Understanding How Freelancers in the Design Domain Collaborate with Generative Artificial Intelligence

Research Paper

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Abstract. Generative artificial intelligence (GenAI) technologies, such as text-to-image generation (TTIG) systems, significantly impact computer-supported collaborative work and freelancers. While the general understanding of this trend is growing, it is not yet understood how GenAI is changing the creative work processes of freelancers in the design domain. Therefore, this paper investigates the collaboration of GenAI and freelancers through a thematic analysis of qualitative interviews with 10 freelance designers. The results are four tradeoffs in freelancers' collaboration with TTIG systems: the balance between increased creativity and potential standardization, the dichotomy between enhanced efficiency and overprecision, the dynamic of viewing AI as a sparring partner versus experiencing a loss of control, and the contrasting views on job transition versus job loss. This paper contributes to the body of knowledge on GenAI, creative work processes, and online freelancing by revealing novel insights about how TTIG systems are changing freelance work in the design domain.

Keywords: Generative Artificial Intelligence, Online Freelancing, Human-AI collaboration

1 Introduction

Generative artificial intelligence (GenAI) is a double-edged sword for freelance designers, where text-to-image generation (TTIG) systems illuminate new creative paths while casting shadows of uncertainty on traditional work processes. Unlike their in-house counterparts, freelancers operate with greater autonomy but also face direct market exposure and a lack of institutional support, making them uniquely vulnerable to technological disruption (Ashford et al., 2018). GenAI is a form of artificial intelligence that uses generative models to generate texts, images, or other data (Banh & Strobel, 2023; Feuerriegel et al., 2024).

Recent advancements in artificial intelligence (AI), deep learning, and computer vision have led to the emergence of a new class of GenAI systems. TTIG systems, such as Stable Diffusion, Midjourney, or DALL-E, can generate high-quality images from text prompts and have sparked debates on their impact on art, politics, and copyright issues (Bond, 2023; Grierson, 2023; Roose, 2022; Vincent, 2023). The collaboration

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between humans and these GenAI systems enables multifaceted support in decision-making, idea generation, and the promotion of creativity and innovation (Benbya et al., 2024). TTIG systems generate images as outputs in collaboration with humans based on inputs and prompts. This generated content can be used to enhance skills and optimize results, increasing productivity in creative tasks. However, the use of TTIG systems could also have problematic consequences, such as a decrease in creativity (Zhou & Lee, 2023).So far, limited research has started to explore the impact of TTIG systems on creativity and specific implications for work practices and freelancers. Existing studies focus on creative professionals' perceptions but are limited by time and industry focus (Inie et al., 2023; Ko et al., 2023; Vimpari et al., 2023). To date, it is not understood how the special features of TTIG systems affect the work of freelancersThis is significant to investigate as TTIG systems are increasingly changing the creative industry and influencing the way creative work is done (Harper & Randall, 2024; Oppenlaender, 2022) and freelancers face a unique set of challenges, including market competition and professional isolation (Ashford et al., 2018; Gussek & Wiesche, 2024; Strunk et al., 2022). This research aims to clarify whether and how these systems enhance or detract from creative skills and reshape the freelance labor market. In the short term, the release of TTIG systems and other GenAI systems reduced both employment and earnings for freelancers (Demirci et al., 2025; Hui et al., 2024).

Therefore, our study aims to explore the impact of TTIG systems on the creative work process of freelance designers, their perception of these systems, and implications for the future of creative work and the freelance industry. Thus, this study seeks to answer the research question: *How do GenAI technologies, such as TTIG systems, change the creative work processes of freelancers in the design domain?*

We conducted an inductive qualitative thematic analysis through 10 semi-structured interviews with freelance designers after they integrated a TTIG system in their creative process during a design task. We reveal four tradeoffs in freelancers' collaboration with TTIG systems and map them to the different stages in the creative process (Mace & Ward, 2002). First, we identify a tradeoff in creativity, highlighting increased creativity or standardization. Second, we mark a possible effect on efficiency during the creative process. Third, we discover differences in how designers feel about interacting with unpredictable AI systems. Finally, freelancers expressed varying opinions about the impact of TTIG systems on their future work as freelance designers. The results provide valuable insights for academic researchers and freelance professionals by unveiling novel insights about how freelancers in the design domain collaborate with TTIG systems.

