Expertise, Identity, and the Blurring of Everyday Work: A Qualitative Exploration of Generative AI's Impact on Creative Workers

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II. Abstract

Technology is central to the work of experts and in the creation and communication of knowledge. It has been pivotal in sharing knowledge within and across knowledge boundaries, as well as enabling individuals and groups to attain and retain distinct expert jurisdictions. From analogue to digital, and now to artificial intelligence (AI), creative workers have used technological advances for centuries to bring their ideas to life. What previous innovations have in common is that they required creative workers to master their use, and then employ them to amplify, automate, and augment their creative expertise. Previous innovations also share the common dynamic of having the creative worker retain control, with the innovation performing a supporting role. Relatedly, a vast body of creativity research has the implicit or explicit assumption that creative expertise is an inherently human skill and beyond the reach of machines—until the latest innovation in AI.

The latest innovation in AI, generative AI (GenAI), is different. It is an innovation unlike anything before it. Where incumbent innovations have been restricted to precise processes, predetermined actions, and features designed to generate specific outcomes, GenAI is a form of general intelligence that possesses broad capabilities that can take multiple forms and be applied across existing and new tasks. Consequently, GenAI is marketed as creative due to its ability to generate new, arguably useful outputs, thereby also mimicking the core tenets of creativity: novelty and usefulness.

This thesis examines the impact of AI on the creative industries (CIs) from an individual's perspective. Research into either of these hugely popular fields is not new. What is distinct, driven by a personal interest stemming from a fusion of professional practice and academic discovery, is how this thesis foregrounds the salient role of the individual creative worker and their expertise. This thesis contends that GenAI is a radical innovation, unlike any artificial intelligence technology that has come before it. As a form of general intelligence, it possesses a broad capability that is not limited to precise features designed to generate specific outcomes. Instead, it is positioned as creative and capable of problem-solving. Thus, GenAI is mimicking the signature skill of creative workers and disrupting the natural order in the creative industries.

The UK design sector and its workforce of design experts provided a compelling context for discovery. Designers have undergone significant transformations with technological advancements, from the advent of the printing press and computer to the internet and 3D printers. With the increasing capabilities of GenAI, mimicking the tasks and skills once

considered unique to creative workers' expertise, the focus of this research crystallised as an exploration at the individual level into how GenAI impacts the practices, expertise, and identity of creative workers.

The exploratory, qualitative method of the research, combined with the temporal objective of the study, required a longitudinal interpretive approach. The study reported here draws on 100 in-depth interviews, split across two phases. The overriding message of this thesis is that GenAI is transforming the creative industries in a way unseen with past technological innovations that relied on creatives' expertise. In short, creative expertise is no longer the exclusive domain of humans, and technology is no longer simply a tool controlled by humans. The core findings from each paper are: i) longstanding relationships with clients and partners are upended with GenAI *widening the locus of creative expertise*; ii) the radical technological innovation of GenAI is resulting in an unprecedented technological landscape and indications of an *extension to the creative process*; iii) the *proximity of creative expertise* is introduced as a practical framework to help understand determinants of GenAI. *Creative trespassing* is introduced to describe the use of GenAI by one group of experts in a different expert domain, revealing the reshaping of well-established expert boundaries.

III. Prologue

The direction for this thesis was established in the summer of 2022, following a preliminary study I designed and conducted that investigated the antecedents and determinants of human-centred artificial intelligence (HCAI). Specifically, I investigated the role of creative self-efficacy, the 'perceived confidence to creatively perform a given task, in a specific location, at a particular level' (Beghetto & Karwowski, 2017, p. 5), in the adoption of HCAI among a sample of creative workers. Data were collected using the Qualtrics questionnaire tool and comprised a sample of 209. Two findings served as the catalyst for what I went on to explore in greater depth, which is reported in this thesis. First, creative self-efficacy was identified as a determinant of the perceived ease of use and perceived usefulness of HCAI. However, contrary to one of my predictions, the effect was reversed, meaning that the greater one's belief in their creative ability, the lower the perceived usefulness of the HCAI creativity tools. This suggests that the greater the creative expertise, the less reliance there is on digital creative support. Secondly, the findings showed that the highest discomfort was with HCAI application to what is widely believed to be the holy grail of creative work—generating original creative output.

This preliminary study was conducted before the release of ChatGPT, which catapulted Large Language Models (LLMs) into mainstream discourse in November 2022, with it topping national and international news, scholarly, and policy agendas. I make this statement upfront for three reasons: first, to highlight the motivational significance of the research, which is based on my own preliminary empirical study conducted before most people (including myself) had heard of the technology. Second, to emphasise a contention in this thesis, that the pace and capability of change in the technological landscape of GenAI, in which it was conducted, is unlike anything before it, a point I will expand upon as the thesis unfolds. Lastly, to demonstrate my deep and long-term interest in the phenomena core to this thesis. The findings from the preliminary study were personally intriguing, managerially salient, and warranting further scholarly exploration, first in the literature and subsequently with empirical research. Combined, it identified the locus of knowledge where this thesis sits, supporting and extending research at the intersection of *creative workers*, *expertise*, and *GenAI*.

CHAPTER 1

The Introduction

1.1 Creativity, idea generation and identity

Creativity has been the subject of scholars across most disciplines since the seminal work of Guilford (1950), whose definition of creativity is widely accepted and replicated to this day: something novel and useful (Amabile, 1996; Kaufman & Sternberg, 2010; Guilford, 1950). 'Creativity is the font from which new technologies, new industries, new wealth, and all other good economic things flow' (Florida, 2012, p. 15). Indeed, creativity is a 'critical factor driving civilisation forward' (Hennessey & Amabile, 2010, p. 570), with 'every advance in the history of humankind has resulted from creativity, the production of new, appropriate ideas' (Amabile, 2018, p. 1). As such, creativity involves a 'process (requiring networks, knowledge and technologies) that enables the generation and translation of novel ideas into innovative goods and services' (Pratt & Jeffcutt, 2009, p. 4). A process that seeks to close a metaphorical gap (e.g., problem space) in the production of ideas, as it typically moves from a period of divergence (e.g., idea generation) to one of convergence (e.g., idea refinement) (Kaufman & Sternberg, 2019), as ideas are explored through a sequence of iterative stages until a solution (i.e., idea) is created.

Creative idea generation has come to symbolise the true essence of creativity, with creative output selected for its perceived novelty (Hsu et al., 2012). Consumers seek novelty from the creative industries (Landoni et al., 2019) and, by extension, from creative workers. Creative workers are expected to continually generate new ideas (Ananth & Harvey, 2023), their livelihoods deeply entwined with their ideas (Toivonen et al., 2023), acting as a core component of their perceived expertise. Indeed, with what people do creatively an intrinsic part of who they are (Townley et al., 2009), creative work is identity-affirming (Elsbach, 2009). First-hand experience and practice are essential for understanding the generation and transmission of expert knowledge (Miron-Spektor et al., 2011). The skills and knowledge that

workers invest significant time and energy in developing (e.g., idea generation) are those they closely identify with, and as such are referred to as 'signature skills' because of their idiosyncratic nature and the depth of expertise (Leonard-Barton, 1995). 'Creators can become deeply attached to ideas that become enmeshed with their identities' (Toivonen et al., 2023, p. 39), their identities extending as their career progresses (Pratt et al., 2006). Technological shifts are also shown to be used by individuals to 'define their occupation [identity] in a way that differentiates it from other professions and enables members to differentiate from one another (Nelson et al., 2023, p. 554). Thus, identities, like expertise, are used to establish distinct communities of like-minded experts, who are also known as knowledge workers.

