Design Tensions in Online Freelancing Platforms: Using Speculative Participatory Design to Support Freelancers' Relationships with Clients

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This paper explores the design challenges that arise in supporting online freelancers to navigate relationships with clients. Prior studies have shown that current platform designs can lead to worker precarity in freelancer-client relationships, such as power imbalances, information asymmetry, and labor abuse. To envision alternative designs that empower workers in managing their relationships with clients, we engaged 22 Upwork freelancers in participatory speculative design activities. Through this co-design process, we identified *design tensions* that constrain design options as a result of conflicting values and priorities that could only be balanced and compromised rather than completely resolved. Six design tensions were identified in the context of designing for four different phases of freelancing. We observed three patterns in these tensions: 1) the freelancers' need for client involvement in their tasks and career growth, which conflicted with their skepticism that clients had sufficient incentives to be involved; 2) that there was often no viable balancing option for some tensions, but they could be addressed through changes in the platform's incentive structure; and 3) some tensions occurred not only between freelancers and clients, but also within the freelancer community. We present three approaches for addressing these design tensions and discuss how this research can support more equitable and healthy freelancer-client relationships.

CCS Concepts: • **Human-centered computing** → **Human computer interaction (HCI)**; *Participatory design.*

Additional Key Words and Phrases: design tension, online freelancing, freelancers, client relationship, gig work, speculative design, participatory design, work precarity, power imbalances, information assymetry, labor abuse

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1 INTRODUCTION

The rise of online freelancing has led to a significant shift in the way work is organized and performed. Freelancing platforms such as Upwork and Fiverr are gaining popularity by enabling workers with specific skills to access online jobs as a way to earn a living, adopt a side hustle [35, 54, 58], and craft a career path independent from an employer [5]. Clients outsource non-core tasks to freelancers so they can focus on their core work, get more done, and complete tasks that require skills they don't have [38]. Freelancers are often attracted to the flexibility and autonomy that comes with this freelance work [30, 58], but the success and well-being of freelancers is heavily dependent on the quality of their relationships with clients [20]. In particular, freelancers must navigate the power dynamics and information asymmetries that can arise in these relationships, which can lead to precarious work and labour abuse [33, 51].

Recent studies have begun to view the precariousness experienced by freelancers as a design problem. These studies have examined how algorithms and other technical features of platforms are designed to manage their operations [27, 58], such as how the platforms control and structure the relationships between freelancers and clients in terms of work, money, and power dynamics. For example, de la Vega et al. used speculative design fiction and engaged freelancers to evaluate alternative platform features [1], while Zhang et al. involved workers in the participatory design of the algorithmic management of a ride-sharing platform [59]. A common theme in these studies is the engagement of workers in the design process, allowing them to assess or create alternatives themselves. This design-centric perspective offers concrete ways to prime and shape the future design of platforms, going beyond merely identifying gaps or generating debates.

Designing a platform as a socio-technical system requires addressing the tensions between parties who hold differing values, perspectives, and realities that are complex and often conflicting [33]. When these tensions constrain design possibilities, they lead to *design tensions* between limited design choices. Design tensions cannot be resolved simply, but rather require a balanced design that involves compromise between opposing factors, such as visions, approaches, and priorities [52]. In the ride-sharing context, for instance, there is a design tension of whether to make the passenger's destination visible to the driver before accepting the ride, as it gives the driver more control over their ride preferences, but it can also lead to discrimination against passengers traveling to less desirable areas if drivers choose not to accept those requests. Zhang et al.'s participatory design study identified that particular design tension, characterizing it as a choice between transparency and opaqueness, and their freelancers suggested a balanced design that truncates the visible information in a "translucent" fashion [59]. When designing for better relationships between freelancers and clients, understanding design tensions can provide insight into opposing decision factors. This can help prevent the imposition of a single perspective or "design saviorism" and promote balanced and sustainable relationships instead.

In this study, we put freelancers at the center of the design process [18, 19] since we recognized the urgency of empowering them and supporting their *work* in their relationships with clients, rather than reinforcing managerial control and oversight. To this end, we engaged 22 Upwork freelancers in participatory design activities [6], where they explored and reflected on alternative platform designs [55] in support of their relationships with clients. As a result, we identified design tension as the primary theme of their reflections on the design outputs they generated. In the course of the design process, our freelancers found their design options are constrained by the need to balance and compromise differing values and priorities. We further identified six design tensions, as summarized in Table 2, that span four work phases of freelancing as illustrated in Figure 1. Three patterns were notable among the identified design tensions. First, the most prevalent tensions lie in deciding the level of workload that the design options impose on clients. This was

because freelancers need client input and feedback, but providing this to freelancers poorly fits into the client's workflow and incentives. Second, some design tensions could not be paired with a viable option that balances opposing values. For instance, freelancers desire a design that promotes obtaining specific, skill-oriented feedback from clients, but they also see no incentive for clients to invest their time in writing substantial post-job feedback for them. Third, not all design tensions are rooted in the tension between freelancers and clients. A design tension can arise between freelancers who have different standings on the platform (e.g., novice vs. experienced) or from a freelancer's own internal uncertainty on whether the design feature would work for or against them. We distilled these patterns into three approaches for handling design tensions in online freelancing, described in Section 5.1.

Overall, this work lays the groundwork for supporting more balanced and sustainable freelancer-client relationships by making the following contributions:

(1) We characterize six design tensions that arise in four different work phases of freelancers.
(2) We distill the characteristics of these design tensions into three design approaches that can help balance opposing values and priorities.
(3) We shed light on design tension as a useful perspective that can help reveal and concretize opposing values and limited resources in envisioning alternative designs of online freelancing platforms.

2 BACKGROUND AND LITERATURE REVIEW

This section provides an overview of the background and literature pertinent to the study of design tensions in online freelancing platforms. It delves deep into the historical evolution of freelancing, situates online freelancing within the broader gig economy, and critically examines the current design of these platforms. Moreover, it explores the design tensions inherent in these systems and emphasizes the potential for participatory and speculative design to identify and address these tensions.

2.1 Brief Introduction to Freelancing and the Digital Landscape

Freelancing, a form of self-employment where individuals offer services to multiple clients, has its roots in the practices of specialized craftsmen, artists, and professionals who exchanged their skills directly to those in need [30]. The evolution of this work setup has been significantly guided by technology, with each technological advancement contributing to the contemporary shape of freelancing. Particularly, the diffusion of the Internet and digital technologies in the late 20th and early 21st centuries provided a new dimension to freelancing, enabling a global reach and instantaneous communication [3].

Online platforms like Upwork, Fiverr, and Freelancer have drastically altered the dynamics of freelancing. They introduced a marketplace model that connected clients and freelancers from every corner of the globe, breaking down geographical boundaries [34]. While these digital transformations have broadened opportunities, offering freelancers access to a global clientele and a diverse range of projects, they also present unprecedented challenges [1]. Issues such as competition saturation, the role of algorithms in reputation systems, and the complexities of remote work underline the distinctions between traditional and online freelancing [58].

2.2 The Gig Economy Spectrum: Situating Online Freelancing

The gig economy, an umbrella term, encapsulates a broad range of contingent work arrangements that are facilitated by digital platforms. These work arrangements take on various forms, from short-term tasks to more specialized projects [31]. While terms like "sharing economy," "platform

economy," and "on-demand economy" are occasionally used as synonyms, each denotes distinct shades of the broader gig economy. Howcroft and Bergvall-Kåreborn's typology helps delineate these shades [23][1]. For instance, the sharing economy, typically centered around asset-sharing, aligns with "Asset-Based Services" (Type C in their typology), as seen in platforms like Airbnb or Uber. In contrast, freelancing platforms such as Upwork might be situated within "Profession-Based Freelance Crowdwork" (Type D) where skills and services are central. The diverse nature of gig work inherently implies an array of challenges and dynamics, which are further underscored by the intricate relationship between freelance workers and clients and the tensions and power dynamics inherent to this domain [44, 51].

Online freelancing can be segmented based on the nature and duration of tasks. Micro-tasking, represented by platforms like Amazon's Mechanical Turk, can be categorized under "Online Task Crowdwork" (Type A), involving specific, short-term tasks. These platforms have often been criticized for low wage offerings and opacity in task descriptions. Conversely, more comprehensive freelance projects, which may extend over weeks or months [32], are facilitated by platforms like Upwork and resemble "Profession-Based Freelance Crowdwork" (Type D). Here, workers face challenges such as competitive environments, unpredictable earnings, and occasional imbalances in power dynamics with clients [34, 58]. While these challenges resonate with the broader concerns of the gig economy, Howcroft and Bergvall-Kåreborn's typology aids in pinpointing specific difficulties encountered by online freelancers, emphasizing the need for tailored interventions.

In exploring the multifaceted landscape of the gig economy, the differentiation among types of gig workers becomes paramount. The typology defined by Dunn [15] classifies workers into distinct categories, namely 'Searchers,' 'Lifers,' 'Short-timers,' 'Long-rangers,' and 'Dabblers,' based on varied motivations and strategic approaches to gig work. Our study primarily hones in on 'Searchers'—those who find themselves in precarious situations, often underemployed and heavily reliant on gig work for income—and 'Lifers,' individuals who fully embrace gig work, seeking long-term career opportunities within this sphere. The emphasis on these categories is critical, given the pressing need to address the economic instability and uncertainty that particularly plague 'Searchers' and 'Lifers' within the gig economy.