2 Theoretical Background

To situate our research, we first outline the unique context of freelance designers, focusing on the specific challenges that make them a critical group for studying the impact of generative AI. We then introduce the creative process as a conceptual model and position Generative AI as a new class of creativity support tool that directly intersects with both the freelancers' context and their core work processes.

2.1 Freelancing in the Design Domain

Online freelancing, in other words, self-employed workers via digital labor platforms, covers all sectors and types of jobs (Blaising & Dabbish, 2022). This type of work has sparked the attention of computer-supported collaborative work researchers and bears some special issues for workers (Kim et al., 2023).

First, there is the challenge of starting a career as a freelancer. On digital labor platforms, client reviews determine the acquisition of jobs. Especially in the beginning, freelancers have no reviews, and clients tend to trust experienced freelancers. Getting a first job on a freelancing platform is, therefore, an extremely difficult barrier (Gussek & Wiesche, 2024).

Second, the competition on freelancing platforms is huge. These global online marketplaces allow access from anywhere in the world, meaning that very different freelancers offer their services at a range of prices. This often makes it challenging for freelancers to win a job and adjust their prices to the market and the offer in order to be successful (Strunk et al., 2022).

Third, freelancers usually work alone and do not receive support from colleagues or supervisors as in traditional offline work. They are on their own and often lack contact with others due to online anonymity on freelancing platforms (Ashford et al., 2018). Concerning this challenge, the concept of "holding environments" in the gig economy was identified. Connections to places, routines, goals, and, above all, people are defined as indicators of success in online labor markets (Petriglieri et al., 2019).

Finally, the release of GenAI systems has been shown to reduce both employment and earning for freelancers (Demirci et al., 2025; Hui et al., 2024). Teutloff et al. (2025) found that the demand for novice freelancers is decreasing more than the demand for experienced freelancers due to GenAI, suggesting greater challenges in starting a freelance caarer and competing in the freelance market. However, there remains a gap in in understanding *how* GenAI systems, particularly TTIG systems, transform the challenges of freelance designers through changes in their creative process.

2.2 Creative Process

To analyze these changes, we must first understand the creative process itself. Mace and Ward (2002) proposed a dynamic model of the creative process of visual artists in four stages. The process begins with a stage of conception, where an idea for the artwork is envisioned through a vague concept or feeling. This is followed by a stage of idea development, where the idea is structured, extended, or restructured through problem-solving, experimentation, and information gathering. To develop creative ideas, artists need to engage in divergent thinking (Guilford, 1984). In the third phase, the artwork is realized and moves from a mere concept. The final stage is the finalization of the artwork, where artists decide if their artwork is finished or if they want to pursue further iterations, abandon, store, or destroy their artwork. This process is dynamic and iterative, allowing for fluent movement between the proposed phases (Mace & Ward, 2002).

While this process centers on the creative process of artists working on their ideas, our study focuses on the creative tasks of visual design freelancers. In our case, the process of completing creative tasks might not include a phase of conception, as clients provide tasks. However, it still includes the same stages of idea development, realization, and finalization. We employ this model as our core analytical lens, allowing us to pinpoint where and how creative processes face potential disruption from TTIG systems, altering how freelance designers conceive, develop, realize, and finalize their work.

2.3 Creativity Support Tools and Generative AI

Computing technology presents new tools that help more people be more creative. Creativity support tools offer new ways to discover and innovate and offer new forms of expression. (Shneiderman, 2002, 2007).

Recently, GenAI tools emerged as an additional form of creativity support tools powered by advancements in machine learning. Systems powered by large language models, such as GPT-4o, enable users to generate text outputs by instructing the model with a text prompt (Brown et al., 2020; OpenAI, 2023). Another class of GenAI systems are text-to-image generation (TTIG) systems, such as DALL-E (Betker et al., 2023; Ramesh et al., 2021, 2022), Midjourney, and Stable Diffusion (Podell et al., 2023; Rombach et al., 2022), which generate images from a text description.

