	Bangladeshi	Bangladesh	1-2 years	Primary income	Database Development	40+ hours a week
5	M	25-31	Israeli	Israel	3-4 years*	Supplementary income	Translation	< 20 hours a week
6	F	46-52	British	UK	1-2 years	Primary income	Writing	< 20 hours a week
7	F	25-31	Bruneian	Brunei Darussalam	More than 4 years*	Supplementary income	Marketing	< 20 hours a week
8	F	18-24	American	US	4-6 months	Primary income	Graphic Design	< 20 hours a week
9	F	32-38	American	US	4-6 months	Primary income	Data Analysis	< 20 hours a week
10	F	25-31	American	Pakistan	1-2 years	Primary income	Writing	20-30 hours a week
11	F	25-31	Honduran	US	1-2 years	Primary income	Graphic Design	< 20 hours a week
12	M	25-31	Brazilian	Brazil	4-6 months	Primary income	Translation and Writing	20-30 hours a week
13	M	18-24	Nigerian	Nigeria	4-6 months	Primary income	Web Development	30-40 hours a week
14	M	25-31	Nigerian	Nigeria	4-6 months	Primary income	Marketing and translation	40+ hours a week
15	M	25-31	Indian	India	4-6 months	Primary income	Writing	20-30 hours a week

7.3.2 Diary design

The diary’s primary goal was to prompt participants to capture everyday activities for later discussion in semi-structured interviews. This study was conducted before the practice-focused lens, underpinning this thesis, was sufficiently developed. As a result, the diary was framed around the concept of “work-life balance and boundaries” at the time of designing the study, generating data that goes beyond the description of participants’ practices.

We designed a series of prompts that encouraged participants to reflect and share practices around their freelance work, non-work activities, everyday routines, transition moments between work and non-work, and productivity. Example diary prompts included: “Briefly describe what you’ve worked on recently;” “Take a moment to broadly describe a typical day

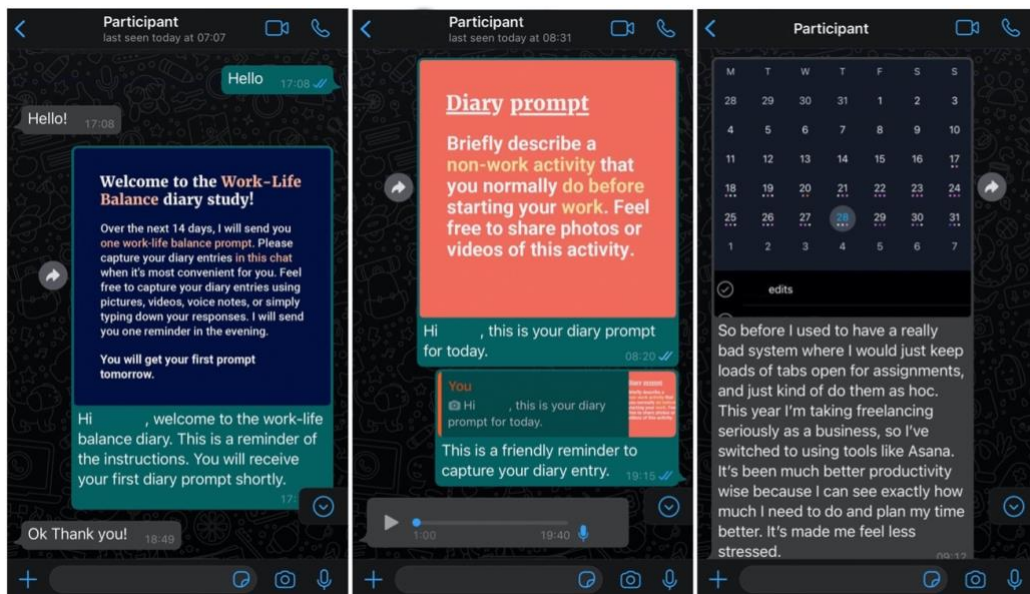
* Upwork was formerly Elance-oDesk.

in your life;” “Briefly describe how you finish your workday;” “Take some time to capture a moment when you have found yourself juggling work and non-work activities.” (See Appendix A2 for the complete list of prompts.) We sent a different prompt every day, for 14 days—see 7.3.3 for a detailed explanation of the diary deployment.

We followed recommendations from the *diary study pipeline* detailed in Carter & Mankoff (2005), whereby the diary supported lightweight *in situ* annotations, various multimedia formats (e.g., photos and voice notes), and researcher interaction for structuring post-diary interviews. To cover these recommendations, we deployed our diary using WhatsApp, a popular messaging app available in over 180 countries for Android and iOS (WhatsApp, n.d.) and priorly used in other HCI studies, e.g. (Lambton-Howard et al., 2019; Rainey et al., 2020). By using WhatsApp, participants had flexibility to capture their entries when convenient and receive daily reminders. We incorporated Bolger et al.’s (2003b) recommendations for mitigating the burden of diary studies by limiting the diary period to 14 days. Finally, we used a password-protected mobile device provided by our university, to communicate with participants via WhatsApp and all the data was deleted from the device after exporting the data.

See Figure 6 for examples of the diary format.

Figure 6: Diary design examples, participants’ names have been removed.



7.3.3 Procedure

The study consisted of three parts: on-boarding call, diary period, and post-diary interview. Firstly, people interested in the study filled in a screening survey containing all the study

details and informed consent agreements (see Appendix A). Participants were invited to an individual on-boarding call through Microsoft Teams during which we reiterated the study purpose, duration, and clarified any questions. During this call we exchanged WhatsApp contacts and sent participants an image card with a summary of the diary instructions as showed above in Figure 6. To lessen the burden of recording diary entries, and as suggested by Carter & Mankoff (2005), we emphasised that skipping entries was allowed and we would save our comments on their entries for the post-diary interview.

Secondly, starting the day after the on-boarding call, the diary period consisted of participants receiving one different prompt daily for 14 consecutive days, including weekends. We sent prompts during participants' morning or as early as possible for those who did not share our same time zone as well as an evening reminder. All participants received the prompts in the same order. After 14 days, we sent an image card indicating the end of the diary period and inviting them to the post-diary interview. We exported the chat and thoroughly recreated the responses in a text editor file including audio and video transcriptions for later analysis (see Appendix A2 for an example of a diary transcript).

Finally, we invited participants individually for a semi-structured interview conducted through Microsoft Teams. Before each interview, we carefully revised participants' diary entries and prepared questions that related to their diaries. The interview focused on adding nuance and context to participants' entries, discussing their daily work-lives, the role of Upwork in managing their work, and examples of combining their freelance work with other activities (e.g., other forms of work or family duties). Example questions included: "How do you go about planning your workday?" "How do you organise your online freelancing projects with your other responsibilities?" "Talk me through the process of prioritising your activities for the day" (see an interview guide example in Appendix A3). Interviews lasted 43 minutes on average (MIN = 29mins / MAX = 67mins) and were audio-recorded and transcribed. Upon completion of the post-diary interview, participants received an Amazon Voucher worth £30 (~\$40) to compensate for their time.

7.3.4 Data analysis

To construct a holistic understanding of participants' management of everyday practices, the challenges they encounter, and the impact of that Upwork's features had on their practices, we analysed our data thematically (Braun & Clarke, 2006b, 2013). We compiled diary entries, including the multimedia items (e.g., images), interview transcripts, and notes for the 15 participants in the qualitative software NVivo (version 12) (QSR, n.d.). We gained familiarity with the data and developed initial inductive codes by systematically going through five

participants' data. Regular meetings were had with this thesis' supervisors to discuss and refine these initial codes and develop a codebook. The codebook was then applied to the rest of the participants' data allowing for the identification of new codes and refining existing ones. Once all the data were coded, we sorted codes and data excerpts into a collaborative board for discussion and identifying patterns. We looked at participants' everyday practices around managing their platform work with other personal (e.g., family duties) and work activities (e.g., full-time work or freelancing off-platform). We then focused on how participants considered and leveraged platform's features when managing their various everyday practices and how individual's context also shaped these choices. Throughout, we identified challenges that participants faced and reported both with platform features but also within the context of their work-life.

From our analysis we found it difficult to disentangle the challenges that participants faced from the platform features and/or their everyday practices. To stay true to how these elements are so interwoven, we present our findings in section 7.4 in three stages, following the order with which one interacts with platforms: 1) everyday considerations in finding work 2) everyday considerations in managing work, and 3) everyday considerations in completing work. We recognise that our participants' everyday routines seldomly followed this linear structure, but it helps with identifying how the various stages of work can present different practices, challenges, and the impact of platform elements at each stage.

7.4 Findings

Our results are presented in three stages, following the normative order with which one interacts with platforms to find, manage, and complete work. At each stage, we touch on the three recurrent themes we identified through our analysis: (1) everyday practices, (2) challenges freelancers encounter when enacting their everyday practices, and (3) platform elements that impact everyday practices.

7.4.1 Everyday Considerations in Finding Work

In this section, we capture how freelancers consider and leverage platform elements for finding work. As described in Chapter 4 (see 4.1), finding work is fundamentally determined by Upwork's structures and features, such as the bidding system, profile ratings and badges, and client interactions. These platform elements impact the amount of work freelancers can get and, thus, require competencies to land new projects while attending other responsibilities. We also found that the period of finding work and negotiating contract details is crucial for managing everyday activities once the project starts.

7.4.1.1 *Availability expectations*

One of the greatest selling points of becoming a freelancer is the ability to be in control of working hours and have greater flexibility. We found that managing one's availability when looking for jobs through the platform poses specific challenges that can jeopardise that apparent flexibility. The pace at which work is arranged on Upwork increases the expectations to remain attentive for potential new work opportunities. The platform design incentivises bidding for work and responding to clients quickly to land jobs. For instance, P2, a market researcher living in the UK, shared that 'timing' to get jobs 'is everything' because some jobs can be gone in a matter of hours, recognising the fast-paced hiring dynamics of freelancing platforms:

[P2] "I was applying to things previously that were posted weeks ago or days ago. One of the, you know, articles I read said that a job posted in [the past] 24 hours, or even 12 hours, is already taken, which to me is quite terrifying ((laugh)) (...) I mean I knew timing was everything, but I didn't know that the timing of 24 hours made a massive difference."

It is this velocity of work exchanges that dictates availability expectations. Because clients have a wide range of qualified freelancers to choose from on the platform, remaining available for potential work opportunities at any point becomes crucial. Remaining available also means adjusting to potential clients' availability and responding when they are more active. P11, a graphic designer in the US working a full-time job alongside freelancing, illustrated the importance of being alert for potential invites when clients are also available and responding before her competitors to land a job:

[P11] "Most customers are available during the day time rather than night time so in Upwork is better to, especially if you get like an invite to a proposal, I wanna be the first one out the gate because that usually lands you the job like quickly and then you talk to them before they're bombarded with lots of people."

Remaining available for potential work opportunities becomes a greater priority for those freelancers that are getting started on the platform and building a reputation. While online freelancing can enable greater flexibility and autonomy to choose when work is conducted, it also requires constant monitoring of communications. Thus, setting boundaries becomes more challenging in an environment where delaying a response can result in clients choosing another freelancer. Exemplified by P8, a graphic designer in the US who has freelanced for

less than six months and has two part-time jobs, she felt compelled to be available for potential new opportunities and respond promptly even during her designated non-work hours:

[P8] (Diary excerpt) "I feel like I always have to be available to potential clients, so even when I decide to be done working for the day so I can spend time with my boyfriend, if I see a message from a potential new client, I feel like I need to answer immediately lest they chose to work with another freelancer. I get anxious every time I get a new message and worry that I won't be able to do the work or do it well enough to satisfy the client."

Also, there are reputation implications for delaying a response. As reviewed in section 4.1.1 freelancer profiles display robust metrics and percentages that reflect freelancers' history on the platform that can help in securing a project. Beyond clients' evaluation, some participants shared experiences around how other interactions (or lack thereof) impact these algorithmic assessments. In terms, of availability the system can monitor how long one takes to reply to a client and reduce the responsiveness percentage should it go under a certain threshold. For instance, P7, a marketing specialist from Brunei, shared one time when she missed a notification from a potential client and noticed how this delay lowered her responsiveness rate:

[P7] "Upwork do time you on how responsive you are. One time I didn't get a notification, the app was buggy, so I didn't check my email either and I didn't realise that for like one and a half day that this person messaged me even if I'm not interested in the job (...) Upwork kind of flags me as unresponsive so like my responsiveness went from 100% to like 92[%] or was it 89[%] I forgot but yeah it wasn't a perfect 100[%] anymore"

The configuration of Upwork's hiring dynamics requires freelancers to be available for potential work opportunities. It is the pace at which jobs are taken, the breadth of available talent worldwide, and the algorithmic evaluations that heighten this expectation for constant availability. We found that even when our participants established hard boundaries between work and non-work, they often remained attentive for potential work messages, suggesting that they effectively rarely switched off from work.

7.4.1.2 Screening potential clients

The success of freelancing heavily depends, among other things, on the relationship that is built with a client (as was discussed extensively in our previous study). We found that screening potential clients and identifying those who are trustworthy is a crucial practice for finding work that eases the process of managing work activities down the line. Freelancers

screen potential clients to ensure that working dynamics are compatible, expectations are aligned, and demands are manageable. A calibrating strategy we observed was accessing the client's profile during the hiring process and reading the reviews they were given from previous projects, paying particular attention to how they rated other freelancers. As illustrated by P8, clients' profiles provided her valuable information to assess their work expectations and demands before deciding to work with them:

[P8] "You can read if a freelancer says 'this client was unmanageable, this client had insane expectations, they never answered' then I don't wanna work with this person [client] (...) you can even see how the client writes about the freelancers they hire so maybe the client has all five stars but they're giving out mixed reviews so there's also that guessing game there too where 'why didn't they get a five star if you're only writing something nice about them?' But you can get a sense of who a person is and how they work with others based on both the reviews they get and the reviews they give."

However, as P8 explained, reviews are contingent on other freelancers being candid about clients' work dynamic in their reviews. As we described in the previous chapter, there is a power imbalance ingrained in the design of freelancing platforms, whereby freelancers might not be open about their reviews because it could hurt potential future work opportunities. Thus, this strategy of assessing clients' work was multifaceted and included other aspects beyond merely looking at clients' profiles. As P1, a writer living in the Czech Republic, mentioned that her main strategies to determine if she wanted to work with a potential new client was reading their proposal and talking to them, rather than trusting other freelancers' reviews:

[P1] "Sometimes the feedback could be a bit like 'I'll give you five stars if you give me five stars' so it's not that accurate (...) cos I've worked with this one client (...) I thought he would be really good but then I was like 'he wasn't that good' I was thinking 'why is everyone giving him five stars if he's not good?' I don't really look at the feedback like that's not my top priority it's mostly the proposal an if they initiate a conversation then I can already tell how they are gonna be like."

Also, these screening strategies were honed over time as freelancers learned more about the platform and client dynamics. Developing this experience allows to identify indicators suggesting a client might not be trustworthy. For instance, P15, a writer from India, stated that elements such as the project description and budget helped him in assessing potential client's professionalism, which informed his 'gut feeling' about the work opportunity:

[P15] “Low paying clients are generally never satisfied with the work. Job descriptions also help me gauge if the client is going to be a professional client or someone who just wants to scrape the bottom of the barrel it’s usually harder to gauge on [their] rating so I try to interact with them a few times before I agree on a contract but it’s just this gut feeling that develops regarding whether a client will be a good fit or not.”

We found that assessing potential clients is a common practice when finding work on Upwork. Freelancers harness a combination of strategies, such as reading client’s reviews and analysing prior interactions, to gauge the client’s work dynamic. While leveraging platform’s affordances was useful, e.g., looking at the client’s reviews and budget, freelancers often need to extend these capabilities by interacting with clients and developing their intuition over time. As we will describe below, screening clients was seen as the baseline to mitigate challenges when managing everyday work activities, such as negotiating priorities and deadlines, which are crucial to freelancers’ routines.

7.4.1.3 Managing expectations

Managing clients’ expectations emerged as another crucial consideration while finding work to organise one’s work-life. While freelancers’ profiles typically show their availability and rates, these are not set in stone. Upwork leaves the negotiation process open for the freelancer and clients to reach mutual agreement on the project details, such as timeline, payrate, and deliverables. This negotiation process is key for freelancers and clients to align their expectations and agree on what is achievable within the project or task timeframe. For example, P3, a writer based in the UK, exemplified the unrealistic expectations clients can have:

[P3] “Although obviously on Upwork your hourly profile rate is very clear a lot of people don’t want to do a fixed price and they have absolutely no concept of how much you will get done within an hour. The site says that I charge 45 dollars an hour but they [clients] think I can do 10 thousand words within that hour and obviously you can’t.”

Managing clients’ expectations serves as a strategy to set boundaries with clients at the start of the relationship. This practice contributes to effective work management and allows for carving boundaries between work and non-work responsibilities before committing to a project. As exemplified by P8, she makes her working hours very clear from the first point of contact as a strategy to establish work and non-work boundaries and remain in control over her schedule:

[P8] *“I make sure to discuss with the client how much time I have per week to work on their project so I don't promise a logo and say ‘I'll have it done in a week’ I say ‘hey, this whole project will take 20 to 30 hours. I have available this week 10 hours to put into this project’ so a lot of is managing client expectations as well and making sure they understand that I have other obligations to take care of.”*

Moreover, managing expectations and timelines gives clients reassurance of competence and professionalism. For example, P10, a US writer, shared the importance of being transparent about how long a project will take: *“I'm very clear about that like [I say] ‘look a draft is gonna take me five to seven days.”* She continued to reflect that Upwork's highly competed marketplace incentivises platform newcomers to take on projects even with unrealistic expectations. As such, being firm and transparent when communicating expectations leaves a good impression on the potential client:

[P10] *“I think a lot of the clients like really appreciate when you're transparent because that's like an unfortunate by-product of Upwork is that everybody is desperate to do work. Whether or not they can deliver is different, but they'll say ‘yes’ to everything because it's so the way the platform works is like quite hard for you to get jobs especially initially that you just kinda say ‘yes’ even though it's unreasonable expectations.”*

Despite Upwork providing a structured processes to arrange work, it is the freelancer and client responsibility to negotiate project expectations. Managing expectations is a common practice to demonstrate professionalism and clarify potential assumptions clients might have. Freelancers use this practice to negotiate timelines and set upfront boundaries that can help them plan their work down the line by carving boundaries for other demands.

7.4.2 Everyday Considerations in Doing Work

In this section, we capture the practices required to organise and execute work activities once a contract starts and how platform work fits into a wider ecosystem of work and non-work responsibilities. We observed that online freelancers' everyday lives are dynamic in that one may be switching between contracts for different clients, or even juggling other jobs and responsibilities outside of Upwork. We describe how platform elements and individual circumstances shape the process of organising and doing work while freelancing on platforms.

7.4.2.1 *Productivity practices*

In managing everyday life, freelancers harness a combination of strategies and digital technologies to support productivity and collaboration. This is true of any knowledge-based job, but it can be especially challenging for freelancers as they have no support or infrastructure to rely on, guide them, or train them. As part of the independent nature of freelancing, our participants developed routines and work patterns that helped them in spread out moments of focus, productivity, and collaboration. For example, P6, an experienced marketing writer from the UK, structured her workdays prioritising the tasks that require more focus and creativity for the early hours of her day, while leaving other tasks demanding lesser attention for the afternoons:

[P6] (Diary excerpt) "I go from having total focus in the mornings to needing more frequent breaks as the day wears on. (I usually plan my work around this, so my afternoons are spent on editing and revising copy, rather than on the creative process of generating content.) around 4pm I know that I'm not going to produce anything of quality and it's time to stop. I also like to have structure to my day and not just work indefinitely."

By contrast P13, a web developer based in Nigeria, organised his day around the cost of internet access. He balanced his productivity preferences with the necessity to save valuable financial expenses required in self-managing his platform work – something that is not commonly experienced by those in the Global North who generally have constant access to the online world at a flat rate:

[P13] "Purchasing data for internet often is quite expensive here (...) I'm getting it 90% off the price at midnight (...) so at night is when I have more focus and then less distractions but the basic inspiration behind that [working during the night] is just the lower cost of internet access."

Online freelancing also involves developing self-management abilities to organise projects across various days. Breaking down project tasks was a common practice among our participants, something that echoes the concept of ‘microproductivity’, which has been advocated as a way of supporting better work-life management (Teevan et al., 2016). Yet, as suggested in previous research (Ahmetoglu et al., 2020), knowledge-based work can be difficult to predict and plan for. For instance, P12, a translator and writer from Brazil, shared that this ability to forecast and organise work is something he developed after gaining more experience freelancing:

[P12] “I took a job yesterday that is to write five thousand words (...) I will write like fifteen hundred today, fifteen hundred tomorrow, fifteen hundred in the third day, and in the fourth day I will proofread everything and edit (...) I'm trying to be more aware of that process because sometimes I would get a job like have one week to do it and start on the last two days”

Various project management software also featured as enabling productivity and to stay on top of varying work responsibilities. We observed that our participants often had multiple work-life commitments beyond freelancing on Upwork, thus figuring out which tools work best for them was perceived as crucial to stay on top of their various demands. Tools like Notion⁸ or Asana⁹ were seen as supporting the practice of tracking multiple deadlines, progress, and project resources for their work holistically rather than merely Upwork projects. P1 noted that these tools were crucial because she was juggling multiple roles and work streams and she needed to keep all the projects organised and unified:

[P1] (Diary excerpt) “My notion helps me visualise all my tasks and ideas. Everything is clear and organised so I know where to find any information I may need when I need it. It has all the due dates, files, links and progress tracker of every assignment. [It's] [e]specially useful in productivity when you're [sic] balancing university, freelance work, tutor, passion projects and other miscellaneous things.”

Productivity strategies and tools become a crucial practice to meet everyday demands. The highly autonomous nature of freelancing requires maximising productive time and learning how to consciously distribute one's workload. Tools like calendars and project management software become the building blocks that support productivity practices. In turn, these tools bring together the multiple roles and responsibilities that make up freelancers' work-lives, which often go beyond freelance work but cover multiple activities.

7.4.2.2 Balancing competing demands

Freelancers have the responsibility to develop working patterns that fit into a broader ecosystem of everyday activities. As a result, work and non-work become intertwined in patterned routines that are carefully crafted (B. Gray et al., 2020). We observed that our participants balanced their competing demands by allowing their routines to adjust when disruptions emerged – in other words, forestalling disruptions by adapting quickly to work

⁸ <https://www.notion.so>

⁹ <https://asana.com>

and non-work activities. This resonates with Erickson et al.'s (2019) concept of *elasticity* whereby freelancers embrace and learn from the dynamic nature of their work. For instance, P13 described how he adjusted his schedule to meet multiple demands:

[P13] (Diary excerpt) "I have a milestone of work to deliver to a client on Upwork. I have an outstanding work to deliver to an offline client. The easter Holiday is fast approaching and I needed to shop for groceries and other items. I (...) [will] spend the holidays with my parents. With all these activities piled up, kept my schedule aside, worked overtime and eventually went shopping on Wednesday. Then returned to work another overtime to make up for the coming days I would be offline."

However, competing work-life demands can overlap and create conflict. Echoing Gold & Mustafa's (2013) notion of freelance work as 'polychronic', i.e., doing several things at the same time, which erodes the boundaries between work and non-work. We found that our participants' contexts constrained how they adapted their practices to competing demands. For instance, P3 reflected that to balance both her work and caring responsibilities she ended up prioritising work more than she would prefer:

[P3] (Diary excerpt) "I was working early in the morning while the kids ate breakfast and [I] sent it [project] off, job done (...) except when they [client] messaged 10 minutes later sending it back to me because I hadn't edited the appendix (...) so I had to try and do that while the kids were running around and getting into trouble. I also often find myself chatting to potential clients when my kids would rather (...) I was giving them [kids] 100% of my attention."

We also observed that balancing competing demands requires leaving room for unexpected situations to emerge. Because of the dynamic nature of freelance work, there is a constant reorganisation of work. Thus, freelancers leave room for opportunities to emerge and alter their work routine. P9 shared how she developed the ability to leave room to take on Upwork projects while meeting her off-platform retainer client's tasks:

[P9] "I know that [Retainer Client] they're flexible and the projects that I've been given they are more long term projects so I can, you know, if somebody from Upwork emails me and was like 'hey I need this thing turned around in two days' I can put that [Retainer Client]'s stuff on hold obviously if there's a meeting or something I have a deadline I can't but usually I can sort of arrange the [Retainer Client]'s work around the Upwork work"

On the flipside, there is a tension between allowing for dynamic opportunities to emerge and dealing with the unpredictability of the project-based work. Relating back to managing clients' expectations (7.4.1.3), having clear project timelines enable the ability to craft routines and balance competing demands. However, this strategy is contingent on having the ability to plan for the work. P6 stated the difficulties adjusting the flow of work with clients who lack project clarity:

[P6] (Diary excerpt) "You get people who mess you around. They have you jump through hoops and say they are going to hire you then delay the project or go silent then eventually give you the work but want it done ASAP [as soon as possible]. If you're busy you need time to schedule work in and can't just finish a big project in 48 hours but many people on Upwork forget you have other clients and aren't just waiting on them."

We observed that to balance competing work-life demands, freelancers develop patterned routines that allow for adapting to dynamic situations. This strategy harnesses the flexible and autonomous nature of freelance work to extend and reorganise work time as necessary. Nonetheless, this strategy can come with the caveat of work permeating non-work responsibilities. Central to balancing competing demands is the ability to map out work-life activities which can be hindered by the unpredictability of freelance work.

7.4.2.3 Constrained autonomy

We found that Upwork's work monitoring features for hourly contracts played a role in constraining the autonomy for managing work activities. The Upwork Desktop App software requires freelancers to adhere to constrained work times by tracking activity and taking screenshots to monitor work (as described in 4.1.2). Contrary to the elasticity required to pivot when demands or issues emerge, this feature imposes rigidity to work practices that allow to balance demands. This rigidity was seen as restricting control over work and non-work time. Exemplified by P5, a translator from Israel, he saw the feature as working under pressing surveillance and undermining his productivity:

[P5] "it's like trying to control every minute of your work and it feels like, you know, it stresses you out I don't like working under that programme [Upwork Desktop App]. It feels like I have to be working all the time and that might actually provide worse results because you can't be one hundred percent efficient, you have to, you know, take a minute to breathe every now and then."

Although the feature can be paused and logging time manually is allowed, freelancers have no payment protection should the client dispute the work. The burden of deciding whether to work with Upwork Desktop App or risk not having payment guarantee lies with the freelancer. This power imbalance favours clients and platform's profit, but leaves freelancers open to potential abuse. As mentioned by P10:

[P10] "so you can put in manual time where you just say, 'hey I worked on this for like an hour,' but then Upwork has basically said 'you're on your own when you do that' and if the client says 'I don't wanna pay you for that hour' because they can't prove that you were working, nor can they prove you weren't working, so then Upwork is like 'well, you're on your own.'"

Moreover, working under this monitoring software constrains work autonomy by creating the sensation that time should be maximised exclusively for work delivery, overlooking the dynamic nature of freelance knowledge work (Ahmetoglu et al., 2020). As in any other form of knowledge work, online freelancers need to engage in creative and problem-solving activities which are hard to capture by metrics such as mouse clicks and keystrokes. The design behind the monitoring software assumes that one's workflow is linear and without disturbances or pauses to work through problems. This was exemplified by P9 who despite recognising that she could bill for the time invested in her thought process, she felt that pausing the programme released pressure of feeling monitored:

[P9] "If I feel like I should know how to do something and I have to look it up I'll pause the time tracker sometimes for like 10 or 20 minutes while I sort of work through something which I definitely probably could be charging for that time but I kind of feel like it loosens the stress on me as well (...) I feel like I have as much time as I need to actually like really sit down and think it through."

This concern over monitoring of the work process also resonated with the experience of P11, who actively avoided hourly contracts. She explained that beyond the intrusiveness of the Upwork Desktop App, she felt that this featured was comparable with clients directly supervising her work, which she perceived as removing the autonomy she valued from freelance work: *"I don't mind screenshots but when you're like on top of me that's a concern (...) I will do good work I just don't need to be supervised"* (P11).

Opposite to the promise of autonomy and control over one's work, Upwork's monitoring software for hourly contracts was perceived as imposing a constrained work practice. This constrained work practice clashes with having the flexibility required to attend to multiple

responsibilities, choosing one work's preferences, and taking breaks or pausing to think through problems. Finally, the design of the app highlights another form of power imbalance by not protecting payment disputes, should the freelancer choose to log time manually.

7.4.3 Everyday Considerations in Completing Work

In this section, we capture how completing a contract impacts freelancers' ability to find and manage future work and can pose challenges for work detachment. We first unpack how getting positive client reviews eases finding future work and enables greater autonomy to set boundaries between work and non-work activities. Then, we follow to describe platform elements and contextual circumstances that influenced our participants' ability to detach from work.

7.4.3.1 Evaluation impact

As we have described so far, freelancers develop complex strategies, such as screening potential clients and managing expectations to ensure that, when a contract ends, they receive a positive review. Freelancers know that positive reviews translate into repeated work opportunities and less time looking for projects as their profile stands out for potential clients. On the flipside, negative reviews (or lack thereof in the case of freelancers who just got started on the platform) make it harder to find projects, taking up more time writing proposals and bidding for work. P12 as relatively new to Upwork shared how despite having had positive evaluations, he still experiences anxiety after completing a contract because he is aware of the impact a negative rate can have on finding future work:

[P12] "The anxiety I have to get reviewed like I have five reviews on my profile until now all of them are five stars precisely because of that I get really anxious about it I know that to keep getting more jobs I need good reviews and after I send the work I usually go to sleep because I know I will be like extremely anxious about the feedback even though I haven't got a bad feedback [sic] yet."

Having a high-rated profile also enables autonomy to set harder boundaries and become more selective about the work one chooses. By contrast, freelancers new to the platform are more likely to agree to unrealistic expectations, recall P10 (in 7.4.1.3) who mentioned that – by design – freelancers with no record on the platform have little leverage to manage expectations. This notion was echoed by P8 who felt that she had less power to push back because she still is developing that reputation that comes from clients' evaluation:

[P8] "I feel like I'm in a very difficult point in my career to be able to set hard

boundaries (...) I don't really have the ability to kind of pick and choose as much as someone who's further along in their career might be able to (...) I'm not at the point where people are inviting me to gigs because they know my work or they know my reputation."

This view resonates with Wood & Lehdonvirta's (2021) notion of 'algorithmic insecurity' whereby being evaluated through algorithmic processes shapes new forms of worker vulnerability, in this case reducing autonomy to set boundaries between work and non-work activities. For other participants this vulnerability stemmed from the opacity of the evaluation algorithms that their livelihoods relied on, as described by P15: "*see Upwork is making your profile to depend upon a score and it is not even telling you how it's being calculated so I think that is pretty unfair of them.*" The sentiment of vulnerability was further exacerbated by another imbalance in the system when clients provide private feedback (see a description of private feedback in 4.1.3), making it challenging for freelancers to improve upon their services. Put it in P3's words: "*It's just really tough to not know why you may not have got excellent feedback if someone chooses not to tell you.*"

Clients' evaluation is a crucial element that freelancers consider before accepting a new project. Freelancers are mindful of the implications that ratings have on securing projects regularly on the platform. Hence, strategies such as assessing potential clients, are developed in the process of finding work to minimise the risk of getting a negative review. High-rated freelancers have greater autonomy to push back and be selective about potential clients. This speaks to the implications that evaluation has on the broader management of one's work-life.

7.4.3.2 Perpetual work-lives

Unlike traditional employment, freelancing rarely has a clear-cut end of the day. As previously detailed, freelancers flexibly accommodate a wide range of work and non-work responsibilities during the day, manoeuvring when disruptions emerge. On top of these dynamic workdays, freelancers are responsible for carving time off and setting their own work and non-work boundaries. Illustrated by P8, she referred to freelancing as a profession that can be hard to detach from: "*It seems like every time I say 'okay I'm done working for the day' I get another message from a client or a new client is, you know, wants to know about 'XYZ.' "*

Upwork's international marketplace model can make it tempting to continue looking for work and responding to messages at any point of the day. With project opportunities so easily accessible through the platform, it can become difficult to entirely detach and let work permeate one's recovery time. Particularly through mobile technologies, P1 shared in her diary how she scrolled through her Upwork's job feed and bookmarked potential jobs after catching

up with other social media during her downtime: *“I’ll get ready for bed and watch some YouTube, read a book or scroll on social media. If nothing interests me, I’ll check my upwork [sic] app. Reply messages if there are any and look at jobs and save them for the future.”*

This notion was further echoed by other participants, who remained attentive for work opportunities during their non-work time. Relating back to the necessity of remaining available for new potential clients and the platform incentivising quick responses (recall 7.4.1.1), some participants struggled to completely detach from work-related activities. For instance, P4, a database developer from Bangladesh, spoke about the difficulty of balancing work detachment with securing future work:

[P4] “I find it very hard to detach. Even when I decide to call it a day my mind is already thinking about where the next project might come from (...) When I’m spending time with my family I can get easily distracted by [my] notifications [I’m like] ‘is this a new client messaging?’”