2.3 The Prevalent Design Approach of Online Freelancing Platforms

As mentioned above, online freelancing platforms, like Upwork, Freelancer, and Fiverr, have surged as significant digital intermediaries connecting freelancers with a worldwide clientele [37]. Central to these platforms is the deployment of algorithms for tasks such as linking freelancers to suitable projects, shaping search rankings, and gauging performance through rating systems [25]. Although these systems are intended to optimize the freelancing experience, they frequently give rise to unintended challenges. Among the intricacies emerging from the present platform designs are power imbalances between freelancers and clients, a lack of transparency in job allocations, and the incessant pressure on freelancers to sustain high ratings, all hinting at the underlying tensions and imbalances in these systems [21, 44, 58].

The prevalent design approach, often leaning towards client interests, exemplifies top-down managerial control. This inadvertently induces various tensions, particularly those related to differing interests among stakeholders and conflicting priorities [30, 46]. However, the possibility of reimagining online freelancing platforms with a worker-centric lens is immense. Rather than solely relying on algorithmic interventions, embracing human-oriented values, iterative feedback, and adaptability can set the stage for platforms that champion fairness and equity. It's heartening to

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[1]The typology encompasses "Playbour Crowdwork" (Type B), blending play and labor, although this is not central to the primary focus of the work presented.

see certain platforms acknowledging these nuances and moving towards integrating features that stress transparency, inclusivity, and most crucially, empowering the freelance workforce [44, 59].

2.4 Relationship between Freelancers and Clients

The relationship between freelance workers and clients has been widely studied in the gig work literature, with a common theme being the precarity of the worker's position due to information and power asymmetry in favor of clients [44, 51]. Online freelancers often lack autonomy in how they are allocated jobs and how they connect with clients [34, 58]. Studies have found that client colonization can lead to emotional labor for freelancers [20] and that the lack of autonomy in the negotiation process can constrain freelancers in their ability to renegotiate contract details without facing financial and reputational consequences [34, 58].

The concept of algorithmic management [36] is particularly relevant in understanding how these dynamics play out. This refers to the use of algorithms and automation in decision-making and management within organizations, and how it impacts the relationship between freelancers and clients. Research has focused on the algorithmic and functional elements of platforms that contribute to the algorithmic management of these platforms and how such algorithmic control contributes to the technostressors that workers experience [12, 26, 27, 36, 58].

However, it's important to note that clients can also be a source of support for freelancers. In [4], Blaising et al. also mentioned three areas of mentorship/feedback in need of support for freelancers: developing platform literacy, social network access, and support-seeking with limited formal resources. Lustig et al.'s study has also shown that clients take on a significant amount of "transaction costs" to manage stakeholder expectations and realities [38].

2.5 Exploring Design Tensions in Online Freelancing Platforms

Tatar's Design Tensions Framework provides a lens through which the design trade-offs and conflicting priorities in technology systems can be understood and analyzed [52]. It acknowledges that in design, choices often need to be made between competing values and user needs, leading to tensions. Applied to online freelancing platforms, this framework can elucidate the complex relationships between various stakeholders, ranging from platform designers and developers to freelancers and their clients [42, 46, 49].

Online freelancing platforms manifest various design tensions, stemming from the differing priorities of stakeholders involved. One significant tension is between platform profitability and equitable remuneration for freelancers [22]. Platforms such as Upwork, for example, might face tensions when considering mechanisms like "connects," which serve to limit spammy job proposals but also make the proposal process more burdensome for freelancers [24]. Another tension arises between providing clients with a vast pool of freelancers to choose from and ensuring visibility for new or less-established freelancers, a challenge heightened by the precarity of the freelancer's position due to power imbalances [44, 58]. Moreover, as platforms deploy algorithmic management [36], the choice between algorithmic neutrality and introducing measures to prevent potential biases or unfair ratings becomes another source of tension. Addressing these design tensions requires a nuanced understanding of the platform's ecosystem and a commitment to prioritizing sustainable and ethical practices over short-term gains [1, 14].

2.6 The Potential of Participatory and Speculative Design in Addressing Tensions

Participatory Design (PD) is a methodological approach that actively involves all stakeholders, particularly end-users, in the design process to ensure that the final product caters to their needs and preferences [45]. Originating from the Scandinavian workplace democracy movements of the 1970s, PD has been adopted in diverse contexts, including HCI and CSCW, highlighting collaboration,

mutual learning, and shared decision-making [40]. Its guiding principle is the democratization of design, suggesting that those impacted by design decisions should participate in them [7].

Speculative design is a complementary approach, often used to investigate the implications of emerging technologies and social trends. Through methods like design fiction, it offers alternative visions of the future, provoking discussion on potential societal impacts [56, 57]. Recent studies, such as those on gig work, have utilized design methods like participatory design and design fiction to envision platforms that cultivate sustainable labor ecosystems [1, 59].

In the domain of online freelancing platforms, combining participatory and speculative design has the potential to uncover intricate design tensions by leveraging the firsthand experiences of freelancers [41]. Creating a collaborative atmosphere, these methodologies can co-create solutions to the unique challenges freelancers face, ensuring platform designs resonate with their aspirations and values [58]. The iterative nature of PD, combined with the forward-looking aspect of speculative design, allows for real-time adjustments, making the solutions adaptable to the ever-evolving landscape of online freelancing.

While the broader gig economy has redefined work relationships, online freelancing holds specific nuances, from the intricacies of algorithmic management to power imbalances between freelancers and clients. At the core of these dynamics lie design tensions, which not only reflect conflicting interests and priorities but also underscore the gaps in current platform designs that lean towards managerial control over freelancer empowerment. By harnessing the synergies of participatory and speculative design, this study seeks to navigate these tensions and put freelancers at the forefront of design solutions [11]. In doing so, our contributions aim to foster a more equitable digital freelancing landscape, wherein platforms are not mere transactional intermediaries but allies that amplify freelancer agency, autonomy, and dignity.

3 METHODS

Given the well-defined and specific scope of the study – the freelancer side of the freelancer-client relationships – our goal was to reveal deeper underlying tensions that cannot be easily addressed by design solutions presented in prior work. To elicit in-depth reflection on freelancers' desires and concerns around the design, we ran a participatory design fiction study [41, 53] where the participating freelancers generated and reflected on speculative platform designs that could mitigate the challenges they face in client relationships. Our method decision was informed by foundational texts in speculative design. Our perspective aligns with Auger's assertion that speculative design fulfills two primary roles: enabling thought about the future and critiquing current practices [2]. Employing speculative design techniques as outlined in [16], we guided our freelancers in an imaginative exploration of how various future designs could either draw us nearer to or push us further from *preferable* outcomes, as opposed to the probable scenarios that might unfold if the status quo persists. Acccordingly, we worked with freelancers to find out "What problem and tensions exist in the freelancer-client relationship right now, and what design might address them?", and also "If these design solutions were implemented, what deeper issues would still remain?" Overall, this process encouraged participants to critique present conditions and consider various futures' relational dynamics, ensuring a comprehensive exploration not confined by current technological or societal constraints.

Our inquiry approach had the following three characteristics. First, the design process served as a means to the end. Asking freelancers to come up with their own designs empowered them to debate existing assumptions, elaborate on the complexity of challenges, and prime future solutions. Freelancer-generated designs were immediate outputs of the participatory design activity, but our
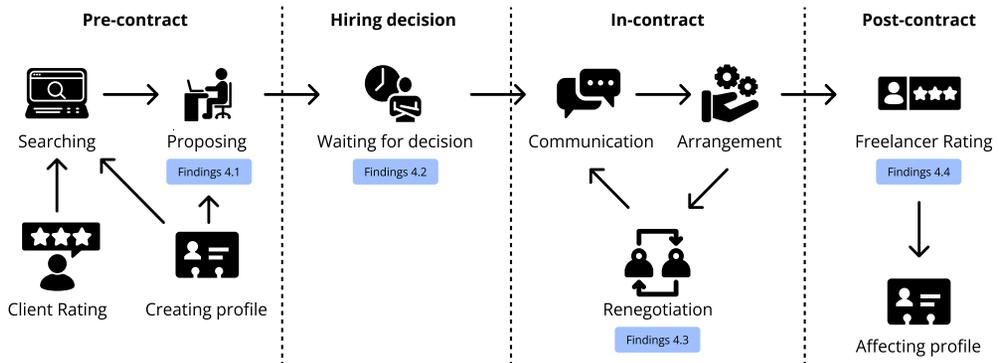
Fig. 1. Work phases in freelancing. Each symbol in the figure represents a type of action that freelancers engage in. Through our research, four actions were found to be particularly relevant to design tensions. These actions are highlighted with a reference to the corresponding finding sections (as indicated by the blue box).

target *outcome*[2] was to capture freelancers' reflections. Second, apart from previous studies that engaged gig workers in group-based workshop and focus-group formats [1, 59], our approach provides a unique perspective by focusing on one-on-one engagement with each freelancer to gather individualized insights and in-depth reflections from them. Third, we promoted the cross-pollination of ideas between our freelancers by snowballing the design prompts over the participants. The basis of each co-design session was built on the designs and reflections from the past sessions synthesized by the researcher team geared towards the individual participant.