Recent studies focused on the perception, adoption, and future changes of TTIG systems in the Finnish video game industry (Vimpari et al., 2023), the potentials and limitations of TTIG systems perceived by South Korean visual artists (Ko et al., 2023), and the thoughts about GenAI by creative professionals (Inie et al., 2023). The studies identified relevant themes related to the creative process, designer roles, inspiration, efficiency, job impact, biases, and copyright issues. However, previous research has not explored how these TTIG systems affect the creative work processes for freelancers in the design domain and how the workers collaborate with AI systems. This gap is significant given freelancers' unique position at the intersection of creative work, digital labor markets, and emerging technology adoption.

3 Method

To answer our research question of how TTIG systems change the creative work processes for freelance designers, we conducted an exploratory thematic analysis of 10 semi-structured interviews with freelance designers (Braun & Clarke, 2006).

3.1 Data Collection and Sample

We interviewed 10 online freelance designers who differed in various characteristics. Table 1 provides an overview of the sample. Our sample has a balanced gender distribution. Different countries and design fields are represented. The participants' freelancing and design experience levels ranged from junior to senior. All participants had used

TTIG systems at least once before our design task and the interviews. While a sample of 10 is qualitative in nature, we determined it was sufficient for this exploratory study as we began to observe strong thematic saturation, with the same core tradeoffs emerging consistently across the later interviews. While the later interviews provided valuable nuance and new examples, they did not introduce fundamentally new high-level themes.

Table 1. Sample Overview

#	Gender	Country	Design Domain	Experience
1	Female	Brazil	Interface design, Illustration	Intermediate
2	Female	Portugal	UX design, Illustration	Intermediate
3	Male	Germany	Illustration	Junior
4	Male	Pakistan	Mechanical design	Intermediate
5	Female	Brazil	Illustration	Intermediate
6	Male	Georgia	Illustration	Intermediate
7	Male	Mexico	Photo editing, Illustration	Junior
8	Male	Germany	Web design, Corporate design	Senior
9	Female	Germany	UX design, Interface design	Intermediate
10	Female	Germany	Illustration, Communications design	Intermediate

Participants were contacted via different freelancing platforms (Upwork, Malt, Discord). Payment for participation ranged from $15 to $20, with some participants forgoing pay. Before the interview, we checked applicants for design experience and English language proficiency in previous projects and skills descriptions.

We then conducted the semi-structured interviews in August and September 2023 after a design task incorporating a TTIG system. Several days before the interview the participants were assigned a design task involving the creation of an image while integrating a TTIG system into their creative work process. This approach ensured that all participants had recent, hands-on experience with the same technology (Stable Diffusion XL 1.0), grounding their reflections in a shared, concrete experience rather than just abstract recall of various tools. This task-first design helped to elicit specific, detailed accounts of their work processes. We picked the subject of the design task from PartiPrompts (P2), a dataset of over 1600 prompts in English that include various categories and challenges for benchmarking TTIG models (Yu et al., 2022). Prompts from PartiPrompts (P2) challenge known weaknesses of TTIG systems, such as displaying the correct number of objects on an image, creating legible symbols, or understanding perspective and negotiation. For example, we instructed one participant to create an image of “two cups of coffee, one with latte art of a heart. The other has latte art of stars”. This prompt challenges the TTIG system in creating symbols and creating a specific quantity. If the supplied TTIG system is unable to correctly generate the subject by entering the prompt directly, we instructed the participants to try and solve the challenge by adapting the prompt or editing the image with other systems, e.g., Adobe Photoshop. We did not instruct specific art styles (e.g., cartoon, oil painting, photograph, etc.) and only required the participants to use the supplied TTIG system and creating the image in the resolution of 1024x1024 pixels.

We developed a web application for accessing the TTIG system to ensure that every participant uses the same TTIG system and is not constrained by personal lack of access to TTIG systems. Supplying a web application also allowed us to log the participants' prompts and generated images to discuss specific steps in the interviews. At the time of data collection, the most capable open-source model available through an API was Stable Diffusion XL 1.0 (Podell et al., 2023), which we thus integrated into our web application. After finishing the design task, we checked participants usage of the web application and if they successfully completed the design task, before inviting them to an interview.