Nevertheless, a few other participants were better at keeping clearer boundaries between their work and non-work time. It was clear that these participants were further advanced in their freelance careers and highlighted that their experience allows them to be in control over setting these harder boundaries. Indeed, an established profile plays a prominent role in enabling higher levels of autonomy. Even when setting these harder boundaries, remaining flexible to attend work responsibilities at different times of day was a feature of working in a global marketplace. Illustrated by P6:

[P6] “I’m not one of these people that has to be constantly checking Upwork at seven o’clock at night and doing all of that, you know, and obviously there are extenuating circumstances sometimes and a client in a different time zone might need to have conversation with you right now and that’s fine but that is scheduled in it’s occasional (...) I guess because of where I am in my career and the fact that I’m old enough and wise enough to not just be a very sort of naive freelancer that runs themselves ragged twenty-four seven for their clients I kind of have those boundaries in place for my clients and they respect it.”

Freelancing platforms introduce challenges for work detachment. As an international marketplace, there are constant work opportunities emerging and even one might have clients in multiple time zones, making it tempting to continue working for longer hours (Shevchuk et al., 2021). Also, freelancers adjust their work schedules accordingly to their multiple work and no-work demands, leading to porous boundaries between these activities. Having an

established reputation on the platform and working with trustworthy clients contribute to feeling in control over detaching from work and taking time off.

7.5 Discussion

In this chapter, we have described how Upwork freelancers manage their everyday practices, the challenges they encounter, and how platform features impact their routines. We will now summarise and discuss our findings with reference to the Structuration Model of Technology (introduced in section 7.2). The discussion will centre on what Orlikowski referred to as a ‘use mode’ of the model, where we consider how freelancers make use of platforms. Then we will extend to consider the ‘design mode’ of freelancing platforms.

7.5.1 Freelance Everyday Work-Life as Influenced by Platform Use

We found that elements of everyday practice, platform features, and the context in which work-life happens are tightly interwoven. To explore their relationships, we found using Orlikowski’s (1992) Structuration Model of Technology (Figure 5 in 7.2) to be useful to think about the relationship between platforms and freelancers’ everyday practices. Orlikowski’s model is particularly well-suited to render the ongoing interactions of technology at work and the study of workers’ practices (Orlikowski & Scott, 2016). We depict these interactions in Figure 7, provide an overview in Table 5, and elaborate below.

Figure 7: Structuration Model of freelancers’ ongoing interaction with the Upwork platform, adapted from Orlikowski (1992)

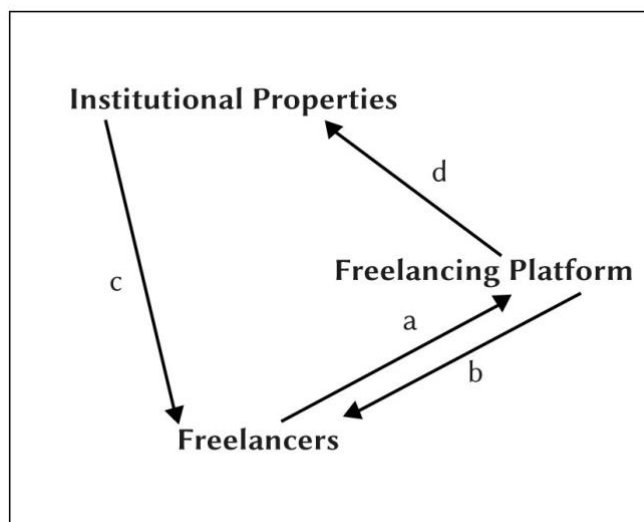


Table 5: Freelancers’ ongoing interaction with freelancing platforms

Arrow	Type of Influence	Discussed in
-------	-------------------	--------------

a	Freelancers' appropriation of platform features during use.	Section 7.5.1.1
b	Freelancing platforms as enabling and constraining freelancers' everyday work-life.	Section 7.5.1.2
c	Institutionalised norms of freelance work influencing freelancers' work-life practices.	Section 7.5.1.3
d	Freelancing platforms as influencing the institutionalised norms of freelance practice.	Section 7.5.1.4

7.5.1.1 *Freelancers' appropriation of platform features during use*

According to the concept of “duality of technology”, technology is socially constructed by actors through the different meanings they attach to it and the various features they emphasise during use – an ‘interpretative flexibility’ (Orlikowski, 1992). We observed participants appropriating and emphasising certain platform features, in part, to mitigate platform constraints, but other times to accommodate platform work to their individual circumstances (*arrow a in Figure 7*). While a core motivation to develop these practices was to improve their experience freelancing online, they often required additional work, echoing the paradoxical ‘overhead’ platforms create for freelancers (Blaising, Kotturi, et al., 2020; Kinder et al., 2019). This mode of interaction during use illustrates that platforms do not determine freelancers’ everyday practices, but rather are a product of how freelancers choose – or not – to use certain features.

Freelancers appropriate platform features such as standardised profiles, structured proposals, and ratings to assess potential clients while getting work. Some participants mentioned examining potential clients’ profiles, their review history, and comments other freelancers left about them before accepting to discuss a project. Similarly, other participants inferred the potential client work preferences from how they defined their project in their proposal board or by directly communicating with them. Freelancers clearly emphasised different platform features that could mitigate the risk of working with a problematic client.

Freelancers extended and, in some cases, avoided certain platform features to manage their various work-life demands. For instance, participants used additional productivity tools (e.g., project management software) to extend Upwork’s limited milestone tracking (as also suggested in (Kinder et al., 2019)), but also to balance multiple roles and responsibilities that go beyond their platform work, e.g., a full-time job or off-platform projects. Participants developed practices around Upwork’s monitoring software for hourly contracts, for instance, pausing the tool whilst thinking through a problem, using their phone to check other

notifications to circumvent the screenshot system, echoing prior research (Sannon et al., 2022; A. J. Wood et al., 2019), or even avoiding hourly contracts entirely.

Freelancers' individual context also contributed to the importance they gave to Upwork. For example, freelancers with caring responsibilities, a full-time job, or other work-life commitments purposely accepted less projects. While most participants chose their working hours or were influenced by their clients' working hours, one participant from Nigeria was constrained to working during the nights to save on internet costs. These examples illustrate how individual context influenced platform use and the features they considered meaningful.

7.5.1.2 Freelancing platforms as enabling and constraining freelancers' work-life

Drawing from Orlikowski's (1992) model, we can view Upwork as simultaneously enabling and constraining everyday practices (*arrow b* in Figure 7). The platform's structures allow freelance work to have a standardised cycle, regardless of individuals' location. For instance, the platform enables the marketplace for work to be negotiated between freelancers and client (Jarrahi, Sutherland, et al., 2020). On the one hand, these affordances enable agency for freelancers to choose who to work with as well as how they negotiate the outputs of their work with clients, thus providing greater work-life flexibility. On the other hand, this global marketplace constrains this flexibility, for instance, by incentivising competition with freelancers globally, penalising low levels of availability and responsiveness, and atomising freelancers' competencies to opaque ratings (Rahman, 2021).

The platform provides technological infrastructure to arrange projects flexibly, e.g., per milestone or per hour. This platform structure enables flexibility and autonomy for freelancers to organise their workload, choose their preferred productivity tools, and integrate other responsibilities into their routines. At the same time, however, this structure constrains freelancers to platform norms and tools. For instance, monitoring hourly work constrains work autonomy by imposing a rigid structure to the work process, going against the flexibility that freelancers appreciate from this type of work. Further, work arrangements and project tracking must remain on the platform, risking retaliation should freelancers and clients move collaboration off-platform (Kinder et al., 2019; Sutherland et al., 2019).

Further, the platform simplifies the evaluation process by using algorithmic models to measure clients and freelancers' work satisfaction. This structure enables a standardisation of work relationships, enabling trust among platform users at a great scale. High rated profiles unlock greater opportunities to find projects and, in turn, enable greater control over one's work boundaries. On the flipside, low ratings constrain freelancers' ability to find quality work. This issue can permeate the ability to balance work-life demands, for instance, by taking on

work with unfeasible expectations or difficulties detaching from work. Indeed, platforms become a mediator of freelance work with implications that pervade onto freelancers' work-life off-platform.

7.5.1.3 Institutionalised shared practices influencing freelancers' everyday practices

Orlikowski (1992) argued that the use of technology in organisational contexts is also influenced by institutional conditions (*arrow c in Figure 7*). While Orlikowski specifically referred to situated organisational norms, here we make a distinction to argue that freelancers are influenced by the institutional shared norms comprising their practices (defined and reviewed in 2.1 and further examined in Chapter 6). In other words, freelancers are influenced by shared actions and norms accepted and enacted through their work. For example, a shared practice of freelance work entails developing client relationships whether on- or off-platforms. Our findings illustrate this relationship is crucial to set expectations, demonstrate professionalism, and negotiate project details. When platforms impose technical constraints on such practice, freelancers seek ways to build these relationships anyway.

Self-managing productivity and demands is another example of instituted shared practices of freelance work that shapes interactions with platforms. When crafting work routines, various work-life demands factor in the process of allocating work time, such as considering internet costs, other client commitments, and caring responsibilities (recall P13, P9, and P3 in 7.4.2.2). These demands constrain the amount of time freelancers can allocate to platform work and has implications for the types of projects they accept. Freelancers regularly consider their multiple demands and workloads, leaving room to manoeuvre should disruptions emerge, a form of 'elastic' practice akin to freelance knowledge work (Erickson et al., 2019). Likewise, carving time off and non-work boundaries enabled control over the routines of some (usually more experienced) participants, as reported in prior research (B. Gray et al., 2020). Such self-management practices begin to shed light on how shared freelance practices influences interactions with platforms.

7.5.1.4 Freelancing platforms influencing the institutionalised shared practices

Finally, our findings further elucidate how freelancing platforms are transforming instituted, shared freelance practices (*arrow d in Figure 7*), what Orlikowski referred to as the "institutional consequences of interaction with technology" (Orlikowski, 1992, p. 19). Freelancing platforms have impacted freelancers' availability expectations where talented professionals are available around the clock and across geographies, unlike more traditional freelance work that is constrained to local labour markets and personal relationships (Graham & Anwar, 2019; Sinicki, 2019). Our findings illustrate how freelancers adapt their everyday

schedules to match these fast-paced market conditions, extending prior research on platform time allocation control (Shevchuk et al., 2019, 2021). This pressure on availability was more pronounced for participants located in Asia as most of their clients were based in North America and Europe, requiring them to work late nights. Further, the platform is designed to keep freelancers attentive to notifications and new project opportunities by timing responses and punishing inactivity with rating downgrades. These conditions introduce a tension between valuing work flexibility and platforms' commodification of freelancers' availability as part of their services. Indeed, prior research has criticised how the gig economy has transformed clients and customers' expectations towards on-demand, low-cost services (Alkhatib, 2021; Alkhatib et al., 2015; Glöss et al., 2016a; Lampinen, Lutz, et al., 2018; Woodcock & Graham, 2019).

Platforms' algorithmic management and standardised work processes have transformed work autonomy as a characteristic practice that freelancers share. For instance, freelance work has been characterised by enabling people to work under their own terms, however, platforms have introduced monitoring technologies, resulting in constrained autonomy and flexibility, as it was also discussed extensively in our previous study (Chapter 6). Reputation has been transformed by rating systems that have serious consequences for how freelancers secure work (Munoz, Dunn, et al., 2022; Sutherland et al., 2019; A. Wood & Lehdonvirta, 2021). Our findings extend this prior research by showing how freelancers deploy various practices from the moment they apply for projects to ensure a positive rating. Platforms have transformed how reputation is built through algorithmic measures and standardised ratings (Munoz, Dunn, et al., 2022). Whereas traditionally freelancers' reputation has been constrained to a tight-knit network of clients and managed independently, reputation is now globally available and managed by a platform third party.

7.5.2 Freelancers Everyday Practices as Influenced by Platform Design

This study has mainly focused on the interpretive flexibility that unfolds during freelancers' use of freelancing platforms, a '*use mode* of interaction' (Orlikowski, 1992). However, Orlikowski's (1992) model also considers a '*design mode* of interaction' where human agents build into technology institutional assumptions, rules, and norms. In the case of our study, these human agents would be Upwork's developers and decision-makers. This study raises awareness of platform designs implications for freelancers' everyday practices and, more broadly, for the future of freelance work.

There seems to be a disconnection between those who develop the platform and those who use it. Arguably, platform decision-makers put clients' interests at the forefront when

designing platforms, as they are the ones who ultimately determine the supply and demand of platform work (Woodcock & Graham, 2019). This comes at the cost of freelancers. As we have argued, freelancers experience high levels of pressure and anxiety to perform in these highly demanding online labour markets. The experienced precarity is more pronounced for those who rely on freelancing platforms as a main source of income and live in geographies with already stressed local economies. Rida Qadri has criticised the abject impositions of platform technologies onto diverse contexts, particularly the Global South, with workers making up for the systems' shortcomings (Qadri, 2020, 2021a, 2021b). Platform designers have the responsibility to create systems that consider these vast realities and live up to their promised flexibility and work quality. Prior work has shown there are also implicit biases coded into the algorithms that prevent workers from having fair, equitable experiences (Dunn et al., 2021; Foong et al., 2018; Hannák et al., 2017; Ma et al., 2022). As we argued above, freelancers might have agency to extend and even circumvent platform features to enhance their experience, however, they have little agency to fundamentally influence platform designs.

To address these challenges, it is imperative to envision new ways for freelancers to influence the design process of platform designs. Our findings highlight the importance of making workers feel valued and in charge of their job, and not merely subjected to opaque algorithmic decision-making (Rahman, 2021). For example, recent research has engaged location-based gig workers in re-imagining platforms' algorithmic management features (Kirman, 2022; Zhang et al., 2022). Researchers have explored avenues to re-imagine a gig economy that is worker owned and run (Alkhatib et al., 2015; Scholz & Schneider, 2017), and new forms of worker-centred platforms have proven to provide secure alternative to mainstream, capitalistic gig economy companies (Kusk & Bossen, 2022). Despite these emerging efforts, big tech companies continue to dominate most of the gig economy market and have little incentives to change their model. When it comes to pushing freelancing platforms to implement changes to support workers, the Oxford Internet Institute 'Fairwork' project is a successful example of holding gig economy companies accountable and advocating for workers' wellbeing (Fairwork, 2021b). We acknowledge a broader systemic change is necessary at the policy level to mitigate the negative effects of platform capitalism on workers (as further discussed in 10.3). However, policies only apply to local or country-specific legislations.

Ultimately, it is important for researchers and designers to acknowledge how the design of these platforms is re-configuring shared practices of freelance work, internationally (both positively and negatively). For instance, traditionally relationships and arrangements have remained between clients and freelancers, whereas now platforms are central intermediaries

of this relationship. Usually freelancers have had sole control over their work processes and boundaries, now platforms influence these decisions. Platform mediation has started to become part of freelancers everyday practices, introducing unprecedented challenges for availability expectations, work autonomy, and work detachment. Because platforms have transformed the instituted norms of freelance practice, more research is needed to ensure freelancers' voices from all over the world are reflected in platforms' designs.

7.6 Limitations and Future work

Although our sample consists of a small group of international participants with diverse backgrounds and occupations and it was never meant to be representative, our findings highlight impact that context plays in the use of online freelancing platforms that operate internationally. These findings shed light on the importance of including participants from more diverse geographies when studying platforms that operate internationally, as other disciplines outside of HCI have done (Anwar & Graham, 2020b, 2020a; A. J. Wood et al., 2018, 2019). While our findings are not exhaustive when it comes to documenting freelancers' everyday practices, they provide in-depth insight into impacts freelancers' platform labour lived experiences. Future work should compare everyday practices in different geographies at a greater scale to inform more equitable platform design and policies. Finally, our study focused on freelancers using the platform Upwork, future work should examine how platforms with a different structure model (e.g., locally owned platforms) might impact everyday practices, as it has been researched in the food delivery contexts (Kusk & Bossen, 2022).

7.7 Conclusion

In this chapter, we have expanded the empirical understanding of how freelancers manage their everyday practices, the challenges they encounter, and the impact of platform's features in this management process. We took an in-depth qualitative approach, combining diary entries with semi-structured interviews, with 15 freelancers. Our qualitative findings suggest that both platform features and individual context shape online freelancers' everyday practices. To balance platform demands and everyday activities, freelancers adopt practices that mitigate platform challenges but also reflect their individual preferences and circumstances. We drew from Orlikowski's (1992) Structuration Model of Technology to foreground the various factors that influence freelancers' everyday practices, introducing serious challenges for availability, work autonomy, and work detachment. We conclude with a discussion of how platform designs are transforming instituted, shared practices of freelance work.

Chapter 8 Developing “Freelance Grow,” a Worker-Centred Design Fiction

Parts of this chapter have been published in (Alvarez de la Vega et al., 2022)

8.1 Introduction

The previous two chapters have uncovered various challenges and opportunities that freelancing platforms pose for freelancers’ shared and everyday practices. We have observed that platforms serve as a useful resource for freelancers but note that it is often freelancers rather than platforms that leverage opportunities. Much of the prior research pertaining to freelancing platforms has focused on developing an empirical understanding of freelancers’ experiences and proposing recommendations to enhance their work, including our research in the previous two chapters. However, much less work has explored design possibilities to amplify the opportunities that platforms present for freelancers’ practices. Therefore, this chapter sets out to address this gap through developing a *design fiction*, named ‘Freelance Grow’, which we then use as the basis for the study presented in Chapter 9.

Design fiction has become a popular approach in HCI to visualise and engage with potential technologies that might emerge in the (often near) future. Design fiction has been widely adopted by researchers and designers to prototype technology artefacts embedded in fictional ‘story worlds’ (P. Coulton et al., 2017; Dunne & Raby, 2013). This approach affords the development of artefacts and speculative technologies in a wide variety of formats, such as fully-fledged technology prototypes (Lawson et al., 2015; Noortman et al., 2019) or even fictional paper abstracts (Bates et al., 2019; Lindley et al., 2016). These creative formats enable a wide audience to imagine potential technology use and discuss their implications and consequences (Bleecker, 2009; C. Coulton et al., 2019; Schulte et al., 2016). As such, design fiction has been successful in exploring opportunities and pitfalls for technology development.

The steadily growing body of research looking at freelancing platforms has generated a wide range of design recommendations to improve the freelance work experience. For example, prior research in HCI and CSCW has made suggestions to enhance freelancers’ career trajectories (Blaising, Kotturi, et al., 2020), impression management (Foong, 2020b; Munoz, Dunn, et al., 2022), wage disparities (Dunn et al., 2021; Foong, 2020a; Foong et al., 2018;

Foong & Gerber, 2021), entrepreneurial development (Salehi & Bernstein, 2018; Suzuki et al., 2016), transparency (Sannon et al., 2022), and mentorship (Blaising & Dabbish, 2022). Moreover, rich insights on freelancers' work preferences have emerged from studies from disciplines like sociology and management, e.g. (Nemkova et al., 2019; Sutherland et al., 2019). Even independent organisations have developed policy recommendations to improve the working conditions on online platforms, for instance, the UK-led Fairwork initiative (Fairwork, 2021a). However, implementing and evaluating these recommendations require significant resources.

Therefore, we see design fiction as a suitable method to investigate online freelancers' reactions to emerging recommendations and to identify further opportunities for researchers to support freelancers' practices through potential platform features. In developing the design fiction, we have critically engaged with the findings from our previous two chapters and recent literature that examines opportunities to improve freelancing platforms. Also we have chosen this design fiction as a research method that will allow us to further explore the problem space at hand and generate empirical data in the study presented in Chapter 9.

8.2 Design Fiction as an Empirical Research Tool

Design fiction has contributed to a wide range of design and research scholarship, leading to confusion over the type of knowledge it generates (for a more extensive review see Baumer et al. (2020)). For example, design fiction's origins trace back to literary science fiction (Bleecker, 2009) and even the performing arts (Brandt & Grunnet, 2000) as a form of challenging social views of technology. Further, design fiction strong roots in 'critical design' (Blythe et al., 2016; Dunne & Raby, 2013; Vines et al., 2012) serves to question views and assumptions taken for granted or that otherwise might go unexplored. Participatory design has tapped into fiction to engage people in the co-design process (Andersen, 2013; Muller, 2012) and even to stimulate research reflexivity in qualitative research (Ciolfi & Lockley, 2020). Because of these diverse uses of design fiction, it is imperative to articulate its goals and the role it plays in this chapter.

The focus of our design fiction is to further generate an empirical understanding of opportunities and challenges new, speculative platform features might introduce for freelancers' shared and everyday practices. Our approach to design fiction resembles that of the tradition of 'user studies' (Baumer et al., 2020). We use design fiction as a means of engaging freelancers in exploring alternative pathways platforms might take to better support freelancers' practices. We draw from the empirical knowledge generated in the previous chapters and from existing sources (e.g., research and policy papers) to develop speculative

platform concepts that make up our design fiction. The focus of this chapter is to articulate this knowledge and make it accessible for discussion with research participants in the study presented in Chapter 9.

8.3 Approach

In this section we describe the process of developing our original design fiction, ‘Freelance Grow’. We developed Freelance Grow in two phases: firstly, we assessed online freelancing literature to identify the opportunities and challenges freelancing platforms create for freelance practice. In this first phase, we also mapped out design recommendations previous research has made and connecting these recommendations to improving freelancers’ practices. Secondly, we used speculative design (Dunne & Raby, 2013) to embody the research-based recommendations (from phase 1) in Freelance Grow’s features.

8.3.1 Phase 1: Literature assessment

Rather than performing an exhaustive literature analysis, this phase intended to provide research-based inspiration for our design fiction, as suggested by Schulte et al. (2016). As such, we did not select key words or determine inclusion/exclusion criteria *a priori* when surveying the literature. Instead, we framed our literature assessment by using the four directions for designing worker-centred freelancing platforms suggested in 6.4.2 and published in (Alvarez de la Vega et al., 2021b):

- i. transparent and constructive evaluations,
- ii. professional development opportunities,
- iii. reputation management, and
- iv. symmetric relationships.

Our objective in surveying related literature was to map existing research-based recommendations onto these four areas to inspire the speculation of new features.

We began by referring to the six papers we cited in these four design directions (Blaising, Kotturi, et al., 2020; Glöss et al., 2016a; M. Gray & Suri, 2019; Kinder et al., 2019; Lustig et al., 2020; Stipp, 2017). Then, we looked at this prior research references and subsequent papers from their authors, e.g., (Blaising & Dabbish, 2022; Foong & Gerber, 2021), aiming to expand our understanding of the challenges and opportunities that freelancing platforms create for freelance practices. Also, we considered literature that presented worker-centred interventions to support gig economy workers in similar fields (e.g., microwork). Finally, we drew from prior knowledge of initiatives and tools supporting online workers, such as the

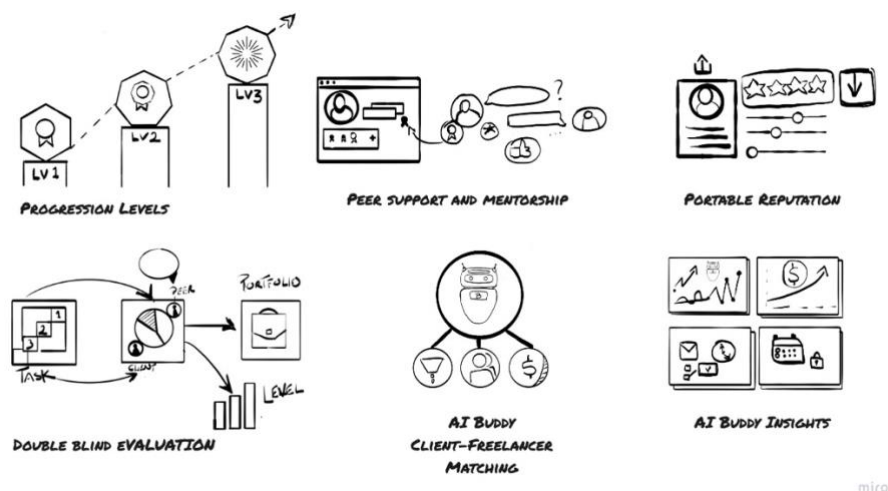
Fairwork’s cloudwork ratings (Fairwork, 2021a) and tools showcased at the ‘Digital Worker Inquiry’ online event (Gregory et al., 2021).

The final corpus of literature that informed our design fiction comprised of a total of 26 sources, of which 15 were HCI papers (published at venues such as CHI and CSCW), 8 were papers from disciplines beyond HCI (e.g., sociology and internet geography), and 3 were existing tools or initiatives support gig economy workers (e.g., Gig CV (Arets, 2021)). We reference these sources in section 8.4, while presenting Freelance Grow’s speculative features.

8.3.2 Phase 2: Speculative design

We drew from Coulton et al. (2017)’s notion of design fiction as ‘world building’ to develop a story that resonated with our target participants, i.e., freelancers, while allowing exploration of research-based recommendations. We used a digital board to sketch prototypes that embodied the literature recommendations identified in phase 1 (see Figure 8). Meetings were held regularly with the first supervisor of this thesis to discuss these sketches to ensure that each feature opened ‘an entry point to our design fiction world’ (C. Coulton et al., 2019) and could encourage reflection and discussion among participants. We were particularly interested in how participants might interpret Freelance Grow’s speculative features and their perception towards other approaches to tackle the challenges they have experienced working on platforms. In short, this second phase involved sketching and discussing what these features might look like until we created the polished version illustrated below.

Figure 8: Low-fidelity sketches of Freelance Grow’s speculative features.



8.4 Freelance Grow's Speculative Features

Freelance Grow is a fictional freelancing company whose mission is to support freelancers in advancing their career through a new platform. We created this fiction to explore a model of online freelancing where the platform is designed to enhanced freelancing practices, such as entrepreneurial development and community support. We created the fiction as a marketing website intended to recruit freelancers to join the Freelance Grow platform¹⁰. As is common practice in design fiction, Freelance Grow's narrative extrapolates existing platforms' branding and marketing discourse into the near future to evoke plausibility. The visual and written elements critique existing freelancing platforms that sell their services as a 'one-stop-shop' for freelance talent (Blaising & Dabbish, 2022).

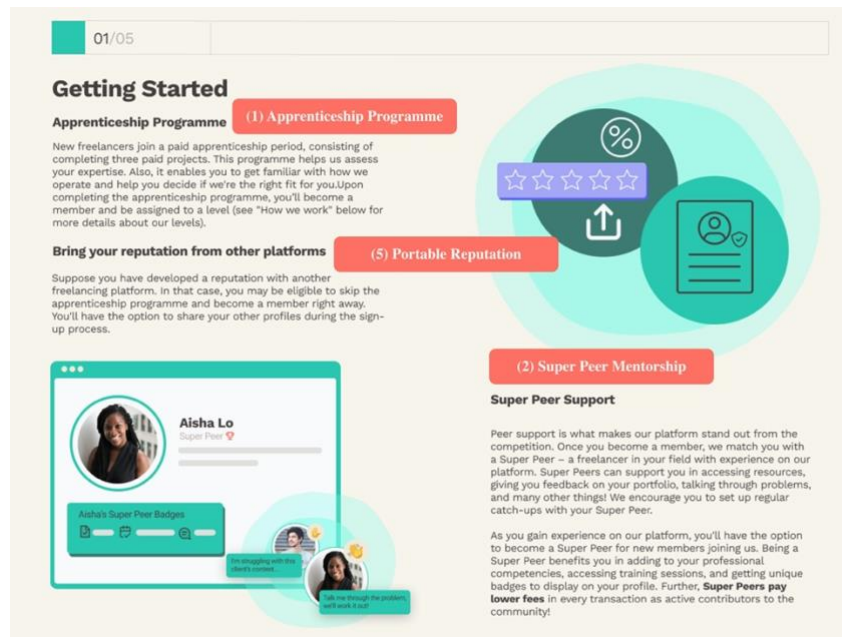
Here, we present an overview of Freelance Grow's speculative features. We have numbered each of the eight features for easier to reference in Chapter 9, where we present a qualitative study that used Freelance Grow as a tool to provoke discussion. Each feature includes a screenshot of the high-fidelity fiction and motivating factors, such as the literature recommendations and real-world examples that informed each feature.

8.4.1 (1) Apprenticeship Programme

This feature supports newcomers to access paid projects and resources to ease into the platform environment. The Apprenticeship Programme may be skipped for freelancers with an established reputation on a different platform. See Figure 9.

Figure 9: The on-boarding page describing features to get support when signing up to the platform, including the Apprenticeship Programme and Super Peer Support Mentorship.

¹⁰ See the original design fiction at freelancetech.design



Motivation and inspiration

A prime appeal of freelancing platforms is to explore career opportunities, entrepreneurship, and develop new skills (Blaising, Kotturi, et al., 2020; Blaising, Kulkarni, et al., 2020; Blaising & Dabbish, 2022). However, in their current form, platforms rarely support the transition into freelance work, leading to heightened uncertainty, emotional, and financial strain (Petriglieri et al., 2019).

Blaising et al. (2020, p. 24) suggest that “future platform re-design and tool development might assist freelancers to identify pathways, gain necessary skills and mentorship, secure opportunities (e.g., paid apprenticeship with other online freelancers) (ibid).” We speculated that an apprenticeship programme for professionals transitioning into online freelancing could be useful to ease into both freelance work and the platform environment.

8.4.2 (2) Super Peer Mentorship

This feature connects freelancers with experienced peers on the platform to support career and entrepreneurial development. Freelancers who sign up as mentors pay less platform commissions and have a badge to display on their profile. See Figure 9.

Motivation and inspiration

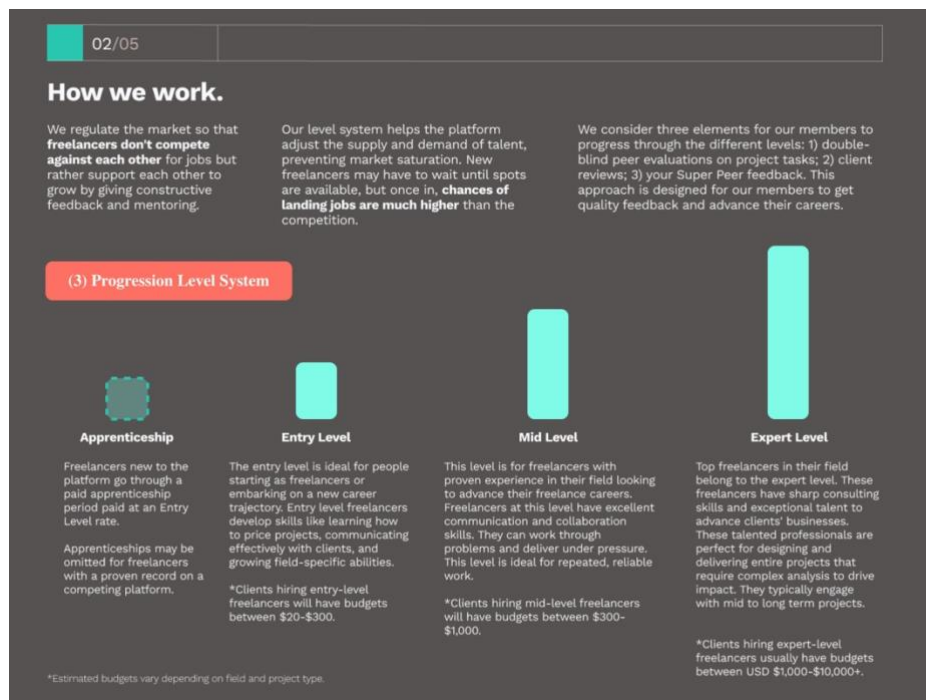
Online freelancers shoulder forms of ‘self-directed’ training by piecing together multiple forms of informal mentorship, such as accessing advice from online forums (Blaising et al., 2018, 2019; Blaising & Dabbish, 2022).

Previous research has suggested that mentorship and networks of socialisation can be valuable forms of support in navigating freelancing platforms, develop domain-specific skills, and gain entrepreneurial training (Blaising & Dabbish, 2022; Suzuki et al., 2016). We speculated that platforms could facilitate these mentorship connections to form social learning opportunities, which are crucial for the development of shared practices (Wenger, 1998).