To ensure our participants felt agency as proactive design partners of the participatory design process, we adopted a few specific strategies. Firstly, beyond merely acknowledging the freelancers as partners, we actively engaged them in shaping the research process. This involvement included iteratively formulating and refining the research questions based on their insights. Moreover, we established a continuous feedback loop, where freelancers could reflect on and critique both their design contributions and the design prompts ideated by earlier participants. This fostered a sense of ownership and collaborative investment in the study outcomes. Additionally, we provided opportunities for freelancers to actively steer the direction of the session. We encouraged them to voice their perspectives and concerns and structured the session around topics of their interests. By consciously ensuring our freelancers' voices were at the forefront, we hoped to transcend the traditional client-service provider dynamic and foster a genuine partnership atmosphere.

3.1 Recruitment and Participants

To stabilize our recruitment strategy and study procedure, we ran pilot studies with 12 freelancers on Upwork. In a nutshell, the pilots offered three methodological takeaways: 1) The reflection is deeper and richer when the participating freelancer has a more critical perspective of the platform design and management. 2) Freelancer's relationship challenges with clients, albeit diverse, can be structured into different work phases as shown in Figure 1. 3) Participants without a design background demand "seed" designs and hands-on guidance, otherwise they find it difficult to translate their impression of the platform into design.

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[2]See Bødker et al. [6] for a more specific distinction between output and outcome of participatory design.

For the main study, we recruited Upwork freelancers through a purposive sampling strategy, aiming for two distinct objectives. Firstly, we sought participants who exhibited a critical perspective of the platform's design and management, as our aim was to delve into profound insights for potential improvements. Secondly, within this group, we implemented a maximum variation sampling approach to ensure a diverse representation based on demographic characteristics, including age, race, gender, location, job types, and specific experiences with the platform (see Table 1). This dual-focused strategy was designed to balance a depth of critical insights with a breadth of freelancer experiences. To recruit these participants, we posted the study recruitment message as a job posting in Upwork with the pay rate of CAD 50 per hour. Participants were asked to send a proposal confirming that they filled out our pre-screening survey, which served as our selection criteria. Our procedure was approved by our university's institutional research ethics review board.

While engaging with participants holding critical perspectives greatly enriched our understanding and provided actionable insights for empowering freelancers, it inherently limited our sample to individuals predisposed to critique. This approach inevitably excluded voices of freelancers who are relatively satisfied with their platform experience and potentially supportive of the status quo. Recognizing these constraints, we acknowledge the need for a more comprehensive study that encompasses a broader spectrum of experiences and attitudes as an avenue for future work.

The pre-screening survey had an open-ended question for insights respondents may have in regards to improving the platform. We prioritized respondents who showed critical perspectives towards their work conditions, challenges, and ideas for platform improvement, the principal criteria for selecting a participant. The pre-screen survey also collects: 1) freelancers' demographic data, which we used to diversify freelancers across gender and geographic backgrounds; 2) their reliance on Upwork for income, used to prioritize freelancers who have higher dependency on the platform; 3) work phases that they find most challenging in handling client relationship, used to identify and assign them to PD sessions that would eventually cover different work phases, as a whole set.

For the initial five sessions, we recruited participants with UX/UI design backgrounds, by posting the job within the "Design and Creative" job category, as we wanted to leverage their professional skills to jump start the participatory design sessions. As the study progressed, our recruitment expanded to target freelancers across a variety of occupations, and the recruitment message was reposted across Upwork's 12 job categories (e.g. "Account and Consulting", "Admin Support", etc.).

As a result, we recruited 22 Upwork freelancers[3] (12 women, 9 men, and 1 non-binary). Pseudonyms have been assigned to all research participants. Participant ages ranged from 19 - 49 years. Nine participants identified as Asian, six as White, four as Black, and three as Latinx. The majority (14) of our participants were full-time workers on Upwork, and eight participants worked part-time. Three participants have had experiences with being a client: Cameron on Upwork, Gael on other freelance platforms (it was not disclosed which ones specifically), and Raleigh on Fiverr.

3.2 Procedure

The participatory design sessions were conducted entirely over Zoom. Our sessions were structured into three steps: challenge-identification, co-design, and reflection. More specifically, the session started with approximately a 30 min semi-structured interview where a participant was asked about their experiences and challenges in handling client relationships on Upwork, approximately 30 minutes of conceptual design ideation in ways to improve their work interfaces (with respect to

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[3]There was no overlap with the pilots. Although we conducted 23 sessions, we dropped one participant's data due to low audio quality that prohibited accurate transcription.

Table 1. Summary of participant demographics

ID	Name	Age	Race	Gender	Location	Job type	Tenure (year started), part-time/full-time	Experience before Upwork/ On other platform(s)/ Non-platform
P1	Adya	19-29	Asian	Woman	Texas, United States	UX strategist	Sept 2021, full-time	UX designer (6 years), Fiverr
P2	Berta	19-29	Black	Woman	Nairobi, Kenya	UX designer	Apr 2022, part-time	UX designer (3 years), software developer
P3	Cameron	19-29	Black	Man	Spanish Town, Jamaica	UX designer	Feb 2022, part-time	Entrepreneur, client on Upwork
P4	Drew	19-29	White	Man	Old Windsor, United Kingdom	UX designer	May 2022, part-time	Business analyst, Fiverr
P5	Emerson	30-39	Latinx	Woman	Curitiba, Brazil	UX research consultant	Oct 2021, part-time	Contract agency UX research consultant (3 years)
P6	Farah	19-29	Black	Woman	London, United Kingdom	Content writer	Jun 2021, part-time	Writing agencies, freelancer.com
P7	Gale	19-29	Asian	Man	Lahore, Pakistan	Mechanical engineer, product designer	May 2021, part-time	Fiverr
P8	Hachi	40-49	White	Woman	Bragadiru, Romania	Market research analyst	Oct 2020, full-time	Market researcher (15 years), freelancer.com
P9	Ibis	40-49	Asian	Man	Palakkad, India	Web research, data entry/extraction, translator, project management	Dec 2017, full-time	Retail banking (16 years)
P10	Jamie	30-39	Asian	Woman	Ho Chi Minh City, Vietnam	Translator, virtual assistant	Feb 2022, full-time	Executive assistant, contract freelancing (3 years)
P11	Kim	19-29	Asian	Woman	Kawit, Phillipines	Juris doctor, creative	Oct 2021, part-time	Government legal consultant, contract freelancing (10 years)
P12	Lee	30-39	White	Man	Merida, Mexico	Copywriter, SEO, researcher	Feb 2022, part-time	Construction site manager (10 years)
P13	Morgan	19-29	White	Man	Escondido, United States	Translator	Jan 2021, full-time	Contract freelancing (10 years)
P14	Naveen	30-39	Asian	Woman	Muntinlupa City, Phillipines	Content creation, virtual assistant	Aug 2019, full-time	Economics high school teacher
P15	Gael	30-39	Latinx	Man	Brasilia, Brazil	Interpreter, translator	Jun 2021, full-time	Administrative assistant, Brazilian Senate interpreter, client on other platforms
P16	Paz	30-39	Asian	Woman	Chennai, India	Business research, strategy consultant	Jan 2021, full-time	Marketing analyst and management (7 years)
P17	Quin	30-39	Black	Woman	Ibadan, Nigeria	Virtual assistant, research, customer service	Oct 2021, full-time	Chemistry and math teacher, contract freelancing
P18	Raleigh	19-29	Latinx	Man	Panama, Panama	Business analyst, strategy, sales and tech	Jul 2021, full-time	Client on Fiverr
P19	Sam	19-29	White	Non-Binary	Plover, United States	Editor, proofreader, copywriter	Jan, 2021, full-time	Contract freelancing (2 years)
P20	Taylor	30-39	Asian	Man	Wazirabad, Pakistan	Writer, editor, proofreader	May 2020, full-time	University researcher
P21	Uriel	30-39	White	Woman	Poznan, Poland	Translator, proofreader, EFL material curriculum development	Feb 2022, part-time	EFL teacher
P22	Kiran	19-29	Asian	Woman	Karachi, Pakistan	Proofreader, data entry, content writer	Oct 2021, full-time	Fiverr

their encountered challenges), and approximately 30 minutes of design reflection on other people's designs.

Not all designs were shown to each participant during the design reflection. The designs that we showed were matched and varied depending on what challenges the participant spoke about during the semi-structured interview. As we received new insights throughout the sessions, the design artifacts that were shown to participants were continually iterated upon by researchers.

The timing allocation of the three steps in our study procedure evolved over time. The initial five sessions (P1-5) were design-heavy with a longer co-design step (up to 50 mins) with the other two steps being shorter, because at the time there were no aggregated design ideas at the beginning of the data collection. The sessions with the later third of participants (P13-22) were reflection-heavy

where the majority of the time (more than 40 mins) was dedicated to the reflection step, since the design ideas were relatively mature by that point.

The prompt that was given to participants during the co-design step asked them to imagine that they have control over the redesign of Upwork. They were told that their goal is to think of how the platform can be changed to help freelancers mitigate the challenges that they face. For participants P1 - P5, the design session was separated into 3 stages. In stage 1, participants come up with a bullet point list of interface requirements. In stage 2, participants create a text write-up of a user flow. In stage 3, participants create low fidelity wire frames using the tool of their choice. After each stage, participants regrouped with researchers and walked them through their ideas. Participants P6 - P14 were asked to brainstorm conceptual designs for the co-design step, and as such they only created a list of interface requirements.