1.2 Knowledge

Knowledge falls on a spectrum, from the deeply internalised (i.e., *tacit*) to that which can be formally expressed (i.e., *explicit*) (Polanyi, 1966). Underlying this foundational position on tacit knowledge is fact that we can know more than we can tell' (p. 4). Polanyi's (1966) foundational constructs of tacit and explicit knowledge were operationalised by Nonaka and Takeuchi (1995), as they define tacit knowledge as 'personal, context-specific, and therefore hard to formalise and communicate; explicit or "codified knowledge", on the other hand, refers to knowledge that is transmittable in formal, systematic language' (p. 59). Where tacit knowledge is subjective, bodily, practice-based and of the here and now, explicit knowledge is objective, of the mind, and knowing the 'there and then' (Gourlay, 2006). Collins (2010) asserts that 'that which is not explicit knowledge is mostly just the way the world unfolds; sometimes it is referred to as tacit knowledge' (p. 80). This 'tacit knowledge is a source of competitive advantage […] derives not only from obvious and visible expertise, but from invisible reservoirs of experience (Leonard & Sensiper, 1998, p. 127). Hence, first-hand experience and practice are essential for understanding, generating, and transmitting knowledge (Miron-Spektor et al., 2011).

Indeed, ‘some dimensions of knowledge are unlikely ever to be wholly explicated, whether embedded in cognition or in physical abilities. Semiconscious or unconscious tacit knowledge produces insight, intuition, and decisions based on “gut feel”’ (Leonard & Sensiper, 1998, p. 113). This socially situated ‘relational knowledge’ is thought to be impossible to codify, instead being tacitly preserved and nurtured (Pakarinen & Huising, 2023) and, over time, organically diffusing through organisations (Nonaka, 1994). Nevertheless, Collins (2010) contributes a taxonomy to better understand this ‘terrain of tacit knowledge’. The taxonomy has three types that reflect the ‘three major reasons why tacit knowledge is not explicated’ (p. 1). i) *Relational Tacit Knowledge (RTK)*: that is inextricably tied to the human body and physical capabilities. This cannot easily be converted into a set of explicit rules ‘unless we could make everyone privy to the contents of everyone else’s heads’, which would be ‘too expensive’ and ‘logistically impossible’ (p. 96). ii) *Somatic Tacit Knowledge (STK)*: that is tacit simply because it has not been explicated or written down yet. In principle, it can be made explicit but ‘is tacit because of our bodily limits’ (p. 101). iii) *Collective Tacit Knowledge (CTK)* that is embedded within societies and cultures rather than individual bodies or texts. It encompasses the shared conventions, behaviours, and social interactions that allow humans to communicate and navigate the world. Hence, this type of tacit knowledge ‘that is located in society’ is not possible to all be made explicit ‘in the foreseeable future’ (p. 138).

1.2.1 Designers’ knowledge: Starting from internships or junior positions, designers typically enter their careers with a mix of implicit design knowledge and some formalised design training, during which they develop explicit skills in using design tools to realise their ideas. As designers progress through their careers, they strengthen their explicit knowledge and skills for tasks at different stages of the creative process, while deepening their tacit knowledge and intuition at stages across the process that arise from practice-based experience. Although designers develop tacit and explicit knowledge, it is posited that a designer’s ‘knowledge is

largely tacit, implicit and intuitive and therefore different to explicit, conventionalised knowledge of design rules and tactics as found in textbooks describing design methods' (Ball & Christensen, 2019, p, 49). Indeed, creativity—and, by association, design—was once thought to be the sole domain of humans (Runco, 2023), requiring personal and cultural sensitivities the reserve of humans (Buchoud et al., 2021). Thus, such tacit knowledge is hard to verbalise (Eyal, 2019) and, therefore, that which cannot be taught (Schön, 1983)

The design process begins in the mind and then with a blank canvas, on which designers build their designs. Even with the advent of computer-aided design, hand sketching is still the first port of call, where designers 'create them [sketches] not just to record an idea, but to help generate it.' (Menezes & Lawson, 2006, p. 571). They experiment, one idea triggering another. They put the first idea aside and start another on a blank sheet, and another, and so on, in a dialogue between them and the paper (Cross, 2007). These metaphorical conversations designers have with their ideas are all 'stockpiled' (Ananth & Harvey, 2023), creating a rich, idiosyncratic tapestry of highly tacit knowledge, distinct to each designer, that they can draw on instinctively and immediately in the future. Hence, as a creative activity, design has been shown to be an exemplar of 'knowing-in-action', referring to publicly observable actions that are revealed spontaneously and executed skilfully but are not verbally explicable (Schön, 1983).

Nevertheless, throughout the creative process, stages and tasks once thought to require solely tacit knowledge have been systematised and made explicit. Recent developments in epistemic technologies have demonstrated they are increasingly effective in supporting creative processes, for instance, creative exploration (Dalsgaard, 2017) and problem discovery and problem definition (Schleith et al., 2022).

1.3 Experts, knowledge boundaries and epistemic technologies

'A specialised body of knowledge which can be acquired only by studying and training, and which is not possessed by the ordinary run of men' (Eyal, 2019, p.15) is the adopted

definition of expertise. Thus, knowledge is only held by a select group (Treem, 2016) and used to assert authority over a problem domain that other groups cannot solve (Anthony, 2021). Thus, securing members' feeling of authority over the domain. Knowledge boundaries are constructed by experts in their pursuit of intellectual authority over a particular domain (Gieryn, 1983). Attaining authority of expertise in a particular domain also affords members autonomy in that community (Abbott, 1988). Experts seek to maintain authority by protecting their distinct expertise, acting as gatekeepers to the knowledge boundaries that define their jurisdictions (Susskind & Susskind, 2018). Knowledge boundaries are socially constructed barriers that enable different professional groupings to develop distinctive knowledge bases (Van Maanen & Barley, 1984; Ferlie et al., 2005). They are typically drawn around practices that are easily shared among actors within the same community but are difficult to share with a different community (Waardenburg et al., 2022).

Experts in these communities can be referred to as knowledge workers who are 'highly qualified individuals doing knowledge-based work, using intellectual and symbolic skills in work' (Alvesson, 2004, p. 21), those responsible for creating, sharing, and applying expertise (Abbott, 1988). With the expertise of knowledge workers affording them an elevated social status due to their specialised skills and unique knowledge (Larson, 1979), their distinct knowledge is what enables these experts to secure recognition and protect their areas of expertise (Eyal, 2019).

Technology is central to the work of experts across various domains, including librarians (e.g., Nelson & Irwin, 2014), data scientists (e.g., Vaast & Pinsonneault, 2021), R&D engineers (e.g., Lifshitz-Assaf, 2018), and radiologists (Jussupow et al., 2018). Experts utilise technology for the creation and communication of knowledge within and across knowledge boundaries (Leonardi et al., 2019), as they attempt to protect their knowledge domains. Information technology systems are shown to extend and improve human agency and be capable of

producing new knowledge when their users have the competence and opportunity to express it. Which, when achieved, attains its legitimisation (Zuboff, 1988). Recently, algorithmic technologies played a central role in the ongoing construction of knowledge' (Anthony, 2018, p. 661). Although challenged by technological innovation, expert communities have 'largely deflected, absorbed, or even appropriated these changes' (Pakarinen & Huising, 2023, p. 2055).