To conduct the interviews, we used an interview guide with semi-structured questions to gain insights about creative process changes, collaboration patterns, and freelancing challenges in the context of TTIG systems. The interview guide provided a basic framework for the interview but also made it possible to ask follow-up questions if necessary. All interviews were conducted online, in English or German, depending on the participants' preferences, and lasted an average of 37 minutes. All interviews were recorded and transcribed with the consent of the participants. At the start of the interviews, we had a casual chat with the participants and presented the interview contents. The outline consists of different topics that were covered to varying degrees and in varying order to adapt to the participant's answers. Exemplary questions were: How do you use AI Image Tools? What is your general opinion on generated images vs human-made images? Do you fear losing your job to AI image tools?

3.2 Data Analysis

We conducted a thematic analysis of the empirical interview data. Following the exploratory nature of the study, we conducted the thematic analysis inductively to discover previously unknown themes and phenomena. For the analysis, we followed the six phases of a thematic analysis laid out by Braun and Clarke (2006). In the first step, we familiarized ourselves with the data and read the transcribed interviews several times until we gained a deeper understanding of the collaboration of designers and TTIG systems. The second step was to form initial codes by coding interesting characteristics throughout the data set. In the third step, we searched for themes by organizing codes and excerpts into potential topics related to the research question. In the fourth step, we rechecked whether the themes fit into the context of the analysis. In the fifth step, we defined and named the themes by refining the specifics of each theme and checking how they fit into the overall story of the analysis. In the final step, a report was created, and the results were described by selecting meaningful quotes from the data set and relating them back to the research question. Overall, we identified four themes, which are described in detail in the following chapter: Creativity, Efficiency, Interaction, and Work Consequences.

4 Results

TTIG systems change the creative work processes of design freelancers in various dimensions. Designers use and interact with TTIG systems for various tasks such as image creation, research, and idea generation. We identified four different tradeoffs regarding the collaboration between freelance designers and TTIG systems. Figure 1 shows the four different identified tradeoffs, which are explained in more detail below.

Creativity	Inspiration ⟷ Standardization
Efficiency	Performance ⟷ Overprecision
Interaction	Sparring Partner ⟷ Lack of control
Work consequences	Job transition ⟷ Job losses

Figure 1. Collaboration Tradeoffs

4.1 Creativity Tradeoff

First, a fundamental tradeoff emerges that is most prominent in the idea development stage of the creative process. This is the phase where designers experiment, gather information, and engage in divergent thinking to structure and extend their initial concepts. Our findings show that collaboration with TTIG systems can either serve as a powerful source of inspiration or lead to a homogenizing standardization.

On the one hand, GenAI is changing the way designers look for inspiration and enables creative impulses. For example, TTIG systems allow designers to try out new styles that they cannot yet easily test on their own due to a lack of skills. In addition, in some platforms, shared galleries can be used for inspiration, where designers can see each other's image generations. The GenAI systems help with tasks even though the results are not perfect, and improvements are required. Above all, a basis can be created with GenAI that can then be optimized, and the process is easier than designing everything from scratch. In summary, designers' creativity can be enhanced by TTIG tools.

"You see things that you probably never thought about. And you are like: "Oh, I'm not going to do this thing, but I can do this with the hair or whatever it is." So, I think for sure it has changed the way I look for inspiration" (#2).

On the other hand, a kind of standardization can also arise, which leads to a stagnation of similar results again and again. TTIG systems are trained on existing images and artworks, which leads to the impression of recombination of known styles. This creates the feeling that all generated images ultimately look similar, as all designers use similar GenAI tools. In summary, the ability to be truly inspired as a designer can be lost through collaboration with GenAI:

"[TTIG systems] can't generate anything new, anything really new, because it always falls back on things that are already there. So it can't be creative, not really" (#10).

4.2 Efficiency Tradeoff

Second, the collaboration with TTIG systems influences the efficiency of freelance designers, particularly during the realization and finalization stages of the creative process. This is where the artwork is made tangible and where the artist must decide if it is complete. The tradeoff here lies between significant performance improvements and the risk of "overprecision" as a form of perfectionism that can undermine those gains.On the one hand, the use of TTIG systems can improve the performance and speed of the designer's work. GenAI can take over work and specific work steps from the designers, such as time-consuming image editing tasks, and save time. Traditional designer workflows are often tedious, and GenAI can handle many of the necessary steps in the process. The work is simplified overall, as the designer can instruct the TTIG system in natural language. It does not matter whether the results are perfect immediately, the overall efficiency increases:

"I think that AI tools help the designers process a lot. Before, a task that would take me an hour or more, I can do it in just a click [with the GenAI tool]" (#1).