3.3 Analysis

We employed a reflexive thematic analysis [9], commencing with an inductive approach to ensure our findings were firmly rooted in the raw data, specifically the participants' narratives. This initial phase involved the meticulous coding of 22 transcripts, resulting in 543 unique codes emblematic of the participants' experiences and challenges, such as "unclear job description limits work planning" and "uncertainty in work availability." Our choice for an inductive start was strategic; prioritizing the emergence of codes from the data assured that the subsequent analysis was not constrained by, but could contribute nuanced insights to, the existing literature on gig work. Following the inductive phase, we transitioned to a deductive analysis, informed by key issues identified in the gig work literature, particularly those discussed in Sections 2.4 and 2.3. This approach allowed for the categorization of the initial codes under broader themes resonant with established concepts and theories, such as information asymmetry and platform opaqueness. The marriage of inductive and deductive strategies enabled us to contextualize our novel findings within the prevailing theoretical framework. This hybrid method provided a robust mechanism for interpreting emergent themes, enhancing both the depth and relevance of our insights into the complexities of the gig economy.

3.4 Positionality

We acknowledge our personal positions in formal education, place of residence, occupational background, and relationship to our participants as potential sources of bias. As all authors reside in developed countries and have either completed (or are completing) post-secondary education, we recognize that we are sensitized to the oppressive nature of freelance platforms. Furthermore, this privilege impacts our abilities to relate to freelancers' lived experiences (for example, with precarious job availabilities). Although we consider freelancers as partners in our design process rather than as participants, we recognize that our formal relationship to freelancers in this study was that of a client since we hired them. As such, there may have been asymmetries in our social interactions with participants as we conducted the study. We acknowledge the absence of direct insights from the client side, which may have impacted the comprehensiveness of our findings and discussions. Our position as clients in this study, though indirectly, allowed us to reflect on some aspects of client experiences with freelancers, but we understand that it does not fully represent the diverse perspectives of clients in freelance platforms.

4 FINDINGS: DESIGN TENSIONS

Our analysis has revealed the intricate design dilemmas that freelancers encounter when juggling competing perspectives and priorities. Six distinct design tensions were identified across the four phases of freelance work, as summarized in Table 2 and Figure 1.

Table 2. Summary of Findings

Work Phase and Theme	Design Output	Design Tensions
4.1 Proposing jobs: Establishing Mutual Task Expectations	Upvote Job Inquiries	#1. Design changes that promote inquiries could help novices but make experts lose the advantage of using inquiry to signal expertise (Section 4.1.3) #2. Increasing access to freelancers' inquiries can potentially overburden clients by adding to their workload and disrupting their workflow (Section 4.1.4)
4.2 Waiting for Client Hiring Decision: Reconciling Freelancers' Awareness of Hiring Status with Client Workload	Hiring Status, Rejection Feedback	#3. Freelancers desire input from clients on their proposals, but they also worry about imposing too many demands on them (Section 4.2.3)
4.3 In-Job: Remedying the Emotional Toll of Confronting Clients in Renegotiations	AI Chatbot Renegotiation, Renegotiation Form	#4. Third-party intervention can lower the emotional barrier of direct confrontation, but it may hinder the establishment of a long-term relationship with clients and the autonomy of freelancers (Section 4.3.3)
4.4 Post-Job: Getting Client Feedback for Professional Growth	Specific Feedback	#5. Promoting specific feedback from clients can backfire for freelancers, resulting in lower ratings and emotional strain (Section 4.4.3) #6. Freelancers see a gap of perception between freelancers and clients regarding how much post-work feedback clients should provide (Section 4.4.4)

The identified design tensions were derived from our freelancers' remarks on the challenges and design outputs that our participants collectively generated, explored, and discussed. While a wide range of challenges and design ideas were reported by our freelancers, we have chosen to document only a selected subset that is directly relevant to the identified design tensions. It's worth noting that the purpose of documenting these challenges and design outputs is to provide context for the following design tensions, rather than to be considered contributions themselves.

4.1 Proposing Jobs: Establishing Mutual Task Expectations

Our freelancers have found that the current platform design is not inviting for them to ask clients for clarification on specific tasks in job postings. In our co-design process, we focused on increasing access to inquiries by moving job inquiries from one-on-one chatting to public commenting. However, we identified that the design possibilities to address this challenge lie on a spectrum of opposing values. Public commenting may help novice freelancers alleviate their emotional burden, but may diminish the advantages of experienced freelancers.

4.1.1 Challenge: Feeling unempowered to ask clients about task expectations. Freelancers often encounter challenges when clients do not clearly define the tasks required in the jobs they post on freelance platforms. This lack of clear communication can result in unexpected or unpaid work and can cause conflict between the freelancer and the client. For example, Kim finds that often in her field "the job description will be in the general sense and it will balloon into more tasks, or will include unrelated tasks once hired." As a result, freelancers may feel pressured to take on tasks that do not match their skill sets. Inadequate task expectation setting also risks their contracts becoming a product that does not meet the clients' expectations. Uriel believes that freelancers "can't deliver good results if [clients] don't ask specifics." When such conflicts happen, freelancers bear the brunt because clients attribute the inadequate work product to a freelancer's lack of skill rather than taking responsibility for how their lack of task communication affects the work output. These issues can impact the productivity and finances of freelancers, and also lead to negative ratings after the contract is complete. Muralidhar et al. referred to this as "changing goal posts" in [24].

Freelancers may feel that they are not empowered to ask questions and that the design of the contract or job posting is not conducive to inquiry, even though clarifying task expectations is vital for a conflict-free contract. Kim believes that having an expectations-setting meeting is essential for a conflict-free contract, but some freelancers may find it difficult to talk and negotiate in this setting due to "anxiety and animosity involved" in establishing mutual task expectations. Uriel believes that asking extra questions is a way of "protecting [freelancers] from clients saying 'Oh, you didn't do this and that'". However, she also describes how some clients adopt a dismissive attitude towards
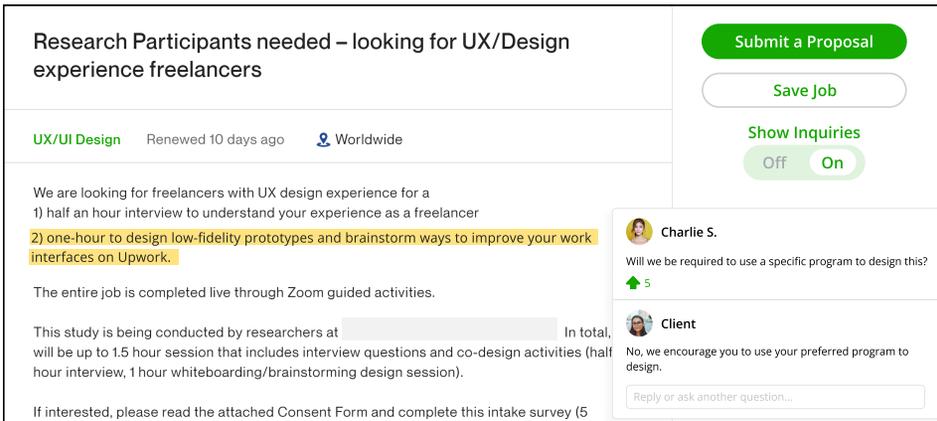
Fig. 2. Upvote Job Inquiries design - Through a Google Docs style commenting format, all freelancers are able to annotate the job post to submit inquiries. Freelancers are able to upvote each other's questions.

her when she tries to gain clarity on job terms, saying "Maybe I have felt that they were a bit like dismissive [when I asked questions], because they just wanted me to do it." In an effort to complete work as quickly as possible, some clients may downplay the freelancers' concerns and questions. This suggests that some freelancers may feel anxious when asking about job details one-on-one with clients, especially novice freelancers who fear upsetting potential clients and losing their opportunities.

4.1.2   Design output: Promoting public inquiries with and without qualifications. Together with freelancers, we co-created alternative designs to help freelancers establish mutual expectations about job tasks with clients. The primary design is Upvote Job Inquiries (see Fig 2). The design keeps freelancer questions and client answers right over the job posting description in a Google Docs style commenting format. The inquiries are visible to all other freelancers who can also upvote each other's questions to emphasize priority to clients.

The design approach was based on two primary inputs from our freelancers. The first was the need to lower the barriers to inquiries. Since freelancers are concerned about asking questions about the job one-on-one to clients, moving the conversation to a public forum can make them feel supported by their peers and also allow them to share task information with each other, as all of them have access to the conversation with the client. The second input was to hold clients accountable for answering freelancer questions. The freelancers reported that they avoid unresponsive clients as it is an indicator of how they may treat their freelancers during the contract. This means that moving the stage of inquiry to a public forum can motivate clients to be more responsive, as answering freelancer inquiries can help them recruit more competent freelancers.

The Upvote Job Inquiries design allows any freelancers to ask questions. However, during the design process, we created a variant of the design called Selective Inquiries (see Fig 8 in the appendix A) that implements an eligibility mechanism for allowing only freelancers who meet certain criteria defined by the client to be able to ask questions about job postings. This new design was inspired by the identification of two kinds of design tensions, as given next.