8.4.3 (3) Progression Level System

This feature enables freelancers to compete for jobs only with freelancers at their level of expertise. It attempts to mitigate market oversaturation and flatten the playing field. Each level has defined boundaries in terms of rate setting and expertise. See Figure 10.

Figure 10: Freelance Grow’s Progression Level System



Motivation and inspiration

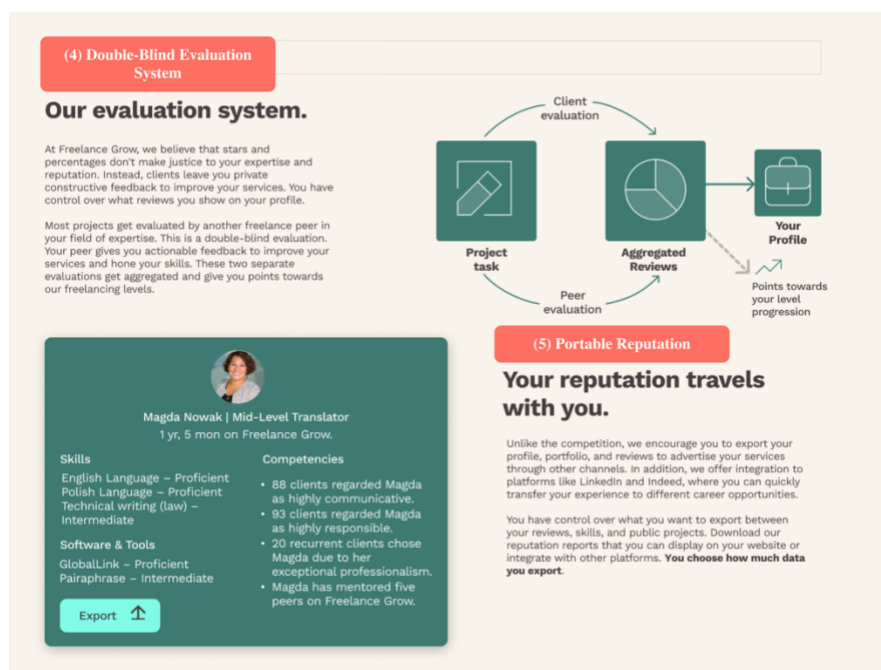
Online freelancing platforms have an oversupply of labour, resulting in highly competitive markets. This high competition leads to challenges, such as securing recurrent work, financial uncertainty, and difficulties detaching from work (Anwar & Graham, 2020a; Blaising, Kotturi, et al., 2020; Sutherland et al., 2019; A. Wood & Lehdonvirta, 2021).

Previous research has called for platform interventions to mitigate this oversupply of workers and ensure reliable job availability (Fairwork, 2021b). Foong & Gerber (2021) hint to such potential interventions by platforms defining fixed rates to minimise wage disparities. We speculated a defined progression system could create less competition and mitigate the negative effects that stem from highly saturated markets.

8.4.4 (4) Double-Blind Evaluation

This feature enables freelancers to be evaluated both from clients and experienced peers. Thus, balancing the evaluation power dynamics and increasing the ratings' quality. See Figure 11.

Figure 11 Double-Blind Evaluation and Portable Reputation features



Motivation and inspiration

Platforms usually rate freelancers through client-based evaluations, putting them in an unbalanced power dynamic (A. J. Wood et al., 2019; A. Wood & Lehdonvirta, 2021). Kotturi et al. (2020) suggest that these ratings become inflated over time whereby negative feedback outweighs positive, reducing their reliability.

We drew inspiration from the concept of 'Crowd Guilds' (Whiting et al., 2017), a peer evaluation system for microworkers in platforms such as Amazon Mechanical Turk to provide double-blind evaluations of their work. We speculated that double-blind peer reviews could mitigate power imbalances and increase the quality of evaluations.

8.4.5 (5) Portable Reputation

This feature enables freelancers to both 'import' and 'export' their reputation to showcase in other channels or platforms. This Portable Reputation displays competencies and skills rather than a score to facilitate transferability to other off-platform environments and facilitate the process of building social capital (Gandini, 2016b). See Figure 11.

Motivation and inspiration

Existing platform reputation systems, e.g. ratings and reviews, constrain freelancers to specific platform environments, making it challenging to demonstrate their expertise off-platform (or even when signing up to another platform) (Blaising, Kotturi, et al., 2020; Nemkova et al., 2019).

Previous research has called for tools and partnerships that support workers in effectively communicating and demonstrating their reputation (e.g. skills and competencies) across and beyond freelancing platforms (ibid) (Alvarez de la Vega et al., 2021b; Blaising, Kotturi, et al., 2020; Blaising, Kulkarni, et al., 2020). We drew inspiration from 'Gig CV' (Arets, 2021), an initiative in the Netherlands helping gig workers transfer their reputation to different platforms. We speculated that platforms could have features to support freelancers translate their previous experiences to other platform environment and enable control over managing their reputation.

8.4.6 (6) AI Buddy: Features for Entrepreneurial Development and Wellbeing

This feature enables freelancers to access a dashboard with relevant, automated, insights to support entrepreneurial development and wellbeing. Examples of insights include receiving pricing strategies, impression management feedback, and guarding work time. See Figure 12.

Motivation and inspiration

Gig work typically lacks organisational structures to support information-seeking and entrepreneurial development needs of workers (Blaising, Kotturi, et al., 2020; Blaising, Kulkarni, et al., 2020; Wilkins et al., 2022).

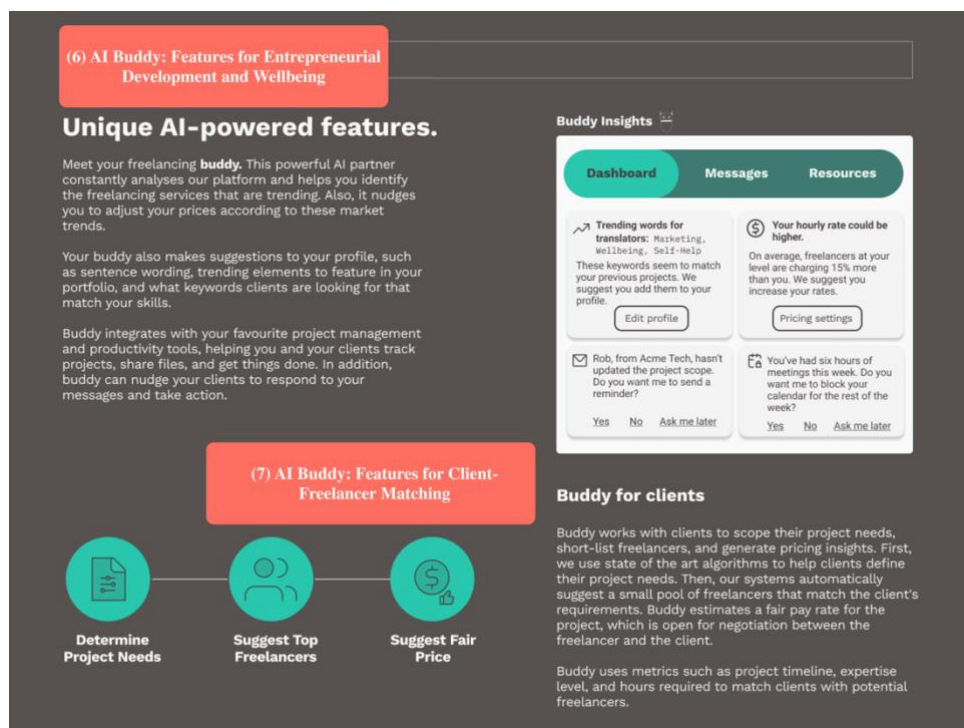
Previous research has called for platforms to intervene in aspects of entrepreneurial development, such as “nudging workers with below-average rates to raise their rates through value-based pricing (ibid)” (Foong & Gerber, 2021, p. 12) and introducing training opportunities for freelancers to adapt to changes in market and client demands (Blaising, Kotturi, et al., 2020). We drew inspiration from AI-driven tools, such as Microsoft Viva

(Microsoft, 2021; Winn et al., 2017), used in corporate settings to support knowledge workers access insights from their work and harness organisational knowledge. We speculated a similar use of AI could help freelancers meet their information-seeking, support entrepreneurial decisions, and provide wellbeing recommendations.

8.4.7 (7) AI Buddy: Features for Client-Freelancer Matching

This feature enables clients to structure their projects and suggest a fair price. The feature also attempts to help freelancers ease the work search by automatically matching with clients, based on their project needs. See Figure 12.

Figure 12: AI Buddy Insights for Entrepreneurial Development and Wellbeing. AI Buddy for Client-Freelancer Pre-Screening and Matching



Motivation and inspiration

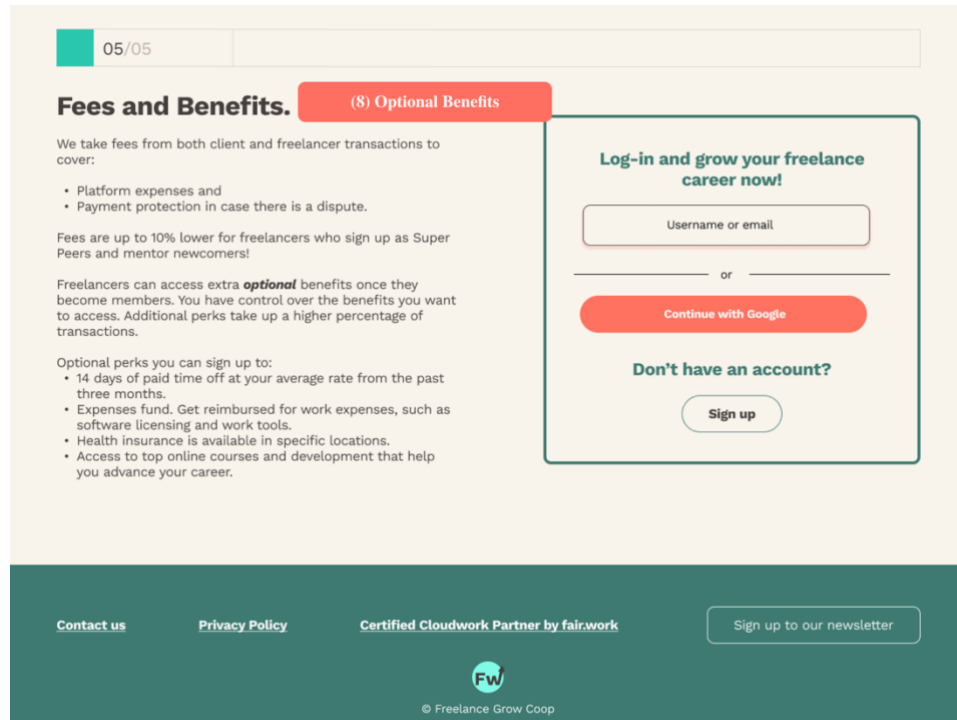
Platforms put the onus on clients to determine projects and budgets. However, clients do not necessarily know how to articulate their needs and calculate fair wages (Lustig et al., 2020). This issue leads to transactional costs for workers who spend a substantial amount of time submitting proposals and may end up underpaid for their services.

Lustig et al. (2020) suggest that platform interventions to support clients scope their projects and match them with a manageable pool of freelancers could mitigate these transactional costs. Hence, we built on the 'AI Buddy' narrative from the previous feature to speculate with a client-freelancer matchmaking tool that scoped clients' needs.

8.4.8 (8) Optional Benefits

This feature enables freelancers to sign up for various optional benefits to mitigate precarious situations. Examples of these benefits included 14 days of paid time off, reimbursement for work expenses, and access to health insurance. See Figure 13.

Figure 13: A list of Freelance Grow's Fees and Optional Benefits



Motivation and inspiration

Considering recent debates about location-based platforms granting gig workers' rights and benefits (e.g., sick leave and health insurance) (Alvarez de la Vega et al., 2020; Wood, A.J.; Graham, M.; Anwar, 2020), we wanted to probe reactions to this discourse for freelancing platforms.

We speculated that Freelance Grow could grant optional benefits to mitigate the entrepreneurial costs and overhead suggested in prior research (Blaising, Kotturi, et al., 2020) and reiterated in Chapter 6.

8.5 Conclusion

In this chapter, we have described the process of developing a design fiction, 'Freelance Grow.' This chapter directly contributes to addressing [research objective 3](#) (RO3) of this thesis. The fiction embodies design recommendations and real-world interventions to address challenges introduced for freelancers' practices. Developing the design fiction has served a

twofold purpose: Firstly, as a reflexive exercise to compile and make sense of the findings from Chapter 6, Chapter 7, and literature closely examining online freelancers' experiences. Secondly, it serves as the basis of an empirical study, presented in the following chapter, to further explore and reflect upon design opportunities to support online freelancers' practices.

Chapter 9 Freelancers' Views on Freelance Grow

Parts of this chapter have been published in (Alvarez de la Vega et al., 2022)

9.1 Introduction

As we argued in previous chapters, freelancing platforms are an emerging field of study in relation to the gig economy. Most of the literature so far has focused on understanding freelancers' experiences working on these platforms (including our prior research in Chapter 6 and Chapter 7). However, there remains a gap in envisioning what alternative platform models might look like, especially those centred on enhancing the freelancing experience on platforms. This chapter sets out to address this gap by exploring design opportunities to support freelancers' practices. We used Freelance Grow, a design fiction detailed in the previous chapter, as the basis for discussion across five online focus groups. In discussing our design fiction with freelancers, we aimed to:

- understand how freelancers perceived the design fiction, particularly any benefits that our speculative designs could introduce to enhance freelancers' practices; and
- identify areas of concern that could create new challenges or even hinder (rather than support) freelance practice.

9.2 Approach

To explore the concepts in the design fiction, we conducted five online focus groups with a total of 23 online freelancers (see Table 6). The purpose of this study was to provoke discussion among freelancers about our design fiction and further explore how freelancers negotiated and debated potential technologies to support their practice. We chose online focus groups as a method because it allows for evaluating ideas in a group setting (Gaiser & Abrams, 2017).

9.2.1 Participants

We recruited participants through social media and freelancing subforums. Interested participants filled in an online form where they granted informed consent to participate in the

study, shared their demographic information, and provided their availability for the focus group (see Appendix B1). We accommodated participants into five focus groups and conducted the sessions through Zoom, an online meeting software.

Table 6: Online focus groups participant information

Participant ID & Focus Group*	Gender	Country	Years Freelancing	Client Experience	Platform(s) Used	Area of Expertise
1.1	F	UK	1-2	Yes	Jovoto	Design, Writing
2.1	F	UK	3-4	No	Upwork	Editing, Proofreading
3.1	F	UK	3-4	Yes	Fiverr	Data entry, Design
4.1	M	UK	1-2	Yes	Fiverr, Upwork	Design, Editing, Writing
5.1	M	UK	3-4	Yes	Fiverr, Upwork	Design
6.2	F	UK	>1	Yes	Fiverr, Upwork	Programming, Writing
7.2	F	UK	4+	Yes	Essay Pro, Quality Writers, Studybay	Design, Writing
8.2	M	UK	3-4	No	Fiverr, Freelancer, Upwork,	Data analysis, Writing
9.2	M	UK	4+	Yes	Fiverr, Freelancer, Upwork,	Data analysis, Writing
10.2	F	UK	4+	Yes	24 Writers, Essaypro, Upwork	Design, Writing
11.3	F	Turkey	4+	No	Upwork	Design, Research
12.3	M	UK	1-2	Yes	Freelancer	Writing
13.3	M	UK	3-4	No	Fiverr	Writing
14.3	F	UK	1-2	No	Freelancer, Upwork	Data entry, Writing
15.3	M	UK	1-2	No	Fiverr, Freelancer, Upwork,	Transcription, Writing
16.3	M	UK	1-2	No	Fiverr, Freelancer	Data entry
17.4	F	UK	3-4	Yes	Upwork	Data analysis
18.4	M	US	>1	Yes	Fiverr, Jovoto, Upwork	Software development
19.4	M	US	4+	Yes	Fiverr, Jovoto, Upwork	Design, Software development
20.4	M	US	4+	No	Fiverr, Freelancer	Software testing
21.5	M	Canada	>1	Yes	Fiverr, Upwork	Design
22.5	M	UK	1-2	No	Edusson, Fiverr, Verbit	Transcription, Writing
23.5	M	Kenya	1-2	Yes	Freelancer	Writing

Participants' ages ranged between 18-38 years old. Nine participants self-identified as female and 14 as male. 17 participants resided in the UK, three in the USA, one in Canada, one in Kenya, and one in Turkey. Over half of our participants used more than one platform (65.21%), of which Fiverr and Upwork were used the most (60.86%), followed by Freelancer.com (34.78%), and task-specific platforms, such as Studybay, the least (26.08%).

* The first number represent the participant ID, followed by the focus group number. For example, when referring to participant with ID 1 in focus group 1, we append them with a dot: P1.1.

Participants had varied domains of expertise, such as writing, design, software development, proofreading, editing, data analysis, data entry, transcription, and software testing. Most of our participants (86.95%) had over one year of experience freelancing on platforms, with 56.52% of participants reporting more than three years freelancing; only 13.04% had freelanced between 4-12 months. Finally, 68.86% of participants reported they had used platforms as clients citing various reasons, such as to improve their personal brand (e.g., create a logo for their portfolio), re-outsourcing some of their tasks, or simply to learn more about how platforms work from the client side.

9.2.2 Introducing Freelance Grow and focus group structure

Participants received a link to our design fiction several days before attending the online focus group. We encouraged participants to get familiar with the concepts presented in the fiction and take notes about things that caught their attention so we could discuss them during the session. As a strategy to mitigate deception (P. Coulton et al., 2016), we clearly informed participants that these were fictional, ‘potential platform features’ that we wanted to discuss with them, and we had no intention in developing.

Focus group sessions lasted on average 83 minutes (minimum duration 63 mins / maximum duration 99 min). We began each focus group with a round of introductions. Then, participants had 10 minutes to go through the design fiction individually since getting familiar with the concept was encouraged but not mandatory. We followed to discuss initial reactions to the fiction, asking questions such as “what surprised you from Freelance Grow?” “What did you find interesting?” “What did you find concerning?” See focus group’s guide in Appendix AA.1B2. The rest of the focus group followed a semi-structured format, whereby we followed up on participants’ comments. Example questions at this stage included “how do you imagine such feature could impact your freelance work?” “What elements of Freelance Grow, would you like other freelancing platforms to adopt?” The session concluded by participants expressing their final reflections about our design fiction. After the session, each participant received a £30 Amazon Voucher to compensate their time.

9.2.3 Data collection and analysis

We audio-recorded and transcribed the focus groups for qualitative, thematic analysis (Braun & Clarke, 2006c). We went through the recordings and transcriptions twice to gain familiarity with the dataset, noting down regular reflexive entries in a research journal, as suggested in Braun & Clarke (2021). We coded all focus groups deductively, guided by our research aims (i.e., participants’ perceptions, concerns, and benefits related to the fiction). During this phase, regular meetings were held with this thesis’ primary supervisor to discuss the codes and

interesting aspects emerging from the data. Once all the data were coded, we sorted our codes and example quotes in a digital board to identify patterns in the dataset and construct candidate themes. After various iterations, we generated three themes which we present below in the findings section.

9.3 Findings

We present findings relating to the three themes we constructed in the qualitative analysis. Since some speculative features sparked divisions and debate, and to stay true to these nuances, we have chosen to structure our findings in terms of ‘benefits’ and ‘concerns.’ We present viewed benefits and concerns on (i) platform support getting work, (ii) entrepreneurial development, and (iii) peer cooperation. We reference the design fiction’s features by capitalising them and prepending each feature’s number in brackets (as numbered in Chapter 8), for example, [\(1\) Apprenticeship Programme](#).

9.3.1 Freelancers’ Views on Platform Support Getting Work

This theme captures our participants’ views towards various elements of the fiction aimed at supporting freelancers to get work.

9.3.1.1 Perceived benefits: Supporting newcomers

The challenges of starting out on a platform were discussed extensively in our focus groups. For example, it was perceived that newcomers lacked much needed support to navigate the platform environment and marketplace dynamics: *“you're thrown into the deep end of the pool and they [platforms] expect you to swim immediately and no one is looking out for you it's kind of really hard for newbies”* (P22.5). As such, the [\(1\) Apprenticeship Programme](#) was viewed positively as a feature that could ease newcomers into the platform environment: *“other websites don't offer such kind of things like, if you are a beginner, there is not an option where you can learn and here [in the design fiction] you can learn with some paid projects so I think it's a good initiative”* (P4.1). The paid aspect of this feature was particularly appealing because a common strategy newcomers adopt to get work is significantly undercharging for their services (A. J. Wood et al., 2019).

Participants felt that current platforms’ designs assume newcomers have no prior professional experience. For example, platforms usually require newcomers to complete several jobs before assigning them a reputation, making it challenging to get work: *“I didn't even try to enter any other platform other than Upwork because it's just too much almost impossible to start from zero, I think”* (P11.3). Participants felt that [\(5\) Portable Reputation](#) feature would

be beneficial to lower the barriers for newcomers and to access the marketplace: *“the possibility of carrying your portfolio from other platforms and being able to showcase your CV to other people that automatically gives you a good rating which definitely helps you in acquiring contracts from the other freelancing platforms.”* (P19.4). Perhaps more importantly, participants saw the need for platforms to validate freelancers off-platform expertise when joining. For instance, P17.4 imagined that platforms could ‘translate’ her corporate expertise into a form of initial rating that validates her professionalism, knowledge, and reliability to deliver work: *“I think your non-freelancing work can somehow translate into like a beginning rating. Like say you have 10 years of experience working in the industry and now you've gone freelance and you've just signed up for a site like the site looks like you're new, but you have, you know, 10 years of real experience behind you.”* Managing one’s reputation sparked interest and optimism with our participants as an avenue to support their opportunities getting work on- and off-platform.

However, other participants remained sceptical about the plausibility of reputation portability as this speculative feature goes against current platforms' core business goals. While it may be very appealing for freelancers to get clients from multiple sources, platforms' profit depends on the mediation of such transactions (Choudary, 2018; Jarrahi, Sutherland, et al., 2020; Kinder et al., 2019; Lampinen & Brown, 2017), making such a feature unrealistic: *“I would really like [to transfer my portfolio] but I think the platform wouldn't like it ((chuckles)) because maybe not for a corporate job, but for finding other clients that are not on those platforms”* (P11.3). As platforms currently compete to attract the most transactions, there was no perceived incentive for them to facilitate transferability between competitors: *“most of these platforms are in competition with each other [...] So, if you are kind of looking for a way to like transfer your profile from one platform to another I think most of them [platforms] would want to like uphold your reputation of your existing customers.”* (P21.5). Indeed, while the [\(5\) Portable Reputation](#) feature would be beneficial to diversify one’s work opportunities, it seemed too far-fetched as it would require significant partnerships among platforms.

9.3.1.2 Perceived concerns: Removing control over getting work

The [\(7\) AI Buddy Feature for Client-Freelancer Matching](#) sparked significant concerns among our participants. Participants felt that this feature would reduce their autonomy over getting work because the matching criteria would sit behind opaque algorithms rather than within their control. P2.1 illustrated this point by saying that while looking for work is time-consuming, it is entirely ‘within her control’: *“it just said [in the fiction] ‘we match clients with talent’ and I wasn't sure what that meant or who controls that because yes at the moment I can spend a long time trying to look for jobs but that's at least within my control and then the client can*

choose me or not.” Similarly, participants expressed how being in control over the project search is a fundamental part of building client relationships and thus such process should not be offloaded to algorithms: *“I just wouldn't want it [platform] to be like ‘oh, here are your choices [of freelancers] and pick one.’ I think [writing proposals] is sort of a necessary thing to showcase your skills and establish a relationship with the client.”* (P17.4). While project searching can be time-consuming is yet ‘necessary’ to be in control of demonstrating one's competencies.

Also, this client-matching feature sparked concerns about limiting work opportunities and constraining work autonomy: *“I think that algorithm would probably limit me to a certain percentage of work out there (...) I think that most of us freelancers love just sorting out the work for ourselves.”* (P19.4). Potential biases of the matching algorithm were also a matter of concern as they could hurt one's chances of landing projects: *“What if that one [client matching feature] will bring biases because it won't allow some people to do some jobs cos maybe [...] if your profile won't meet the criteria of the work you won't be able to land something good.”* (P23.5). By platforms having greater control over project search, even when well-intentioned, there seemed to be a fundamental distrust in the speculative AI's capabilities, as suggested in other forms of algorithmic systems (Lee, 2018).

It was viewed that our speculative client-matching feature could also hurt learning and career development. For example, when discussing if platforms should filter and tailor clients' needs to match freelancers' skills, P3.1 mentioned that part of her enjoyment freelancing is finding projects that are interesting even if they are not in her immediate area of expertise as they can turn out to be rewarding. Thus, platforms filtering clients to match specific skills could stifle these learning opportunities and constrain freelancers with a wide range of skills like her: *“I'd like to see like any job that comes up cos something might come up that I'm like ‘oh, that sounds really interesting that' and I'll give it a go and then I do well and I enjoy it [...] that's like learning in that you don't have to stick to one thing that you do. Like I do so many different things and I love learning so like a filter system for me isn't that necessary”* (P3.1). Indeed, participants perceived that the [\(7\) AI Buddy Client Matching](#) feature could not only constrain their autonomy over finding work, but also limit development opportunities.

9.3.2 Freelancers' Views on Entrepreneurial Development

This theme captures how participants viewed various features aimed at supporting entrepreneurial development.

9.3.2.1 Perceived benefits: Developing skills

Participants viewed value in our design fiction supporting the development of different forms of entrepreneurial skills. There was a perceived benefit in using the [\(6\) AI Buddy Entrepreneurial Insights](#) to keep one's skills up to date. For instance, P14.3 viewed value in the AI Buddy potentially giving her advice on aspects of her professional niche to gain a competitive advantage: *"[I'd like to receive] insights on content creation, copywriting, editing."* Similarly, another participant suggested that platforms could even harness these trends and organise training events for freelancers to learn new skills: *"It is also good if maybe like a platform can find a tutor or an instructor who is an expert in that field and then organise a webinar just for freelancers and then maybe he or she can teach new ideas and concepts"* (P10.2). Also, there was a perceived opportunity for platforms to support the development of 'soft skills', such as managing clients, which is another element of successful business management (Foong, 2020a). As freelancing involves a great deal of self-management and communication with clients, these soft skills were seen as a key for growth: *"maybe you're a great communicator between your friends and family and you know you have a great network, but dealing with a client is something else I think [...] for example, you have three clients at the same time you have three projects and each of them is a different person and they treat you differently so you also have to treat them differently"* (P11.3). Nonetheless, the development of entrepreneurial skills was perceived more relevant for freelancers in the early stages of their careers rather than for experienced freelancers, mirroring prior research with novice apprentices (Lave & Wenger, 1991).

Participants viewed accessing information and resources as a benefit to align their services with current market trends. For instance, P3.1 a designer using Fiverr, mentioned the importance of knowing clients' trends to advertise her services and seemed keen on knowing *"what people are searching for, what people are buying, what people are wanting ideas on, uh, yeah what's in at the moment."* Likewise, there was a perceived potential in harnessing the [\(6\) AI Buddy Insights](#) to help freelancers increase their discoverability on a platform environment. For instance, learning about keywords and sentences that could boost their profile, and thus stand out for new clients: *"it has to be like one of the top priorities using AI [artificial intelligence] to suggest keywords [...] for possibly profile descriptions, possibly uh profile summary, possibly things that will make the freelancer rank [higher] among search"* (P21.5). There was a perceived excitement about amplifying one's freelance business using emerging technology.

Participants viewed receiving feedback as crucial to developing one's entrepreneurial skills. Participants mentioned the importance of accessing feedback that can help them identify areas

for development: *“I’d like them [clients] to like give me a detailed uh review of my work maybe there should also be a way of connecting with the reviewer uh and the clients should be like tell you where they weren’t satisfied with your work.”* (P6.2). Participants called for evaluation systems that were straightforward and detailed in suggesting how to improve their skills. For example, one participant imagined a system could prompt clients to reflect and give a nuanced evaluation of their experience, considering both positive and ‘areas for improvement:’ *“If there was a like ‘please tell us the positives from this experience’ and then ‘like, ‘are there any areas for improvement? Or any areas to consider’ so that they’re [clients] encouraged to think, not just think negatively, but encouraged to think about some of the positives as well”* (P2.1). This view resonates with Foong et al.’s (2017) recommendations on designing feedback exchanges that support nuanced sensemaking.

Likewise, our design fiction sparked a discussion around how common quantitative scales can oversimplify one’s competences. This view stemmed from evaluation systems focusing more on feedback about project specifics, rather than entrepreneurial competencies. P15.3 called for a feedback system that is granular and could allow him to improve his competencies: *“I think they [freelancers] should be rated not solely under like five stars, it should be how competent they are, how fast, how professional, how communicative, how responsive, whether the customer is satisfied with the quality of work [...] so, that would give like an in-depth view of the real quality of work.”* Overall, there seemed to be a perceived benefit in feedback and evaluations that enable the development of entrepreneurial competencies.

9.3.2.2 Perceived concerns: Technology doesn’t always know best

Nevertheless, some participants viewed some aspects of our [\(6\) AI Buddy: Features for Entrepreneurial Development and Wellbeing](#) as evoking a sense of superiority. Participants were concerned that AI suggestions might impose managerial values into their work processes, clashing with their preferences for autonomy. For example, when discussing the possibility that platforms could mitigate overwork by suggesting time off, P2.1 responded *“((sarcastic tone)) It’s my right to make myself miserable with how much I work ((chuckle)).”* Likewise, this feature was viewed as ‘annoying’ in that one is aware of their own work time and thus the feature would be distracting rather than a supportive: *“I feel like that [AI buddy feature] would just be super annoying, you know, if it were like ‘you’ve had six hours of meetings this week do you want me to block your calendar?’ like no ((emphasis)) don’t, you know, don’t bother me with that.”* (P17.4). Nonetheless, a few other participants were more positive about having suggestions about their wellbeing and acknowledged that to run a successful freelance business it is crucial to look after oneself: *“To me, it’s a very welcome*

idea for you to suggest [wellbeing insights] and keep me from breaking down because the moment you break down, you can't work at all.” (P21.5).

Another concern was that some AI suggestions, such as suggesting pricing strategies, could have substantial limitations. Participants felt that the suggestions would not consider all the nuanced factors that go into individual everyday practices and a system giving accurate recommendations seemed unrealistic: *“As a freelancer I personally know what my price is based on my considerations, the tools that I use, time frame, and all that, and I don't think that the AI would probably get to consider all those things” (P19.4).* By the system automatically suggesting pricing strategies, there was a concern towards the accuracy behind the algorithm, resembling other research on AI fairness in gig economy platforms (Fieseler et al., 2019). Hence, participants called for other complementary approaches to providing entrepreneurial training, for example, by having dedicated staff that can complement AI recommendations: *“Once a freelancer puts in the price, automatically it [algorithm] should send feedback to the freelancer and give him a detailed advice but it will also become better if [...] a department within the website [platform] that specialises in helping people create their profiles to best attract clients or attract customers” (P22.5).* There was a general perceived scepticism towards the usefulness and the granularity of AI in supporting one’s freelance business development, thus requiring a human-in-the-loop to complement this process.

Our intention was to probe reactions to freelancing platforms potentially providing more organisational support structures, such as [\(8\) Optional Benefits](#), to cover entrepreneurial costs (e.g., by reimbursing business expenses) and mitigate precarity. Participants felt that these benefits crossed the line and were seen too similar to an employer: *“like the paid time off and those sort of more employer focused things [...] Um, it just seemed really weird because as a freelancer that's on you, that's the whole point of being a freelancer is you set your rate to include, you know, paid time off, and to cover your, your expenses.” (P17.4).* This view resonates with our findings in Chapter 6 whereby freelancers felt that platform features ought not to cross the line when it comes to managing work because it clashes with the autonomy that is valued from freelance work.

9.3.3 Freelancers’ Views on Peer Cooperation

This final theme captures how participants viewed features of our design fiction that related to different aspects of cooperation, such as mentorship and peer evaluations.