Notably, Nonaka and Takeuchi's (1995) seminal work included a reference linking codification to explicit knowledge. Put another way, where tacit knowledge is subjective, bodily, practice-based and of the here and now, explicit knowledge is objective, of the mind, and knowing the 'there and then' (Gourlay, 2006).

1.3.1 The codification of knowledge. Codified knowledge refers to explicit, formal or systematic knowledge that can be communicated through a formalised language (Nonaka and Takeuchi (1995), usually expressed in 'words and numbers, scientific procedures, or universal principles' (Cohendet & Meyer-Krahmer, 2001, p. 1564). The codification of knowledge depends strongly on the context and knowledge of focus (Cohendet & Meyer-Krahmer, 2001) and with the advancing technological capabilities to codify explicit knowledge, there has been an increase in the reliance on computers' increasing epistemic capabilities (Eyal, 2019). By contrast, tacit knowledge is composed of 'indexical expressions'. If we were to write a set of rules about how to interpret these indexical expressions, the exercise would quickly ramify to infinity' (Eyal, 2019, p. 28), in short, it would be 'logistically impossible' (Collins, 2010). In the context of this research, as established in section 1.2.1, a designer's knowledge comprises a combination of tacit and explicit knowledge. Therefore, aspects of designers' work are increasingly being explicated and codified. However, tacit knowledge is 'not teachable' (Schön, 1983, p. 158). Put another way, it is not possible to fully teach machines how to design; there is 'always an irreducibly tacit aspect to any explicit knowledge' (Gourlay, 2006, p. 1422).

1.4 Artificial intelligence

Artificial intelligence (AI) is an invisible power that is increasingly becoming inextricably interwoven through all aspects of our lives—a technological canvas permeating both the professional and personal spheres. Fuelled by exponential increases in computing power and vast amounts of data, 'computers and other digital advances [AI] are doing for mental power—the ability to use our brains to understand and shape our environments—what the steam engine and its descendants did for muscle power' (Brynjolfsson & McAfee, 2014, p. 7). AI is challenging expert authority, making it less clear 'who or what can claim expertise on a given issue' (Heimstädt et al., 2023, p. 5). Unlike singular inventions from the past, it behaves 'more like electricity in that it powers tools and devices that run almost every aspect of society and our lives' (Smith et al., 2019). In other words, AI is fuelling the Fourth Industrial Revolution (Makridakis, 2017)

In general terms, AI is the leveraging of 'computer systems and machine learning to mimic the problem-solving and decision-making capabilities of human intelligence' (IBM, 2025), a description adopted for this research. AI is just positioned as the 'latest in a long line of threats' (Pakarinen & Huising, 2023, p. 2055) encountered by experts and their domains of knowledge. Indeed, their increasing presence of epistemic technologies is anticipated to 'transform expertise in organisations, reshape work and occupational boundaries, and offer novel forms of coordination and control' (Faraj et al., 2018, p. 62). AI tools have, until recently, had specific features designed to generate outcomes. This 'narrow' or 'weak' AI (Marr, 2023) is often referred to as Traditional AI, which has been employed for medical diagnosis (e.g., Lebovitz et al., 2022) or automated driving (e.g., Cunneen et al., 2019). Notably, there is an absence of research on the creative industries and their workforce.

Innovation has revolutionised the creative industries (CIs), from analogue to digital and now AI, and technological advances have been developed in the knowledge that humans cannot

succeed without enhancements (Newman & Blanchard, 2019). The pace of change with AI technologies means whatever AI you are using today is sure to be the worst you will ever use (Mollick, 2024). Indeed, the speed and capabilities of AI have advanced beyond any expectation, with algorithms now creating images with 'superhuman effectiveness' (Hartmann et al., 2024) and 'machine-generated' media almost indistinguishable from 'real' media (Frank et al., 2023). While these traditional AI tools substitute, supplement, or amplify most cognitive tasks (Makridakis, 2017), they have not significantly impacted creative work, which requires personal and cultural sensitivities that are reserved for humans (Buchoud et al., 2021). This was until the latest innovation in AI. Generative AI (GenAI) is qualitatively different**.**

1.5 Generative AI

Generative AI (GenAI) is forecast to 'trigger leaps in productivity greater than we have ever seen before' (Forbes, 2023). Rather than having specific features for well-defined tasks, as found with traditional AI, GenAI is a form of general intelligence with broad capabilities that can take multiple forms and be applied across existing and new tasks, affording it 'broad and non-technical appeal' (Grimes et al., 2023, p. 1617). Indeed, until now, AI, often referred to as 'narrow' or 'weak' focus, performing a specific task (Marr, 2023). GenAI, however, can use data to generate new content (Marr, 2024). GenAI can also generate new processes and improve existing methods, contributing to a situation that can 'redefine the notions of knowledge and expertise' (Mariani & Dwivedi, 2024, p. 15). The presence and capabilities of GenAI are forecast to continue increasing exponentially over the next 5 years, with its capacity already doubling every 7 months over the last 6 years (Metr, 2025). GenAI is already capable of creative problem-solving (IBM, 2024) and idea generation (Cai et al., 2023). Indeed, positioned as being creative (OpenAI, 2023), and capable of creating new (Marr, 2023) and, arguably, useful content (IBM, 2024), GenAI is mimicking the core tenets of creativity: *new* and *useful* (Amabile, 1996; Guilford, 1950). Hence, unlike incumbent creativity support tools,

using traditional AI. GenAI can assume more agentic roles and is often portrayed as a co-creator (Gmeiner et al., 2023).

The infancy of GenAI means that it is a highly active topic of research. A focus on the creativity industries is overshadowed by work on domains such as healthcare (e.g., Jindal et al., 2024), finance (e.g., Mettrick, 2024), and supply chains (e.g., Jackson et al., 2024). This is unsurprising, given the efficiency and economic potential that GenAI affords them. Although considerably lighter, there is a growing body of research at the intersection of creativity and GenAI. Benbya et al. (2024) provide a recent analysis and research agenda for potential implications from GenAI for knowledge and creative work. However, the paper offers no empirics. The empirical studies available yield different findings. On the one hand, a study found that 'AI enhanced the creativity of higher-skilled agents' (Jia et al., 2024, p. 37). On the other hand, a different study found that most 'experts do not benefit as much from the use of GenAI in their work performance as novices' (Hsu & Bechky, 2024, p. 7), and the use of an image generator makes people fixate on an initial idea (Wadinambiarachchi et al., 2024). Research has also shown that the idea-generation capabilities of human collaborations with GenAI outperform human-only ideas in terms of novelty (e.g., Boussioux et al., 2024). At the same time, another study finds that the idea-generation capabilities of GenAI surpass those of humans (Girotra et al., 2023), with another suggesting that GenAI can enhance individual creativity by offering new possibilities (Doshi & Hauser, 2023).

What these example studies all have in common is that they take a quantitative approach, with creativity as the dependent variable. Although GenAI is anticipated to have a significant impact on knowledge workers (i.e., creative workers). There is limited understanding of the human implications of its growing ability to mimic the skills and expertise of creative workers. In reviewing the extant literature, aside from some lone voices advocating for computational creativity (e.g., Boden, 2004), it is suggested that creativity research has been viewed through

a lens that (whether it be explicit or implicit) assumes it is an inherent and exclusive human skill (e.g., Florida, 2012). A prevailing notion is that there are groups who 'believe machines will never be able to touch' (Du Sautoy, 2019, p. 2). Indeed, creative idea generation is assumed irreplaceable by technology (Osborn, 1953), and machines are assumed to be no match for the 'things that characterize human creativity', which means it is at best generating 'a kind of *pseudo-creativity*' (Runco, 2023, p. 1). I question if these positions still hold with the greater agency and capability of GenAI through the growing codification of knowledge.