4.1.3   Design tension #1: Design changes that promote inquiries could help novices but make experts lose the advantage of using inquiry to signal expertise. In reflection of the the Upvote Job Inquiries design, novice freelancers responded more favorably than those with more experience. Their

rationales were based on opposing interests through which it made visible the design tension between them around promoting access to inquiry.

Novice freelancers appreciated the community based inquiry mechanism as it increased access to job inquiries for those who fear being dismissed when communicating one-on-one with clients. They reflected that the design would allow the emotional burden of communicating to be offloaded and shared between peers. Raleigh, another novice freelancer, also saw that the benefit of the design was "for the freelancer to use this as an opportunity to show more interest to the client and also for the client to see which freelancers are actually caring about the job post."

On the other hand, more experienced freelancers saw that the benefits of the design for the novices will come at the expense of experienced workers' ability to use job inquiries to signal their expertise. The experienced freelancers reported that they often use one-on-one inquiries as a way for them to show their experience, knowledge, and skill level. Hence, encouraging all freelancers to access the clients' response can possibly makes their inquiries and proposals less unique, as described by Paz below.

> "Most freelancers send a very generic proposal. So in the cover letter if you ask something very specific to the project, they tend to respond to you, so that is how you can show your skill set to them. ... [This design], it kind of removes my advantage." - Paz

Allowing all freelancers to share the inquiry channel would hinder the ability of the experienced to leverage the one-on-one communication channel where they can draw the client's attention exclusively. The design tension occurs at the points of access and visibility of inquiries. Expert freelancers may feel like they have mastered the current platform design to their benefit, and as such the new design would make them lose their vantage point.

4.1.4 Design tension #2: Increasing access to freelancers' inquiries can potentially overburden clients by adding to their workload and disrupting their workflow. Freelancers saw the design intent of the Upvote Job Inquiries design (see Fig 2) for helping them gain more clarity towards job terms, but doubted clients would engage with inquiries, as it might disrupt their hiring timelines. They believe clients prioritize a swift hiring process over answering questions.

> "I actually love this question-asking feature as a freelancer, but would clients actually bother to answer them? Yeah, for those ones that are very serious and looking or someone, you know, maybe for long term or a top-quality service they would. But I think 70% at least in my field, they [clients] just want the work done." - Uriel

More experienced freelancers raised another related concern about the possibility of the inexperienced freelancers asking too many trivial or unrelated questions. They speculated that novice freelancers may misuse the question-asking feature by treating it as a forum for general inquiries instead to fill their gap in knowledge or experiences. Clients thus can be given a greater workload as they have to filter through questions that are not specific to their jobs.

> "I'm just worried about burdening the client with too many questions. [...] Maybe only freelancers up to a certain level can ask questions. [...] Because there are a lot of newbies - maybe they don't understand, or sometimes they ask some things that are not related. [...] I think that it's not going to be so unfair for the client to define the criteria on who gets to ask the questions." - Gael

Also, it is worth noticing that Gael's comment above implies a new design idea of controlling access to asking questions based on freelancers' eligibility criteria. As they saw the tension between increasing the freelancers' access to ask questions and managing clients' workload, a reasonable design balance could be achieved by controlling the access for some of the freelancers who are likely to cause more client workload. A prototype implementation of this eligibility mechanism is
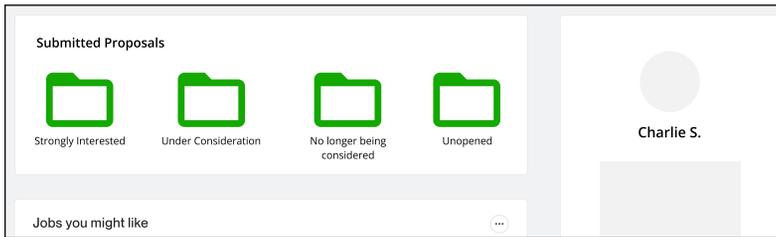
Fig. 3. Hiring Status design - When viewing proposals, clients are required to sort freelancers into one of three categories: "Strongly interested", "Under consideration", and "No longer being considered". Freelancers are then able to see which categories their job proposals have been sorted into.

the Selective Inquiries design in Fig 8. Freelancers reviewing this design appreciated the balance it offered. Uriel, for instance, voiced his approval, stating, "It's a good idea to limit the question asking option to those eligible freelancers because I don't know how many spammers or trolls are out there on the network." This circumvents the issue of excessive questions and helps clients identify skilled candidates that they could possibly hire. Importantly, the design is still conducive to nurturing the gig literacy of the novice freelancers as they can still benefit from having access to view the inquiries raised by those who meet the eligibility criteria.

4.2 Waiting for Hiring Decision: Reconciling Freelancers' Awareness with Client Workload

Freelancers experience disruptions in their workflow planning as a result of the unresponsiveness of clients during the hiring process. This contributes to the challenges in balancing workload and financial success. Freelancers require more granular communication towards their chances of getting hired. They seek a visibility mechanism that will allow them to receive input from clients, but will not overburden the clients with excessive work.

4.2.1 Challenge: Opaque hiring statuses create uncertainty in the work planning of freelancers and can result in financial losses. Freelancers allocate a considerable amount of time towards proposing for jobs, as they oftentimes custom tailor proposals to job postings in hopes of increasing their chances of hire. However, freelancers express that the time and energy that they put into crafting a proposal can feel like an unappreciated, wasted effort (Gael, Lee). This is especially in the case where clients never open their proposals, or just fail to hire anyone for their jobs.

> "It's frustrating for me to make the effort, spend the time to make a bid and proposal, and they didn't hire anyone. [...] For them it's easier cause there's no consequence to not hiring someone - they don't have to pay, or I don't know how it works but for the freelancer they take the time and effort to do it, it's an intellectual task to that very time. Custom-made proposals for each job, and they do it for dozens of jobs depending on how busy." - Gael

Additionally, Upwork freelancers are oftentimes required to submit an in-platform currency (connects) bought with money to be able to apply to jobs, and the frustration can also be attributed towards the financial loss of "losing their connects" when jobs expire and clients fail to hire anyone (Paz, Gael, Kim, Sam). A recent study by Muralidhar et al. [24] covered how the connects, originally implemented as a spam prevention mechanism, makes it expensive for freelancers to apply for jobs.

4.2.2 Design output: Supporting freelancers to gain visibility of job hiring statuses. Our freelancers viewed this design problem through the lens of information asymmetry, where they do not have

access to the current status of their proposal during the review process. To address this issue, we implemented the Hiring Status design (shown in Figure 3). This design consists of two visibility features that allow clients to provide input to freelancers. The first feature is a proposal binning mechanism, which informs freelancers of the status of their proposal when it changes. In this design, clients are required to move proposals into one of three categories: "No longer being considered", "Under consideration", and "Strongly interested". Whenever a client takes an action, the freelancer's view is updated to reflect the current status of their proposal. The second feature is a dialogue box that prompts clients to provide rationales for rejecting a proposal. If a client is no longer considering a freelancer for a job, they are asked to provide feedback by selecting from a given list of qualifications, which allows clients to complete the feedback with minimal effort (Fig. 7 in the Appendix).

4.2.3 Design tension #3: Freelancers desire input from clients on their proposals, but they also worry about imposing too many demands on them. Our freelancers (Gael, Raleigh, Kim) had a positive reaction to the design because it gave them a better indication of their chances of success in obtaining a job. They stated that even a simple signal of whether their proposal was under consideration or not could be immensely helpful in their workflow towards securing jobs. They believe that this would allow them to plan their workflow more efficiently and adjust their job application strategy as needed. For example, Gael said, "I think that it'd be great for us to at least know that we made it to the under consideration folder, or no longer being considered and if so why." Kim added, "This helps freelancers know if they should continue with their job search or wait for a possible hiring." Our freelancers were more enthusiastic about the status update feature than the post-rejection feedback feature because they saw the benefits of the first feature giving them more control over their workflow and making it more efficient.

When evaluating this design, freelancers critically weigh the appeal of the new status update feature against its potential workload impact on clients. Our freelancers found that the status update feature strikes a good balance between these tensions, providing essential feedback with minimal client effort, fitting into their existing work processes. Gael, who has experience as a client, believes that "it would be pretty convenient to shortlist candidates" with our design. Quin added:

> "I think the reason why some [clients] don't get back to us is because they will not have the time to start replying to everybody. Like you have hundreds of submitted proposals and you have to start typing 'Oh, this is why', but this prototype, it's very easy." - Quin

Gael and Quin's comments suggest that clients may already be categorizing freelancers in a similar manner to what is shown in our design, but just not formally communicating these categorizations. As such, the design integrates with the workflow of clients, making it mutually beneficial for both parties. Clients gain a clearer, more structured system for categorizing potential applicants, which allows them to maximize the chances of a successful hire and project outcome. Freelancers gain greater control over their workflow.

Lee expressed concerns about the overwhelming number of proposals clients receive on freelancing platforms. He emphasized that due to the sheer volume of applications, clients may not respond to all applicants, noting, "20 proposals, 3-5 come back with further questions. 1-2 end up having a very automated reply... It feels a bit one-sided [when I feel like I need to respond instantly to clients], but I realize clients have huge numbers of applicants." Lee suggested platforms could potentially offer a one-click response option for clients to inform applicants they aren't selected. He warned that if platforms don't make the process more user-friendly, clients might move to other platforms, negatively impacting freelancers. Our freelancers recognize that addressing the information asymmetry in the hiring process depends on the efforts of the clients. Therefore, they

do not expect full transparency regarding the clients' hiring intentions. Their evaluations of our design suggest that they are willing to accept a degree of negotiated "translucency" that allows them to see the client's process to a level that is appropriate for the work they are offering on the platform.