9.3.3.1 Perceived benefits: Mentorship as developing strong shared practices

Mentorship through the [\(2\) Super Peer](#) feature was perceived as having potential to enable strong social learning opportunities. From the mentee's perspective, having an experienced freelancer to talk to was seen as a great advantage to navigate the platform environment and the essentials of online freelancing: *"I know most of these platforms are not kind of like user friendly at the beginning for new users [...] so you're trying to like give newbies a way of like a mentorship program that will kind of guide them through the step to step process"* (P21.5). Also, freelancers at early stages of their careers could benefit from an experienced peer providing insight on areas for development: *"when someone [mentor] has like that expertise they're more likely to see mistakes in your work and maybe correct you so that you [...] learn from them"* (P6.2). Newcomers and early-career freelancers were seen as getting the most immediate benefits from accessing mentorship, illustrating the values of communities of practice for introducing newcomers into a new domain (Lave & Wenger, 1991; Wenger, 1998; Wenger et al., 2002), in this case the domain of freelancing online.

Equally, participants felt mentorship could have various benefits for more experienced freelancers. For example, showcasing a [\(2\) Super Peer](#) badge on one's profile was viewed as a potential 'added advantage' to attract new clients: *"if there is a small badge or something like it shows I'm good enough that I can even mentor someone [...] it's an added advantage cos you are taking a time out to help someone else"* (P22.5). Mentorship could even lead to new sources of professional networks and work opportunities. P17.4, for example, explained that in her 'close knit' industry connections are crucial for repeated work, thus mentoring could amplify such connections: *"if you're mentoring them [peers], they may run across projects that they don't feel comfortable they can take on themselves and so they refer you. Or maybe you run into a big project and you need help so you have someone you can go to bring on to help."* At a more personal level, mentorship was seen as being potentially rewarding, especially for those freelancers who have mentored peers in other professional settings as was P11.3's case: *"I take great satisfaction when people thank me [...] when I give them mentorship."* This more 'intangible' side of mentorship related to having the opportunity to share knowledge and enable professional fulfilment, mirroring relationships in other professional development settings such as with do-it-yourself makers (Lang, 2017; Meissner et al., 2017).

A more optimistic perspective regarded mentorship as potentially beneficial for all stakeholders on the online freelancing platform (i.e., freelancers, clients, and platform owners). P17.4 perceived mentoring as the key to 'raising the whole bar' of the platform by having competent novice freelancers that were reliable for clients with lower budgets. In turn,

more experienced freelancers could have higher chances to land contracts that better matched their rates: *“I think it [mentorship] raises a whole bar and then the clients are happier because they have more professional freelancers [...] if somebody wants to go with a cheaper freelancer they’re not getting crap service, they’re getting someone decent but you know still within their budget and that’s fine because you know then we [experienced freelancers] can go with the higher budget clients.”* Indeed, this optimistic view shows how mentorship could have a positive ripple effect not just for freelancers at different career stages, but also for clients and platform stakeholders.

9.3.3.2 Perceived concerns: The tension between cooperation and individual success

At the same time, there was a perceived tension between supporting other peers and having individual success on platform environments, a form of ‘adversarial collaboration’ (Cohen et al., 2000). Freelancing was perceived as a profession underpinned by being completely independent, i.e., not relying on anyone to get and complete work. P20.4, for instance, described freelancing as a profession where *“you work by yourself you rely on yourself you don’t rely on others.”* Also aligned with working independently, there was a sentiment of individualism intertwined with carving opportunities for personal success: *“the best thing is just to be independent, get good reviews from your clients, and you grow”* (P13.3). These views reflect the importance of individual goals in a competitive marketplace, as documented in other work settings (Danis & Lee, 2002).

Some participants viewed individual success as directly clashing with the notion of peer support. For example, some participants were sceptical about cooperation because getting work as a freelancer on platforms is at expense of other freelancers not getting that contract. Thus, the idea of cooperating with other freelancers seemed to go against one’s individual success: *“it [design fiction] assumes all freelancers are cooperative and nice and part of a big community whereas I think a lot of them have more of a ‘hold the ladder up behind them’ sort of ‘get there first’ mentality”* (P2.1). For some participants competition was viewed as ‘necessary’ to enable opportunities for quality talent to stand out from the rest of the market: *“It [competition] is necessary because every competitive market gives chances for good expertise to come forth, you know, it brings out quality compared to an environment where there is less competition.”* (P16.3). Market competition was a point of tension across our focus groups and perceived as clashing with the idea of being cooperative and supportive with others.

Some participants even perceived cooperation as counterintuitive and hindering one's abilities to secure work. For example, P2.1 perceived mentoring other peers as taking up valuable time

that she could use to get paid work: *“it sounds like being a Super Peer here would take up a lot of time and certainly a lot of goodwill because that's time that you're not earning, and time that you're not looking for jobs.”* Also, there was a concern towards mentoring the very people who might be competing to get the same types of clients: *“if you mentor someone then you're basically mentoring your competition because that's who will be competing with you for these contracts.”* (P20.4). This concern was also voiced in terms of using the [\(4\) Double-Blind Evaluation](#) feature because peer reviewers might gain an advantage from looking at one's work, learn from others' processes, and becoming more attractive for clients: *“When you send someone your work to evaluate it [...] that person will learn how you're different that gives them a chance of getting better and probably even overtaking you and thus probably taking some of the contracts that you get as a freelancer”* (P19.4). These concerns reflect that some people perceive freelancing as an individualistic, competitive profession where cooperation could harm one's opportunities to get work.

9.4 Discussion

In this chapter, we have explored freelancers' views on 'Freelance Grow,' a design fiction that embodies gig economy literature recommendations to support various freelancers' practices, and, more broadly, improve the experience of working on freelancing platforms. We have been interested in how online freelancers viewed Freelance Grow, capturing their perceived concerns and benefits. Based on these findings, we discuss three opportunities and considerations for designing interventions to support online freelancers. Echoing Baumer et al. (2020), we see our design fiction as an empirical method to engage with and understand freelancers' experiences. As such, the focus of our discussion becomes less on the speculative features (including their feasibility and sustainability) and more on the reactions they provoked. Hence, in this section, we seek to further illuminate the problem space and identify pathways forward to support freelancers' practices based on our findings.

9.4.1 Designing for greater autonomy

Feature [\(5\) Portable Reputation](#) was seen as enabling greater autonomy over one's freelance work on- and off-platform. This feature was viewed as an exciting opportunity to gain control over one's experience and portfolio. Extending prior research from the literature (Blaising, Kotturi, et al., 2020; Jarrahi, Sutherland, et al., 2020) and Chapter 6, our findings suggest that reputation systems that constrain reviews and ratings to a single platform environment were seen as barriers that hamper freelancers' career advancement. An opportunity for future research is developing tools for freelancers to demonstrate their professional experience (whether online freelancing or traditional employment settings) beyond platform

environments, such as their personal website, other professional platforms like LinkedIn, or even other freelancing platforms. Previous research has designed tools to support low-resource job seekers capture their professional competencies and skills (T. Dillahunt & Hsiao, 2021; T. R. Dillahunt & Lu, 2019), a similar approach could be taken for online freelancers to have control over their reputation. However, our participants recognised that facilitating reputation transferability jeopardises platforms' revenue, thus compromising the feasibility of such tools. We recommend future research should build on existing examples of successful partnerships across multiple platforms supporting gig workers access their data and reputation, such as 'GigCV' (Arets, 2021). Also, we are mindful that some workers might want to have a 'clean slate' when signing up to a new platform, hence, we advocate for workers to have a final say regarding reputation transferability.

Features [\(3\) Progression Level](#), [\(6-7\) AI Buddy](#), and [\(8\) Optional Benefits](#) had elements that were seen as potentially constraining one's autonomy. Participants criticised our speculations mainly because they seemed to adopt management-like capabilities. Even when well intentioned, participants felt that it was not the role of the platform to determine their work opportunities to a smaller pool of clients or provide benefits akin to traditional employment. Participants especially criticised speculative features putting forward the use of AI, e.g., to match freelancers with clients or suggest prices. Future technology development should carefully consider ways to increase trust in AI-driven features and be mindful of the managerial dynamics that they impose on workers. Emerging research has suggested participatory methods for stakeholders, including workers, to democratically develop algorithmic features (Lee et al., 2019; Zhang et al., 2022) to distribute the power dynamics more evenly. We advocate for approaches that consider freelancers' interests and preferences when designing forms of algorithmic management as the notion of 'management' clashes with autonomy as an underpinning value of freelance practice.

9.4.2 Supporting the development of entrepreneurial skills

Feature [\(1\) Apprenticeship Programme](#) was seen as a potential source of entrepreneurial development. Participants recognised that different stages of their freelance career require different types of support. This feature was seen as beneficial for novices to ease into the platform and accessing paid opportunities without the pressure to immediately compete with experienced freelancers for work. There is great potential for platforms to leverage social learning theories (e.g., communities of practice (Wenger, 1998)) to support newcomers in developing their skills. We expand previous research (Blaising, Kotturi, et al., 2020; Blaising, Kulkarni, et al., 2020), by illustrating the need for on-boarding features that can support

novices transition into online freelancing, while allowing more experienced freelancers to showcase their previous experience within the platform environment right away.

Participants called for approaches to support their entrepreneurial development that we overlooked in our design fiction. Participants associated entrepreneurial development with keeping domain specific skills updated, but most importantly, learning shared freelance practices (e.g., dealing with clients, managing different projects, and sensemaking of feedback). Huang et al. (2019) suggest that platforms are in a strong position to encourage freelancers to develop relevant domain-specific skills. Our findings confirm and expand this notion by showing that platforms can further promote the development of entrepreneurial skills. Future technology development should explore pathways for freelancers to access reliable and meaningful feedback on their shared practices. These opportunities could build on existing interventions, e.g., portfolio feedback (Foong et al., 2021), to encompass other entrepreneurial qualities.

Feature [\(7\) AI Buddy: Entrepreneurial Insights](#) was viewed as prescriptive and potentially failing to fully meet participants' entrepreneurial needs. Participants were concerned that an AI could accurately consider the various, often dynamic, elements that go into their everyday practices, such as time invested in freelancing (e.g., part-time vs fulltime (Foong & Gerber, 2021)), types of work they do, and workload. Future technology development should carefully consider the complexities and overhead (Avle et al., 2019; Blaising, Kotturi, et al., 2020) that go into self-development to make adequate suggestions. Extending previous research on impression management and pricing strategies (Foong et al., 2018; Foong & Gerber, 2021; Munoz, Dunn, et al., 2022), participants called for complementary approaches to support these strategies, such as discussing them with platform staff or peer mentors. We suggest that supporting entrepreneurial training should come from multiple angles and not merely from platforms making automated recommendations.

9.4.3 Fostering meaningful peer support

Feature [\(2\) Super Peer Mentorship](#) was seen as having potential to enable social learning opportunities. Participants viewed mentorship as having benefits for both mentees and mentors. From the mentee's perspective, participants felt that having an experienced peer could help navigate both platform environments and advancing their freelance everyday practices by getting advice from experienced peers. From the mentor's perspective, participants viewed an opportunity to demonstrate mentorship as an added competence that could attract potential clients and amplify their professional networks to get work, confirming prior work (Blaising, Kotturi, et al., 2020; Blaising & Dabbish, 2022). There is an opportunity

for researchers and designers to create mentorship programmes that foster career connections and go beyond support with specific tasks or skills (as was the case in previous research (Suzuki et al., 2016)). Future research should explore the configuration of supportive communities where learning emerges as a form of social practice (Lave & Wenger, 1991). An emerging understanding in mentorship strategies could support the creation of such peer support interventions (Umbelino et al., 2021).

Features [\(2\) Super Peer Mentorship](#) and [\(4\) Double-Blind Evaluations](#) sparked tensions between peer cooperation and individual success. Participants voiced concerns that mentoring and evaluating peers might hamper their success on the platform, for example, by peers providing unfair reviews to damage their competition. These findings mirror those discussed in prior research on peer assessments at scale (Kotturi et al., 2020) and fragmented peer support communities (Yao et al., 2021). Participants also questioned the added (potentially unpaid) work that supporting peers could create. These tensions resemble the notions of “adversarial collaboration” (Cohen et al., 2000) and “social dilemmas” (Danis & Lee, 2003), whereby individuals with shared competitive goals are faced with incentives to cooperate to enhance the collective. These findings illuminate challenges for further exploration in the freelancing space.

Future research should consider strategies to mitigate damaging competitive dynamics. For example, future peer assessment interventions might leverage disclosing necessary information (e.g., how reviews are aggregated) and consider peer anonymity to mitigate damaging behaviour (Kotturi et al., 2020; Whiting et al., 2017). Also, we suggest that managing individual success and community cooperation in competitive marketplaces requires to further understand both individuals (Danis & Lee, 2002, 2003) and markets’ objectives (Lampinen & Brown, 2017). There is an opportunity to investigate the factors spurring competition and those that incentivise collaboration among freelancers.

9.5 Limitations

Although our study has provided valuable insights for future work to address prevalent challenges for online freelancers, we acknowledge the limitations of our approach. Firstly, our sample had an overrepresentation of UK participants, and more generally from the Global North. We screened for participants who had used platforms as clients and with several years of experience, making our sample skewed to these savvier freelancers. Future work should engage with freelancers from the Global South to gain richer perspectives on approaches to support online freelancers, given that workers from these countries might experience heightened precarity (Anwar & Graham, 2020a). Secondly, while we hope elements of our

speculative features can inspire future technology development, further empirical research is needed to understand the implications of designing tools to support various freelancers' practices. We suggest researchers work closely with all stakeholders (i.e., freelancers, clients, and platform leadership) to develop a deeper understanding of how new tools may impact freelancers' experiences with platforms.

9.6 Conclusion

We have engaged with 23 online freelancers across five online focus groups to explore the concepts in *Freelance Grow*, a design fiction developed in Chapter 8. Our qualitative findings suggest that freelancers appreciated *Freelance Grow*'s features aimed at supporting their status as independent workers, fostering social learning opportunities, and developing entrepreneurial skills. Conversely, our findings highlight how some recommendations from previous work, even when applied to a fictional scenario, can be seen as a threat to freelancers' autonomy and individual success. This chapter demarcates the end of Part IV *Data Collection*. The following and last part, *Synopsis*, discusses the insights gained in addressing our initial research questions, provides a critical reflection of limitations, and concludes with a research summary.

Part V. Synopsis

Overview

This is the final part of this thesis and comprises Chapter 10

We begin Chapter 10 with a summary of the core findings from our three empirical studies. Then, we follow to discuss this thesis' three main contributions. The first contribution stems from a reflection on our empirical findings and how they address our overarching research question and objectives. These findings provide novel knowledge to HCI literature and beyond about the impact of freelancing platforms on freelancers' practices. The second contribution relates to design considerations for research, practice, and technology development. The last contribution is a discussion of recommendations and challenges for policymakers. This chapter closes reflecting on research limitations, directions for future work, and a conclusion statement.

Chapter 10 Discussion

10.1 Summary of Research Findings

This thesis has examined the challenges and opportunities freelancing platforms introduce for freelance practice through three qualitative studies. In 1.2.4, we defined shared and everyday practices, and then elaborated about the background of this definition in 2.1. *Shared practices* were defined as actions that are accepted and enacted by a particular group that interacts regularly (in this case freelancers). *Everyday practices* were defined as ordinary cycles of activity, where various roles and domains, such as work and non-work activities, usually overlap. We noted that these practices are tightly intertwined and mutually influence each other. Our studies were motivated by the need to understand how freelancing platforms, as a new work genre (characterised by algorithmic management rather than human), have impacted freelance practice at the shared and everyday levels. Together, these three studies build our understanding of how freelancers' practices have been transformed by freelancing platforms, which is the primary contribution of this thesis and is discussed in the next section (10.2). Here, we summarise the main findings from each study.

The first study, described in **Chapter 6**, contributed an expanded understanding of the impact of freelancing platforms on freelancers' shared practices (addressing research objective one [RO1] of this thesis). This study presented a qualitative analysis of 528 freelancing subforum posts with 7499 associated comments. Our findings suggested opportunities and challenges freelancing platforms introduce for their shared practices. On the one hand, freelancers viewed platforms as presenting advantages for some shared practices, such as enabling a space to find clients, develop entrepreneurial skills, and lessen administrative burdens (e.g., chasing payments). On the other hand, freelancers viewed platforms as challenging core freelancing shared practices in terms of work autonomy and entrepreneurial control (e.g., by monitoring and evaluating their work through algorithmic systems, introducing unbalance power relationships with clients, and limiting their earnings). This chapter begins to untangle the impact freelancing platforms have on freelancing shared practices and norms, while pointing to opportunities platforms create for freelance work.

The second study, described in **Chapter 7**, investigated the impacts freelancing platforms have on freelancers' everyday practices (addressing research objective two [RO2] of this thesis). This chapter presented a qualitative study combining a 14-day diary followed by semi-structured interviews with 15 freelancers. Our findings suggested that both platform features and individual circumstances shaped freelancers' everyday practices. Importantly, our

findings showed how platform features challenge freelancers' availability expectations (e.g., demanding constant attention to secure work), work autonomy (e.g., policing work processes), and work detachment (e.g., incentivising regular interaction with the platform). In response to these challenges, freelancers developed strategies to mitigate platform constraints and balance their individual responsibilities beyond their platform work. This chapter contributes an extended understanding of the interplay between platform features, freelancers' everyday practices, and instituted, shared norms of freelance practice by drawing from Orlikowski's (1992) Structuration Model of Technology – an established work practice theory that considers the relationship between technology, human actors, and institutional conditions.

The third study, described in **Chapter 9**, explored how new platform features can impact freelancers' practices (addressing research objective three [RO3] of this thesis). This chapter used a design fiction (presented in Chapter 8), depicting a platform called "Freelance Grow" that focused on enhancing freelancers' practices, as a discussion probe across five online focus groups that engaged with a total of 23 freelancers. Based on a qualitative analysis of the focus groups' transcripts, our findings suggested that freelancers appreciate features from the fiction that supported their entrepreneurial status, fostered social learning opportunities, and facilitated skills development. On the flipside, freelancers expressed concerns about fictional features that appeared to undermine their work autonomy and individual success. This chapter contributes opportunities and challenges platforms hold for the future of freelance practice and highlights pitfalls to consider when designing future interventions with freelancers.

10.2 Contributions to Knowledge

This thesis set out to address the following overarching research question and generate empirical knowledge of how freelancing platforms have impacted freelancers' practices:

What opportunities and challenges do online freelancing platforms introduce for freelancers' practices?

In this section, we discuss the opportunities and challenges freelancing platforms have had on four core elements of freelance practice: (1) Work Autonomy, (2) Client Relationships, (3) Reputation, and (4) Entrepreneurship (see Table 7 for an overview). Work Autonomy and Entrepreneurship were identified as core freelancing practices as part of the literature review presented in Chapter 2 and impacts to these elements came across strongly throughout our findings. In Chapter 2, we presented Social Capital as another core element of freelance practice, however, throughout our studies we identified that platforms impact two different

elements of Social Capital: Client Relationships and Reputation. As such, we have decided to discuss these two elements separately.

We identified the impacts to these four core elements by mapping out and reflecting on our empirical research findings, recognising recurrent themes of discussion throughout three years of research. We illustrate the discussion by relating back to findings from our Reddit Data (Chapter 6), Diary Study (Chapter 7), and Focus Groups (Chapter 9) and situating our findings in the context of related literature. We begin by describing the relevant aspects of each core element for freelance practice (as summarised on the first column of Table 7).

We found that freelancing platforms impact (positively and negatively) both freelancers' shared and everyday practices. Because these two elements of practice are tightly interwoven and mutually influence each other (as argued in 2.1), we unpack them throughout our discussion, pointing to platform elements that introduce opportunities and challenges for these two elements of practice.

Overall, our research shows that challenges outweigh the opportunities platforms create for freelance practice. Work Autonomy and Reputation were two core areas where challenges were viewed as more prominent than potential opportunities. On the flipside, we identified platforms introduce an equal number of opportunities and challenges for Client Relationships and Entrepreneurship. Therefore, we call for more approaches, both on- and off-platforms, to mitigate challenges and maximise the opportunities of freelancing in the online gig economy, as we discuss in section 10.3.

One theme that cuts across our findings is that experienced challenges and opportunities are contingent on individual circumstances. Examples of these individual circumstances include how important online freelancing is for one's income and what one's career goals are when using freelancing platforms. Freelancers relying on platforms as their main source of work *and* lacking other work alternatives (whether off-line or through other platforms) are more likely to experience greater challenges. By contrast, freelancers using platforms as a supplementary source of work are more likely to benefit from platform opportunities. These findings contribute and extend prior research on work precarity in the gig economy (Ma & Hanrahan, 2019; Schor, 2021; A. Wood & Lehdonvirta, 2021). We reflect on how researchers, platform stakeholders, activists, and policymakers could use this new knowledge in sections 10.3 and 10.4 to bridge these gaps. We now transition to discuss the opportunities and challenges freelancing platforms introduce for freelance practice.

Table 7 Freelance practices influenced by freelancing platforms

Core Elements of Freelance Practice	Opportunities for Freelance Practice	Example	Challenges for Freelance Practice	Example
1. Work Autonomy Freelancers control when, where, and how they work	Freelancing platforms can enable many work autonomy qualities (e.g., work flexibility), especially compared with traditional nine-to-five employment	P1 (in 7.4.2) attending university full-time while using platforms to complement her income	Platform features impose a rigid work structure, clashing with freelancers' preference for flexibility	P5 (in 7.4.2.3) feeling he couldn't attend other responsibilities while using Upwork's hourly tracking software
			Platform features challenge availability by incentivising quick responsiveness	P7 (in 7.4.1.1) sharing her rating declined when she delayed a response
			Platform features challenge work time to meet marketplace work demands	P8 (in 7.4.3.2) feeling compelled to be available for clients during her downtime
2. Client Relationships Freelancers cultivate relationships with clients to negotiate and arrange work	Freelancing platforms enable access to a wide range of clients	Thread 22 (in 6.3.2.3) discussing platforms as convenient to find clients	Platforms create asymmetric power relationships between freelancers and clients	Thread 151 (in 6.3.2.1) discussing platforms as affecting freelancers' ratings and ability to find work
			Platforms offer detailed client information, e.g., project descriptions, review history, and track record	P17.4, (in 9.3.1.2) leveraging platforms' affordances to build client relationships
3. Reputation Freelancers develop their reputation in various off- and on-line channels as a form of social capital (i.e., expecting a value in return)	Platforms introduce opportunities for freelancers to expand their social capital	Thread 248 (in 6.3.2.3) discussed how platforms are one of various work sources	Platforms introduce barriers for newcomers to develop a reputation and secure work	P17.4 (in 9.3.1.1) sharing platforms failing to validate her prior off-platform experience when getting started
			Opaque algorithmic ratings have negative consequences for freelancers' wellbeing	P12 (in 7.4.3.1) feeling anxious when sending a job for review fearing his score might plummet
4. Entrepreneurship Freelancers, as 'solopreneurs', are responsible for their business activities	Freelancing platforms can facilitate the self-managing activities of freelance work	Thread 169 (in 6.3.2.3) discussing platforms as convenient to ease the burden of finding work	Platforms control freelance business activities, reducing freelancers' agency over their business	Thread 46 (in 6.3.2.1) discussing platforms as 'setting the ground rules' of freelance business, e.g., controlling supply and demand of work
	Freelancers can leverage platforms to develop entrepreneurial practices and professional skills	P3.1 (in 9.3.1.2) sharing platforms have allowed her to explore new career options	Platforms present challenges for the development of entrepreneurial qualities	P22.5 (in 9.3.1.1) regarding platforms as leaving freelancers to fend for themselves

10.2.1 Work autonomy

Traditionally, knowledge-based professionals have pursued freelance work in search of greater control of how work fits into their personal lives (Annink & den Dulk, 2012; B. Gray et al., 2017; Massey & Elmore, 2011). Freelancers' work autonomy can be seen in relation to who they work with, how they arrange their working hours, how much they charge for their services, and how they go about doing their work (Jarrahi et al., 2017; Jarrahi, Newlands, et al., 2020). For instance, freelancers have great flexibility when it comes to attending various work and non-work responsibilities and choosing their workplaces (unlike employees that might be constrained to office spaces and fixed schedules) (Ciolfi & de Carvalho, 2014; B. Gray et al., 2020). We argued in Chapter 2 that this autonomy and flexibility are in part product of freelance work, but also akin to the versatility of knowledge work as primary outputting information and knowledge (Erickson et al., 2019; Jarrahi et al., 2019).

10.2.1.1 Opportunities for work autonomy on platforms

In principle, freelancing platforms retain many work autonomy qualities from freelance work. Online freelancers may set their own rates, choose from a wide range of projects, schedule work as they see fit, and work however much they want. These opportunities for work autonomy were more apparent in our Diary Study, where some participants harnessed this autonomy and flexibility in their everyday practices, and referred to work autonomy as advantageous, especially when compared to the alternatives of a nine-to-five job. For instance, P13 (in 7.4.2) squeezed in multiple work and non-work responsibilities as part of his routine, P3 combined her online freelancing with childcare, and P1 managed to attend university full-time while using platforms to experiment with her 'passion projects.' Previous research suggests that less reliance on platforms for income mitigates the perceived negative impacts of algorithmic management (Ma & Hanrahan, 2019; Schor, 2021; A. Wood & Lehdonvirta, 2021). Our findings confirm and extend this prior research by showing that, under certain circumstances (such as using the platform as a complementary source of work), freelancers experience less platforms constraints on work autonomy. These findings contribute novel knowledge on how platforms can positively impact work autonomy in relation to freelancers' everyday routines and preferences to combine platform work with other responsibilities and projects.

10.2.1.2 Challenges for work autonomy on platforms

We identified three challenges that constrain and negatively impact freelancers' work autonomy. Firstly, we have argued that platforms' algorithmic management is designed to ensure platform relevance (thus generating profit) even when these designs are conflicted with

freelancers' preference for autonomy (Jarrahi, Sutherland, et al., 2020; Kinder et al., 2019; Shapiro, 2018). These tensions between platform designs and work autonomy were consistent across our three studies. In our Reddit Data (thread 101 in 6.3.2.1), freelancers referred to platforms' algorithmic management features, e.g., policing client relationships and tracking productivity, as 'having a boss but being a freelancer.' In our Diary Study, P5 (in 7.4.2.3) referred to Upwork's hourly tracking system as 'trying to control every minute of [his] work' and P11 felt she was being micromanaged via this tracking system. Lastly in our Focus Groups, participants were critical of our speculative platform features that appeared to influence their work autonomy, such as suggesting time off or setting prices (see examples in 9.3.2.2). These findings contribute an extended understanding of how algorithmic management challenges by imposing stringent control on freelancers' everyday practices which are inherently flexible and autonomous.

Secondly, by dictating the supply and demand of work, platforms have challenged freelancers' everyday practices of finding work. These challenges were more salient in our Diary Study. For instance, P7 (in 7.4.1.1) mentioned how platforms enforced quick hiring dynamics by penalising slow responsiveness with lower ratings, thereby requiring freelancers to remain attentive to potential work opportunities. Coupled with these quick hiring dynamics was remaining attentive and responding quickly to potential client requests to stand out from other applicants, as presented in section 7.4.1.1. Whereas constant availability through information and communication technologies (ICTs) has been a known challenge for freelancers' everyday practices predating platforms (Cecchinato et al., 2017; Mazmanian & Erickson, 2014; Sadler, Robertson, & Kan, 2006), platforms' algorithms enforce visible consequences for failing to meet these expectations, e.g., a client pivoting quickly to a different freelancer or damaging one's rating by delaying a response. These findings contribute a novel understanding of how platform features have impacted freelancers' autonomy over managing their availability and communications with clients.

Lastly, as a marketplace operating around the clock internationally, freelancers are incentivised to adjust their work times to meet work demands, thus challenging freelancers' autonomy over their work schedules. These challenges were more apparent in our Diary Study. For instance, P6 (in 7.4.3.2) shared how she would take calls during her non-work designated time from a client in a different time zone and P1 who would spend her downtime scrolling through Upwork's job feed and responding to messages. These findings resonate with previous research examining the impacts of freelancers working late nights to meet platforms' work demands (Shevchuk et al., 2019, 2021; A. J. Wood et al., 2019). Freelance work has been characterised for its flexibility to choose *when* one works, however, our research shows

this promise does not hold when using platforms that advertise freelancers' readiness and on-demand availability as part of their services. These findings contribute to the understanding of platforms impact on freelancers' shared and everyday practices around work time flexibility.

10.2.2 Client relationships

Traditionally, freelancers have cultivated client relationships as a shared practice to develop a reputation and secure recurrent projects. Freelancers may negotiate various aspects of their work with their clients, such as timelines, payrates, and project scope, enabling agency and dignity on both sides (Sinicki, 2019). However, client relationships come with challenges, such as ensuring clients are satisfied with their work even at the expense of hindering their own wellbeing, e.g., letting work spill over designated non-work time (Gold & Mustafa, 2013). These client relationships are intrinsic to freelancing, but most importantly to knowledge work whereby there is a deliberate creation, maintenance, and activation of social networks to find collaborations (Davenport, 2005; Erickson et al., 2019; Nardi et al., 2002).

10.2.2.1 Opportunities for client relationships on platforms

Freelancing platforms have enabled opportunities to access a wide range of clients at an international scale. Whereas freelance work opportunities have been traditionally constrained to local labour markets and individual social networks (Gandini, 2016b; Jacobs et al., 2019), platforms have expanded these opportunities to connect with clients internationally (Graham & Anwar, 2019; Jarrett, 2022; Woodcock & Graham, 2019). These advantages were discussed mainly in our Reddit Data and Diary Study. For example, thread 169 (in 6.3.2.3) talked about platforms as mitigating challenges of accessing projects that are difficult to find in a more traditional freelance fashion. In our follow-up interviews in our Diary Study various participants (e.g., P2, P4, P13, P14) mentioned having access to clients through platforms that otherwise would be unavailable through their local networks. These findings contribute an understanding of the value platforms introduce for facilitating the development of social capital networks, a core shared practice of freelance work.

The second opportunity we identified is that platforms have transformed how freelancers negotiate with clients. Platforms provide a wide range of resources and features, such as badges and metrics, to facilitate the building of client relationship (Jarrahi & Sutherland, 2019). These opportunities were more apparent in our Diary Study and Focus Groups. For instance, we illustrate in 7.4.1 how freelancers leverage client profiles, reviews, and project descriptions to gauge their work expectations, work compatibility, and demands. Freelancers have not usually been able to access these detailed client reputation breakdowns in more

traditional forms of freelance work. Further, prior research has shown that platforms' features allow freelancers to streamline their communication practices with clients to speed up negotiations and land projects quicker (Hsieh et al., 2022). Our research adds depth to these findings, uncovering how negotiation practices with clients also serve to develop relationships as mentioned by P17.4 (in 9.3.1.2) and set boundaries and expectations as shared by P8 (in 7.4.1.3). These findings contribute a new understanding of how developing client relationships and communication has been transformed by platform features and affordances.

10.2.2.2 Challenges for client relationships on platforms

Freelancing platforms introduce asymmetric power relationships between freelancers and clients, thereby challenging meaningful relationship development. Prior research has noted how platforms usually design their systems to generate profit, thus favouring clients who dictate work demand (Fox et al., 2020; M. Gray & Suri, 2019; Srnicek, 2017). This sentiment was voiced especially in our Reddit Data. For instance, thread 46 (in 6.3.2.1) discussed that platforms benefit clients rather than workers, thereby introducing challenges for negotiating as equal business entities, which is a shared practice of freelance work. Power asymmetries usually manifested in relation to rating systems (Kinder et al., 2019; Lustig et al., 2020; Nemkova et al., 2019; Sutherland et al., 2019; Wilkins et al., 2022), through which freelancers felt disempowered to push back against abusive client practices, fearing a poor rating, as illustrated in thread 3 (in 6.3.2.1). While this tension of maintaining positive client relationships 'at all costs' has always existed (Gold & Mustafa, 2013), platforms' algorithmic evaluations have exacerbated the emotional labour freelancers engage with to maintain positive relationships with clients. This emotional labour was apparent in our Diary Study (7.4), whereby freelancers adjusted their everyday practices, e.g., by thoroughly screening potential clients and managing expectations, to ensure a positive rating upon finishing a contract. These findings contribute an understanding of how asymmetric power dynamics have challenged freelancing shared practices when it comes to negotiating with clients, while also impacting freelancers' everyday practices to mitigate reputational damage.

Platforms' opaque trust-building features (e.g., ratings and badges) are usually designed to favour clients rather than freelancers. Challenges with these features were apparent across our three studies. In our Reddit Data, thread 101 (in 6.3.2.2) discussed that platforms' rating systems disproportionately affect freelancers over clients. Further, threads 80 (in 6.3.2.1) and 180 (in 6.3.2.2) spoke about how platforms' policing features can result in sudden an unjustified account suspension. In our Diary Study, P15 and P3 (in 7.4.3.1) voiced their frustrations with the little amount of information that platforms disclose about their ranking evaluations, making it tough to improve upon getting a low score. In our Focus Groups P6.2

and P2.1 (in 9.3.2.1) mentioned the lack of actionable feedback freelancers get from their client interactions (e.g., when a bid for project has closed) and wished platforms were more transparent regarding areas to improve their services and client relationships. These findings solidify existing knowledge about platform information asymmetries and how they negatively impact the work experience for freelancers.