1.5.1 Technological agency. An 'agent is a being with the capacity to act, and 'agency' denotes the exercise or manifestation of this capacity' (Schlosser, 2019). Thus a computer's technological capability (i.e., algorithm) determines its capacity to act. The greater the capability, the greater the agency. Technology has long been key to creative processes, from Leonardo's paint (Shneiderman, 2000), and 'computers were designed to extend human analytical and creative power' (Selker, 2005, p. 419). The evolution of technology used in the creative process–from analogue to digital, and now AI–reflects the acceptance that humans cannot succeed without enhancements (Newman & Blanchard, 2019). Nonetheless, technological innovations to date have not exhibited agentic capabilities that mimic human creativity. Traditional or 'narrow' AI can substitute, supplement, or amplify most cognitive tasks (Makridakis, 2017); it has not significantly impacted creative workers, whose work requires the personal and cultural sensitivities that are uniquely human (Buchoud et al., 2021).

1.5.2 Designers' perceived agency of GenAI. Unlike earlier technologies, GenAI is perceived to have greater agency. Often portrayed as a co-creator (Gmeiner et al., 2023), GenAI is positioned as creating new (Marr, 2023) and arguably useful, high-quality content (IBM, 2024) that mimics the foundational tenets of creativity, namely something that is both *new* and *useful* (Amabile, 1996). Therefore, designers' perceived agency of GenAI lies in its ability to perform creative tasks long assumed to be exclusively human (e.g., idea generation)—

capabilities made possible by the codification of explicit knowledge. Agency perception theory (Vanneste & Puranam, 2024) posits that perceived agency shapes trust in AI, with a causal relationship between perceived agency and perceived ability. Compared with older 'traditional' rule-based AIs, where decision-making is predefined and rigidly dictated, the decision-making in newer, 'modern' AIs (e.g., GenAI) is more complex and self-learnt, and can change. As modern AI becomes increasingly capable and perceptibly opaque (black-boxed), its perceived agency increases. In turn, with increased perceptions of agency, the human-GenAI trust relationship edges closer to a human-human (interpersonal) relationship than with older forms of AI technology.

1.6 Research question

Taking these definitions of agency and codification forward, creative workers are not immune to any changes they might bring, thus upsetting the natural order in the CIs. When technological innovation is a critical factor for change in driving creative industries to 'recreate' or 'transform' (Jones et al., 2015), and when that innovation has growing agency, capable of mimicking many tasks and skills once considered unique to creative workers' expertise, this thesis sought answers to the overarching research question:

How does GenAI influence creative workers' expertise, identity, and practice?

1.7 Creative industries and the design sector

To respond to this research question, I focused on the creative industries, where creative workers have traditionally used creativity-support tools to realise their ideas. For example, the advent of the printing press accelerated the diffusion of those ideas, but it did not have the ideas. The computer transformed how creative workers worked, but it did not create work for them. What these examples share, albeit centuries apart, is not only that they were radical for their time, but they were marketed and perceived as tools—sometimes intelligent ones. As such, these tools required mastery by creative workers to amplify, automate, and augment their

creative expertise. Put differently, the creative worker has always held the upper hand and controlled the technology.

The creative industries' global scale and geographical uniqueness focused my attention on the United Kingdom, where the CIs are defined for having 'their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property' (DCMS, 2001). The UK's creative industries are positioned at the 'heart of the nation's competitive advantage' (DCMS, 2018), responsible for circa two million jobs (WDO, 2024) and are the 'lynchpin for future growth' (Labour Party, 2024, p. 1). The creative industries comprise nine expert sectors, including design, architecture, film and music (Deloitte, 2022). The research focus at a 'work level' (Barley & Kunda, 2001) necessitated a narrower focus on a single sector in the CIs.

The UK design sector and its designers provided a compelling context for exploring the relationship between creative workers, expertise, and GenAI. Where creativity is the invention of an idea that is new and useful (Amabile, 1996), design is the refinement of those ideas through a process of iteration (Design Council, 2021). Design 'isn't just about making things look beautiful; it's also about making things work beautifully' (Martin, 2009, p. 58). Design plays a significant role in shaping our world (Design Council, 2022), where, in today's socially, economically and environmentally complex climate, expert design matters and is at the heart of commercial success (McKinsey, 2018). My professional experience in the UK creative industries was also a determining factor in choosing the UK design sector for exploration. The sector comprises various design disciplines, including graphic, motion, user experience, digital, and service design, whose workforce, unless stated, will be collectively referred to as designers herein.

The exploratory, qualitative nature of the research question and aims required an interpretive approach. A longitudinal approach to the research design was conducive to the inherently temporal nature of technological change. Time is shown to be 'capable of revealing

the temporal patterns, causes, and movements from continuity [and] underlying logics that give events meaning and significance' (Pettigrew, 1990, p. 273) and can account for the co-evolution of people and technology (Orlikowski, 1992). I conducted 100 interviews with designers across two phases, beginning in November 2023. In the first phase, after removing participants who did not meet the inclusion criteria, fifty-six designers were included. Of those fifty-six, forty-four were interviewed for a second time in Phase 2, 9 and 12 months following the first interview. My domain experience and discourse knowledge enabled him to win the participants' trust and be less obtrusive (Orr, 1996) in questioning. Data collection across both phases produced over 120 hours of in-depth, unedited audio transcripts. The volume of data required a flexible, less orthodox approach to analysis, which meant deviation from the conventions provided by the scope of any individual methodological template. Instead, having the agency and flexibility to select core elements of specific templates. Thus, this pluralist approach aligns closely with methodological bricolage (Pratt et al., 2022) and was effective in uncovering distinct findings.

1.8 Snapshot of findings

While the three papers reported in the thesis address the overarching research question and aims, each also responds to a distinct research question. They share methodological approaches but, in Papers I and II, draw on their own analysis of phase 1 data, and in Paper III, on phase 1 and 1 data. The overriding message of this thesis is threefold:

First, I found that GenAI is transforming the assumptions and expectations surrounding creative expertise, leading to a shift in designers' relationships with their work and networks of clients, partners, and technology. GenAI is increasingly capable of performing designers' tasks and democratising creative expertise (e.g., idea generation). The longstanding conventions surrounding their relationships with clients and partners are upended with this, *widening the locus of creative expertise*.

Second, I found that the technological innovation of GenAI means the technology and tools in the creative industry are no longer constrained to amplifying, augmenting or automating specific, predefined tasks of creative workers. The once-exclusive human agency over the creative process is being transformed, as GenAI is reported to be *extending the creative process*.

Third, by employing an affordance lens, I found that the perceived expertise afforded to GenAI by designers moderates their use of it. I introduce a practical framework for analysing and predicting where and when individuals will use GenAI to cross knowledge boundaries. I call this framework *the proximity of creative expertise*. GenAI is reshaping multiple well-established expert boundaries by facilitating *creative trespassing*.

CHAPTER 2

Paper Synopses

The three papers presented in this thesis offer salient, theoretically and empirically novel findings with both academic and managerial value, shedding light on the impact of GenAI on creative workers in response to the research question. The papers present emergent findings that tell a compelling narrative that GenAI is becoming the agent of change in the design sector. Responding to different research questions that address the overarching question and the analysis of this thesis, the papers report complementary and progressive findings that build on one another. The papers advance understanding of creative expertise, identity and daily work during technological innovation, while highlighting an underexplored yet highly significant research domain. I proceed by providing a synopsis of each paper, along with details of its development.