On the other hand, in terms of efficiency, overprecision and a kind of pedantry concerning the perfect result can also occur. Freelance designers tend to be hyper-critical when collaborating with GenAI, as adjustments and improvements are easy to implement while prompting TTIG systems. Thus, GenAI technology triggers or reinforces the perfectionism of designers, and more and more iterations are used to improve the images further to match the expectations of the clients and the freelance designers. The risk is that too much time is wasted, and efficiency suffers and decreases:

"There is the risk that you say you try, try, try, try and then hours have passed and in the end you haven't got anywhere" (#9).

4.3 Interaction Tradeoff

Third, a tradeoff emerges regarding the interaction between designers and TTIG systems. This dynamic is not confined to a single stage but characterizes the collaborative process that unfolds during both idea development and realization. The designer can experience the AI as a responsive sparring partner, or they can feel a frustrating lack of control over an unpredictable tool.On the one hand, GenAI can be seen as a sparring partner for designers. It enables a new form of interaction and collaboration with artificial subjects that can be easily handled in natural language. The collaboration and work between freelance designers and TTIG systems are characterized by continuous improvement of the results and iterative refinement of the images through targeted prompting. Generated results can be used as a basis for further improvement, or the designer can combine individual partial outputs of the TTIG system into something new. Therefore, designers guide the system and modify the prompt to generate fitting images. Designers adapt to the TTIG system in order to optimize the interaction.

"I take this image that I have to generate this concept and try to refine it with saying what style do I want and then making some keywords for it. So I want the hot air balloon. I want an Indian pattern, but if I say I want a hot balloon with a yin-yang pattern, maybe it will not understand. So, I tried refining it in the way that I thought the machine

would understand better. And then, I kept trying again to get a more accurate image" (#1).

On the other hand, there can also be a lack of control within the interaction between freelance designers and GenAI tools. The problem is that the results of TTIG systems are not predictable and difficult to control for the designers. The process of generating images is intransparent and acts as a black box to the designers. Designers have to optimize the prompt formulation, and even then, it is not easy to control the AI in a targeted way. This loss of control makes the interaction and collaboration between freelance designers and AI systems difficult:

"For normal humans that doesn't know how to write prompts, it's hard to make it [the TTIG system] work in your way" (#6).

4.4 Work Consequences Tradeoff

Fourth, the changes observed across the creative process stages culminate in a tradeoff regarding the future of freelance work itself. This is not a tradeoff within a single task, but an overarching consequence of how GenAI is transforming the value of the designer's skills and their position in the market. The core tension is between a necessary job transition, where designers adapt and augment their skills, and the threat of job loss.On the one hand, a job transition takes place through collaboration between GenAI and freelance designers. The idea of what constitutes a freelance designer and what a designer does is changing. Above all, the roles within design work are evolving through the interaction with GenAI, as designers no longer work purely graphically but must adapt their skills to the new form of collaboration through natural language in the form of prompts. Freelance designers are not completely replaced by GenAI but check and guide the systems, which can easily improve certain tasks. For this reason, a change is taking place within the collaboration, as designers no longer need to know exactly how to complete a task independently but rather how best to interact with the AI so that it can augment their work. The work of a freelance designer is fundamentally irreplaceable, as it is very specific for them to know exactly what is to be implemented and how. These changing roles also allow lateral entrants to enter the freelance design field. For them, a basic understanding of design is sufficient, and they do not have to master all the skills of a traditional designer, but they can let GenAI work for them. Overall, a change in the work of freelance designers is therefore evident.