10.2.3 Reputation

Reputation in freelance work has been regarded as an investment in relationships and self-branding to enable profitable professional networks, a form of ‘social capital’ (Gandini, 2016a). Peters (1997) characterises knowledge-based professional identities as ‘brands of one’ that should be promoted and cultivated as a form of social capital that can generate a value in return (e.g., getting a new project through personal connections). Prior research has explored self-branding practices of freelancers online (e.g., on social media) and off-line (e.g., through personal networks), showing the importance of managing self-presentation and connections as part of their everyday work (Barley & Kunda, 2011; Gandini, 2016b; Grugulis & Stoyanova, 2011). Importantly, freelancers have typically self-managed their identity representation and built their entrepreneurial profiles individually through their social channels (Hoffman & Casnocha, 2012).

10.2.3.1 Opportunities for reputation on platforms

Freelancing platforms present opportunities to expand freelancers’ social capital. This opportunity was mainly discussed in our Reddit data, for instance, thread 248 (in 6.3.2.3) where freelancers talked about using platforms as one of the various areas where they find work. These findings echo Blyth et al.’s (2022) research around freelancing platforms fitting into a larger ecosystem of freelancers’ online presence. These findings contribute an expanded understanding of platforms as presenting opportunities for freelancers to create social capital and expand their social visibility in an economy that praises self-branding, entrepreneurship, and specialised skill (Alkhatib et al., 2017; Gandini, 2016b).

10.2.3.2 Challenges for reputation on platforms

We found platforms create reputational barriers to access work opportunities, which are especially pronounced for platform newcomers. These barriers were mostly apparent in our Reddit Data and Focus Groups. For example, thread 126 (in 6.3.2.2) discussed how landing the first few jobs with no prior reputation on a platform was incredibly difficult. This challenge stems from platforms relying on algorithms to automatically calculate freelancers’ ratings based on their recurrent interactions with the platform, however, newcomers lack such initial

calculations, creating barriers to display a reputation and find work. This challenge was further echoed by P17.4 (in 9.3.1.1) who asserted that platforms – by design – fail to represent freelancers’ prior, off-platform experience. Barriers for newcomers to develop a reputation can discourage freelancers to use various platforms, as mentioned by P11.3 (in 9.3.1.1). While, in principle, freelancing platforms can amplify freelancers’ social capital, these findings show that accessing these platform networks can be incredibly challenging.

Further, relying on a reputation that is built through opaque algorithmic scores introduces challenges for freelancers’ everyday work detachment practices. Previous research has touched on freelancers’ experiences with algorithmic management (Blyth et al., 2022; E. L. Bucher et al., 2021; Jarrahi & Sutherland, 2019; A. J. Wood et al., 2019). Our Diary Study findings extend this prior research by showing negative impacts algorithmic evaluations have on freelancers’ everyday lives. For instance, P12 (in 7.4.3.1) felt anxious when sending a job for review fearing his score might plummet. We found that an established reputation and seniority was associated with a greater ability to detach from work and feel in control over one’ boundaries, as mentioned by P6 (in 7.4.3.2). Conversely, freelancers still developing their reputation can find it harder to detach from work and feel less in control of setting boundaries, as voiced by P8 (in 7.4.3.1). Our findings contribute an understanding of the impacts algorithmic management and reputation have on freelancers’ work detachment practices.

10.2.4 Entrepreneurship

In this thesis, we have viewed freelancers as entrepreneurs, i.e. individuals who run a business, arguing that this quality has implications for both shared and everyday practices (Burke & Cowling, 2015; de Jager et al., 2016). In terms of shared practices, freelancers develop strong ties to their identity as ‘solopreneurs,’ allowing them to cope with precarious moments, such as work uncertainty and financial strains (Petriglieri et al., 2019). Entrepreneurial implications for their everyday practices include self-managing a wide array of activities to operate effectively and deliver on their projects (Avle et al., 2019). While entrepreneurship enables the three other core elements we discussed above (work autonomy, client relationships, and reputation), here we focus on discussing the opportunities and challenges platforms bring to the skills of business ownership.

10.2.4.1 Opportunities for entrepreneurship on platforms

Our studies confirm and extend prior literature suggesting that platforms introduce opportunities to develop entrepreneurial and knowledge-specific (e.g., graphic design) skills (Blaising, Kotturi, et al., 2020; Blaising, Kulkarni, et al., 2020). These findings were evident across our three studies. For instance, thread 248 (in 6.3.2.3) discussed how a freelancer

kickstarted their freelance career on Upwork while still being a university student. Another freelancer in thread 25 (in 6.3.2.2) shared how they honed their self-presentation skills by analysing other freelancers' profiles on Upwork. Similarly, in our Diary Study, P12 (in 7.4.2.1) shared how he has learned project management skills through his Upwork workload. Finally, in our Focus Groups (in 9.3.1.2) P3.1 shared her appreciation for platforms allowing her to explore new career opportunities by being exposed to a wide range of jobs on the platform. These findings contribute new empirical evidence of how freelancing platforms can be a source of valuable shared practices to develop entrepreneurial skills and foster career progression.

Platforms have impacted freelancers' everyday practices by streamlining various administrative tasks. Through our Reddit Data and Diary Study we have identified freelancers who view platforms as enabling conveniences to find work, reducing everyday administrative demands. For example, thread 169 (in 6.3.2.3) a freelancer regarded Upwork as a positive 'middle-man' that facilitates the process of sourcing work. Further, in our Diary Study, we followed the journey of participants who combined online freelancing with their full-time work (P7, P10, P11) or education (P1, P5, P12). These participants highlighted how Upwork's administrative conveniences (e.g., standardised contracts) lowered the barriers to pursue side projects, develop skills, and generate additional income that might be otherwise time-consuming in a more traditional freelancing fashion. These findings extend our understanding of the positive effects platforms can have on freelancers' everyday practices by easing the process of self-managing their freelance work.

10.2.4.2 Challenges for entrepreneurial qualities on platforms

By platforms controlling the freelance process (and taking a commission), they sit in a position of power that challenges the shared practice of freelancers as independent businesses. This challenge was evident in our Reddit Data. For instance, thread 46 (in 6.3.2.1) a freelancer regarded platforms as setting the ground rules of freelance business, for instance controlling supply and demand of work, and thus constraining their entrepreneurial capabilities. Another challenge is that freelancers still bear most risks of independent work, such as financial uncertainty, while working on platforms (Haapakorpi, 2021), as discussed in thread 101 (in 6.3.2.1). Nevertheless, platforms introduce new risks by having full control over freelancers' accounts, challenging their business ownership, should they be suspended or leave the platform (A. Wood & Lehdonvirta, 2021). Our findings contribute novel evidence on how platforms exert control over freelancers' business by mediating the end-to-end work process, limiting the level of independence freelancers have over their entrepreneurial practices while working on the platform.

While we have noted that freelancers can leverage platform work to develop entrepreneurial skills, we have argued these practices are more a display of freelancers' agency than platforms' fundamental designs. In fact, our Focus Groups and Reddit Data showed that platforms provide little support for freelancers to develop entrepreneurial skills. For instance, P22.5 (in 9.3.1.1) who compared getting started on a platform like getting thrown into the deep end of a pool and no one looking out for him. These views resonate with Blaising et al.'s (2020) longitudinal study where they noted that a significant barrier for people to view online freelancing as a sustainable career option was the lack of support and the entrepreneurial overhead required. Another challenge to entrepreneurship is the risk associated with depending on a platform for most of one's work, as Reddit users discussed in 6.3.2.3. Freelancers viewed platforms as presenting conveniences but ultimately were not perceived as a sustainable career option on their own because of the control platforms have over their business and the little support they provide to have success on the platform. These findings contribute an understanding of the challenges stifling long-term sustainability of platforms for freelance work.

10.3 Implications for Design

This section pertains to how freelancers' practices can be thoughtfully considered in the design of new platform configurations, potential new features, and research interventions to address challenges freelancing platforms create. We see the main contribution of this thesis lying in articulating how freelancers' practices and platforms impact each other (as discussed above). As such, the contributions to design do not come in the form of interface or software recommendations, as this was not the focus of our research approach and would be misaligned with the knowledge generated (Dourish, 2006). Rather, our design contributions come as a reflection and critique of design assumptions baked into freelancing platforms, how these design assumptions impact freelancers' practices, and potential avenues to foster practices that are aligned with freelancers' preferences. Put differently, we contribute a way of thinking about "worker-centred" designs in the freelance gig economy (Fox et al., 2020).

Gig economy platforms operate under a capitalistic model designed to generate profit – rather than to support freelancers' practices (Richardson et al., 2022; Srnicek, 2017; van Doorn & Badger, 2020). Although, arguably, platforms can implement changes to support positive work experience without compromising their profitability, they have little incentives to do so, and tighter regulations may be necessary to adequately support workers, as we discuss in the following section. Recognising this caveat allows us to situate our design implications to favour researchers, designers, and activists who wish to support freelancers, whether through off-platform interventions (e.g., (Foong et al., 2021; Salehi & Bernstein, 2018; Suzuki et al.,

2016)) or through developing marketplaces that steer away from the mainstream gig economy model (e.g., (Alkhatib et al., 2015; Lampinen & Brown, 2017; Scholz & Schneider, 2017; Subasi et al., 2020)).

Various challenges stem from platforms' opaque algorithms, hence, there is a need to increase transparency and audit these algorithms. Freelancing platforms use information asymmetries as a control mechanism, such as undisclosed rating parameters and surveillance tools that delimit platforms' norms and expectations but are otherwise 'invisible' to workers (Rahman, 2021). There is a need for design interventions to reveal features – that by design – hide platforms' intents from workers. Activist tools, such as Turkoptikon (Irani & Silberman, 2013), have been successful in equipping gig workers with previously unknown information while also building a system of mutual worker aid. Also, there is a need to audit platforms' algorithms and their outcomes. For instance, prior forms of algorithmic auditing have uncovered race and gender biases in hiring and rating freelancers (Hannák et al., 2017). As the gig economy platforms operate through opaque algorithms, researchers, activists, and designers should channel efforts to support freelancers in the sensemaking of platforms' information asymmetries and surface the negative consequences these opaque systems introduce for workers' experiences.

There is also a need to support freelancers who are disproportionately affected by platform challenges. One of our core takeaways is that freelancers use platforms differently – depending on their career stages and individual circumstances. Some freelancers might view platforms as a side-hustle, others might view them as their main source of work, and many others might oscillate between these two extremes. In this continuum, freelancers who rely on platforms as their main source of work *and* lack other alternatives are disproportionately affected by the challenges platforms introduce to their shared and everyday practices. Recognising this distinction enables design avenues to support freelancers who lack access to other work sources. For instance, off-platform interventions, e.g., (T. Dillahunt & Hsiao, 2021; T. R. Dillahunt & Lu, 2019; Salehi & Bernstein, 2018), might be necessary to support freelancers in diversifying affected freelancers' work sources and mitigate the negative impacts stemming from platform reliance.

There is a need to support freelancers' access to entrepreneurial resources and spaces where communities of practice can thrive. In early 2022, Upwork launched their community page¹¹, aimed at providing a wide range of resources, such as a 'suite' of informational modules¹², best practices to use the platform, and certifications to improve freelancers' profiles. While

¹¹ <https://community.upwork.com>

¹² <https://community.upwork.com/t5/Academy/ct-p/Academy>

these efforts show platforms have appetite to support entrepreneurship and community development, these resources seem aimed at reinforcing their position of power since most of their guidance is specific to Upwork features. Future research might consider enabling community spaces for freelancers to connect, share experiences, and ultimately support social learning. As discussed in our Focus Groups (Chapter 9), freelancers, especially novices, appreciated the idea of connecting with peers and receiving mentoring on their entrepreneurial skills. Future research might build upon prior interventions, e.g., (Suzuki et al., 2016), to support freelancers develop strong shared practices.

There is a need for workers to have greater control over their data when doing freelance work on platforms. Platforms collect a wide range of data from workers, from personal information to work patterns, however, most of this data remains inaccessible for workers and even contributes to platforms' business value (Calacci, 2022; van Doorn & Badger, 2020). In this thesis (specifically in the design fiction presented in Chapter 8) we have explored alternatives for freelancers to access and 'export' their reputation, drawing from Arets' (2021) GigCV initiative. Nevertheless, reputation is only one aspect of worker data that future design interventions might support. Tools already exist¹³ for gig workers to self-track their working resources, expenses, and schedule. There is a great opportunity to design tools that enable freelancers to easily retrieve, understand, and compare their data with their peers. As Gregory (2021) argues, this 'worker data science' movement will require both ethical and technical expertise to developing and maintaining worker data tools, which academics and unions may be in a strong position to provide. By freelancers having more control of their data, they may have greater leverage to contest and demand better conditions in the gig economy.

As a final reflection, we want to highlight the limits of 'design' when working with gig workers and transition into the next section which discusses policy implications. Irani & Silberman (2016, p. 4582) remind us by citing Dunne & Raby (2013) that the "power of design is often overestimated" and that we (researchers and designers) can, on occasion, make more impact as citizens protesting, organising, and 'boycotting' rather than designing systems even when well-intentioned and engaging workers. Certainly, activist research is well-equipped to "understand the causes of oppression, inequality, and violence" (de Castro Leal et al., 2021, p. 3), especially when it is explicitly political and occurring outside of political institutions as de Castro Leal and colleagues note. However, surfacing these forms of oppression and inequality from a research perspective might not be enough to improve workers' conditions in the gig economy. Indeed, while there is value in researching with workers and designing interventions that can strive to be worker-centred, there are limits to our practice (as

¹³ For instance, Driver's Seat: <https://driversseat.co> and WeClock: <https://weclock.it>

researchers and designers) when influencing the work experience (Bates et al., 2020; Richardson et al., 2022). Therefore, we call for broader systemic changes at the policy level to build a future of online work that lives to its expectations, as we follow to discuss in 10.4.

10.4 Implications for Policy

Our research has argued that freelancing platforms prioritise clients and their profitability over freelancers' work preferences. Following the worker-centred stance that we have taken throughout this thesis, as positioned in 1.2.3, our implications for policy provide a lens to carefully consider freelancers' work preferences in relation to platforms. While policymakers may consider all parties involved (e.g., clients and platform decision-makers) when developing regulations, our research has not engaged with these other parties, and as such does not consider them in these implications. Also, we do not intend to provide ready-made policy solutions. Instead, we see this section as enabling avenues towards thinking about an online gig economy that delivers on its promises for *all* its users and reflecting on potential political agendas that might be suited to achieve this vision, which is an intersecting point where HCI and policymaking can meet (Spaa et al., 2019).

We call for corporate responsibility towards *all* users of platform services – that is – considering workers' safety and satisfaction as equally crucial as that of clients. Extensive research, including the one presented in this thesis, has highlighted the precarity workers can experience on platforms (Anwar & Graham, 2020a; Sutherland et al., 2019; A. Wood & Lehdonvirta, 2021). Work precarity is embedded as part of the gig economy model, where corporate profitability is at the expense of workers bearing risks and costs (Srnicsek, 2017). Prior research has shown examples of gig economy companies considering workers as an asset rather than an expense (Bennett, 2021). For instance, Gray & Suri (2019) narrated the story of “LeadGenius” a business lead generation platform that engineered work security and development as part of their work experience, Kessler (2018) follow the journey of “Managed by Q” a management building platform that regarded workers as employees providing training and stable income, and “Up&Go”¹⁴ is a platform providing cleaning services in the US where workers are at the heart of the decision-making processes (Gregory, 2021). These examples show that platforms can have a strong responsibility towards workers, to protect their rights, train them, and ensure safe working conditions, as it has been proposed for other forms of digital marketplaces (Følstad et al., 2018). Future policies should ensure platforms abide to this corporate responsibility towards workers.

¹⁴ <https://www.upandgo.coop>

While gig economy companies can contribute to improving working conditions on their platforms, we argue that significant advancements to workers' rights will only be possible when there is political appetite to hold these companies accountable. Indeed, there have been successful examples of local governments and institutions that have enforced robust regulatory measures to location-based gig companies in terms of licensing, safety checks, and even minimum wages (Deutsch & Sterling, 2021; "Legality of Ridesharing Companies by Jurisdiction," n.d.). However, regulating online platforms has been more complex and problematic than location-based platforms. Fairwork (2021b, p. 6), a research and policy project advocating for gig workers' rights, assert that online gig work involves labour relations shifting across borders, exchanging (mostly) intangible services that often "fall outside" or "strategically evade national regulations, including labour protections, corporate regulation, and tax structures (ibid)." It is this ambiguous and emerging regulatory terrain that has allowed online platforms to take advantage of workers (Fairwork, 2021b). Therefore, we call for innovative policy approaches and international regulatory bodies that can hold platforms to a decent work standard, regardless of the geographies they operate in.

At the same time, regulating platforms is only a partial step towards ensuring better futures of work as the gig economy continues to grow and expand to other areas of our lives. As more jobs continue to become temporary, project-based, and algorithmically managed, we also advocate for protecting workers rather than jobs (Ponce del Castillo, 2020). Our research has shown that freelancers embrace their status as independent workers and do not necessarily seek a stable job, but rather robust social institutions that are well-equipped to serve this type of 'flexible worker.' Such institutions might invest in accessible healthcare, comprehensive tax procedures for the self-employed, and economic protections should self-employed workers stop generating income, for instance, because of an accident, crisis, or upon reaching retirement age. Many of these benefits are currently covered by employers (although it varies by country), especially in the Global South, where a significant percentage of online workers are located (Fairwork, 2022). Therefore, we call for policies that seriously consider the gig economy model as a full-time reality of work and adapt their protections accordingly.

Finally, as the landscape of work continues to rapidly adopt emerging technologies, such as AI, policymakers might need to update existing legislation to consider and keep up with these advancements. It is likely that algorithms will continue to adopt managerial roles within the gig economy and beyond (Jarrahi, Newlands, et al., 2021), hence, policymakers will need to consider aspects of worker privacy, surveillance, stratification, and data protection (Ponce del Castillo, 2020). These aspects are especially relevant in the context of this thesis where freelancers are regarded as independent workers and yet platforms collect and amass large

amounts of information from their interactions with their systems (Calacci, 2022). This new relationship of data transactions and power may require unprecedented regulations to ensure that lawful procedures are in place to safeguard workers.

10.5 Limitations and Future Work

Beyond the limitations detailed in each study chapter, there remain all-encompassing limitations that are worth discussing. We recognise that practice-centred research questions usually involve situated approaches, such as ethnography, however, due to the internationally dispersed nature of our research participants, and the COVID-19 pandemic restrictions, such approach was not feasible. To address this limitation, and to triangulate our findings, we took different approaches to understanding freelancers' practices, as described in 5.2. Future research should explore other approaches to understanding freelancers' practices. First-person methods such as autoethnography, could prove beneficial in engaging more deeply with platform features, as it has been done in the courier context (Kusk & Bossen, 2022).

This thesis mostly examined the practices of freelancers from the Global North, with notable exemptions in Chapter 7. Previous research, from disciplines outside of HCI, have focused on Global South freelancers' experiences (Anwar & Graham, 2020b, 2020a; Graham et al., 2017; A. J. Wood et al., 2018, 2019). Given the growth of freelancing platforms and that a significant number of freelancers are located outside North America and Europe (Fairwork, 2021b; World Economic Forum, 2020), future HCI research should engage more seriously with online freelancers located in diverse geographies with vastly different contexts. This approach has been previously successful in other gig economy contexts, such as microwork, ride-hailing, and beauty work, engaging with workers located in countries such as India, Bangladesh, and Indonesia (Anjali Anwar et al., 2021; Kumar et al., 2018; Qadri, 2020, 2021a; Raval & Dourish, 2016; Yin et al., 2018). These approaches have been successful in bringing diverse perspectives to the literature and showing how gig economy platforms impact other contexts differently.

The freelancing practices discussed in this thesis are possibly not exhaustive, however they provide novel knowledge around how platforms have transformed established professional norms. There are opportunities to learn from workers' practices predating platforms, as noted by Dillahunt et al. (2017). Future research should continue learning from established forms of work and consider how the gig economy might be transformed from the bottom up – namely, through understanding workers' needs (Alkhatib et al., 2015; Bates et al., 2020; Lampinen, McGregor, et al., 2018). We also call for more research examining how freelancers' relationships with other platform actors, such as clients, might influence their practice as also

suggested in Lustig et al. (2020). Richardson et al. (2022) have started to critically engage with the values and assumptions from various stakeholders in designing gig economy systems, however, more research is needed to surface the competing values of gig platforms, workers, clients, and other parties that might be involved (e.g., researchers). As platforms modify their features and new modalities emerge, future research should examine the impacts these new functionalities have on freelancers' practices over time.

Lastly, we call for more work to understand the barriers to support freelancers' practices. For example, the study presented in Chapter 9 uncovered a tension between conflicting competitive goals and providing peer support, thus competition represents a potential barrier for supporting entrepreneurial qualities. There is a need for more research that focuses on the barriers that platform designs create for workers, for instance, examining the inequalities stemming from doing freelance work at an international scale, and identifying the barriers to accessing work opportunities on freelancing platforms. As forms of online work continue to expand, future research should ensure its opportunities outweigh its challenges.

10.6 Conclusions

As more people increasingly seek work flexibility detached from bureaucratic organisations, freelancing platforms promise an opportunity to pursue freelance work that aligns with these flexible work aspirations. Freelancing platforms can enable flexibility to choose one's projects and pay rate, when work gets done, and even where from. However, research has shown that platforms' saturated markets, work surveillance features, and opaque decision-making processes compromise this promised flexibility. Freelancers work long hours to earn decent wages, they are constantly monitored by platform features, and their status on the platform can change unexpectedly, jeopardising their sustainability. As freelancing platforms are an emerging work model, our understanding of their impacts on freelance work have remained limited. For platforms to truly deliver on their promise of a flexible work alternative, it is critical to have a nuanced understanding of how these systems have affected freelance work.

Therefore, this thesis has examined the opportunities and challenges that freelancing platforms introduce for freelance work. Our findings have shown that freelancing platforms' have impacted four core elements of freelance work: work autonomy, client relationships, reputation, and entrepreneurship. Opportunities platforms introduce for these four areas include facilitating everyday administrative conveniences, providing access to find work, and enabling avenues to entrepreneurial experiences that can be flexibly combined with other responsibilities. On the flipside, challenges include constraining freelancers' work routines to meet expectations, creating power asymmetries with clients, introducing barriers for accessing

work without sustained engagement with the platform, and hampering entrepreneurial control. Our findings suggest that freelancers who lack other work alternatives outside of platforms are the ones who are most affected by these challenges. In short, our research has shown that platforms' challenges outmatch their opportunities for sustainable futures of freelance work.

Beyond these novel contributions to knowledge, this thesis also provides a thorough reflection on what can be done to support freelancers' core values and mitigate platforms' most damaging challenges through design and policy. In terms of design, we contribute ways of thinking to move towards research interventions, potential platform configurations, and features that carefully consider freelancers' preferences. In terms of policy, we contribute a series of implications to support freelancers through regulating and holding platforms accountable, robust social institutions for self-employed workers, and greater attention to regulate emerging technologies that manage work.

References

- Abhinav, K., Dubey, A., Jain, S., Bhatia, G. K., McCartin, B., & Bhardwaj, N. (2018). *CrowdAssistant: A Virtual Buddy for Crowd worker*. 17–20. <https://doi.org/10.1145/3195863.3195865>
- Ahmetoglu, Y., Brumby, D. P., & Cox, A. L. (2020). To Plan or Not to Plan? A Mixed-Methods Diary Study Examining When , How and Why Knowledge Work Planning is Inaccurate. *ACM Hum.-Comput. Interact. CSCW*, 3(December). <https://doi.org/https://doi.org/10.1145/3432921>
- Alkhatib, A. (2021). To live in their utopia: Why algorithmic systems create absurd outcomes. *Conference on Human Factors in Computing Systems - Proceedings*. <https://doi.org/10.1145/3411764.3445740>
- Alkhatib, A., Bernstein, M. S., & Levi, M. (2017). Examining Crowd Work and Gig Work Through The Historical Lens of Piecework. *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, 4599–4616. <https://doi.org/10.1145/3025453.3025974>
- Alkhatib, A., Cranshaw, J., & Monroy-Hernandez, A. (2015). *Laying the Groundwork for a Worker-Centric Peer Economy*. https://www.microsoft.com/en-us/research/wp-content/uploads/2016/09/worker_centric_peer_econ.pdf
- Alvarez de la Vega, J. C., Cecchinato, M. E., & Rooksby, J. (2020). The Gig Economy in Times of COVID-19 : Designing for Gig Workers ’ Needs. *Microsoft Research Virtual Symposium on the New Future of Work*. <https://www.microsoft.com/en-us/research/uploads/prod/2020/07/NFW-Alvarez-de-la-Vega-et-al.pdf>
- Alvarez de la Vega, J. C., Cecchinato, M. E., & Rooksby, J. (2021a). Why lose control? a study of freelancers’ experiences with gig economy platforms. *Conference on Human Factors in Computing Systems - Proceedings*. <https://doi.org/10.1145/3411764.3445305>
- Alvarez de la Vega, J. C., Cecchinato, M. E., & Rooksby, J. (2021b). “Why lose control?” A Study of Freelancers’ Experiences with Gig Economy Platforms. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, 1–14. <https://doi.org/10.1145/3411764.3445305>

- Alvarez de la Vega, J. C., Cecchinato, M. E., & Rooksby, J. (2022). Design Opportunities for Freelancing Platforms: Online Freelancers' Views on a Worker-Centred Design Fiction. *2022 Symposium on Human-Computer Interaction for Work*, 1–19. <https://doi.org/10.1145/3533406.3533410>
- Alvarez de la Vega, J. C., Cecchinato, M. E., & Rooksby, J. (2023). Understanding Platform Mediated Work-Life: A Diary Study with Gig Economy Freelancers. *Proceedings of the ACM on Human-Computer Interaction, Vol. 7, CSCWI*, 32. <https://doi.org/https://doi.org/10.1145/3579539>
- Alvesson, M. (2001). Knowledge work: Ambiguity, image and identity. *Human Relations*, 54(7), 863–886. <https://doi.org/10.1177/0018726701547004>
- Amitabh, U. (2022). *Passion Economy and the Side Hustle Revolution* (first). SAGE Publications Ltd.
- Andalibi, N., Haimson, O. L., De Choudhury, M., & Forte, A. (2016). Understanding social media disclosures of sexual abuse through the lenses of support seeking and anonymity. *Conference on Human Factors in Computing Systems - Proceedings*, 3906–3918. <https://doi.org/10.1145/2858036.2858096>
- Andalibi, N., Haimson, O. L., De Choudhury, M., & Forte, A. (2018). Social support, reciprocity, and anonymity in responses to sexual abuse disclosures on social media. *ACM Transactions on Computer-Human Interaction*, 25(5). <https://doi.org/10.1145/3234942>
- Andersen, K. (2013). Making Magic Machines. *10th European Academy of Design Conference - Crafting the Future, April*. <https://doi.org/10.2307/j.ctvg8p3md.12>
- Anderson, K. E. (2015). Ask me anything: What is reddit? *Library Hi Tech News*, 32(5), 8–11. <https://doi.org/10.1108/LHTN-03-2015-0018>
- Anjali Anwar, I., Pal, J., & Hui, J. (2021). Watched, but Moving: Platformization of Beauty Work and Its Gendered Mechanisms of Control. *Proceedings of the ACM on Human-Computer Interaction*, 4(CSCW3), 1–20. <https://doi.org/10.1145/3432949>
- Annink, A., & den Dulk, L. (2012). Autonomy: The panacea for self-employed women's work-life balance? *Community, Work and Family*, 15(4), 383–402. <https://doi.org/10.1080/13668803.2012.723901>

- Anwar, M. A., & Graham, M. (2020a). Between a rock and a hard place: Freedom, flexibility, precarity and vulnerability in the gig economy in Africa. *Competition and Change*, 1–22. <https://doi.org/10.1177/1024529420914473>
- Anwar, M. A., & Graham, M. (2020b). Hidden transcripts of the gig economy: labour agency and the new art of resistance among African gig workers. *Environment and Planning A*, 52(7), 1269–1291. <https://doi.org/10.1177/0308518X19894584>
- Arets, M. (2021). *Gig CV*. <https://gig-cv.com>
- Ashford, S. J., Caza, B. B., & Reid, E. M. (2018). From surviving to thriving in the gig economy: A research agenda for individuals in the new world of work. *Research in Organizational Behavior*, 38, 23–41. <https://doi.org/10.1016/j.riob.2018.11.001>
- Association of Independent Professionals and the Self-Employed. (2021). *The Self-Employed Landscape in 2021*. <https://www.ipse.co.uk/policy/research/the-self-employed-landscape/the-self-employed-landscape-report-2021.html>
- Avdikos, V., & Kalogerisis, A. (2017). Socio-economic profile and working conditions of freelancers in co-working spaces and work collectives: evidence from the design sector in Greece. *Area*, 49(1), 35–42. <https://doi.org/10.1111/area.12279>
- Avle, S., Hui, J., Lindtner, S., & Dillahunt, T. (2019). Additional labors of the entrepreneurial self. *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW). <https://doi.org/10.1145/3359320>
- Bajwa, U., Knorr, L., Ruggiero, E. Di, Gastaldo, D., & Zendel, A. (2018). Towards an understanding of workers ' experiences in the global gig economy. *Globalization and Health*, 14(124), 2–4.
- Barley, S. R., & Kunda, G. (2006). Contracting: A New Form of Professional Practice. *Academy of Management Journal*, 20(1), 45–66. https://www.jstor.org/tc/accept?origin=%2Fstable%2Fpdf%2F4166218.pdf%3Fcasa_token%3DJSPoyMQEyfgAAAAA%3AzWC_qraYBUB0xav7qLWr6X1puuNfXrGxqidfuECIilp7IIR9JxKxgkn2ckOUQGAjTnggADgFfj4HwBhUWP2sEdMB4naGYwjewnGUEO-j2ia0g0fq9NUn&is_image=False
- Barley, S. R., & Kunda, G. (2011). Gurus, hired guns, and warm bodies: Itinerant experts in a knowledge economy. *Gurus, Hired Guns, and Warm Bodies: Itinerant Experts in a Knowledge Economy*, May, 1–342. <https://doi.org/10.1177/009430610503400620>

- Barnes, B. (2005). Practice as collective action. In T. Schatzki, K. Knorr-Cetina, & E. von Savigny (Eds.), *The Practice Turn in Contemporary Theory* (First). Routledge.
- Bates, O., Lord, C., Alter, H., & Kirman, B. (2020). Let's start talking the walk: Capturing and reflecting on our limits when working with gig economy workers. *Proceedings of the 7th International Conference on ICT for Sustainability*, 227–235. <https://doi.org/10.1145/3401335.3401364>
- Bates, O., Remy, C., Nash, C., & Kirman, B. (2019). The future of techno-disruption in gig economy workforces: Challenging the dialogue with fictional abstracts. *ACM International Conference Proceeding Series, July 2017*, 15–18. <https://doi.org/10.1145/3363384.3363476>
- Baudin, M. (2007). Working with Machines. *Working with Machines*, 1603–1612. <https://doi.org/10.4324/9780429272806>
- Baumer, E. P. S., Blythe, M., & Tanenbaum, T. J. (2020). Evaluating design fiction: The right tool for the job. *DIS 2020 - Proceedings of the 2020 ACM Designing Interactive Systems Conference*, 1901–1913. <https://doi.org/10.1145/3357236.3395464>
- Baumgartner, J. (2019). *Pushshift Reddit API Documentation*. Github Repository. <https://github.com/pushshift/api>
- Bennett, M. (2021). *Financial protection for gig economy workers benefits everyone. Here's why*. World Economic Forum.
- Berger, R. (2015). Now I see it, now I don't: researcher's position and reflexivity in qualitative research. *Qualitative Research*, 15(2), 219–234. <https://doi.org/10.1177/1468794112468475>
- Berger, T., Frey, C. B., Levin, G., & Danda, S. R. (2019). Uber Happy? Work and Well-being in the “Gig Economy.” *Economic Policy*, 1–35. <https://doi.org/10.1093/epolic/eiz007>
- Blaising, A., Askay, D., Kotturi, Y., & Kulkarni, C. (2018). A qualitative investigation of unmet information-seeking needs of online workers. *Americas Conference on Information Systems 2018: Digital Disruption, AMCIS 2018*, 1–10.
- Blaising, A., & Dabbish, L. (2022). Managing the Transition to Online Freelancing Platforms: Self-Directed Socialization. *Computer Supported Cooperative Work (Forthcoming)*.