2.1. Paper I: *Widening the Locus of Creative Expertise*

The first paper reports on the impact that GenAI is having on designers' work practices in response to the research question:

How does GenAI impact creative workers' expertise and identity?

In the paper, I explore the effect of designers' inherent expertise as GenAI becomes increasingly accessible and capable. Ideas are closely associated with the expertise and identities of creative workers, who have hitherto felt shielded from earlier technological changes driven by artificial intelligence (AI). Drawing on in-depth interviews with 56 expert designers, the paper finds that the broad capabilities and democratisation of creative expertise enabled by GenAI are destabilising the balance of power between designers and their distinctive expertise. I introduce the concept of the *widening locus of creative expertise* to illustrate a shift in the generation, access, and application of knowledge from human to machine. Second, I discovered that a designer's responses were diverse, seeing GenAI as both an opportunity and a threat to their identity. Designers' responses are captured and characterised

as to *compete*, *cherry-pick* and *change course*. All offering fertile ground for future enquiry. Last, designers' perceived expertise in problem-solving and idea generation is found to run deep in their creative identity—constituting part of their creative DNA.

I presented the first version of this paper at an Academy of Management Professional Development workshop, which was part of the Creative Industries Conference 2024 at the University of Edinburgh. I also presented a co-authored version with my supervisors at EGOS 2024 (Sub-theme 34: Digital Disruption: Professions at the Crossroads?) and the 2024 SEI Research Day at London Business School. A version received an R&R from the Academy of Management Discoveries for a Special Issue. However, the changes requested resulted in a new paper (An early version of Paper II). I also presented a version of this paper at the 85th Annual Meeting of the Academy of Management in July 2025, in Copenhagen, Denmark, where I received valuable feedback that is being incorporated in preparation for journal submission. The Journal of Management Studies has been identified as a possible journal to approach.

2.2. Paper II: *Extending the Creative Process*

The second paper provides a deeper and more focused examination of the surprising and salient theme observed in Paper I. In this paper, I explored the duality and fluidity found in the value statements as designers responded, as I sought to answer:

How does GenAI affect designers' perceptions of their creative process?

In the paper, I draw on the same in-depth interviews as Paper I, but through a different analytical lens. I find the fluid value judgements that fall into three themes: *dehumanising creative agency*, *disorienting creative work, and displacing creative expertise*. The fluidity of these value judgements at an intrapersonal level is attributed to their varying strengths and malleability to external pressure from peers, stakeholders, and the technology itself. Consequently, I find that because of the disruption and increased capabilities of GenAI, the

prototypical creative process is transforming. Technology is no longer constrained to augmenting or automating specific, predefined tasks by creative workers. Instead, I find that designers' tasks are increasingly and capably mimicked by the enormous amounts of data and computing power behind GenAI, and I suggest the results indicate an *extension of the creative process*.

This is the latest version of a paper that resulted from a revise-and-resubmit process for the Academy of Management Discoveries special issue on Challenges and Opportunities in Creative Industries. Despite being unsuccessful, in part due to the time constraints of special issues, the paper received encouraging, detailed reviews. The feedback was instrumental in strengthening the manuscript in preparation for a revised submission to the Academy of Management Discoveries through the standard submission process.

2.3. Paper III: *The Proximity of Creative Expertise*

In this third paper, I leveraged data from Phase 1 and II interviews in this temporal study that sought to understand what is driving designers' decisions to engage, or not, with GenAI, in response to the research question:

How does a creative worker's perceived expertise influence their relationship with GenAI and established knowledge boundaries?

To address this question, I use data collected in Phase 1 and introduce the data captured in Phase 2 to investigate changes in designers' attitudes and acceptance of GenAI over time. I include a total of 88 in-depth interviews: 44 collected in Phase I, and the same sample of designers was interviewed in Phase 2, a second time, following a 9- to 12-month interval to accommodate the inherently temporal nature of technological change. An affordance lens was employed as an analytical and theoretical instrument to observe change. The paper introduces the construct of *proximity of creative expertise* as a practical framework for analysing and predicting perceived usefulness and technological acceptance. I found that the closer the expertise of GenAI is perceived to be compared to the designers perceived 'signature skills',

the less usefulness and acceptance they have for it. Most intriguing was designers' exploitative use of GenAI to perform 'signature skills' of other domains of expertise, but not in their own. GenAI was found to facilitate *creative trespassing* by reshaping multiple, well-established boundaries between creative workers and novices, designers and technology, professional designers and non-professionals, and between different creative disciplines.

I presented an early version of the paper at the British Academy of Management Symposium on 'Artificial Intelligence and creativity: Opportunity or Threat', in London, United Kingdom, in April 2025. I also presented it at EGOS 2025 (Expertise and Technology in Flux: Empirical Studies) and in poster form at the 85th Annual Meeting of the Academy of Management, July 2025, in Copenhagen, Denmark. I received valuable feedback at all these events, and the paper is being prepared for submission to the Academy of Management Journal or Organisation Studies.

2.4. Papers summary

Individually, the papers offer salient, theoretically and empirically distinct findings with academic and managerial value. Collectively, they tell a story of real-world significance, illuminating the impact of GenAI on creative workers at the individual level. Where GenAI is emancipating creative expertise and agency, meaning they are no longer under the exclusive domain and control of domain experts. The papers demonstrate the value of future research for the next generation of creative workers and technological innovation. This thesis continues with each paper presented in full.

CHAPTER 3
The Papers

3.1. Paper I: *Widening the Locus of Creative Expertise*

3.2. Paper II: *Extending the Creative Process*

3.3. Paper III: *Proximity of Creative Expertise*

3.1. Paper I

Widening the Locus of Creative Expertise

1 Introduction

Artificial intelligence (AI) is the computational superpower rapidly changing what we do, how we do it, and who we are (United Nations, 2023). Fuelled by vast amounts of data—the oil of the twenty-first century (Smith et al., 2019)—AI is powering the Fourth Industrial Revolution (World Economic Forum, 2022). These 'traditional' AI tools are highly advantageous due to the 'dramatic fall in the cost of providing quality predictions' (Agrawal et al., 2018, p. 1). They are designed with specific features to generate particular outcomes, such as with medical diagnosis (e.g., Lebovitz et al., 2022) and automated driving (e.g., Cunneen et al., 2019). Although these tools can substitute, supplement, or amplify most mental tasks (Makridakis, 2017), including the automation of predictions for strategic decision-making and problem-solving (Krakowski et al., 2023), the potential impact on creative workers and their work is less well reported. Creative work has been thought to require personal and cultural sensitivities that only humans can offer (Buchoud et al., 2021). Indeed, the narrative, explicit or implicit, has been that creativity is inherently human (e.g., Runco, 2023; Florida, 2012).

That was until the latest development in AI. Generative AI (GenAI) is different. This nascent technology does not have specific features limited to well-defined tasks, as with traditional AI. GenAI is democratising access to information (MIT Sloan, 2025). GenAI offers broad capabilities accessible using text prompts that do not require established domain expertise. This means it has a 'broad and nontechnical appeal' (Grimes et al., 2023, p. 1617) and can be leveraged to cross knowledge boundaries to address existing and new, previously unattainable, tasks. For instance, creative problem-solving (IBM, 2024) and idea generation (Cai et al., 2023). Hence, unlike previous technological innovations like traditional AI, GenAI mimics the perceived skills and expertise of creative workers. Therefore, when a professional's identity is the self-definition and enactment of their role (Ibarra, 1999), with what people do creatively intrinsic to who they are

(Townley et al., 2009), and with creative work being identity-affirming (Elsbach, 2009), GenAI is anticipated to directly impact the legitimacy and recognition of creative workers' expertise.