4.3 In-Job: Remedying the Emotional Toll of Confronting Clients in Renegotiations

Renegotiating freelancing contracts is a common occurrence, and our freelancers have found that directly communicating with clients can be emotionally challenging. In response, they designed communication delegation features to address this strain. However, we have learned through our design exercises that it is important for the freelancers to handle the renegotiation themselves as opposed to having a third-party step in, even if it means facing emotional obstacles. Freelancers expressed that direct communication is key to building a strong client relationship.

4.3.1 Challenge: Renegotiation is Emotionally Draining. Freelancers often have to renegotiate the scope of their work with clients, which can be a stressful and uncertain process. In freelancing the scope of work may change during the course of a project, sometimes becoming "completely different to the original proposal" (Raleigh). In these cases, freelancers may need to negotiate additional terms and compensation with their clients for the extra work. However, this process can be unstable and uncertain for freelancers, leading to confusion and conflict. Our freelancers reported that the major challenge in renegotiating is the emotional drain of talking to their clients, as they fear upsetting them and experiencing negative repercussions such as lower ratings and replacement. Uriel described feeling during renegotiations as "[I] felt a bit stressed. It's like uncomfortable... I felt really awkward", while Kiran emphasized the fear of replacement in a competitive market, stating, "if I'm not agreeing to [the original contract] today, someone else will." Additionally, freelancers fear that renegotiating contract details might lead to negative feedback from clients, as Paz noted. These fears are consistent with the findings of Vega et al. [10], who also found that freelancers worry about receiving bad ratings as a repercussion of renegotiation.

4.3.2 Design output: Delegating Renegotiation to Intermediaries. To address this challenge, our freelancers have explored design ideas that involve delegating direct confrontation with clients to the system. Two designs are worth highlighting: the Artificial Intelligence (AI) Chatbot Renegotiation and the Renegotiation Form.

The AI Chatbot Renegotiation involves using a chatbot as a third-party agent to talk to the client on behalf of the freelancer (see Fig 4). The freelancer explains their case to the AI, which negotiates on their behalf if it has correctly interpreted the situation. As a failsafe mechanism against AI's moderation failure, if the AI makes a wrong interpretation of the freelancer's intention, the freelancer can choose to speak with the client directly or with an Upwork representative. The gist of the idea is to lessen freelancers' direct contact with clients.

The Renegotiation Form design involves creating a form template for freelancers to specify what they want to renegotiate (see Fig 5). This allows them to communicate their case to clients through a structured form, rather than relying on chat, which can be challenging to navigate because the communication process requires careful use of conversational tone and language to avoid sounding disrespectful (Kim). In the form, freelancers can provide details such as the tasks that require more time to complete, specifics of the extra work involved in completing the task, the rationales for the timeline and rate adjustments, etc.

4.3.3 Design tension #4: Third-party intervention can lower the emotional barrier of direct confrontation, but it may hinder the establishment of a long-term relationship with clients and the autonomy of freelancers. Freelancers in our study were divided on whether to involve a third party in the

Fig. 4. AI Chatbot Renegotiation design - Freelancers interact with an AI chatbot to renegotiate. They explain their case to the AI, and the AI negotiates on their behalf if the freelancer confirms that the AI has interpreted their situation correctly. If the AI has not interpreted the situation correctly, freelancers can choose to either talk to an Upwork representative or talk to the client directly.

renegotiation process or handle it themselves by directly communicating with their clients. On the one hand, they recognized the potential benefits of intermediaries, such as the emotional relief they could provide. However, they also expressed concerns about relying on a third party potentially hindering their ability to build trust and develop their own client management skills. They were conflicted between the emotional difficulties of direct communication and the importance of handling it themselves.

Our freelancers reported that co-created designs, such as a chatbot or form feature, could help alleviate the emotional burden of renegotiating contracts by providing a more structured and mediated approach. Sam said, "You don't necessarily have the gumption or courage to directly contact your client. The [chatbot design] takes that away from the freelancer and removes a lot of the pressure." In discussions about the form feature design, Kim noted the difficulties of diplomatically keeping the peace while having a renegotiation conversation, due to the confrontational nature of renegotiation. Kim said that the feature "saves a lot of the uncomfortable chat messages that you have to go through with your client - going back and forth and trying to still be amicable and still be respectful without sounding like you're trying to one up them." Raleigh and Kim emphasized that the form feature could also help alleviate freelancers' fear of client backlash during renegotiation. Raleigh said, "sometimes freelancers can think that if I renegotiate my contract my client will get mad."

Fig. 5. Renegotiation Form design - Freelancers fill out a form stating their reasons and evidence for renegotiating the original contract details.

However, despite welcoming the possible emotional benefits, the removal of direct communication with clients in the proposed designs was in the end unfavorably received by our freelancers. They articulated three pivotal reasons for preferring to handle negotiations themselves. First, they view early and direct interaction as a crucial strategy to informally gauge the clients' receptiveness to renegotiations, a sentiment captured by Paz's approach to use casual chat messages to "feel out" a client's openness before any formal renegotiation request, thereby avoiding unpleasant surprises or negative feedback. She reflected genuine concern that bypassing this step might upset clients, leading to adverse reactions. Similarly, Uriel discussed the complexity of ascertaining one's bargaining power, calling attention to the "hard thing to decide" in knowing if renegotiation is a viable option, while Farah's strategy hinged on assessing "client friendliness" and their demonstrated flexibility. Second, the freelancers pointed out the intricate nature of renegotiation, arguing that standardized methods or mediators could oversimplify or misjudge the situation. This perspective is epitomized by Sam's skepticism about an AI chatbot's competence in assessing fair pricing, maintaining that the AI's evaluations could falter, necessitating direct communication with the client for resolution. She stressed that personal circumstances and multifaceted factors in pricing make it likely that "what's most likely going to happen with the AI is it's going to do its job very poorly." Third, they consider successful renegotiation as a pathway to fostering strong, long-term professional relationships with clients. Raleigh underscored the importance of open, transparent dealings with long-term clients, asserting, "I feel that [directly talking to clients] is the correct thing to do," highlighting that straightforward communication is instrumental in establishing durable, successful client connections.

4.4 Post-Job: Getting Client Feedback for Professional Growth

Freelancers desire clients' feedback post-job because it can benefit their professional growth. However, our freelancers have found obtaining quality feedback challenging. They believed the main barrier is clients' lack of incentive to provide feedback [4]. Consequently, the freelancers

Fig. 6. Specific Feedback design - If freelancers want specific feedback from clients, they can create a multiple choice form that includes the questions (and answer choices) they have about their performance. In the process of creating the form, freelancers are able to see and adopt "Commonly asked questions in your skill area". The form then gets sent to clients.

were skeptical about clients using even simple feedback methods, like forms, and were hesitant to request feedback directly.

4.4.1 Challenge: Client feedback is vital to freelancers' career growth, but it is difficult to get specific feedback. Getting post-job feedback from clients is a valuable resource for freelancers as it helps them improve their skills and feel emotionally validated in their work. As Sam noted, "It's nice to get that extra feedback on certain things so you can fine-tune your own skills on what you're working on." Kiran added that "it's always good to have a compliment and it actually gives you a little bit of motivation that 'Okay yes, I did so well there.'"

Despite the benefits of post-job feedback, freelancers often struggle to receive specific, helpful feedback from clients. Vague feedback can be unhelpful and come across as dismissive to freelancers, who are seeking skill-oriented comments that contribute to their professional growth. As Uriel noted: "you never know [the specifics] and if someone just writes 'all has been good or happy with the service', it just doesn't really say much and it sounds dismissive." In order to address this issue, their design solution aims to encourage clients to provide specific, skill-oriented post-job feedback to freelancers.

4.4.2 Design output: Supporting freelancers to gather constructive feedback post-contract. We worked closely with freelancers to create a solution that would help them obtain more specific, constructive feedback post-contract (see Fig 6). The design allows freelancers to create their own customized feedback forms, which clients will be asked to fill in. To help freelancers create effective feedback forms, the design includes a recommended template with commonly asked questions in the freelancers' skill area, complete with questions and answer fields that can be easily adopted by the freelancers. Another goal of the design was to reduce the workload of clients by using a multiple-choice format, which eliminates the need for them to craft a free-form response. Overall, this design was aimed at helping freelancers receive more targeted, helpful feedback that can support their professional development. However, there was mixed feedback from freelancers during the participatory design process, with some debate and suspicion surrounding the design. We identified two design tensions that illustrate the gap in understanding and acceptance of the design.

4.4.3   Design tension #5: Promoting specific feedback from clients can backfire for freelancers, resulting in lower ratings and emotional strain. During the process of debating and refining the design of the Specific Feedback form (Fig 6), our freelancers described a tension between benefits and harms of asking clients for specific feedback.