- Blaising, A., Kotturi, Y., Kulkarni, C., & Dabbish, L. (2020). Making it Work, or Not : A Longitudinal Study of Career Trajectories Among Online Freelancers. *ACMHum.-Comput. Interact.* 4, CSCW3, 4(December), 29. <https://doi.org/https://doi.org/10.1145/3432925>
- Blaising, A., Kulkarni, C., & Dabbish, L. (2020). Career Trajectories in Online Freelance Platforms. *Microsoft Research Virtual Symposium on the New Future of Work*, 1–9. <https://www.microsoft.com/en-us/research/uploads/prod/2020/07/Blaising-et-al-NFW-FINAL.pdf>
- Blaising, A., Kulkarni, C., & Kotturi, Y. (2019). Navigating uncertainty in the future of work: Information-seeking and critical events among online freelancers. *Conference on Human Factors in Computing Systems - Proceedings*, 1–6. <https://doi.org/10.1145/3290607.3312922>
- Bleecker, J. (2009). Design Fiction: A Short Essay on Design, Science, Fact and Fiction. *Near Future Laboratory*, March, 49. <http://www.nearfuturelaboratory.com/2009/03/17/design-fiction-a-short-essay-on-design-science-fact-and-fiction/>
- Blyth, D. L., Jarrahi, M. H., Lutz, C., & Newlands, G. (2022). Self-branding strategies of online freelancers on Upwork. *New Media & Society*, 1–26. <https://doi.org/10.1177/14614448221108960>
- Blythe, M., Andersen, K., Clarke, R., & Wright, P. (2016). Anti-Solutionist Strategies: Seriously Silly Design Fiction. *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*, 4968–4978. <https://doi.org/10.1145/2858036.2858482>
- Bolger, N., Davis, A., & Rafaeli, E. (2003a). Diary Methods: Capturing Life as it is Lived. *Annual Review of Psychology*, 54, 579–616. <https://doi.org/10.1146/annurev.psych.54.101601.145030>
- Bolger, N., Davis, A., & Rafaeli, E. (2003b). Diary Methods: Capturing Life as it is Lived. *Annual Review of Psychology*, 54(1), 579–616. <https://doi.org/10.1146/annurev.psych.54.101601.145030>
- Brandt, E., & Grunnet, C. (2000). Evoking the future: Drama and props in user centered design. *Proceedings of Participatory Design Conference PDC 2000, December*, 11–20. <http://www.itu.dk/courses/I/F2004/PDC00-drama-endelig.pdf>

- Braun, V., & Clarke, V. (2006a). Qualitative Research in Psychology Using thematic analysis in psychology Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <http://www.tandfonline.com/action/journalInformation?journalCode=uqrp20%5Cnhttp://www.tandfonline.com/action/journalInformation?journalCode=uqrp20>
- Braun, V., & Clarke, V. (2006b). Qualitative Research in Psychology Using thematic analysis in psychology Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Braun, V., & Clarke, V. (2006c). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2013). *Successful Qualitative Research: A Practical Guide for Beginners* (M. Carmichael, Ed.; First). SAGE Publications Ltd.
- Braun, V., & Clarke, V. (2021). *Thematic Analysis: A Practical Guide* (A. Maher, Ed.; First). SAGE Publications Ltd.
- Breaugh, J. A. (1999). Further investigation of the work autonomy scales: Two studies. *Journal of Business and Psychology*, 13(3), 357–373. <https://doi.org/10.1023/A:1022926416628>
- Brems, C., Temmerman, M., Graham, T., & Broersma, M. (2017). Personal Branding on Twitter: How employed and freelance journalists stage themselves on social media. *Digital Journalism*, 5(4), 443–459. <https://doi.org/10.1080/21670811.2016.1176534>
- Bucher, E., Fieseler, C., Lutz, C., & Newlands, G. (2020). *Shaping Emotional Labor Practices in the Sharing Economy*. *March*, 55–82. <https://doi.org/10.1108/s0733-558x20200000066004>
- Bucher, E. L., Schou, P. K., & Waldkirch, M. (2021). Pacifying the algorithm – Anticipatory compliance in the face of algorithmic management in the gig economy. *Organization*, 28(1), 44–67. <https://doi.org/10.1177/1350508420961531>
- Bukht, R., & Heeks, R. (2018). Defining, conceptualising and measuring the digital economy. *International Organisations Research Journal*, 13(2), 143–172. <https://doi.org/10.17323/1996-7845-2018-02-07>

- Burke, A., & Cowling, M. (2015). The Handbook of Research on Freelancing and Self-Employment. In A. Burke (Ed.), *Senate Hall Academic Publishing* (Vol. 13, Issue 1).
- Burrell, G., & Morgan, G. (1979). Interpretive Sociology. In *Sociological Paradigms and Organisational Analysis* (First, p. 448). Routledge Taylor & Francis Group.
- Calacci, D. (2022). Organizing in the End of Employment: Information Sharing, Data Stewardship, and Digital Workerism. *2022 Symposium on Human-Computer Interaction for Work*, 1–9. <https://doi.org/10.1145/3533406.3533424>
- Carter, S., & Mankoff, J. (2005). *When participants do the capturing*. 9, 899–908. <https://doi.org/10.1145/1054972.1055098>
- Caza, B. B., Moss, S., & Vough, H. (2018). From Synchronizing to Harmonizing: The Process of Authenticating Multiple Work Identities. In *Administrative Science Quarterly* (Vol. 63, Issue 4). <https://doi.org/10.1177/0001839217733972>
- Caza, B. B., Reid, E. M., Ashford, S. J., & Granger, S. (2021). Working on my own: Measuring the challenges of gig work. *Human Relations*. <https://doi.org/10.1177/00187267211030098>
- Cecchinato, M. E., Cox, A. L., & Bird, J. (2015). Working 9-5? Professional differences in email and boundary management practices. *Conference on Human Factors in Computing Systems - Proceedings, 2015-April*, 3989–3998. <https://doi.org/10.1145/2702123.2702537>
- Cecchinato, M. E., Cox, A. L., & Bird, J. (2017). Always On(line)? User experience of smartwatches and their role within multi-device ecologies. *Conference on Human Factors in Computing Systems - Proceedings, 2017-May*, 3557–3568. <https://doi.org/10.1145/3025453.3025538>
- Chen, L., Mislove, A., & Wilson, C. (2015). Peeking Beneath the Hood of Uber. *Proceedings of the 2015 ACM Conference on Internet Measurement Conference - IMC '15, 2015-October*, 495–508. <https://doi.org/10.1145/2815675.2815681>
- Choudary, S. P. (2018). The architecture of digital labour platforms: Policy recommendations on platform design for worker well-being. In *ILO future of work research paper series*. https://www.ilo.org/global/topics/future-of-work/publications/research-papers/WCMS_630603/lang--en/index.htm

- Ciolfi, L., & de Carvalho, A. F. P. (2014). Work Practices, Nomadicity and the Mediational Role of Technology. *Computer Supported Cooperative Work*, 23(2), 119–136. <https://doi.org/10.1007/s10606-014-9201-6>
- Ciolfi, L., Gray, B., & de Carvalho, A. F. P. (2020). Making Home Work Places. *18th European Conference on Computer-Supported Cooperative Work*. https://doi.org/10.18420/ecscw2020_ep10
- Ciolfi, L., & Lockley, E. (2017). Work-Life Strategies on the Move: Reconfiguring Boundaries. *International Reports on Socio-Informatics (IRSI)*, 14(3), 35–40. https://www.iisi.de/wp-content/uploads/2018/07/5_ciolfi-lockley_irsi_v14_n3.pdf
- Ciolfi, L., & Lockley, E. (2018). From Work to Life and Back Again: Examining the Digitally-Mediated Work/Life Practices of a Group of Knowledge Workers. *Computer Supported Cooperative Work: CSCW: An International Journal*, 27(3–6), 803–839. <https://doi.org/10.1007/s10606-018-9315-3>
- Ciolfi, L., & Lockley, E. (2020). Exploring flash fiction for the collaborative interpretation of qualitative data. *ECSCW 2019 - Proceedings of the 17th European Conference on Computer Supported Cooperative Work*. https://doi.org/10.18420/ecscw2019_ep03
- Cohen, A. L., Cash, D., & Muller, M. J. (2000). Designing to support adversarial collaboration. *Proceedings of the ACM Conference on Computer Supported Cooperative Work*, 31–39. <https://doi.org/10.1145/358916.358948>
- Cornell University, & The Aspen Institute. (n.d.). *How many gig workers are there?* <https://www.gigeconomydata.org/basics/how-many-gig-workers-are-there>
- Coulton, C., Stead, M., Coulton, P., & Lindley, J. (2019). *The Little Book of Design Fiction for the Internet of Things*.
- Coulton, P., Lindley, J., & Akmal, H. A. (2016). Design Fiction: Does the search for plausibility lead to deception? *DRS2016: Future-Focused Thinking, 1*. <https://doi.org/10.21606/drs.2016.148>
- Coulton, P., Lindley, J., Sturdee, M., & Stead, M. (2017). Design Fiction as World Building. *3rd Biennial Research Through Design Conference, July 2018*, 1–17. <https://doi.org/10.6084/m9.figshare.4746964>

- Creswell, J. W. (2007). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches* (Second, Issue June). SAGE Publications Ltd.
- Czerwinski, M., Horvitz, E., & Wilhite, S. (2004). A diary study of task switching and interruptions. *Conference on Human Factors in Computing Systems - Proceedings*, 6(1), 175–182. <https://doi.org/10.1145/985692.985715>
- Damian, D., & Capatina, A. (2019). Seeking freelancers' motivations to adopt an entrepreneurial career – a storytelling approach. *Proceedings of the International Conference on Business Excellence*, 13(1), 206–215. <https://doi.org/10.2478/picbe-2019-0019>
- Danis, C., & Lee, A. (2002). Contemplating Electronic Mediation: What Makes CBOT Face-to-Face Trading? *ACM 2002 Conference on Computer Supported Cooperative Work*.
- Danis, C., & Lee, A. (2003). *Alternatives to an Open Outcry Market : An Issue of Supporting Cooperation in a Competitive Situation*.
- Davenport, T. H. (2005). *Thinking for a Living: How to Get Better Performance and Results from Knowledge Workers*. Harvard Business School Press.
- de Castro Leal, D., Strohmayer, A., & Krüger, M. (2021). On Activism and Academia. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, 30, 1–18. <https://doi.org/10.1145/3411764.3445263>
- de Jager, W., Kelliher, C., Peters, P., Blomme, R., & Sakamoto, Y. (2016). Fit for self-employment? An extended Person-Environment Fit approach to understand the work-life interface of self-employed workers. *Journal of Management and Organization*, 22(6), 797–816. <https://doi.org/10.1017/jmo.2016.41>
- Deal, J. (2016). *What Millennials Want from Work: How to Maximize Engagement in Today's Workforce*.
- Dean, G., & Hoff, M. (2021, October 7). Nearly three-quarters of workers are actively thinking about quitting their job, according to a recent survey. *Business Insider*. <https://www.businessinsider.com/great-resignation-labor-shortage-workers-thinking-about-quitting-joblist-report-2021-10?r=MX&IR=T>

- Deutsch, A., & Sterling, T. (2021, September 13). Uber drivers are employees, not contractors, says Dutch court. *Reuters*. <https://www.reuters.com/world/europe/dutch-court-rules-uber-drivers-are-employees-not-contractors-newspaper-2021-09-13/>
- Dillahunt, T., & Hsiao, C.-Y. (2021). SkillsIdentifier: A Tool to Promote Career Identity and Self-efficacy Among Underrepresented Job Seekers. *Proceedings of the 54th Hawaii International Conference on System Sciences*. <https://doi.org/10.24251/hicss.2021.588>
- Dillahunt, T. R., & Lu, A. (2019). Dreamgigs: Designing a Tool to Empower Low-resource Job Seekers. *Conference on Human Factors in Computing Systems - Proceedings*, 1–14. <https://doi.org/10.1145/3290605.3300808>
- Dillahunt, T. R., Wang, X., Wheeler, E., Cheng, H. F., Hecht, B., & Zhu, H. (2017). The Sharing Economy in Computing: A Systematic Literature Review. *Proceedings of the ACM on Human-Computer Interaction*, 1(CSCW), 1–26. <https://doi.org/10.1145/3134673>
- Dourish, P. (2006). Implications for design. *Conference on Human Factors in Computing Systems - Proceedings, I*, 541–550. <https://doi.org/10.1145/1124772.1124855>
- Duarte, E. F., & Baranauskas, M. C. C. (2016). Revisiting the three HCI waves: A preliminary discussion on philosophy of science and research paradigms. *ACM International Conference Proceeding Series, Part F1280*. <https://doi.org/10.1145/3033701.3033740>
- Dubey, A., Abhinav, K., Hamilton, M., & Kass, A. (2017). Analyzing gender pay gap in freelancing marketplace. *SIGMIS-CPR 2017 - Proceedings of the 2017 ACM SIGMIS Conference on Computers and People Research*, 13–19. <https://doi.org/10.1145/3084381.3084402>
- Duggan, J., Sherman, U., Carbery, R., & McDonnell, A. (2020). Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM. *Human Resource Management Journal*, 30(1), 114–132. <https://doi.org/10.1111/1748-8583.12258>
- Dunn, M., Munoz, I., & Sawyer, S. (2021). Gender Differences and Lost Flexibility in Online Freelancing During the COVID-19 Pandemic. *Frontiers in Sociology*, 6(August), 1–7. <https://doi.org/10.3389/fsoc.2021.738024>

- Dunn, M., Stephany, F., Sawyer, S., Munoz, I., Raheja, R., Vaccaro, G., & Lehdonvirta, V. (2020). When Motivation Becomes Desperation: Online Freelancing During the COVID-19 Pandemic. *SocArXiv*. <https://doi.org/https://doi.org/10.31235/osf.io/67ptf>
- Dunne, A., & Raby, F. (2013). *Speculative Everything: Design, Fiction, and Social Dreaming*. Massachusetts Institute of Technology.
- Erickson, I., Jarrahi, M. H., Thomson, L., & Sawyer, S. (2014). More than Nomads: Mobility, Knowledge Work, and Infrastructure. *EGOS, Mobile Wor*(52), 1–20. http://www.jarrahi.com/publications/EGOS_Erickson_Subtheme52.pdf
- Erickson, I., Menezes, D., Raheja, R., & Shetty, T. (2019). Flexible Turtles and Elastic Octopi: Exploring Agile Practice in Knowledge Work. *Computer Supported Cooperative Work: CSCW: An International Journal*, 28(3–4), 627–653. <https://doi.org/10.1007/s10606-019-09360-1>
- Fairwork. (2020). *The Gig Economy and Covid-19: Fairwork Report on Platform Policies*.
- Fairwork. (2021a). *Work in the Planetary Labour Market: Fairwork Cloudwork Ratings 2021*. <https://fair.work/wp-content/uploads/sites/131/2021/06/Fairwork-cloudwork-2021-report.pdf>
- Fairwork. (2021b). *Work in the Planetary Labour Market Fairwork Cloudwork Ratings 2021*.
- Fairwork. (2022). *Fairwork Cloudwork Ratings 2022*. <https://fair.work/wp-content/uploads/sites/131/2022/08/Fairwork-Cloudwork-Ratings-2022-FINAL-EN.pdf>
- Farrell, D., Greig, F., & Hamoudi, A. (2018). *The Online Platform Economy in 2018: Drivers, Workers, Sellers and Lessors*. <https://www.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/institute/pdf/institute-ope-2018-exec-summary.pdf>
- Feldman, M. S., & Orlikowski, W. J. (2011). Theorizing practice and practicing theory. *Organization Science*, 22(5), 1240–1253. <https://doi.org/10.1287/orsc.1100.0612>
- Felstead, A., & Jewson, N. (1999). *Global Trends in Flexible Labour*. Macmillan International Higher Education. <https://link.springer.com/book/10.1007/978-1-349-27396-6>
- Fielding, N. G., Raymond, L. M., & Grant, B. (2017). *The SAGE Handbook of Online Research Methods*. SAGE Publications Ltd.

- Fieseler, C., Bucher, E., & Hoffmann, C. P. (2019). Unfairness by Design? The Perceived Fairness of Digital Labor on Crowdfunding Platforms. *Journal of Business Ethics*, 156(4), 987–1005. <https://doi.org/10.1007/s10551-017-3607-2>
- Følstad, A., Skjuve, M., Haugstveit, I. M., & Lech, T. C. (2018). Sharing economy services as human-machine networks: Implications for policy making. *ACM International Conference Proceeding Series*. <https://doi.org/10.1145/3209281.3209338>
- Foong, E. (2020a). *Understanding and Designing Equitable Sociotechnical Systems to Support Freelancers in the Online Gig Economy*. Northwestern University.
- Foong, E. (2020b). Understanding and designing sociotechnical systems to support the impression management practices of online freelance workers. *Proceedings of the International ACM SIGGROUP Conference on Supporting Group Work*, 25–33. <https://doi.org/10.1145/3323994.3371017>
- Foong, E., & Gerber, E. (2021). Understanding Gender Differences in Pricing Strategies in Online Labor Marketplaces. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, 1–16. <https://doi.org/10.1145/3411764.3445636>
- Foong, E., Gergle, D., & Gerber, E. M. (2017). Novice and expert sensemaking of crowdsourced feedback. *Proceedings of the ACM on Human-Computer Interaction*, 1(CSCW), 1–18. <https://doi.org/10.1145/3134680>
- Foong, E., Kim, J. O., Dontcheva, M., & Gerber, E. M. (2021). CrowdFolio: Understanding How Holistic and Decomposed Workflows Influence Feedback on Online Portfolios. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW1), 1–31. <https://doi.org/10.1145/3449096>
- Foong, E., Vincent, N., Hecht, B., & Gerber, E. M. (2018). Women (still) ask for less: Gender differences in hourly rate in an online labor marketplace. *Proceedings of the ACM on Human-Computer Interaction*, 2(CSCW). <https://doi.org/10.1145/3274322>
- Fox, S. E., Khovanskaya, V., Crivellaro, C., Salehi, N., Dombrowski, L., Kulkarni, C., Irani, L., & Forlizzi, J. (2020). Worker-Centered Design: Expanding HCI Methods for Supporting Labor. *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems*, 1–8. <https://doi.org/10.1145/3334480.3375157>

- Fraser, J., & Gold, M. (2001). "Portfolio Workers": Autonomy and Control amongst Freelance Translators. *Work, Employment and Society*, 15(4), 679–697. <https://doi.org/10.1177/095001701400438152>
- Frenken, K., & Schor, J. (2017). Putting the sharing economy into perspective. *Environmental Innovation and Societal Transitions*, 23, 3–10. <https://doi.org/10.1016/j.eist.2017.01.003>
- Friedman, G. (2014). Workers without employers: shadow corporations and the rise of the gig economy. *Review of Keynesian Economics*, 2(2), 171–188. <https://doi.org/10.4337/roke.2014.02.03>
- Gaiser, T. J., & Abrams, K. M. (2017). Online Focus Groups. In *The SAGE Handbook of Online Research Methods*. SAGE Publications Ltd.
- Gandini, A. (2016a). Digital work: Self-branding and social capital in the freelance knowledge economy. *Marketing Theory*, 16(1), 123–141. <https://doi.org/10.1177/1470593115607942>
- Gandini, A. (2016b). *The Reputation Economy: Understanding Knowledge Work in Digital Society*. Palgrave Macmillan UK. <https://doi.org/10.1057/978-1-137-56107-7>
- Giddens, A. (1984). The Constitution of Society: Outline of the Theory of Structuration. In *Social Forces* (Vol. 66, Issue 4). University of California Press. <https://doi.org/10.2307/2579442>
- Glöss, M., McGregor, M., & Brown, B. (2016a). *Designing for Labour*. 1632–1643. <https://doi.org/10.1145/2858036.2858476>
- Glöss, M., McGregor, M., & Brown, B. (2016b). Designing for Labour: Uber and the On-Demand Mobile Workforce. *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*, 1632–1643. <https://doi.org/10.1145/2858036.2858476>
- Gold, M., & Mustafa, M. (2013). "Work always wins": Client colonisation, time management and the anxieties of connected freelancers. *New Technology, Work and Employment*, 28(3), 197–211. <https://doi.org/10.1111/ntwe.12017>
- Graham, M., & Anwar, M. A. (2019). The global gig economy: Towards a planetary labour market? *First Monday*, 24(4). <https://doi.org/10.5210/fm.v24i4.9913>

- Graham, M., Lehdonvirta, V., Wood, A., Barnard, H., Hjorth, I., & Simon, D. P. (2017). *The Risks and Rewards of Online Gig Work At the Global Margins*. 1–13. <https://www.oii.ox.ac.uk/publications/gigwork.pdf>
- Graham, M., & Shaw, J. (2017). *Towards a Fairer Gig Economy* (M. Graham & J. Shaw, Eds.). Meatspace Press.
- Gray, B., Ciolfi, L., & de Carvalho, A. F. P. (2020). *Made to work: Mobilising Contemporary Worklives* (1st ed.). Routledge Taylor & Francis Group.
- Gray, B., Ciolfi, L., de Carvalho, A. F. P., D'Andrea, A., & Wixted, L. (2017). Post-Fordist reconfigurations of gender, work and life: theory and practice. *British Journal of Sociology*, 68(4), 620–642. <https://doi.org/10.1111/1468-4446.12267>
- Gray, M., & Suri, S. (2019). *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass* (First). Houghton Mifflin Harcourt.
- Gregory, K. (2021, December). “Worker Data Science” Can Teach Us How to Fix the Gig Economy. *Wired*. <https://www.wired.com/story/labor-organizing-unions-worker-algorithms/>
- Gregory, K., Bates, O., Gallagher, C., Saunders, M., Miltner, K., Wenlong, L., Alvarez de la Vega, J. C., & McCurdy, K. (2021). *Digital Worker Inquiry: Project Gallery*. <https://digitalworkerinquiry.com/project.html>
- Grugulis, I., & Stoyanova, D. (2011). The missing middle: Communities of practice in a freelance labour market. *Work, Employment and Society*, 25(2), 342–351. <https://doi.org/10.1177/0950017011398891>
- Gustafsson, D. (2019). *Analysing the Double diamond design process through research & implementation*. 55. <http://urn.fi/URN:NBN:fi:aalto-201907144349>
- Haapakorpi, A. (2021). Freedom but Insecurity: the Business Consulting Profession in the Post-Industrial Service Society. *Nordic Journal of Working Life Studies*, 11(1), 45–62. <https://doi.org/10.18291/njwls.122225>
- Hammer, L. B., Kossek, E. E., Anger, W. K., Bodner, T., & Zimmerman, K. L. (2011). Clarifying Work-Family Intervention Processes: The Roles of Work-Family Conflict and Family-Supportive Supervisor Behaviors. *Journal of Applied Psychology*, 96(1), 134–150. <https://doi.org/10.1037/a0020927>

- Hannák, A., Mislove, A., Wagner, C., Strohmaier, M., Garcia, D., & Wilson, C. (2017). Bias in Online freelance marketplaces: Evidence from TaskRabbit and Fiverr. *Proceedings of the ACM Conference on Computer Supported Cooperative Work, CSCW*, 1914–1933. <https://doi.org/10.1145/2998181.2998327>
- Heeks, R. (2017). Digital Economy and Digital Labour Terminology: Making Sense of the “Gig Economy”, “Online Labour”, “Crowd Work”, “Microwork”, “Platform Labour”, Etc RICHARD. In *Development Implications of Digital Economies* (Vol. 32). <http://www.digitale-chancen.de/transfer/downloads/MD280.pdf>
- Hesmondhalgh, D., & Baker, S. (2010). “A very complicated version of freedom”: Conditions and experiences of creative labour in three cultural industries. *Poetics*, 38(1), 4–20. <https://doi.org/10.1016/j.poetic.2009.10.001>
- Hewson, C., Buchanan, T., Brown, I., Coulson, N., Hagger-Johnson, G., Joinson, A., Krotoski, A., & Oates, J. (2017). *Ethics Guidelines for Internet-mediated Research*. www.bps.org.uk/publications/policy-and-guidelines/research-guidelines-policy-documents/research-guidelines-poli
- Hilbrecht, M., & Lero, D. S. (2014). Self-employment and family life: constructing work–life balance when you’re ‘always on.’ *Community, Work & Family*, 17(1), 20–42. <https://doi.org/10.1080/13668803.2013.862214>
- Hoffman, R., & Casnocha, B. (2012). *The Start-up of You: Adapt to the Future, Invest in Yourself, and Transform Your Career*. Random House Digital.
- Hsieh, J., Hong, Y., Burtch, G., & Zhu, H. (2022). A Little Too Personal: Effects of Standardization versus Personalization on Job Acquisition, Work Completion, and Revenue for Online Freelancers. *CHI Conference on Human Factors in Computing Systems*, 1–11. <https://doi.org/10.1145/3491102.3517546>
- Huang, K., Yao, J., & Yin, M. (2019). Understanding the Skill Provision in Gig Economy from A Network Perspective: A Case Study of Fiverr. *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW), 1–23. <https://doi.org/10.1145/3359234>
- Hughes, J., & Lang, K. R. (2004). Issues in online focus groups: Lessons learned from an empirical study of peer-to-peer filesharing system users. *European Journal of Business Research Methods*, 2(2), 95–110.

- Hui, J., Toyama, K., Pal, J., & Dillahunt, T. (2018). Making a living my way: Necessity-driven entrepreneurship in resource-constrained communities. *Proceedings of the ACM on Human-Computer Interaction*, 2(CSCW). <https://doi.org/10.1145/3274340>
- Hymes, K. (2021, September). ‘The Great Resignation’ Misses the Point. *Wired*. <https://www.businessinsider.com/great-resignation-labor-shortage-workers-thinking-about-quitting-joblist-report-2021-10?r=MX&IR=T>
- Irani, L. C., & Silberman, M. S. (2013). Turkopticon: Interrupting worker invisibility in Amazon Mechanical Turk. *Conference on Human Factors in Computing Systems - Proceedings*, 611–620. <https://doi.org/10.1145/2470654.2470742>
- Irani, L. C., & Silberman, M. S. (2016). Stories We Tell About Labor: Turkopticon and the Trouble with “Design.” *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*, 4573–4586. <https://doi.org/10.1145/2858036.2858592>
- Jacobs, S., de Vos, A., Stuer, D., & van der Heijden, B. I. J. M. (2019). “Knowing Me, Knowing You” the Importance of Networking for Freelancers’ Careers: Examining the Mediating Role of Need for Relatedness Fulfillment and Employability-Enhancing Competencies. *Frontiers in Psychology*, 10(SEP), 1–14. <https://doi.org/10.3389/fpsyg.2019.02055>
- James, A. (2017). Juggling Work, Home and Family in the Knowledge Economy. *Work-Life Advantage, February*, 86–116. <https://doi.org/10.1002/9781118944806.ch5>
- James, A. (2022). Women in the gig economy: feminising ‘digital labour.’ *Work in the Global Economy*, XX(Xx), 1–25. <https://doi.org/10.1332/273241721x16448410652000>
- Jarrahi, M. H., Goray, C., Zirker, S., & Zhang, Y. (2021). Digital Diaries as a Research Method for Capturing Practices in Situ. *Research Methods for Digital Work and Organization*, 107–129. <https://doi.org/10.1093/oso/9780198860679.003.0006>
- Jarrahi, M. H., Nelson, S. B., & Thomson, L. (2017). Personal artifact ecologies in the context of mobile knowledge workers. *Computers in Human Behavior*, 75, 469–483. <https://doi.org/10.1016/j.chb.2017.05.028>
- Jarrahi, M. H., Newlands, G., Butler, B., Savage, S., Lutz, C., Dunn, M., & Sawyer, S. (2020). Flexible work and personal digital infrastructures. *Communications of ACM*, October, 1–12.