Research on GenAI has focused on domains such as healthcare (e.g., Jindal et al., 2024), finance (e.g., Mettrick, 2024), supply chains (e.g., Jackson et al., 2024), and strategy (e.g., Doshi et al., 2024). These domains are unsurprising, given the existing concentration of scholarly enquiry in these domains and the well-publicised efficiency and economic potential that GenAI affords them. Consequently, research at the intersection of creative work and GenAI is scarce, with the little available leaning towards the productivity and quantity of creative output (e.g., Jia et al., 2024). Research has not explained how GenAI—with its perceived capabilities to replicate creative expertise—might affect the creative workers and their identities. I suggest that GenAI is likely to have a significant human impact because the transformation is continuing to unfold at an unprecedented scale, speed, and capability—with whatever AI you are using today, sure to be the worst AI you will ever use (Mollick, 2024).

I conducted a qualitative empirical study to examine how creative workers experience the emergence of GenAI in real time. This paper draws on the in-depth interviews with 56 designers. Design plays a significant role in shaping our world (Design Council, 2022) and assisting commercial success (McKinsey, 2018). Moreover, design is expert creative work, with problem-solving and idea generation at its core. I found designers' relationships with their sense of self, their work, their stakeholders, and their creative partners disrupted by the ambiguity and uncertainty of GenAI. The overriding message of this paper is that GenAI is transforming the assumptions and expectations surrounding creative expertise, shifting designers' relationships and altering the role of technology in creative work. The paper is the first of three in a series drawing on a shared data set. Each employs distinct analyses and yields distinct discoveries. In this paper, I make these two contributions:

First, I contribute to the literature on expertise and knowledge work with the notion of the *widening locus of creative expertise* to describe the increased accessibility and usability of GenAI at the work level. Put another way, GenAI is increasingly capable of performing designers' tasks and democratising creative expertise (e.g., idea generation). Designers are left grappling with a significant shift in agency and expertise, triggering a recalibration of roles and relationships. On the one hand, designers are keen to understand how they might leverage automation to automate processes and execute mundane tasks. On the other hand, the accessibility and usability of GenAI mean that designers' expertise is democratised. In other words, designers' distinctive and status-deriving expert work is increasingly accessible to new and less experienced actors using GenAI. Thus, as the locus of creative expertise widens, it destabilises the established balance of power between designers, their expertise, and their relationships with clients and partners, upending them. Nevertheless, *the widening locus of creative expertise* is not inherently negative. It is both friend and foe, as reflected in designers' selective use and mixed identity responses.

Second, contributing to the identity literature, I report that designers perceive GenAI as both an opportunity and a threat to their identity. Designers' varied responses are broadly characterised as: i) to *compete* with GenAI by exploiting their own innate design skills; ii) to *cherry-pick* the use of GenAI by drawing symbolic redlines to protect specific tasks while engaging with GenAI for others; and iii) to *change course* away from using GenAI, instead amplifying their humanness.

In addition to these contributions, I also extend research that suggests identity is inextricably linked to work and expertise. I report that designers treat design with utmost reverence, with it transcending their professional-personal boundaries appearing more than an identity. Instead, it is in their DNA and core to a designer's existence. I begin by establishing the theoretical backdrop for this paper, followed by a description of the methodology, a

presentation of key findings, and a discussion with explanations and contributions. I conclude with limitations and offer suggestions for future research, followed by a Conclusion.

2 Theoretical Backdrop

What follows is an overview of related work in the core themes of this research, illustrating the relevance, importance, and space for the contribution this paper makes.

2.1 Creative experts and idea generation

The creative industries comprise knowledge workers—experts who create, share, and apply their expertise (Abbott, 1988). Creative expertise (e.g., idea generation) has come to symbolise the true essence of creativity. Individuals have novel ideas (Guilford, 1950), and consumers seek novelty from the creative industries (Landoni et al., 2019), with creative work selected for that novelty (Hsu et al., 2012). This results in creative experts being expected to continually generate new ideas in response to stakeholder requirements (Ananth & Harvey, 2023). Ideas that turn into products or services (Pratt & Jeffcutt, 2009) are thus seen as precious commodities on which competitive advantage can rely (Anddiopoulus, 2003). Idea generation follows a creative process of *divergence* (generating ideas) and *convergence* (refining ideas) (e.g., Kaufman and Sternberg, 2019). A study of the creative and performing arts divided their sample into two domains, *generators* 'who bring into being' and *interpreters,* who take what is brought into being and 'fit it to a new use' (Thomson et al., 2009, p. 73). Thus, these two groups and their actions reflect the core divergent and convergent phases of creativity. This is significant because *generators* include roles like designers whose 'livelihood is deeply tied to their ideas' (Toivonen et al., 2023, p. 832),

Exploring the trajectory and management of ideas shows that all ideas matter, with them *stockpiled* for accessibility and easy retrieval (Ananth & Harvey, 2023). However, feedback can impact the trajectory of ideas; it has been shown to trigger a *creative jolt* that leads to the relinquishing of ideas (Toivonen et al., 2023). A foundational assumption of theoretical and

empirical literature on ideas—although not explicitly stated—is that they are human-made. This is unsurprising, given that experts' knowledge is often tacit, which makes it hard to verbalise and ultimately codify (Eyal, 2019). Thus, creativity (Florida, 2012) and, by extension, idea generation (Osborn, 1953) have long been assumed to require cultural sensitivities exclusive to humans (Buchoud et al., 2021), with human creativity still beyond the reach of machines (Runco, 2023).

2.2 Creative workers' identities

Just as material possessions are inherent to an individual's extended self and major contributors to and reflections of our identities (Belk, 1988), ideas are too. Ideas reflect an individual's values and beliefs (Grimes, 2018). Moreover, psychological ownership—possible through experience (Baxter et al., 2015) and design (Shu & Peck, 2011)—can be 'felt toward non-physical entities such as ideas' (Pierce et al., 2003, p. 4). The interwoven relationship creators have with ideas means 'they may engage with them in different ways and value them differently' (Ananth & Harvey, 2023, p. 471) and the 'novelty and usefulness of one's ideas is not merely subject to informational constraints but also to identity-based constraints' (Grimes, 2018, 4).

Building on Mead's foundational work (1934), a burgeoning corpus of literature assumes that the sense of self and identity are structures constructed and sustained through social experience and mediated by communities of societal discourse and ideologies. A position with which this paper adopts. Members of these communities share a distinct pattern of beliefs, values, and norms from other occupations, where their occupational identities are central to members' self-image and fostered through high involvement with their work (Van Maanen & Barley, 1984). 'People make identity claims by conveying images that signal how they view themselves or hope to be viewed by others' (Ibarra, 1999, p. 766). Hence, identities are symbolic and reflexive. It is 'through interaction with others that these self-meanings come to be known and understood

by the individual' (Burke & Reitze, 1981, p. 84). Identities evolve as a career progresses (Pratt et al., 2006), with changes to professions having 'ramifications for how professionals perform their roles and view their identity' (Chreim et al., 2007, p. 1516). With creators becoming 'deeply attached to ideas that become enmeshed with their identities' (Toivonen et al., 2023, p. 39). Furthermore, professionals are shown to use 'technological shifts to define their occupation [identity] in a way that differentiates it from other professions and enables members to differentiate from one another (Nelson et al., 2023, p. 554).