Receiving specific feedback may not always be beneficial for freelancers. Kiran expressed concern that annoying the client may backfire with low ratings. She noted: "if you are going to ask them [clients] very specific questions then it might annoy them. They might give you a bad review or bad feedback that is again going to affect your profile." This reluctance can be exacerbated by the fear of receiving honest but blunt negative feedback, which can damage their self-esteem. Raleigh discussed the possibility of freelancers cherrypicking feedback questions in order to only receive positive validation from clients due to concern about getting "real feedback": "Maybe they [freelancers] do want to hear feedback from the client but when they're creating these questions, they are subconsciously trying to give out options for the client that they would love to hear, but are not actually the real feedback they need for them, [...] manipulating my own options ..."

Some freelancers may not see the benefits of asking for specific feedback. For instance, if freelancers do not heavily rely on freelancing as a career and source of income, the opportunity for improving their skills through specific feedback may be irrelevant to them. Uriel stated:

> "if I have just a few little tasks very now and then, and they're often just very generic and the clients want results very fast, I don't think there's anything I really would want to ask them because they just want the work to be done well and fast."

Individual freelancers may experience different levels of benefits and harms depending on their standing in the platform. Despite the design's intention of promoting client engagement and skill development for freelancers, the harms of such a strategy may outweigh the benefits for some. One workaround could be to give freelancers the option to use such features or not (e.g. they can choose not to request specific feedback), but this does not address the underlying challenge outlined in Section 4.4.1 for those freelancers who opt out.

4.4.4   Design tension #6: Freelancers see a gap of perception between freelancers and clients regarding how much post-work feedback clients should provide. Our freelancers were skeptical about whether clients would be willing to provide feedback using this design, citing client time constraints, a mismatch with client workflows, and a lack of incentive as reasons. These rationales are similar to those previously discussed in Sections 4.1.4 and 4.2.3. However, with this design, they were unable to find a balance between the conflicting demands.

The "shop and drop" workflow, where once clients pay for a freelancer's services they disengage immediately after, is commonly used by clients in the freelancing market. This workflow does not seem to accommodate the need for additional work post-contract. According to participant Kiran, clients often view the payment as the final step in the process and do not respond to requests for feedback or additional work. Kiran noted that this is particularly true if there was not a strong working relationship established during the initial contract.

> "They are going to pay you for your time, for your work, and then they leave. [...] They feel like that they have given the money. That's it. [...] That once the task is done, they don't even respond to you about anything." - Kiran

Even in cases where there was a good working relationship, Quin emphasizes that they prefer not to trouble past clients: "Personally, I don't like troubling my past clients. Why am I discussing with them [after the contract]? Unless we had a good work relationship and I just want to send good things." Quin's experience suggests that some freelancers may have internalized this "shop and drop" workflow and view requests for feedback as out of the norm or not their right. Uriel

illustrates another reason behind their skepticism that clients are not motivated to leave feedback because they do not personally benefit from it.

> "There's no incentive for them to actually give you feedback in the first place. They don't benefit from that in general. So even if we change the way of asking for feedback again, is that easier than the feedback form that we have currently? Probably not because there are more options and more specific questions." - Uriel

Our freelancers were unable to design a workflow that would impose an appropriate workload on clients, allowing freelancers to benefit from the work of their clients and comfortably ask for feedback. The current workflow and incentive structure of the freelancing platform creates a gap in perception regarding the fair amount of post-work feedback that clients should provide. For freelancers, vague and minimal effort feedback is unhelpful and dismissive, but clients do not feel motivated to provide extensive post-job feedback.

5 DISCUSSION

5.1 Approaches for Handling Design Tensions in Online Freelancing Platform

Our data analysis process involved relating and comparing the different design tensions identified in the previous section. This allowed us to understand the underlying commonalities and contrasts between the factors that engender the design tensions. By reflecting on our data and the six design tensions from a broader perspective, we were able to distill the design tensions into three possible approaches that can be applied to handle these tensions when creating online freelancing platforms.

5.1.1 Balance the needs of freelancers for client input with client's workload, where possible. The tension between freelancers' demands for client input and the constraints of clients' workloads stands as a linchpin in the health and success of online freelancing platforms. At its heart, this tension encapsulates the age-old struggle between service providers seeking feedback and consumers balancing responsiveness with their inherent constraints. Past research has shown that in online marketplaces, the availability and transparency of client feedback have profound implications for service providers' motivation, job selection, and overall satisfaction [50]. In the context of freelancing, this feedback not only informs immediate tasks but also shapes long-term career trajectories, echoing sentiments of our participants. However, as our findings suggest, increasing feedback demands on clients can tip the balance unfavorably, potentially deterring clients from active engagement or leading to superficial, less useful feedback. This mirrors studies in other platforms where excessive demands on consumers led to decreased engagement or price perception [48].

The most prevalent source of design tensions in our study was the impact that suggested design changes would have on clients' workloads. Despite freelancers recognizing the value of client input and feedback for their success and well-being, they also had realistic expectations about the level of engagement clients would offer. They expressed concerns about designs that demanded too much work from clients and suggested alternatives to reduce client workloads. When deciding on the appropriate level of client workload, what mattered was whether the client had enough incentive to act on the work, rather than the absolute amount of work. For example, the Hiring Status design (in Section 4.2.2) was deemed feasible by our freelancers because it fit within the client's existing workload and using the interface for the proposal triage process helped clients to organize their files. The balance was achieved when the design option was perceived to require a sufficiently low workload that clients would have the incentive to act on it, and the client's work would be conducive to the success of freelancers.

Another, less prominent, but noteworthy source of design tensions was the emotional labor required by freelancers in managing their relationships with clients. Echoing the findings from literature, our freelancers reported that the uncertainty and power/information asymmetry caused constant anxiety for them [5]. Changes in platform designs could either improve or worsen this emotional overhead. For example, on the one hand, the Hiring Status design reduced uncertainty in the hiring process and the delegated renegotiation designs allowed freelancers to work around the pressure of confronting clients (Section 4.2.2, Section 4.3.2). On the other hand, some freelancers felt anxious about designs that imposed additional workload on clients, not only due to distrust that clients would have enough incentive to do the work (Section 4.1.4), but also due to the risk that demanding work might annoy clients and result in lower ratings and a deterioration of their relationship (Sections 4.3.3 and 4.4.3).

5.1.2   When a design balance is unobtainable, overcome the constraint by introducing new incentive structures. Balancing values is a way to find the best design options when facing a design tension, but the ideal balance point may not always exist if opposing values compromise all viable options. For example, when designing a system for promoting post-job client feedback (see Sections 4.4.3 and 4.4.4), freelancers wanted specific, skill-oriented feedback, which required a significant amount of work from clients. However, clients had no incentive to do this work once the transaction was complete. The design option that required less effort from clients was not viable because freelancers considered it dismissive and unfair.

One way to overcome design tensions that cannot be balanced is to introduce a new incentive structure for the relevant parties. Traditional approaches, centered mainly on monetary rewards, prove inadequate in addressing the nuanced needs of both freelancers and clients. For freelancers, there's a growing recognition of the value of intrinsic rewards such as skill enhancement, portfolio development, and opportunities for long-term collaborations [5, 28, 51]. Conversely, clients are increasingly looking for incentives that promise better project outcomes, quality assurance, and seamless integration of freelancers into temporary or project-based teams [38]. It's imperative to design and introduce innovative incentive structures that reflect these shifts. Such initiatives can encourage more sustainable, fruitful, and respectful engagements on online freelancing platforms, ensuring that both parties feel valued and motivated [8].

5.1.3   Examine impact on freelancer subgroups. In our results, the design tensions were not solely limited to the differing values between freelancers and clients. Design tensions could also arise from perception gaps *within* the freelancer community *even when the design aimed to foster better relationship between the two groups*. This happens when the suggested design has varying impact on subgroups with different levels of experiences and individual preferences.

The most apparent type of challenge within the freelancer community was the conflicting interests between novice workers and those more experienced. As we exemplified in Section 4.1.3, the design idea of promoting inquiry, intended to benefit freelancers as a whole, inadvertently works against a subgroup of them, particularly the experienced freelancers who feel disadvantaged. This sentiment among experienced freelancers suggests a preference for maintaining a certain level of opacity within the system. They are accustomed to navigating this less transparent environment and, arguably, may perceive the system's opaqueness as a competitive barrier that newcomers face, thereby operating as an advantage they can continue to exploit.

In response to this tension, our team, through further design iterations, identified a balancing design that restricts the ability to ask questions only to those who are qualified. However, this approach raises significant concerns regarding equity, particularly for novice freelancers. This solution appears to achieve balance by constraining the privileges of those in a more vulnerable position. Novice freelancers, who often struggle with limited gig literacy and social support to

navigate the challenges that arise in their budding careers [4, 5], are thereby potentially marginalized. This protective measure for seasoned freelancers comes at a cost to the accessibility and openness that could empower new entrants, prompting a need for additional design iterations that consider these complex dynamics.

The design considerations can extend beyond freelancers' expertise; freelancers, rooted in diverse demographic, socio-economic, and professional backgrounds, experience the platforms in varied ways [13, 17, 39, 47]. Crucial individual factors such as expertise level, domain of work, and geographic location intersect with more intricate aspects like gender, age, and cultural background, leading to unique experiences and challenges. These intersectional factors can magnify or mitigate the design tensions identified in online freelancing platforms. Strategies that may alleviate tensions for one subgroup can inadvertently exacerbate issues for another. Therefore, platform designs must move beyond one-size-fits-all solutions, embracing adaptive and responsive measures that recognize and cater to the distinct needs and circumstances of diverse freelancer subgroups.