- Jarrahi, M. H., Newlands, G., Lee, M. K., Wolf, C. T., Kinder, E., & Sutherland, W. (2021). Algorithmic management in a work context. *Big Data & Society*, 8(2), 205395172110203. <https://doi.org/10.1177/20539517211020332>
- Jarrahi, M. H., Philips, G., Sutherland, W., Sawyer, S., & Erickson, I. (2019). Personalization of knowledge, personal knowledge ecology, and digital nomadism. *Journal of the Association for Information Science and Technology*, 70(4), 313–324. <https://doi.org/10.1002/asi.24134>
- Jarrahi, M. H., & Sutherland, W. (2019). Algorithmic Management and Algorithmic Competencies: Understanding and Appropriating Algorithms in Gig Work. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 11420 LNCS(December), 578–589. https://doi.org/10.1007/978-3-030-15742-5_55
- Jarrahi, M. H., Sutherland, W., Nelson, S. B., & Sawyer, S. (2020). Platformic Management, Boundary Resources for Gig Work, and Worker Autonomy. *Computer Supported Cooperative Work (CSCW)*, 29(1–2), 153–189. <https://doi.org/10.1007/s10606-019-09368-7>
- Jarrett, K. (2022). *Digital Labor*. Polity Press.
- Jenkins, K. (2017). Exploring the UK Freelance Workforce , 2016. In *Small Business Research Centre* (Issue February). [http://www.crse.co.uk/sites/default/files/Exploring the UK Freelance Workforce in 2016.pdf](http://www.crse.co.uk/sites/default/files/Exploring%20the%20UK%20Freelance%20Workforce%20in%202016.pdf)
- Kallinikos, J. (2011). *Governing through Technology: Information Artefacts and Social Practice*. Springer London.
- Kasera, J., O' Neill, J., & Bidwell, N. J. (2016). Sociality, Tempo & Flow: Learning from Namibian Ride-sharing. *Proceedings of the First African Conference on Human Computer Interaction - AfriCHI'16*.
- Kässi, O., & Lehtonvirta, V. (2018). Online labour index: Measuring the online gig economy for policy and research. *Technological Forecasting and Social Change*, 137(1934), 241–248. <https://doi.org/10.1016/j.techfore.2018.07.056>
- Kazi, A. G., Yusoff, R., Khan, A., & Kazi, S. (2014). *The Freelancer: A Conceptual Review*. 2(3), 1–7. <https://doi.org/10.11113/sh.v2n3.428>

- Kessler, S. (2018). *Gigged: The Gig Economy, the End of the Job and the Future of Work*. Penguin Random House.
- Kinder, E., Jarrahi, M. H., & Sutherland, W. (2019). Gig Platforms, Tensions, Alliances and Ecosystems. *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW), 1–26. <https://doi.org/10.1145/3359314>
- Kirman, B. (2022). Thinking outside the bag: Worker-led speculation and the future of gig economy delivery platforms. *DRS2022: Bilbao*. <https://doi.org/10.21606/drs.2022.394>
- Kitching, J., & Iskandarova, M. (2019). Freelancing and the struggle for work-time control. In *Rigour and Relevance in Entrepreneurship Research, Resources and Outcomes* (pp. 190–214). Edward Elgar Publishing. <https://doi.org/10.4337/9781789903980.00019>
- Kittur, A., Nickerson, J. v., Bernstein, M., Gerber, E., Shaw, A., Zimmerman, J., Lease, M., & Horton, J. (2013). The Future of Crowd Work. *Proceedings of the 2013 Conference on Computer Supported Cooperative Work - CSCW '13*, 41(4), 1301. <https://doi.org/10.1145/2441776.2441923>
- Kossek, E. E. (2016). Managing work–life boundaries in the digital age. *Organizational Dynamics*, 45(3), 258–270. <https://doi.org/10.1016/j.orgdyn.2016.07.010>
- Kossek, E. E., & Michel, J. S. (2011). Flexible work schedules. In *APA handbook of industrial and organizational psychology, Vol 1: Building and developing the organization*. (Vol. 44, Issue 7, pp. 535–572). American Psychological Association. <https://doi.org/10.1037/12169-017>
- Kotturi, Y., Kahng, A., Procaccia, A. D., & Kulkarni, C. (2020). HirePeer: Impartial peer-assessed hiring at scale in expert crowdsourcing markets. *AAAI 2020 - 34th AAAI Conference on Artificial Intelligence*, 2577–2584. <https://doi.org/10.1609/aaai.v34i03.5641>
- Kuhn, K. M., & Maleki, A. (2017). Micro-entrepreneurs, dependent contractors, and instaserfs: Understanding online labor platform workforces. *Academy of Management Perspectives*, 31(3), 183–200. <https://doi.org/10.5465/amp.2015.0111>
- Kumar, N., Jafarinaimi, N., & bin Morshed, M. (2018). Uber in Bangladesh: The Tangled Web of Mobility and Justice. *Proceedings of the ACM on Human-Computer Interaction*, 2(CSCW), 1–21. <https://doi.org/10.1145/3274367>

- Kusk, K., & Bossen, C. (2022). Working with Wolt: An Ethnographic Study of Lenient Algorithmic Management on a Food Delivery Platform. *Proceedings of the ACM on Human-Computer Interaction*, 6(GROUP), 1–22. <https://doi.org/10.1145/3492823>
- Lallemand, C. (2012, August). Dear Diary: Using Diaries to Study User Experience. *The Magazine of the User Experience Professionals Association*. <https://uxpamagazine.org/dear-diary-using-diaries-to-study-user-experience/>
- Lambton-Howard, D., Anderson, R., Montague, K., Garbett, A., Hazeldine, S., Alvarez, C., Sweeney, J. A., Olivier, P., & Kharrufa, A. (2019). Whatfutures: Designing large-scale engagements on Whatsapp. *Conference on Human Factors in Computing Systems - Proceedings*, 1–14. <https://doi.org/10.1145/3290605.3300389>
- Lampinen, A., & Brown, B. (2017). Market design for HCI: Successes and failures of peer-to-peer exchange platforms. *Conference on Human Factors in Computing Systems - Proceedings, 2017-May*, 4331–4343. <https://doi.org/10.1145/3025453.3025515>
- Lampinen, A., Lutz, C., Newlands, G., Light, A., & Immorlica, N. (2018). Power struggles in the digital economy: Platforms, workers, and markets. *Proceedings of the ACM Conference on Computer Supported Cooperative Work, CSCW*, 417–423. <https://doi.org/10.1145/3272973.3273004>
- Lampinen, A., McGregor, M., Comber, R., & Brown, B. (2018). Member-Owned alternatives: Exploring participatory forms of organising with cooperatives. *Proceedings of the ACM on Human-Computer Interaction*, 2(CSCW). <https://doi.org/10.1145/3274369>
- Lang, D. (2017). *Zero to Maker: A Beginner's Guide to the Skills, Tools, and Ideas of the Maker Movement* (Second). Maker Media, Inc.
- Lascău, L., Gould, S. J. J., Brumby, D. P., & Cox, A. L. (n.d.). Crowdworkers ' Temporal Flexibility is Being Traded for the Convenience of Requesters Through 19 ' Invisible Mechanisms ' Employed by Crowdfunding Platforms. *CHI Conference on Human Factors in Computing Systems Extended Abstracts (CHI '22 Extended Abstracts)*, April 29-May 5, 2022, New Orleans, LA, USA, 1(1). <https://doi.org/10.1145/3491101.3519629>
- Lascau, L., Gould, S. J. J., Cox, A. L., Karmannaya, E., & Brumby, D. P. (2019). Monotasking or multitasking: Designing for crowdworkers' preferences. *Conference on Human Factors in Computing Systems - Proceedings*, 14. <https://doi.org/10.1145/3290605.3300649>

- Lave, J. (1988). *Cognition in Practice Mind, mathematics and culture in everyday life*. Cambridge University Press.
- Lave, J., & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation* (P. Roy & J. P. Brown, Eds.; 6th ed.). Cambridge University Press.
- Lawson, S., Kirman, B., Linehan, C., Feltwell, T., & Hopkins, L. (2015). Problematising Upstream Technology through Speculative Design: The Case of Quantified Cats and Dogs. *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems, 2015-April*, 2663–2672. <https://doi.org/10.1145/2702123.2702260>
- Lee, M. K. (2018). Understanding perception of algorithmic decisions: Fairness, trust, and emotion in response to algorithmic management. *Big Data and Society*, 5(1), 1–16. <https://doi.org/10.1177/2053951718756684>
- Lee, M. K., Kusbit, D., Kahng, A., Kim, J. T., Yuan, X., Chan, A., See, D., Noothigattu, R., Lee, S., Psomas, A., & Procaccia, A. D. (2019). WeBuildAI: Participatory Framework for Algorithmic Governance. *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW), 1–35. <https://doi.org/10.1145/3359283>
- Lee, M. K., Kusbit, D., Metsky, E., & Dabbish, L. (2015). Working with machines: The impact of algorithmic and data-driven management on human workers. *Conference on Human Factors in Computing Systems - Proceedings, 2015-April*, 1603–1612. <https://doi.org/10.1145/2702123.2702548>
- Legality of ridesharing companies by jurisdiction. (n.d.). In *Wikipedia*. Wikipedia, the free encyclopedia.
- Lehdonvirta, V. (2018). Flexibility in the gig economy: managing time on three online piecework platforms. *New Technology, Work and Employment*, 33(1), 13–29. <https://doi.org/10.1111/ntwe.12102>
- Liang, C. A., Munson, S. A., & Kientz, J. A. (2021). Embracing Four Tensions in Human-Computer Interaction Research with Marginalized People. *ACM Transactions on Computer-Human Interaction*, 28(2). <https://doi.org/10.1145/3443686>
- Lindley, J., Coulton, P., & Brown, E. L. (2016). Peer review and design fiction: “Great scott! the quotes are redacted.” *Conference on Human Factors in Computing Systems - Proceedings, 07-12-May-*, 583–594. <https://doi.org/10.1145/2851581.2892568>

- Lindsey, C., Christin, A., Ann DeVito, M., Dillahunt, T., Elish, M. C., Gray, M. L., Qadri, R., Raval, N., Valentine, M., & Watkins, E. A. (2021). “This Seems to Work”: Designing Technological Systems with The Algorithmic Imaginations of Those Who Labor. *ACM Conference of Human Factors in Computing CHI 2021*.
- Lord, C., Bates, O., & Friday, A. (2022). Critical Incident Technique and Gig-Economy Work (Deliveroo): Working with and Challenging Assumptions around Algorithms. *Conference on Human Factors in Computing Systems - Proceedings*. <https://doi.org/10.1145/3491101.3519865>
- Lustig, C., Rintel, S., Scult, L., & Suri, S. (2020). Stuck in the middle with you: The Transaction Costs of Corporate Employees Hiring Freelancers. *Proceedings of the ACM on Human-Computer Interaction*, 4(CSCW1), 1–28. <https://doi.org/10.1145/3392842>
- Ma, N. F., & Hanrahan, B. v. (2019). Part-Time Ride-Sharing: Recognizing the Context in which Drivers Ride-Share and its Impact on Platform Use. *Proceedings of the ACM on Human-Computer Interaction*, 3(GROUP), 1–17. <https://doi.org/10.1145/3361128>
- Ma, N. F., Rivera, V. A., Zheng, Y., & Yoon, D. (2022). “Brush it Off”: How Women Workers Manage and Cope with Bias and Harassment in Gender-agnostic Gig Platforms. *ACM Conference of Human Factors in Computing CHI 2022*.
- Margaryan, A. (2019). Workplace learning in crowdwork. *Journal of Workplace Learning*, 31(4), 250–273. <https://doi.org/10.1108/JWL-10-2018-0126>
- Martin, D., Hanrahan, B. v., O’Neill, J., & Gupta, N. (2014). Being a turker. *Proceedings of the ACM Conference on Computer Supported Cooperative Work, CSCW*, 224–235. <https://doi.org/10.1145/2531602.2531663>
- Massey, B. L., & Elmore, C. J. (2011). Happier working for themselves?: Job satisfaction and women freelance journalists. *Journalism Practice*, 5(6), 672–686. <https://doi.org/10.1080/17512786.2011.579780>
- Mazmanian, M., & Erickson, I. (2014). The product of availability: Understanding the economic underpinnings of constant connectivity. *Conference on Human Factors in Computing Systems - Proceedings*, 763–772. <https://doi.org/10.1145/2556288.2557381>
- Mazmanian, M., Orlikowski, W. J., & Yates, J. A. (2013). The autonomy paradox: The implications of mobile email devices for knowledge professionals. *Organization Science*, 24(5), 1337–1357. <https://doi.org/10.1287/orsc.1120.0806>

- Megill, K. A. (2005). *Thinking for a Living: The Coming Age of Knowledge Work*. De Gruyter. <https://ebookcentral.proquest.com/lib/northumbria/detail.action?docID=370767>
- Meissner, J. L., Vines, J., McLaughlin, J., Nappey, T., Maksimova, J., & Wright, P. (2017). Do-it-yourself empowerment as experienced by novice makers with disabilities. *DIS 2017 - Proceedings of the 2017 ACM Conference on Designing Interactive Systems, I*, 1053–1065. <https://doi.org/10.1145/3064663.3064674>
- Microsoft. (2021). *Microsoft Viva*. <https://www.microsoft.com/en-us/microsoft-viva>
- Möhlmann, M., & Zalmanson, L. (2017). Hands on the Wheel: Navigating Algorithmic Management and Uber Drivers' Autonomy. *ICIS 2017: Transforming Society with Digital Innovation*. https://www.researchgate.net/profile/Mareike_Moehlmann2/publication/319965259_Hands_on_the_wheel_Navigating_algorithmic_management_and_Uber_drivers'_autonomy/links/59c3eaf845851590b13c8ec2/Hands-on-the-wheel-Navigating-algorithmic-management-and-Uber-driv
- Molich, R. (2001). Ethics in HCI. *Conference on Human Factors in Computing Systems - Proceedings*, 217–218. <https://doi.org/10.1145/634067.634197>
- Muller, M. J. (2012). Participatory Design: the Third Space in HCI. In *The Human-Computer Interaction Handbook* (3rd ed., Vol. 4235, pp. 1087–1108). Taylor & Francis. <https://doi.org/10.1201/9781410615862-68>
- Munoz, I., Dunn, M., & Sawyer, S. (2022). Platform-mediated Markets, Online Freelance Workers and Deconstructed Identities. *Proceedings of the ACM on Human-Computer Interaction, CSCW*, 5.
- Munoz, I., Sawyer, S., & Dunn, M. (2022). New futures of work or continued marginalization? The rise of online freelance work and digital platforms. *2022 Symposium on Human-Computer Interaction for Work*, 1–7. <https://doi.org/10.1145/3533406.3533412>
- Nardi, B. A., Whittaker, S., & Schwarz, H. (2002). NetWORKers and their Activity in Intensional Networks. *Computer Supported Cooperative Work (CSCW)*, 11(1–2), 205–242. <https://doi.org/10.1023/A:1015241914483>
- Nemkova, E., Demirel, P., & Baines, L. (2019). In search of meaningful work on digital freelancing platforms: the case of design professionals. *New Technology, Work and Employment*, 34(3), 226–243. <https://doi.org/10.1111/ntwe.12148>

- Noortman, R., Schulte, B. F., Marshall, P., Bakker, S., & Cox, A. L. (2019). Hawkeye – Deploying a design fiction probe. *Conference on Human Factors in Computing Systems - Proceedings*, 1–14. <https://doi.org/10.1145/3290605.3300652>
- Norbäck, M., & Styhre, A. (2019). Making it work in free agent work: The coping practices of Swedish freelance journalists. *Scandinavian Journal of Management*, 35(4), 101076. <https://doi.org/10.1016/j.scaman.2019.101076>
- Northumbria University. (2019). *Research Ethics and Governance Handbook*. <https://www.northumbria.ac.uk/research/ethics-and-integrity/>
- Orlikowski, W. J. (1992). The Duality of Technology: Rethinking the Concept of Technology in Organizations. *Organization Science*, 3(3), 398–427. <https://doi.org/10.1287/orsc.3.3.398>
- Orlikowski, W. J. (2000). Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations. *Organization Science*, 11(4), 404–428. <https://doi.org/10.1287/orsc.11.4.404.14600>
- Orlikowski, W. J. (2015). Practice in research: phenomenon, perspective and philosophy. In D. Golsorkhi, L. Rouleau, D. Seidl, & E. Vaara (Eds.), *Cambridge Handbook of Strategy as Practice* (pp. 33–43). Cambridge University Press. <https://doi.org/10.1017/CBO9781139681032.002>
- Orlikowski, W. J., & Baroudi, J. J. (1991). Studying Information Technology in Organizations: Research Approaches and Assumptions. *Information Systems Research*, 2(1), 1–28. <https://archive.nyu.edu/jspui/bitstream/2451/14404/1/IS-90-04.pdf>
- Orlikowski, W. J., & Scott, S. v. (2016). Digital work: A Research Agenda. *A Research Agenda for Management and Organization Studies*, 88–95. <https://doi.org/10.4337/9781784717025.00014>
- Peters, T. (1997, August 31). The Brand Called You. *Fast Company*. <https://www.fastcompany.com/28905/brand-called-you>
- Petriglieri, G., Ashford, S. J., & Wrzesniewski, A. (2019). Agony and Ecstasy in the Gig Economy: Cultivating Holding Environments for Precarious and Personalized Work Identities. *Administrative Science Quarterly*, 64(1), 124–170. <https://doi.org/10.1177/0001839218759646>

- Ponce del Castillo, A. (2020). Labour in the Age of AI: Why Regulation is Needed to Protect Workers. In *The Foresight Brief*. https://www.etui.org/sites/default/files/ez_import/ForesightBriefs2020.pdf
- Qadri, R. (2020). *Delivery Platform Algorithms Don't Work Without Drivers' Deep Local Knowledge*. Slate. <https://slate.com/technology/2020/12/gojek-grab-indonesia-delivery-platforms-algorithms.html>
- Qadri, R. (2021a). What's in a Network? Infrastructures of Mutual Aid for Digital Platform Workers during COVID-19. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW2). <https://doi.org/10.1145/3479563>
- Qadri, R. (2021b, August). Platform Workers as Infrastructures of Global Technologies. *Interactions*.
- QSR, I. (n.d.). *NVivo 12*. 2019. <https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/about/nvivo>
- Rahman, H. A. (2021). The Invisible Cage: Workers' Reactivity to Opaque Algorithmic Evaluations. *Administrative Science Quarterly*. <https://doi.org/10.1177/00018392211010118>
- Rainey, J., Alvarez de la Vega, C., Richardson, D., Lambton-howard, D., Bartindale, T., Hazeldine, S., Briggs, P., Olivier, P., & Montague, K. (2020). TalkFutures : Supporting Qualitative Practices in Distributed Community Engagements. In ACM (Ed.), *Designing Interactive Systems*. <https://doi.org/https://doi.org/10.1145/3357236.3395531>
- Raval, N., & Dourish, P. (2016). Standing out from the crowd: Emotional labor, body labor, and temporal labor in ridesharing. *Proceedings of the ACM Conference on Computer Supported Cooperative Work, CSCW*, 27, 97–107. <https://doi.org/10.1145/2818048.2820026>
- Raval, N., & Pal, J. (2019). Making a “Pro”: ‘Professionalism’ after Platforms in Beauty-work. *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW). <https://doi.org/10.1145/3359277>
- Ravenelle, A. J. (2019). “We’re not uber:” control, autonomy, and entrepreneurship in the gig economy. *Journal of Managerial Psychology*, 34(4), 269–285. <https://doi.org/10.1108/JMP-06-2018-0256>

- Reddit API*. (n.d.). Retrieved November 15, 2019, from <https://www.reddit.com/dev/api>
- Reddit, I. (n.d.). *Reddit, Inc*. Retrieved November 15, 2019, from <https://www.redditinc.com>
- Reddit, I. (2018). *Reddit Privacy Policy*. <https://www.redditinc.com/policies/privacy-policy>
- Richardson, D., Cumbo, B. J., Bartindale, T., Varghese, D., Saha, M., Saha, P., Ahmed, S. I., Oliver, G. C., & Olivier, P. (2022). *Critically Engaging with Embedded Values through Constrained Technology Design*. 643–653. <https://doi.org/10.1145/3532106.3533570>
- Rivera, V. A., & Lee, D. T. (2021). I Want to, but First I Need to : Understanding Crowdworkers’ Career Goals, Challenges, and Tensions. *ACM on Human-Computer Interaction*, 5(CSCW1), 1–22. <https://doi.org/10.1145/3449224>
- Rosenberg, E. (2022, February 1). 4.3 million Americans left their jobs in December as omicron variant disrupted everything. *Washington Post*.
- Rosenblat, A. (2018). *Uberland: How Algorithms Are Rewriting The Rules Of Work* (California Press, Ed.; First). University of California Press. <https://uberlandbook.com>
- Rosenblat, A., & Stark, L. (2016). Algorithmic labor and information asymmetries: A case study of Uber’s drivers. *International Journal of Communication*, 10, 3758–3784. <https://doi.org/10.2139/ssrn.2686227>
- Sadler, K., Robertson, T., & Kan, M. (2006). “It’s always there, it’s always on”: Australian freelancer’s management of availability using mobile technologies. *ACM International Conference Proceeding Series*, 159, 49–52. <https://doi.org/10.1145/1152215.1152226>
- Sadler, K., Robertson, T., Kan, M., & Hagen, P. (2006). Balancing work, life and other concerns: A study of mobile technology use by Australian freelancers. *ACM International Conference Proceeding Series*, 189(October 2006), 413–416. <https://doi.org/10.1145/1182475.1182525>
- Salazar, K. (2016). *Diary Studies: Understanding Long-Term User Behavior and Experiences*. <https://www.nngroup.com/articles/diary-studies/>
- Salehi, N., & Bernstein, M. S. (2018). Ink: Increasing worker agency to reduce friction in hiring crowd workers. *ACM Transactions on Computer-Human Interaction*, 25(2). <https://doi.org/10.1145/3177882>

- Salehi, N., Irani, L. C., Bernstein, M. S., Alkhatib, A., Ogbé, E., Milland, K., & Clickhappier. (2015). We are dynamo: Overcoming stalling and friction in collective action for crowd workers. *Conference on Human Factors in Computing Systems - Proceedings, 2015-April*, 1621–1630. <https://doi.org/10.1145/2702123.2702508>
- Sandoval, M. (2018). From passionate labour to compassionate work: Cultural co-ops, do what you love and social change. *European Journal of Cultural Studies*, 21(2), 113–129. <https://doi.org/10.1177/1367549417719011>
- Sannon, S., & Cosley, D. (2019). Privacy, power, and invisible labor on Amazon Mechanical Turk. *Conference on Human Factors in Computing Systems - Proceedings*, 1–12. <https://doi.org/10.1145/3290605.3300512>
- Sannon, S., Sun, B., & Cosley, D. (2022). Privacy, Surveillance, and Power in the Gig Economy. *CHI Conference on Human Factors in Computing Systems*, 1–15. <https://doi.org/10.1145/3491102.3502083>
- Saunders, M. N. K., Bristow, A., Thornhill, A., & Lewis, P. (2019). Understanding research philosophy and approaches to theory development. In *Research Methods for Business Students* (8th ed., pp. 128–171). Harlow: Pearson Education. <https://www.pearson.com/uk/educators/higher-education-educators/program/Saunders-Research-Methods-for-Business-Students-7th-Edition/PGM1089011.html>
- Schatzki, T. (2001). Introduction: Practice Theory. In T. Schatzki, K. K. Cetina, & E. von Savigny (Eds.), *The Practice Turn in Contemporary Theory* (first).
- Schatzki, T., Cetina, K. K., & von Savigny, E. (2001). *The Practice Turn in Contemporary Theory* (first). Taylor & Francis.
- Scholz, T., & Schneider, N. (2017). Ours to Hack and to Own. In T. SCHOLZ & N. SCHNEIDER (Eds.), *Ours to Hack and to Own*. OR Books. <https://doi.org/10.2307/j.ctv62hmq7>
- Schor, J. B. (2021). *Dependence and Heterogeneity in the Platform Labor Force* (Issue September).
- Schulte, B. F., Marshall, P., & Cox, A. L. (2016). Homes for life: A design fiction probe. *ACM International Conference Proceeding Series*, 23-27-Octo. <https://doi.org/10.1145/2971485.2993925>

- Sehrawat, U., Sawhney, N., Yeleswarapu, T., & Rangaswamy, N. (2021). The Everyday HCI of Uber Drivers in India: A Developing Country Perspective. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW2). <https://doi.org/10.1145/3479568>
- Serenko, A. (2022). The Great Resignation: the great knowledge exodus or the onset of the Great Knowledge Revolution? *Journal of Knowledge Management*, December 2021. <https://doi.org/10.1108/JKM-12-2021-0920>
- Sewell, W. H. (1992). A Theory of Structure: Duality , Agency , and Transformation. *American Journal of Sociology*, 98(1), 1–29.
- Shafiei Gol, E., Stein, M. K., & Avital, M. (2018). Why take the risk? Motivations of highly skilled workers to participate in crowdworking platforms. *International Conference on Information Systems 2018, ICIS 2018*, 1–9.
- Shapiro, A. (2018). Between autonomy and control: Strategies of arbitrage in the “on-demand” economy. *New Media and Society*, 20(8), 2954–2971. <https://doi.org/10.1177/1461444817738236>
- Shevchuk, A., Strebkov, D., & Davis, S. N. (2019). The Autonomy Paradox: How Night Work Undermines Subjective Well-Being of Internet-Based Freelancers. *ILR Review*, 72(1), 75–100. <https://doi.org/10.1177/0019793918767114>
- Shevchuk, A., Strebkov, D., & Tyulyupo, A. (2021). Always on across time zones: Invisible schedules in the online gig economy. *New Technology, Work and Employment*, 36(1), 94–113. <https://doi.org/10.1111/ntwe.12191>
- Sinicki, A. (2019). *Thriving in the Gig Economy: Freelancing Online for Tech Professionals and Entrepreneurs*. Apress. <https://doi.org/10.1007/978-1-4842-4090-8>
- Smedley, R. M., & Coulson, N. S. (2018). A practical guide to analysing online support forums. *Qualitative Research in Psychology*, 00(00), 1–28. <https://doi.org/10.1080/14780887.2018.1475532>
- Spaa, A., Elsdén, C., Durrant, A., & Vines, J. (2019). Understanding the boundaries between policymaking and HCI. *Conference on Human Factors in Computing Systems - Proceedings*, 1–15. <https://doi.org/10.1145/3290605.3300314>
- Srnicek, N. (2017). *Platform Capitalism*. John Wiley & Sons.

- Stefano, V. de. (2016). The rise of the “just-in-time workforce”: On-demand work, crowdwork and labour protection in the “gig economy.” In *Publications of the International Labour Office*.
- Steiber, A., & Alänge, S. (2013). A corporate system for continuous innovation: The case of Google Inc. *European Journal of Innovation Management*, 16(2), 243–264. <https://doi.org/10.1108/14601061311324566>
- Stephany, F., Dunn, M., Sawyer, S., & Lehdonvirta, V. (2020). *Distancing Bonus or Downscaling Loss? The Changing Livelihood of US Online Workers in Times of COVID-19*. 1–20. <https://doi.org/https://doi.org/10.31235/osf.io/vmg34>
- Stipp, K. (2017). *Ratings in the Gig Economy Are a Mess. Here’s How to Fix Them*. Wired. <https://www.wired.com/story/how-to-fix-ratings-in-the-gig-economy/>
- Subasi, Ö., Fedosov, A., Bates, O., Lampinen, A., & Light, A. (2020). Sharing and Cooperativism: Designing for Economies. *ACM International Conference Proceeding Series*, 1–3. <https://doi.org/10.1145/3419249.3420094>
- Sutherland, W., & Jarrahi, M. H. (2017). The gig economy and information infrastructure: The case of the digital nomad community. *Proceedings of the ACM on Human-Computer Interaction*, 1(CSCW). <https://doi.org/10.1145/3134732>
- Sutherland, W., & Jarrahi, M. H. (2018). The sharing economy and digital platforms: A review and research agenda. *International Journal of Information Management*, 43(February), 328–341. <https://doi.org/10.1016/j.ijinfomgt.2018.07.004>
- Sutherland, W., Jarrahi, M. H., Dunn, M., & Nelson, S. B. (2019). Work Precarity and Gig Literacies in Online Freelancing. *Work, Employment and Society*, October. <https://doi.org/10.1177/0950017019886511>
- Suzuki, R., Salehi, N., Lam, M. S., Marroquin, J. C., & Bernstein, M. S. (2016). Atelier: Repurposing Expert crowdsourcing tasks as micro-internships. *Conference on Human Factors in Computing Systems - Proceedings*, 2645–2656. <https://doi.org/10.1145/2858036.2858121>
- Switch Gig. (2020). *Outside the Bag: Design Provocations on the Futures of Courier Gig-Work*. https://switchgig.files.wordpress.com/2021/10/switch_gig_booklet_web.pdf

- Tay, P., & Large, O. (2022). *Making It Work: Understanding the Gig Economy's Shortcomings and Opportunities*. <https://institute.global/policy/making-it-work-understanding-gig-economys-shortcomings-and-opportunities>
- Teevan, J., Iqbal, S. T., Cai, C. J., Bigam, J. P., Bernstein, M. S., & Gerber, E. M. (2016). Productivity decomposed: Getting big things done with little microtasks. *Conference on Human Factors in Computing Systems - Proceedings, 07-12-May-*, 3500–3507. <https://doi.org/10.1145/2851581.2856480>
- Ticona, J., & Mateescu, A. (2018). Trusted strangers: Carework platforms' cultural entrepreneurship in the on-demand economy. *New Media and Society*, 20(11), 4384–4404. <https://doi.org/10.1177/1461444818773727>
- Ticona, J., Mateescu, A., & Rosenblat, A. (2018). *Beyond Disruption How Tech Shapes Labor Across Domestic Work & Ridehailing*. <https://datasociety.net/output/beyond-disruption/>
- Toxtli, C., Suri, S., & Savage, S. (2021). Quantifying the Invisible Labor in Crowd Work. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW2), 1–26. <https://doi.org/10.1145/3476060>
- Trades Union Congress. (2021). *Gig economy workforce in England and Wales has almost tripled in last five years*. <https://www.tuc.org.uk/news/gig-economy-workforce-england-and-wales-has-almost-tripled-last-five-years-new-tuc-research>
- Tremblay, D. G., & Genin, E. (2008). Money, work-life balance and autonomy: Why do IT professionals choose self-employment? *Applied Research in Quality of Life*, 3(3), 161–179. <https://doi.org/10.1007/s11482-008-9053-7>
- Umbelino, G., Lewis, D. R., Gerber, E., & Easterday, M. (2021). An Emergent Understanding of Mentor Strategies for Career Development in Emerging Fields. *Conference on Human Factors in Computing Systems - Proceedings*. <https://doi.org/10.1145/3411763.3451800>
- Upwork. (n.d.-a). *Understanding and Using Connects*. Retrieved June 12, 2021, from <https://support.upwork.com/hc/en-us/articles/211062898-Connects-Upwork-s-Virtual-Currency>
- Upwork. (n.d.-b). *Upwork: About us*. Retrieved November 5, 2019, from <https://www.upwork.com/about/>

- Upwork, G. Inc. (n.d.-c). *Job Success Score*. Retrieved June 26, 2021, from <https://support.upwork.com/hc/en-us/articles/211068358-Job-Success-Score>
- Upwork, G. Inc. (2019). *Upwork User Agreement*. <https://www.upwork.com/legal#relationshipwithupwork>
- Upwork Global Inc. (n.d.-a). *Hourly vs. Fixed-Price Projects*. Retrieved August 30, 2021, from <https://support.upwork.com/hc/en-us/articles/211063418-Hourly-vs-Fixed-Price-Projects>
- Upwork Global Inc. (n.d.-b). *Leave Feedback on a Contract*. Retrieved July 24, 2021, from <https://support.upwork.com/hc/en-us/articles/211062188-Leave-Feedback-on-a-Contract>
- Upwork Global Inc. (n.d.-c). *Upwork's Talent Badges*. Retrieved August 16, 2021, from <https://support.upwork.com/hc/en-us/articles/360049702614-Upwork-s-Talent-Badges>
- Upwork Global Inc. (n.d.-d). *Use Your Work Diary*. Retrieved August 31, 2021, from <https://support.upwork.com/hc/en-us/articles/211068518-Use-Your-Work-Diary>
- Upwork Global Inc. (n.d.-e). *Review Your Freelancer's Work Diary*. Retrieved August 16, 2021, from <https://support.upwork.com/hc/en-us/articles/211062278-Review-Your-Freelancer-s-Work-Diary>
- Vallas, S., & Schor, J. B. (2020). What Do Platforms Do? Understanding the Gig Economy. *Annual Review of Sociology*, 46(1). <https://doi.org/10.1146/annurev-soc-121919-054857>
- van Doorn, N., & Badger, A. (2020). Platform Capitalism's Hidden Abode: Producing Data Assets in the Gig Economy. *Antipode*, 52(5), 1475–1495. <https://doi.org/10.1111/anti.12641>
- Vines, J., Blythe, M., Lindsay, S., Dunphy, P., Monk, A., & Olivier, P. (2012). Questionable concepts: Critique as a resource for designing with eighty somethings. *Conference on Human Factors in Computing Systems - Proceedings*, 1169–1178. <https://doi.org/10.1145/2207676.2208567>
- Waters, F., & Woodcock, J. (2017). Far From Seamless: a Workers' Inquiry at Deliveroo. *Viewpoint Magazine*. <https://www.viewpointmag.com/2017/09/20/far-seamless-workers-inquiry-deliveroo/>

- Wenger, E. (1998). Communities of Practice: Learning as a Social System. *Systems Thinker*, 2008(Oct 14), 1–10. <http://www.co-i-l.com/coil/knowledge-garden/cop/lss.shtml>
- Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating Communities of Practice*. Harvard Business School Press.
- WhatsApp. (n.d.). *About WhatsApp*. Retrieved June 2, 2021, from <https://www.whatsapp.com/about/>
- White, K. (2015). Freelancing – Are you ready to go solo? *Medical Writing*, 24(3), 140–144. <https://doi.org/10.1179/2047480615z.000000000309>
- Whiting, M. E., Gamage, D., Gaikwad, S. S., Gilbee, A., Goyal, S., Ballav, A., Majeti, D., Chhibber, N., Richmond-Fuller, A., Vargus, F., Sarma, T. S., Chandrakanthan, V., Moura, T., Salih, M. H., Kalejaiye, G. B. T., Ginzberg, A., Mullings, C. A., Dayan, Y., Milland, K., ... Bernstein, M. S. (2017). Crowd guilds: Worker-led reputation and feedback on crowdsourcing platforms. *Proceedings of the ACM Conference on Computer Supported Cooperative Work, CSCW*, 1902–1913. <https://doi.org/10.1145/2998181.2998234>
- Wilkins, D. J., Muralidhar, S. H., Lascau, L., & Lindley, S. (2022). Gigified Knowledge Work: Understanding Knowledge Gaps When Knowledge Work and On-Demand Work Intersect. *Proceedings of the ACM on Human-Computer Interaction*, 6(CSCW1), 1–28. <https://doi.org/10.1145/3512940>
- Williams, A. C., Mark, G., Milland, K., Lnak, E., & Law, E. (2019). The Perpetual Work Life of Crowdworkers: How Tooling Practices Increase Fragmentation in Crowdwork. *Proc. ACM Hum.-Comput. Interact.*, 3(November). <https://doi.org/10.1145/3359126>
- Winn, J., Guiver, J., Webster, S., Zaykov, Y., Kukla, M., & Fabian, D. (2017). *Alexandria : Unsupervised High-Precision Knowledge Base Construction using a Probabilistic Program*. 1–20.
- Wong-Villacres, M., Garcia, A. A., Badillo-Urquiola, K., Machuca, M. D. B., Felice, M. C., Gaytán-Lugo, L. S., Lemus, O. A., Reynolds-Cuéllar, P., & Perusquía-Hernández, M. (2021). Lessons from Latin America: Embracing Horizontality to Reconstruct HCI as a Pluriverse. *Interactions*, 28(2), 56–63. <https://doi.org/10.1145/3447794>

- Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019). Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy. *Work, Employment and Society*, 33(1), 56–75. <https://doi.org/10.1177/0950017018785616>
- Wood, A. J., Lehdonvirta, V., & Graham, M. (2018). Workers of the Internet unite? Online freelancer organisation among remote gig economy workers in six Asian and African countries. *New Technology, Work and Employment*, 33(2), 95–112. <https://doi.org/10.1111/ntwe.12112>
- Wood, A., & Lehdonvirta, V. (2021). Platform Precarity: surviving algorithmic insecurity in the gig economy. *SSRN Electronic Journal*, 1–48. <https://doi.org/10.2139/ssrn.3795375>
- Wood, A.J.; Graham, M.; Anwar, M. A. (2020). Minimum wages for online labor platforms? Regulating the global gig economy. In *The digital transformation of labor: Automation, the gig economy and welfare*.
- Woodcock, J., & Graham, M. (2019). *The gig economy." A critical introduction*. Polity.
- Woodcock, J., & Graham, M. (2020). *The Gig Economy: A Critical Introduction* (1st ed.). Polity Press.
- World Economic Forum. (n.d.). *Upwork: Hosting the world's largest on demand freelance talent marketplace for companies to source talent*. Retrieved November 5, 2019, from <https://www.weforum.org/organizations/upwork>
- World Economic Forum. (2020). *The Promise of Platform Work : Understanding the Ecosystem* (Issue January). https://www3.weforum.org/docs/WEF_The_Promise_of_Platform_Work.pdf
- Yao, Z., Weden, S., Emerlyn, L., Zhu, H., & Kraut, R. E. (2021). Together but Alone: Atomization and Peer Support among Gig Workers. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW2). <https://doi.org/10.1145/3479535>
- Yin, M., Suri, S., & Gray, M. L. (2018). Running out of time: The impact and value of flexibility in on-demand crowdwork. *Conference on Human Factors in Computing Systems - Proceedings, 2018-April*, 1–11. <https://doi.org/10.1145/3173574.3174004>
- Zaharee, M., Lipkie, T., Mehlman, S. K., & Neylon, S. K. (2018). Recruitment and Retention of Early-Career Technical Talent. *Research-Technology Management*, 61(5), 51–61. <https://doi.org/10.1080/08956308.2018.1495966>

Zhang, A., Boltz, A., Chung, C., & Lee, M. K. (2022). Algorithmic management reimagined for workers and by workers: Centering worker well-being in gig work. *Proceedings of the ACM Conference of Human Factors in Computing CHI 2022*, 1(1). <https://doi.org/10.1145/3491102.3501866>

Part IV Appendices

Appendix A Chapter 7 Study Material

- A1. Information Sheet for Participants
- A2. Diary Transcript Example
- A3. Interview Guide Example
- A4. Consent Form and Recruitment Survey

A1 Information Sheet for Participants

Thank you for your interest in this research study¹⁵. Before you decide whether you want to take part voluntarily, please read the following information carefully. If there is anything that is not clear or if you would like more information about the study, email carlos.alvarez@northumbria.ac.uk, or any of the email addresses at the end of this document. This study has been approved by Northumbria University Ethics Committee as Project ID Number: 2950. This study has *no* relation or association with the Upwork platform in any form.