Indeed, creative identities are contextual and formed from relationships with others; as these relationships change, so too do identities transform over time, through a constant process. Simply put, identities are dynamic across time and space (Glăveanu & Tanggaard, 2014). Hence, like expertise, identity is relational and socially constructed through the synchronisation of identity and work [expert] practices and signifies the 'importance of the relationship between 'doing' and 'being' […] and grows through education, training and social interactions' (Pratt et al., 2006, p. 255), they describe an individual's self-definition and enactment in their roles (Ibarra, 1999). Accordingly, creative workers' creative identities are the person- and role-based labels they use to define themselves, such as toy designers (Elsbach, 2009) and architects (Ahuja, 2023).

Many creative workers view their role as more than a job; they see their work as a 'calling' (Pratt et al., 2013; Wrzesniewski et al., 1997). As such, the meaning and meaningfulness of their work are important factors to consider. Indeed, Fetzer and Pratt (2020) explicitly discuss the salient intersection of creativity and meaningful work. Research suggests 'people who interpret their work as a calling have integrated their work deeply into their sense of identity and find it extremely meaningful' (Sandoghdar & Bailey, 2023, p. 8). 'Work is the creation of meaning' (Zuboff, 1988, p. 394), and the *meaning of work* relates to individual experiences and what the output of their involvement signifies to them (Pratt et al., 2003). The *meaningfulness*

of work refers to the significance an individual attributes to their work or the output of their work (Pratt et al., 2003), and meaningful work is 'experienced as particularly significant and holding more positive meaning for individuals' (Rosso et al., 2010, p. 95). However, work with meaning may not be meaningful and meaningful work can have negative implications on the individual.

Identities are threatened when individuals perceive their role, expertise or status 'devalued, marginalised or discriminated against' (Steele et al., 2002, p. 417). Evidence of disruption and threats to the identities of creative workers is reported when receiving feedback (Toivonen et al., 2023), working in a corporate environment (Elsbach, 2009), and engaging in interprofessional collaborations (Ahuja, 2023). Moreover, the role of technology presents opportunities and threats to identities (e.g., Perez et al., 2020; Korica & Molloy, 2010), and specifically how technological innovation, for instance AI, can be identity threatening (e.g., Strich et al., 2021).

2.3 Creative work and technological innovation

Technology has always been part of the creative process, with humans seeking to leverage technological advances to develop tools that further their creative ambitions (Shneiderman, 2000). Hence, computers were designed as tools to extend human creative power (Selker, 2005), created in the knowledge that the human race cannot succeed without enhancements (Newman & Blanchard, 2019). Indeed, technological innovation is a critical factor galvanising action and for the longevity of creative industries (CIs)—change that triggers them to 'recreate' or 'transform' (Jones et al., 2015). Incumbent technological innovation, including 'traditional' AI, has the computational power to perform well-defined tasks and can substitute, supplement, or amplify most human cognitive activities (Makridakis, 2017). Indeed, AI is anticipated to 'transform expertise in organisations, reshape work and occupational boundaries, and offer novel forms of coordination and control' (Faraj et al., 2018). Exemplified

in areas such as medical diagnosis (e.g., Lebovitz et al., 2022) and automated driving (e.g., Cunneen et al., 2019), traditional AI has been primarily to 'complement and extend the core work of experts', with the technology hitherto unable to 'take on and reproduce relational expertise' (Pakarinen & Huising, 2023, p. 2072).

Nevertheless, expertise is vulnerable to external influences such as technological change (e.g., Nelson et al., 2023; Lifshitz-Assaf, 2018; Nelson & Irwin, 1994). Although AI introduces new threats to the authority of professionals such as 'architects, whose expertise, judgment and creativity have thus far been highly valued and considered irreplaceable' (Benbya et al., 2020, XV), with no existential impact anticipated in the near future. Some tried to move beyond the 'philosophical debate' over human-creativity versus machine creativity (Griebel et al., 2020). However, AI continues to emerge rapidly with a pluralistic, contested meaning (Weick, 2020), and the debate is ongoing with the distinctiveness of human creativity still a focus of research (e.g., Runco, 2023). The landscape is uncertain, with the equivocality of AI growing in tandem with its expanding capabilities. Capabilities that are suggested to be capable of replacing knowledge and expertise (Scarbrough et al., 2024).

One of the latest developments in AI—generative AI—is different. The technology powering products such as ChatGPT and MidJourney is unlike traditional AI, which focuses on intelligently performing specific tasks. Generative AI (GenAI) possesses broad capabilities. Notably, the foundational technology for GenAI is akin to the core process of idea generation—divergence and convergence—as it describes a process of *generators* and *discriminators* (Goodfellow et al., 2014). Thus, GenAI semantically and functionally reflects human idea generation. Furthermore, GenAI is positioned as being creative (OpenAI, 2023), capable of creating new (Forbes, 2023)—arguably useful—high-quality text, images, and other content (IBM, 2024). Thus, GenAI also mimics the core tenets of creativity: *new* and *useful* (Amabile, 1996). As an easy-to-use and widely accessible technology, GenAI has 'broad and nontechnical

appeal' (Grimes et al., 2023, p.1617), exemplified by ChatGPT's rapid growth, reaching a record 100 million users in under two months (Reuters, 2023). Subsequently, ChatGPT has had the fastest adoption of any 'economically consequential technology in human history. And the speed and breadth of that adoption (as well as its continued exponential improvement) is why we have no handle on what it all means' (Mollick, 2025).

The infancy of GenAI, combined with publishing timeframes, means research available that focuses on GenAI and the creative industries is limited, overshadowed by work in domains such as healthcare (e.g., Jindal et al., 2024), finance (e.g., Mettrick, 2024) and supply chains (e.g., Jackson et al., 2024). Furthermore, GenAI and creativity work lean towards quantifying creativity (e.g., Doshi & Hauser, 2024; Jia et al., 2024). Although comparatively lighter, research at the intersection of creative work and GenAI is growing, with studies showing that the idea-generation capabilities of human collaborations with GenAI outperform human-only ideas in terms of novelty (e.g., Boussioux et al., 2024). However, studies have also shown that the introduction of GenAI increases the homogenisation of ideas (e.g., Girotra et al., 2023) while the diversity of ideas (Doshi & Hauser, 2024) and feasibility of ideas (e.g., Eisenreich et al., 2024) decrease. Hence, the literature on GenAI does not examine it specifically through an identity lens.

The changes from technological innovations from the near and distant past have 'been described as democratising, liberating forces' (Winner, 1980, p. 122). Indeed, digital innovation is not a neutral force emerging in a vacuum; instead, it reflects deliberate choices as part of a moral and political enterprise, not just an economic one (Ciriello et al., 2025). Such technological change results in winners and losers, which, 'when we change who makes decisions, we impact the distribution of power, and that itself can create resistance to the adoption of new systems (Agrawal et al., 2022, p. 170). Thus, individuals and organisations are anticipated to respond in different ways to their appraisals of GenAI—from perceiving it

as threatening to perceiving it as empowering—dependent on the individuals' perceived agency and control (Uusitalo et al., 2024). Indeed, the World Wide Web has shifted the balance of power in traditional creative agency-client relationships. Notably, clients are empowered to establish in-house services (Stuhlfaut & Windels, 2019). Thus, the capability of GenAI is only anticipated to exacerbate this.