5.2 Precarity in Online Freelancing: Deepening the Understanding

Online freelancing platforms, while offering flexibility and autonomy, have been observed to accentuate the precarity of work. Precarity, often defined as the uncertainty and instability of work conditions, has been an emerging focal point in labor studies, especially in the context of the gig economy [29]. Prior research highlights power imbalances, information asymmetry, and lack of long-term job security as key contributors to this precarious nature of work from freelancing platforms [30]. In our findings, the design tensions elucidate the underlying mechanisms of these precarities. For instance, the challenge in establishing mutual task expectations reflects a systemic information asymmetry. Moreover, the emotional toll freelancers experience during renegotiations is indicative of the fragile nature of their client relationships, a manifestation of the power imbalance. By balancing these design tensions, platforms can potentially reduce the inherent precarities that freelancers face, thereby ensuring a more stable and equitable work environment for freelancers. Yet, while design interventions can mitigate some aspects of precarity, they might inadvertently introduce new complexities. This underscores the need for a holistic approach that considers the multifaceted nature of online freelance work [43].

5.3 Expanding on Design Tensions: A Broader Perspective

In this research, we have identified six key design tensions that arise in the different work phases of freelancers. This expands on the existing literature on design tensions in online freelancing platforms, particularly those that focus on the complex dynamics between platform designers, developers, freelancers, and their clients [42, 46, 49]. Our findings reveal that these tensions are not simply theoretical constructs but have very real implications on the lived experiences of freelancers. For instance, the tension between client involvement in tasks and freelancer skepticism about client incentives to be involved directly impacts freelancers' sense of agency and career growth. Similarly, the tension between transparency and overburdening clients with information demands can affect the freelancer's ability to plan their work and manage their financial risks.

The impacts of these design tensions can also extend beyond individual freelancers to influence the overall health of freelancer-client relationships. For instance, tensions that arise in the renegotiation of contracts, such as between mediating difficult conversations and maintaining personalized client interactions, could either foster or hinder trust, mutual understanding, and long-term partnership. As Tatar's Design Tensions Framework suggests, these competing values or user needs leading to tensions are crucial elements to consider in the design of technology systems [52]. Ignoring or failing to balance these tensions could lead to platforms that exacerbate power imbalances, limit freelancer autonomy, and contribute to labor abuse.

Furthermore, our study underscores the need for a deeper engagement with design tensions beyond mere identification. Recognizing and understanding these tensions is just the first step. Resolving, or at least mediating them, requires innovative design solutions that prioritize the needs and well-being of freelancers without alienating clients. Such endeavors can pave the way for more equitable and healthy freelancer-client relationships. By building on prior research and the rich insights from our study, the CSCW community and platform designers have a unique opportunity to reimagine online freelancing platforms that truly cater to the multifaceted needs of their diverse user base [1, 14].

5.4 Incorporating Client Insights

A vital aspect of designing effective online freelancing platforms revolves around understanding the multiple stakeholders involved, with freelancers and clients constituting the primary dyad. This study placed a deliberate emphasis on the freelancers' perspective, eliciting rich insights into their challenges, needs, and design aspirations. We recognize the pivotal role that clients play in this ecosystem, and while there is surely more work to be done to characterize the clients' perspective, this study was not entirely one-sided in that the designs were informed by the freelancers' understanding of client needs. Our participating freelancers often voiced considerations for their clients when discussing potential design solutions, indicating their cognizance of the symbiotic nature of the platform. Notably, several of our participants, like Cameron, Gael, and Raleigh, had experiences as both freelancers and clients across different platforms, which enriched our discussions with a dual-perspective, albeit limited.

We acknowledge that a comprehensively participatory design process would ideally engage not only freelancers but also clients directly, ensuring that their perceptions, concerns, and needs are authentically represented. We are also aware of the limitations posed by relying solely on freelancers' perceptions of potential client overburden or preferences, as it might not reflect the clients' actual sentiments. In the future, a parallel exploration that centers on clients would be instrumental in creating a holistic design perspective, marrying both freelancers' and clients' visions and needs to pave the way for a more equitable and effective platform design.

6 CONCLUSION

As online freelancing continues to shift the way work is organized and performed, the design of the platforms that connect freelancers and clients has become increasingly crucial. While the autonomy and flexibility of freelancing can be highly appealing, the success and well-being of freelancers is heavily dependent on the quality of their relationships with clients. However, current platform designs all too often lead to power imbalances, information asymmetry, and labor abuse, resulting in precarious work conditions for freelancers.

This paper delves into the design challenges that arise in supporting freelancers as they navigate these relationships, recognizing that understanding and addressing the desires and concerns of this growing workforce is essential to promoting their career development and success. Through a participatory speculative design process that engaged 22 Upwork freelancers, we identified six key design tensions that arise as a result of conflicting values and priorities. These tensions, which span across the various phases of freelancing, reveal the need for client involvement in freelancers' tasks and career growth, but also the skepticism that clients have sufficient incentives to be involved. Furthermore, our result highlights that design tensions often have no viable balancing option and that these stringent constraints can be addressed through structural changes in the platform's incentive mechanisms. Additionally, it emphasizes that design tensions occur not only between freelancers and clients but also within the freelancer community. We present three approaches for

making sense of and handling design tensions, and suggest that this research can support more equitable and healthy freelancer-client relationships.

Overall, our work is a reminder that the design of online freelancing platforms is not simply a technical issue, but one that deeply impacts the livelihoods of the individuals who make a living on them and use them. It calls for a more reflective and holistic approach to platform design that prioritizes the voices and needs of freelancers themselves.

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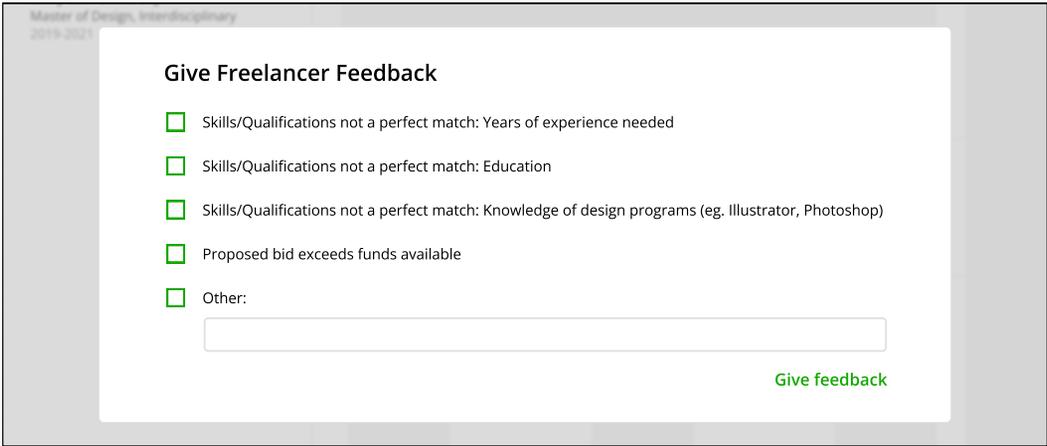
A ADDITIONAL FIGURES

Fig. 7. Rejection Feedback design - If a client selects "No longer being considered", they are prompted to provide rejection feedback by checking off reasons from a list of qualifications.
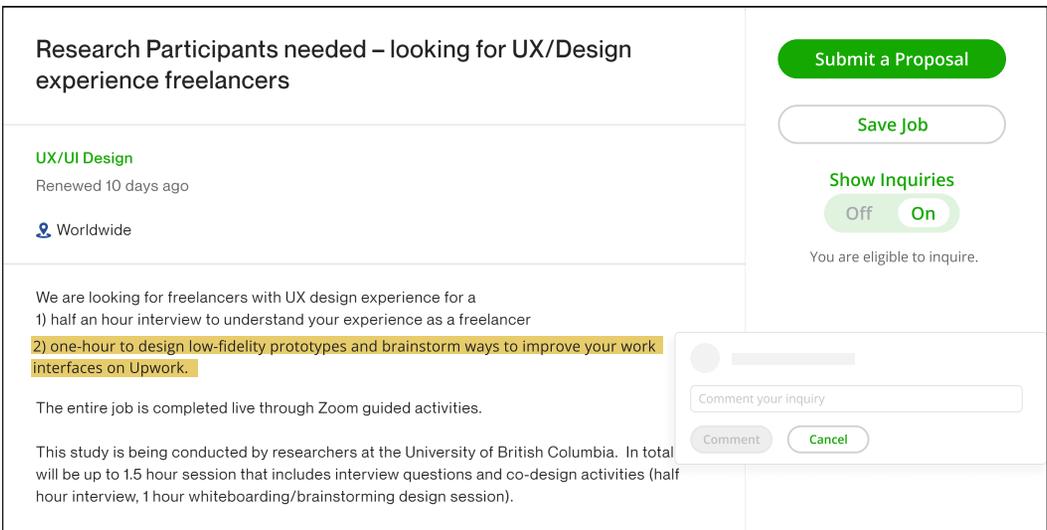

Fig. 8. Selective Inquiries design - Clients define criteria that freelancers need to have in order to inquire. Only qualified freelancers are able to annotate the job post to submit inquiries, but all freelancers are able to see what questions have been asked and answered.