"It's a creative process in any case, writing the prompts. [...] You know what you want when you're a photographer or when you're an illustrator. And I feel like a lot of prompters say: "Okay, I want to have a dragon sitting on that", but have no idea of composition, have no idea of color, have no idea of what the character should really look like." (#3)

On the other hand, job losses can occur through TTIG systems if GenAI takes on complete jobs and not just subtasks of the process. This fundamentally changes freelance designers' careers, which is particularly challenging for junior designers in the freelancing sector. Starting a career and acquiring first jobs as a junior freelance designer is difficult due to high competition and lacking customer confidence. For this reason, junior freelance designers often offer small and easy design tasks at low prices

in order to get their first jobs. However, this strategy is no longer possible due to the availability of AI tools, when small and simple jobs are now also offered by professionals who have them done by AI tools. Overall, jobs can also be lost through TTIG systems and the work of freelance designers is jeopardized:

"In photography you often [...] no longer commission photographers, but instead have images generated for you" (#9).

5 Discussion, Limitations, and Future Research

Our study addresses a critical gap in understanding how TTIG systems specifically impact the creative work processes of freelance designers. While previous research has examined general perceptions of creative professionals (Inie et al., 2023; Ko et al., 2023; Vimpari et al., 2023), our findings reveal four distinct tradeoffs that characterize the unique challenges and opportunities freelance designers face when collaborating with these systems (Figure 1).

First, the Creativity and Efficiency tradeoffs are best understood through the stages of the creative process modeled by Mace and Ward (2002). The Creativity Tradeoff (Inspiration vs. Standardization) primarily impacts the idea development phase, a stage often associated with stress for graphic artists (Botella, 2018). TTIG systems can ease this by amplifying divergent thinking and raising the number of possible ideas (Pedota & Piscitello, 2022). However, this requires designers to actively engage in the process of prompting to produce creative ideas (Oppenlaender et al., 2023). The Efficiency Tradeoff (Performance vs. Overprecision) manifests most strongly in the realization and finalization phases. For this efficiency to materialize, it is crucial that TTIG systems are well-integrated into familiar tools (Shi et al., 2023). Yet, the low effort required to iterate can lead to a overprecision trap, diminishing efficiency gains. This makes it crucial for designers to know when to delegate tasks, which requires an accurate self-assessment of their skills and an understanding of GenAI's capabilities (Fügener et al., 2022).

Second, the Interaction Tradeoff (Sparring Partner vs. Lack of Control) illuminates the nature of the human-AI collaboration through the whole creative process. Designers try to generate images that match their expectations by adapting the prompt. This process of prompt engineering can be seen as a creative interaction between the designer and the TTIG system, leveraging the unpredictability of outputs to generate inspiring ideas which can be reflected on in further prompts (Oppenlaender et al., 2023). Framing the AI as a "sparring partner" suggests a move towards co-creative agency. However, this partnership can break down due to the unpredictability of the outputs, which can lead to frustration if expectations are not met (Chung, 2022; Chung et al., 2021).

Finally, the Work Consequences Tradeoff (Job Transition vs. Job Loss) must be understood within the unique context of freelancers. Junior freelancers often offer small, low-cost projects to gain a foothold in the market (Blaising & Dabbish, 2022; Gussek & Wiesche, 2024), but these jobs are precisely the ones most prone to automation. Reinforcing this challenge, Teutloff et al. (2025) found that the demand for novice freelancers is decreasing more than the demand for experienced freelancers due to GenAI,

suggesting greater challenges in starting a freelance career and competing in the freelance market. This trend is part of a broader decline in employment and earnings on online platforms post-GenAI (Demirci et al., 2025; Hui et al., 2024). TTIG systems could also function as part of the holding environment for freelancers (Petriglieri et al., 2019). We revealed that freelancers collaborate with AI and interact with TTIG systems very easily using natural language. Thus, these systems could be seen as a kind of collaboration partner that freelancers work with as they usually lack support and interaction in the online environment on digital platforms. Communities built around these systems (e.g. Discord servers, prompt-sharing forums) could also function as a virtually populated place for freelancers, providing a feeling of togetherness (Liegl, 2014). These sociotechnical systems can provide the structure, support, and sense of community that isolated freelancers often lack, helping them navigate the necessary job transition by providing a space to learn and adapt collectively.