Details of the Study

This research study aims to explore the perceived work-life balance of freelancers who use the platform Upwork to conduct freelance work. We are particularly interested in how Upwork freelancers go about establishing work and personal boundaries. To do so, we will ask you to take part in a diary study with a post-interview. You will use WhatsApp to capture diary entries. In the interview, we will discuss your diary entries, experience using Upwork, and preferences to combine Upwork with other life activities.

Participant profile

We are recruiting professionals that use the Upwork platform regularly to complete freelance services. To take part you must fulfil the following requirements:

- Be 18 years or older.
- Use the platform Upwork regularly to conduct freelance work and have successfully completed at least one job through the platform.
- Intend to use the Upwork platform as a freelancer during the period of the study.

Participation

Participation is entirely voluntary. If you take part, you are still free to withdraw at any time. You do not have to give a reason. If you withdraw, we will delete any data you would have provided.

¹⁵ The recruitment website is available here (formerly under the freelancebalance.info domain): <https://carlos-alvarezdelavega.github.io/freelance-balance/>

Study stages

In detail, the study consists of the following four stages:

Recruitment survey. In this survey, you will share some details about yourself, your experience with Upwork, and your work-life balance preferences. This survey will determine if you are a suitable candidate for participating in this study. All this information will be kept confidential, and you will only be asked your name to pair your answers with those of subsequent activities related to this study. This survey should not take you more than 10 minutes to complete.

On-boarding call. This call is aimed at explaining in detail the captures you will complete during the diary study. The lead researcher will reiterate the purposes of the study and clarify any questions you might have. This call will last between 15-30 minutes and will take place over Microsoft Teams at a time of your and the researcher's convenience, taking into account time zones.

Diary captures. Starting the day after the on-boarding call, you will be asked to capture short diary entries for 14 days. Each day, you will receive a diary prompt on WhatsApp*, as well as a reminder to capture your entry and share your response back. Capturing your diary entries should not take you more than 5 minutes to complete, and you should capture them when is most convenient during the day. You can capture your diary entries using different formats supported by WhatsApp, such as taking photos, recording voice notes, filming yourself, or simply typing down your answers.

The diary prompts will vary across the 14 days and cover the following themes:

- perceptions of your work activities and use of the Upwork platform,
- non-work activities that you enjoy and help you recover from work, and
- perceptions of your work-life boundaries.

* If you do not have access to WhatsApp, you can still take part in the study by completing the activities and sharing them with the researcher via email.

Post-diary interview. Within a week of completing your diary, you will take part in an interview. The purpose of this interview is to talk through your diary captures, provide more details, and more contextual explanations. The interview will last between 60-90 minutes and will take place over Microsoft Teams at a date and time of your and researcher's convenience, taking into account time zones.

Compensation

Once you complete all four stages of the study (survey, on-boarding call, 14-day diary captures, and post-diary interview), you will receive an Amazon voucher worth £30 as a compensation for your time.

Data collection

We will collect data from the four stages of the study: recruitment survey, on-boarding call, 14-day diary captures, and post-diary interview. All data will be stored in accordance with University guidelines and the Data Protection Act (2018).

We will have access to the data you provide in the recruitment survey. This data will be anonymised, and your name will not appear in any form of analysis. If you are *not* a suitable candidate to participate in this study, the principal researcher will notify you via email, and all the information you might have provided in the survey will be permanently deleted.

We will audio record and transcribe the onboarding call. The audio recording will be deleted, and the transcript anonymised. The anonymised transcript will be retained and might be used in other research.

We will be using WhatsApp, a messaging app, to prompt and share diary captures. All data shared through WhatsApp is end-to-end encrypted. You can [read WhatsApp's privacy policy here](#). After the 14-day diary, the chat history will be exported to a password protected computer and permanently deleted from the mobile device designated for the study. Your WhatsApp contact number will too be deleted from the device.

We will audio record and transcribe the post-diary interview. The audio recording will be deleted, and the transcript anonymised. The anonymised transcript will be retained and might be used in other research.

If you withdraw from the study, we will delete any data we have collected from you. If you withdraw after the post-diary interview and our data analysis has begun, it may be difficult to identify your data and remove it from the dataset.

Confidentiality and anonymity

Your name will not be written on any of the data we collect; the written information you provide will have an ID number – not your name. Your name will not be written on the recorded interview, or on the typed-up versions of your discussions from the interview, and

your name will not appear in any reports or documents resulting from this study. All the data collected from you in this study will be confidential, taking especial care of any media you might share during the diary captures.

Study results

The data will be used for our research study, meaning we store and analyse the anonymised data and use excerpts and summaries in research publications.

The general findings might be reported in a scientific journal or presented at a research conference, and be part of teaching materials, however the data will be anonymised and the data you have provided (including information related to your work) will not be personally identifiable in any form. We can provide you with a summary of the findings from the study if you email the researcher at the address listed below.

We would like to make the anonymised transcripts available in a research repository for use by other researchers and in teaching. You do not have to agree to open publication of the full transcript and data if you do not want this to happen.

Contacts

Principal researcher:

Carlos Alvarez (Doctoral Researcher, Computing and Information Sciences, Northumbria University) carlos.alvarez@northumbria.ac.uk

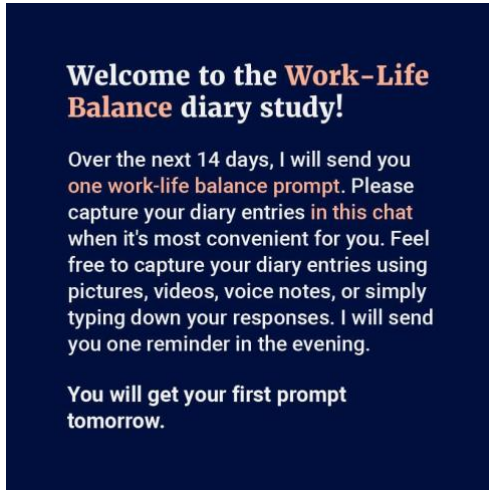
Supervisory team:

Dr John Rooksby (Senior Lecturer, Computing and Information Science, Northumbria University) John.Rooksby@northumbria.ac.uk

Dr Marta Cecchinato (Senior Lecturer, Computing and Information Science, Northumbria University) Marta.Cecchinato@northumbria.ac.uk

A2 Diary Transcript Example

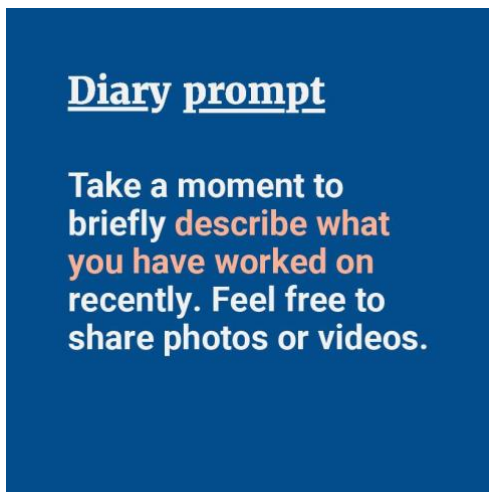
P8 (Chapter 7) Diary Transcript



[Researcher – TEXT] Hi [Name], welcome to the work-life balance diary. This is a reminder of the instructions. You will receive your first diary prompt tomorrow morning.

Instructions 1. 26-03-2021

[Entry 1]



Diary prompt 1. 27-03-2021

[TEXT] Most recently, I have updated a logo and created a brand board and letterhead for one client and worked on a logo design for another client.

[Entry 2]

Diary prompt

Take a moment to briefly **describe a non-work activity that you have enjoyed recently**. Feel free to share photos or videos of this activity.

Diary prompt 2 28-03-2021

[TEXT] Last night, I spent a little time working on a 1000 piece puzzle with my boyfriend. We started doing puzzles together, and I find it very relaxing. I also enjoy watching Brooklyn Nine Nine with him, as I have already seen it a few times so I play sudoku while we watch. I prefer multitasking as it keeps my mind busy.

[Entry 3]

Diary prompt

Take a moment to broadly **describe a typical day in your life**. Feel free to capture parts of your routine with photos and/or videos.

Diary prompt 3 29-03-2021

[TEXT] I currently have three different jobs, so it is hard to say what a typical day in my life is. On the days I work in the pet store, I spend 7-8 hours there and then go home or head to my boyfriends to work on my freelancing stuff. On the days I'm at the school where I act as the digital media specialist, I spend the day updating the website, working on marketing materials, and supervising the middle schoolers. When I go home, I usually work on my current freelance gigs or finding new ones. On the days dedicated to just freelancing, I usually spend a little bit of time relaxing on my phone before I start working for the day. I recently

started using Google Calendar to determine my week and which projects to work on at which times, so I try to stick to that unless I finish early or put in more work than expected.

[Entry 4]

Diary prompt

Take a moment to briefly **describe something** that you have **enjoyed about your work** recently. Feel free to share photos or videos.

Diary prompt 4. 30-03-2021

[TEXT] I enjoy the reactions of my clients when I send over work that they like/love. I have trouble believing in my own skills sometimes, so to have someone tell me I did a great job/leave a nice review helps boost my confidence.

[Entry 5]

Diary prompt

Take a moment to briefly **describe an activity** that you **enjoy doing** after you've **finished your work** for the day. Feel free to share photos or videos of this activity.

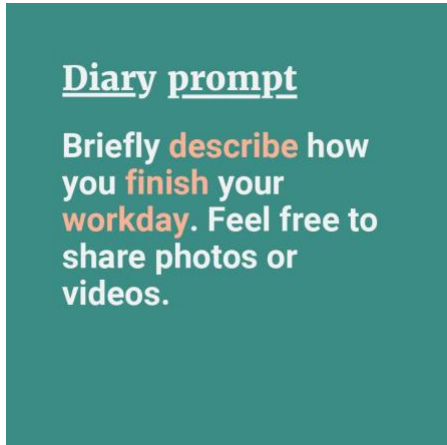
Diary prompt 5. 31-03-2021

[TEXT] After work, I usually find myself hanging out with my boyfriend and watching Brooklyn Nine Nine and vegging out, but sometimes I hang out with my dog, too. Before I started freelancing, I'd hike with him just about every day, but since I work 7 days a week it's

been hard. Yesterday after I wrapped up, I took him to the golf course with my parents to let him romp.

[VIDEO] Dog playing fetch

[Entry 6]



Diary prompt 6 01-04-2021

[TEXT] I feel like my work day is never really finished. Depending on where I'm at on a project, I might send files to a client for review. Otherwise, I might just save everything and close my laptop. Even when I say I'm done for the day, if a client messages me after that I almost always answer.

[Entry 7]



Diary prompt 7 02-04-2021

[TEXT] I don't enjoy searching for new clients. Being between gigs means I'm relying on my part time jobs for income, which isn't much. Looking for clients with good reviews who give good reviews and are willing to pay my rate is tiring. You never know what you're gonna get.

[Entry 8]

Diary prompt

Briefly describe a **non-work activity** that you normally **do before** starting your **work**. Feel free to share photos or videos of this activity.

Diary prompt 8. 03-04-2021

[TEXT] I like to watch Netflix and play sudoku or go on Reddit before I start work for the day.

[Entry 9]

Diary prompt

Briefly **describe** how you know when you are **ready to stop work** for the day. Feel free to share photos or videos to illustrate your description.

Diary prompt 9. 04-04-2021

[TEXT] I usually schedule blocks of time to work on my freelancing. Since I have two part time jobs, I tend to have some small blocks of work time after I've been at one of the others

jobs or longer blocks on the days I'm not at my part time job. I know when I'm ready to stop work for the day if I hit the end of a scheduled block or if I finish a project and send it to the client for review.

[Entry 10]

Diary prompt

Take a moment to reflect and share something that helps with your work productivity. This can be a tool, strategy, or anything else that you think helps you staying productive. Feel free to share photos or videos that illustrate your reflection.

Diary prompt 10. 05-04-2021

[TEXT] What helps me stay productive is scheduling my time. If I know I only need to put in two hours and then the rest of my night I can relax, it's easier to stay productive.

[Entry 11]

Diary prompt

Take a moment to reflect and briefly describe how the COVID-19 restrictions in your city might have impacted your work and non-work boundaries, if at all. Feel free to share any form of media to illustrate your reflection.

Diary prompt 11. 06-04-2021

[TEXT] I graduated in May 2020. I was still working an internship that lasted until August, but I was looking forward a full time job as well. I went on many interviews and got pretty

close on a couple of jobs, but never got any of them. The only job I was offered would require me to move four hours west in the middle of nowhere for low pay. I started freelancing because I couldn't find a job in all this. It feels like I'm always on Upwork talking to clients and looking forward new gigs. It's hard for me to wind down when I'm between clients because I feel like I shouldn't be working and furthering my career. It's very stressful and I feel like I'm falling behind my peers who did get full time jobs after we graduated.

[Entry 12]

Diary prompt

Take some time to **capture** a moment when you have **found yourself juggling work and non-work** activities. Feel free to share photos or videos of this moment.

Diary prompt 12. 07-04-2021

[TEXT] Last night, my boyfriend asked me if I wanted to go to the mall. I told him sure, and that I'd head over to his place since he had just gotten home from work. I realized I needed to trim my hair a bit and I ended up having a new client message me and request a quick call to screen share, so I was going back and forth between trying to do some quick self care to make myself look presentable, land a new gig, and still get to my boyfriends in time to get to the mall before it closed. It ended up taking longer than I expected and we weren't able to get to the mall. My client needed a rush job, so I ended up working most of the night even though we had initially wanted to watch his favorite anime together. It's a frustrating cycle, but since I'm still trying to build my Upwork career and make sure I'm getting new clients, it's hard for me to set boundaries right now.

[Entry 13]

Diary prompt

Take a moment to reflect and **share** what you have **enjoyed about working on Upwork** recently. Feel free to share photos or videos that illustrate your reflection.

Diary prompt 13. 08-04-2021

[TEXT] I enjoy the income and the reviews. I make almost twice as much an hour than I would at a normal entry level job in my field. I also enjoy getting five star reviews from clients, as I struggle with imposter syndrome and being terrified that I'm not actually good at what I do. Every time a client writes me a nice review, it reminds me that I'm doing a good job and I don't need to be so anxious.

[Entry 14]

Diary prompt

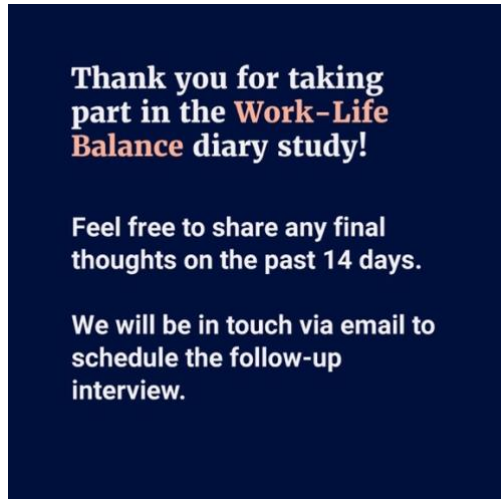
Take a moment to **reflect** and share what you have **not enjoyed** about working on **Upwork** recently. Feel free to share photos or videos that illustrate your reflection.

Diary prompt 14. 09-04-2021

[TEXT] I have not enjoyed the process of trying to find new clients. Within the last few days I have blown through probably over 100 connects applying to gigs every day only to receive maybe 1-3 messages from clients. I feel like I always have to be available to potential clients, so even when I decide to be done working for the day so I can spend time with my boyfriend, if I see a message from a potential new client, I feel like I need to answer immediately lest

they chose to work with another freelancer. I get anxious every time I get a new message and worry that I won't be able to do the work or do it well enough to satisfy the client.

[END DIARY]



Instructions 2. 10-04-2021

A3 Interview Guide Example

As mentioned in 7.3.3, post-diary interviews followed a semi-structured format, based on participant diary entries. Below, there is an example of this semi-structured interview guide, following up from P8's (Chapter 7) diary entries. Questions marked with an asterisk (*) are flagged as of high importance.

P8 Post-Diary Interview Guide

I want to start hearing your freelance story. You've mentioned that you graduated in May 2020 and that you were doing an internship while also looking for full-time positions.

- Tell me more about the process of deciding to go freelance last year while looking for full-time work, what was that like? *

In your diary you mentioned that you sometimes feel like you're falling behind your peers who did get full-time jobs after you all graduated.

- How do you think freelancing online fits into your broader career aspirations? *

Work streams

I want to discuss the different types of jobs that you have. In your diary you mentioned that you work basically seven days a week.

- What is it like having two part-time jobs and your freelance business? *

You shared in your diary that scheduling your time has been a beneficial way to stay on top of your work.

- Can you please elaborate on how you organise your work? *

In your diary you shared that you have started using Google Calendar to determine your week and which projects to work on at which times.

- Can you please elaborate on this practice of organising your workload for the week? *
- What is it about Google Calendar that you like for organising your work? *
- Would you also plan for other non-work activities in your calendar? *
 - If yes / Why do you think you have work and non-work integrated in the same calendar?
 - If not / Why do you think that is?

You shared that in the days when you only have your full-time work, you like to relax a bit on your phone before you start work.

- Can you please elaborate on getting into the mindset of doing freelance work?

In your diary you shared that sometimes you do your freelance work from your partner's place.

- Can you please elaborate on adapting different places to do freelance work from? *

Availability

Let me read you a quote from your diary. You shared: "I feel like my work day is never really finished. [...] Even when I say I'm done for the day, if a client messages me after that I almost always answer."

- Can you please elaborate on this quote?
- If you get a client message during your other part-time jobs, how do you react? *

In your diary you shared that since you are still trying to build your Upwork career and make sure you're getting new clients, it's hard for you to set boundaries.

- Can you please tell me more about this experience of setting boundaries while building your freelance reputation? *

Time to switch-off

From your diary, it seems that you have a quite busy schedule.

- How do you go about planning time off work? *

In your diary you mentioned that you have started doing puzzles with your partner.

- What is it about this activity that you've found relaxing? *

In your diary, when sharing non-work activities, you mentioned that you prefer multitasking as it keeps your mind busy. For instance, playing sudoku while watching a TV show.

- Do you also multitask while you're working? *
 - If yes / what does multitasking look for you in the work context?
 - If no / why do you think this is?

Upwork

Now I want to talk about Upwork.

In your diary, you mentioned that you appreciate getting good reviews as it can boost your confidence.

- Can you please elaborate on the particular elements about Upwork's review system that you appreciate? *
- Is there anything about how your reputation or measured is represented on Upwork that you would like to improve? *
 - What would this change look like?

In your diary, you mentioned that looking for clients with good reviews and that leave good reviews is tiring.

- Can you talk me through the process of assessing potential clients? *

Based on your experience, how would you make this process of applying to projects and assessing clients less cumbersome for freelancers? *

I want to come back to the issue of responding to potential clients right away.

- If Upwork were to be re-designed to help you manage expectations for potential clients, what could that look like? *

- Is there any other type of technology that you think could help you with setting up communication expectations for potential clients? *

Is there anything else about your work-life balance or freelance work that you'd like to share before we wrap up?

A4 Consent Form and Recruitment Survey

Appendix B Chapter 9 Study Materials

- B1. Information Sheet for Participants
- B2. Focus Groups Session Guide
- B3. Consent Form and Recruitment Survey

B1. Information Sheet for Participants

Study Name: Exploring Potential Technologies for Online Freelancers

Thank you for your interest in this research study. Before you decide whether you want to take part voluntarily, please read the following information carefully. Email **carlos.alvarez@northumbria.ac.uk** if anything is unclear or if you would like more information about the study. This study has been approved by Northumbria University Ethics Committee as Project ID Number: 35707. This study has *no* relation or association with any freelancing company or platform.

Purpose of the study

This research study explores online freelancers' views of fictional technology concepts designed to improve the online freelancing work experience. In addition, we are interested in exploring how these fictional concepts might impact online freelancers' work and identify directions for future technology and policy development. As part of the study, we will ask you to engage with our fictional concepts and participate in an online focus group to discuss your views of these technologies with other online freelancers.

Participant profile

We are recruiting professionals who use online freelancing platforms regularly to deliver freelance services, including but not limited to Upwork, Fiverr, Workana, Jovoto, Freelancer, and 99designs. We particularly welcome freelancers who have also used these platforms as clients.

To take part, you must fulfil the following requirements:

- Be 18 years or older.
- Have been an online freelancer (i.e., working independently through platforms) for at least three months.

Participation

Participation is entirely voluntary. If you take part, you are still free to withdraw at any time. You do not have to give a reason. If you withdraw, we will delete any data you would have provided.

Study stages

In detail, the study will consist of the following three stages:

Recruitment survey. In this survey, you will share details about yourself, your experience freelancing online, and the types of tools you use as part of your work. In addition, this survey will determine if you are a suitable candidate for participating in this study. All this information will be kept confidential. You will only be asked your name to pair your answers with subsequent activities related to this study. This survey should take between 5 to 10 minutes to complete.

Focus group. After completing the recruitment survey, the lead researcher will send you an email with the focus group details and a PDF file with the fictional technology concepts to be discussed at the focus group. Focus groups will host up to five participants and one researcher facilitating the discussion, and will last between up to two hours. We will begin by presenting the fictional technology concepts. Then, the group will share their individual and collective views of the fictional technologies, how they might be used in everyday work and the implications for the work experience. Finally, the discussion will conclude with reflections on the considerations that technology designers and policymakers should have when supporting the online freelancing work experience.

The focus groups will be through Zoom.us and will be audio-recorded and transcribed for qualitative analysis (see data below for more details). We will host various focus groups throughout November and early December 2021, considering multiple time zones and days of the week.

Follow-up survey. One week after the focus group, you might receive a follow-up survey. This survey will ask for further thoughts you might have about our fictional technologies. In addition, this survey allows you to share additional reflections that were not discussed at the focus group.

Compensation

Upon attending the online focus group, you will receive an Amazon voucher worth £30 as compensation for your time.

Data collection and storage

We will collect data from the recruitment survey, focus group, and follow-up survey. All data will be stored following University guidelines and the Data Protection Act (2018).

We will have access to the data you provide in the recruitment survey. This data will be anonymised, and your name will not appear in any form of analysis. If you are not a suitable candidate to participate in this study, the principal researcher will notify you via email, and all the information you might have provided in the recruitment survey will be permanently deleted.

We will audio record and transcribe the focus group on a local computer, meaning that this recording is secure. The audio recording will be transcribed for later analysis. The anonymised transcript will be retained and might be used in future research projects.

If you withdraw from the study, we will delete any data we have collected from you. If you withdraw after the follow-up survey and our data analysis has begun, it may be difficult to identify your data and remove it from the dataset.

Confidentiality and anonymity

Your name will not be written on any of the data we collect; the written information you provide will have an ID number – not your name. Also, your name will not be written on the recorded focus group transcripts will not appear in any reports or documents resulting from this study. All the data collected from you in this study will be confidential. The only exception to this confidentiality is if the researcher feels that you or others may be harmed if the information is not shared.

Study results

The data will be used for our research study, meaning we store and analyse the anonymised data and use excerpts and summaries in research publications.

The general findings might be reported in a scientific journal or presented at a research conference and be part of teaching materials; however, the data will be anonymised. The data you have provided (including information related to your work) will not be personally identifiable in any form. We can provide you with a summary of the findings from the study if you email the researcher at the address listed below.

We would like to make the anonymised transcripts available in a research repository for use by other researchers and in teaching. You do not have to agree to open publication of the full transcript and data if you do not want this to happen.

Who is Organising and Funding the Study?

This study is organised and funded by Northumbria University, Newcastle upon Tyne, UK.
This study has no relation to any freelancing platform.

Time requirements

Recruitment survey: 5-10 minutes approx.

Focus group: up to 2 hours.

Follow-up survey: 15 minutes approx.

Participant rights

The [GDPR provides the following rights for individuals](#):

1. The right to be informed
2. The right of access
3. The right to rectification
4. The right to erasure
5. The right to restrict processing
6. The right to data portability
7. The right to object
8. Rights in relation to automated decision making and profiling

You have a right of access to a copy of the information comprised in their personal data through Northumbria University [Subject Access Request](#)

You have the right a right in certain circumstances to have inaccurate personal data rectified; and a right to object to decisions being taken by automated means.

If you are dissatisfied with Northumbria University's processing of personal data, you have the right to complain to the Information Commissioner's Office. For more information see [the ICO website](#).

Contact information

Principal researcher:

Carlos Alvarez (Doctoral Researcher, Computing and Information Sciences, Northumbria University) carlos.alvarez@northumbria.ac.uk

Supervisory team:

Dr Marta Cecchinato (Senior Lecturer, Computing and Information Science, Northumbria University) Marta.Cecchinato@northumbria.ac.uk

Dr John Rooksby (Senior Lecturer, Computing and Information Science, Northumbria University) John.Rooksby@northumbria.ac.uk

B2. Focus Groups Session Guide

Step 1 Consent (3 minutes)

Hi everyone, this focus group will last approximately two hours, however it could be less depending on how the discussion goes.

Reiterate participant rights: voluntary participation, audio recording and transcription, and confidentiality.

Ground Rules

Our focus group is built on respect, understanding, kindness and good faith. Therefore, for everyone to have a good experience and feel in a safe environment, I propose the following ground rules:

- All responses are valid—there are no right or wrong answers.
- Please respect the opinions of others even if you disagree.
- Help protect others' privacy by not discussing details outside the group.
- Speak as openly as you feel comfortable.
- It's all right to abstain from discussing specific topics if you are uncomfortable. Please let the facilitator know if you wish to move on from a topic, whether openly or in a private Zoom message.
- Try to stay on topic; the facilitator may need to interrupt to cover all the material.
- Be mindful of letting others express their views and pay attention when they speak.

Step 2 Introduction (5 minutes)

I'm a PhD student at Northumbria University in the UK. As part of my PhD, I study online freelancing platforms – especially how these platforms shape freelancers' work experiences, their perceived benefits and challenges, and how these platforms could be enhanced to better serve freelancers.

I'm interested in exploring how elements of freelancing platforms could be re-imagined, for example, coming up with evaluation features that are not based on ratings and are more transparent. I've been inspired by the idea of platform cooperatives, which have been successful in prioritising workers' preferences as opposed to maximising profit and customer satisfaction. I wonder how online freelancing platforms might build on these principles?

In this session, I would like to discuss with you the concept of a fictional freelancing platform that proposes a new model of conducting freelance business online. I am going to show you this fictional concept and ask you questions about its features. I will also ask questions about issues that you currently face while freelancing on platforms and how they might be solved.

The fictional concept is supposed to provoke discussion about broad issues rather than proposing solutions to specific problems. I'm interested in your opinions. Please feel free to tell me if you think I'm asking the wrong questions or heading in the wrong direction. Also, please share other ideas for other aspects of online freelancing I may have overlooked.

Do you have any questions for me before we start?

Start audio recording and automatic transcriptions.

Please let me know if you would like to take a break as we go along.

Great, so before I give you some time to engage with the fictional platform concept, I'd like everyone to give a brief introduction. You know, your name and the types of professional services that you provide as a freelancer.

Step 3 The Design Fiction (10 minutes)

Now you'll have roughly 10 minutes to go through the design fiction (this could be a PDF or presented in a video format).

Step 4 Discussion (60 minutes)

Reactions to the design fiction

- What are your initial thoughts about the platform concept?
- What do you like about it?
- What do you dislike about it?
- Does the platform seem like something you would consider using as a freelancer? Why/not?
- Do any of the features of the platform concept resonate with existing features of platforms that you use?
- What features, if any, you think could be useful?

The platform's role

- Have you heard of other platform cooperatives?
- If so, what has been your experiences with them?
- What do you think about the idea of a platform owned and run by freelancers?
- Should platforms enable freelancers to collectively make decisions on how the platform functions? Why/not?
- What do you think about the platform controlling the supply and demand of talent to prevent market saturation, for example, by capping the number of freelancers that can join to certain fields of expertise?
- What do you think about the platform controlling the market? Is this something that platforms should do to reduce saturation?
- What else should the platform control?
- What else should the platform not control?
- What do you think about the platform matching clients with freelancers?
- What other alternatives could there be for reducing the time spent applying for projects?

Platform support for freelancers

- What do you think about receiving nudges and insights to improve your prices and services? (Buddy for freelancers)
- What are your thoughts on a tool that gives you insights about the hours you have worked and adjusting your availability? (Buddy)
- What do you think about having a bot that nudges unresponsive clients to act upon your requests or respond to your messages?

- Do you think this feature could help mitigate some of the work uncertainty and difficulty planning work?

Platform support for clients

- What do you think about the platform helping clients scope their projects and budget before matching them with a freelancer? (Bot-ddy for clients)
- Do you think this tool could mitigate clients underpaying freelancers? Why/not?
- What are your thoughts about the platform matching you with a client depending on their project needs rather than you sending proposals? (Bot-ddy for clients)
- Do you think clients would appreciate having the platform pre-screening their project requirements before talking to a freelancer? Why / not?

The level system

- What do you think about being allocated to various “levels” rather than having individual scores or ratings?
- Do you think the apprenticeship process is helpful to calibrate new freelancers that want to join the platform? Why/not?
- Do you think the apprenticeship programme can mitigate the difficulty of getting started on a platform?
- What are your views of levels suggesting the min and maximum prices freelancers can charge?

The peer support system

- What do you think about the idea of being paired with a “Super Peer” to get mentoring and support?
- Would you like to become a Super Peer and support freelancers new to the platform? Why/not?
- What are your thoughts on an anonymous peer reviewing and evaluating your work alongside the client?
- Do you think having another freelancer reviewing your work could help in getting constructive feedback? Why/not?
- Do you think having a freelance peer evaluating your work could mitigate client abusive behaviour through the evaluation?
- Do you think clients would approve having another freelancing reviewing the work?
- What other features might mitigate potential client abusive behaviour?

- What other features do you think could help getting more meaningful feedback?

Reputation

- What do you think about importing your reputation from other platforms?
- What do you think about the concept of exporting your reputation?
- Do you think it is useful to have control over your reputation to display on your website or on other professional platforms? Why/not?
- What would you like to export with your reputation?

Fees and benefits

- What do you think about the platform taking fees to cover running expenses and payment protection?
- There's been recent push for platforms like Uber to recognise their drivers and workers and give them benefits, should this also apply for freelancing platforms?
- Do you think some of the benefits the platform offers, such as paid leave, by taking additional fees are attractive? Why/not?

Session wrap-up (10 minutes)

- Is there anything else you wish the platform concept includes?
- Is there anything I should remove from the concept? Why?

B3. Consent Form and Recruitment Survey