Crucially, these four tradeoffs do not exist in isolation but are interconnected. For instance, the promise of the AI as a perfect Sparring Partner (Interaction) can directly fuel the "overprecision" trap, negatively impacting the Efficiency Tradeoff. This, in turn, can amplify the risk of Standardization (Creativity), as hyper-refinement may lead to outputs that are technically flawless but creatively generic. The fear of Job Loss (Work Consequences) then incentivizes freelancers to master these tools, further embedding them in a workflow defined by these very tensions. Understanding these interdependencies is key to painting a complete picture of how GenAI is reshaping freelance design work.

This study offers several contributions. Theoretically, we provide a nuanced, empirically grounded account of human-AI collaboration in a creative domain, moving beyond a simple "good vs. bad" dichotomy to reveal the inherent tensions involved. We specifically contribute to the literature on online freelancing by showing how GenAI intersects with and potentially reshapes its core challenges, such as isolation and precarity.

Practically, our findings offer actionable guidance for freelance designers, AI developers, and online work platforms. First, we show that freelancers and designers should not ignore the use of TTIG systems. For creativity, freelancers should focus on using TTIG systems for divergent ideation at the beginning of the process but rely on their own unique artistic vision and skills for refinement and final execution. This strategy leverages the AI for inspiration while mitigating the risk of standardization. For efficiency, designers must develop a disciplined approach to know when an output is "good enough." Setting clear goals and time limits for AI-driven iteration can help avoid the overprecision trap and ensure that the technology remains a net positive for productivity. For client communication, TTIG systems can be powerful tools for managing client expectations. Freelancers can use them to generate rapid, low-cost mockups for early feedback, facilitating clearer communication and reducing misunderstandings later in the project. The tradeoffs we identified also have implications for the tools and platforms that shape the freelance design experience. For AI developers, the goal should be to design for collaboration, not just automation. This means prioritizing user control and transparency to make the AI a more directable partner, and building features that augment rather than replace a designer's creative process. For online work platforms,

the challenge is to help freelancers signal their value in this new market. This involves updating skill categories and portfolio systems to showcase the human expertise involved in an AI-assisted workflow (e.g., creative direction, prompt engineering) and providing educational resources to help their communities adapt.

Our study shows some limitations that should be addressed in future research. First, the number of participants is relatively small but diverse in design background, experience, country, and freelancing platform, which fits the exploratory nature of our study. Second, the demo task before the interview focused on the use of Stable Diffusion XL (Podell et al., 2023) via a web interface. While participants reported no critical issues with the supplied TTIG system, some had prior experience with different systems, which possibly led to friction in their workflow with the supplied tool and influenced reflections in the interviews. Finally, the development of TTIG systems is moving rapidly, and new systems and integrations are being released frequently.

Following the described limitations, we present possible future research opportunities. First, future studies should employ a larger sample size to confirm our results. Second, other and newer TTIG systems offer more capabilities and closer integration into familiar creativity support tools. Adobe Firefly, for example, is integrated into Adobe Photoshop and includes the functionality of generative fill, where a part of an image can be replaced by an AI-generated image. Newer TTIG systems such as FLUX (Black Forest Labs, 2024) and ChatGPT's native image generation (OpenAI, 2025) could solve some of the challenges we identified regarding the usage of TTIG systems, while unveiling new nuances and challenges. Especially ChatGPT's native image generation features offer a new form of collaboration where iteration does not happen through changing the prompt but requesting changes in natural language in a familiar chat environment. Further research is needed to examine how these effects evolve over time as both the technology and designers' adaption strategies mature. Third, future studies could explore the collaboration between the user and the system through an ethnographic view to investigate our proposal of TTIG systems as part of the holding environment for freelancers. Finally, future research could take on a normative stance and formulate guidelines for the effective usage of TTIG systems for freelance designers.

6 Conclusion

In summary, this study addresses a significant gap in understanding how TTIG systems transform the creative work processes of freelance designers. Our qualitative findings reveal four critical trade-offs that freelance designers face when integrating TTIG systems into their creative workflows: the tension between enhanced creativity and the risk of standardization, the double-edged impact on efficiency, the perception of GenAI as both a supportive partner and a potential threat to control, and contrasting views on the impact of GenAI on job roles and stability. By mapping these tensions to the creative process and the unique context of freelancing, our findings advance the theoretical understanding of human-AI collaboration and offer practical guidance for designers navigating this profound technological transition.

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