2.4 The diffusion of innovation

Technological diffusion has been the subject of a burgeoning literature since Rogers (1962) described it as the process by which innovations are communicated through specific channels among the members of social systems over time. Or put another way, 'spreading new information technology within a user community' (Cooper & Zmud, 1990, p. 124). Discussed in terms of *trickle-down* diffusion, where 'adoptions by high-reputation actors trigger imitations by lower-reputation actors,' and in contrast, *trickle-up* diffusion, where adoption by 'low-reputation actors trigger imitations by higher-reputation actors' (Rosenkopf & Abrahamson, 1999, p. 11). Similarly, Fuller et al. (2007) posit two basic paradigms of adoption: top-down adoption (where organisational factors influence technology use)' and 'bottom-up adoption (where individual adoption diffuses across other individuals) (p. 41). More recently, Leonardi and Vaast (2017) use the notion of 'from the bottom up' to describe how non-technical employees bypass traditional IT workflows by using new technology personally before adopting it for work practices.

Research on the characteristics of those who might resist technology is inconclusive. Some suggest that *digital natives*, those users who have grown up in the digital world 'eagerly adopt new technologies and consider themselves to be technologically savvy' (Vodanovich et al., 2010, p. 716). Conversely, a different set of research suggests *digital immigrants* are more likely to accept digital innovations because 'older workers and those who did not have significant experience with social media […] were largely optimistic about the potential

usefulness' (Treem et al., 2015, p. 418). Thus, understanding the nature of the user's relationship with technological innovation and diffusion is beneficial, yet these contrasting findings also underscore the difficulty with it.

2.5 Summary

Specialist expertise, such as creative problem-solving and idea generation, is central to creative work and creative identities. GenAI is the first technology with an unparalleled capability to perform this autonomously by machine or by a novice. Research has started to respond to Amabile (2020), who asked whether, and under what conditions, 'experts' creative processes will be inhibited or facilitated by new ideas from machines; however, an identity lens on the effect on creative workers is absent. This paper foregrounds the human impact of GenAI in the creative industries. Specifically, the changing nature of creative workers' identities and expertise and the meaningfulness of their work. Therefore, as creative expertise becomes increasingly possible and accessible through machines, I sought to report in this paper answers to the research question:

How does GenAI impact creative workers' expertise and identity?

3 Methodology

3.1 The setting

To address the research question, the study focuses on the impact of GenAI on the design sector. The design sector is a fitting context for enquiry into creative workers and GenAI because *design* is a specialist creative sector of knowledge workers—a community of workers with expertise at its core (Scott, 2008). In today's complex social, economic and environmental climate, expert design matters with strong design capabilities at the heart of commercial success (McKinsey, 2018). Indeed, designers are archetypal knowledge workers who are 'responsible for sparking innovation and growth' (Davenport, 2005, p. 3). GenAI is permeating the design sector, with a recent report suggesting that employers predict graphic design will be

the 11th fastest declining job globally, a stark reversal when it was a job showing growth two years ago (World Economic Forum, 2025; 2023). Accordingly, the design sector is well-suited for researching the expertise of creative workers with emergent technologies at a practical level. Due to the global scale and cultural uniqueness of design, the research was narrowed to the UK, a decision reached in part with my 15 years of professional experience in the UK design sector, from designer to creative director. This decision was underscored with the knowledge that the UK creative industries (including the design sector) are world-leading (WDO, 2024) and at the 'heart of the nation's competitive advantage' (DCMS, 2018)—thus ideally situated for innovation research (Li, 2020).

3.2 Data collection

3.2.1 Sampling. My research examines expertise and technology at a 'work level' (Barley & Kunda, 2001) in the UK design sector. The design sector comprises designers across various disciplines (e.g., graphic, motion, and user experience) who, unless explicitly stated, will be collectively referred to as *designers*. I purposefully sampled and recruited professional designers, including those who, in their roles, were actively involved in the UK design sector in generating, realising or directing ideas in response to client briefs. Designers' ideas and their manifestations are predominantly visual in the output generated. This meant the type of output of the sample sought ranged in size, scale and subject but had one unifying thread—they were visual, for instance, from designing postage stamps to brand experiences and visual identities to automobile interfaces. I ensured designers were working full-time with English as their native language or fluency in it as an additional language. A snowballing procedure (Zimmerman, 1977) was then used in conjunction with purposive sampling to recruit the remaining participants, wherein participants were asked to recommend individuals who might best support my line of enquiry. Notably, to address the research question's inquiry into

expertise, only professional designers were sought who were felt to represent rich, perceptive accounts (Alvesson, 2011).

3.2.2 Data collection. I completed a total of 61 in-depth interviews. My existing domain knowledge of the industry and discourse allowed me to win the participants' trust and be less obtrusive (Orr, 1996). For consistency (Corley & Gioia, 2004), conducting all interviews in the same format, online, acting as the 'key instrument' (Creswell, 2007). A semi-structured interview protocol was followed, comprised of 'what' and, importantly, 'how' questions that can elicit information describing temporal events as and when they occur (Van de Ven & Huber, 1990). The interview protocol was modified to gain a more comprehensive understanding of any interesting themes that surfaced. Notably, to elicit more information on designers' responses to GenAI and to gain a deeper understanding of the significance of creativity and ideas to their role, what their ideas mean to them and the attachemnt they feel towards them, how they think about idea generation moving in part or full to machines, where and why they do use it, how they feel about others who use it, and what they think it will mean for their role. Interviews were conducted between late November 2023 and March 2024. All interviews were digitally recorded using Zoom, with Otter providing a draft transcription that was then edited in real-time with audio playback, ensuring the accuracy of what was reported. The interviews averaged 80 minutes and ranged from 7,000 to 12,500 words when transcribed verbatim. Of the 61 interviews, five were excluded for not meeting the inclusion criteria for the target population (Robinson, 2014). The final sample of 56 designers (Table 1-1) consisted of 19 females and 37 males. Notably, with 34% of the sample comprising females, this is more representative than the disproportionately male UK design sector, where only 23% of designers identify as female (Design an average tenure of 17 years. They included founder/owners, in-house, freelance, and agency-side designers. The designers' core disciplines broadly fall into three groups: *graphic* (e.g., graphic and brand identity design), *digital* (e.g., digital product,

ID	Duration	Role	Expert Domain	Employment Type	Tenure	Gender	Seniority
#01	1h 17m	Creative Consultant	Graphic / Brand	Freelance	30 yrs	M	Exec. Director
#02	1h 24m	Creative Director	Graphic / Brand	Agency	16 yrs	M	Director
#03	1h 35m	Motion and 3D Designer	Digital / Experience	Agency	17 yrs	M	Director
#04	1h 11m	UX Director	Digital / Experience	In House	24 yrs	M	Director
#05	1h 0m	Graphic Designer	Graphic / Brand	Freelance	20 yrs	F	Senior
#06	1h 26m	Creative Director	Graphic / Brand	Agency	17 yrs	M	Director
#08	1h 15m	Graphic Designer	Graphic / Brand	Freelance	1 yr	F	Junior
#09	1h 23m	Executive Director, UX	Digital / Experience	In House	17 yrs	M	Director
#10	1h 49m	Designer	Graphic / Brand	Agency	6 yrs	M	Mid-weight
#11	1h 27m	Lead Digital Product Designer	Digital / Experience	In House	19 yrs	M	Director
#13	1h 45m	Head of Digital Design	Digital / Experience	In House	33 yrs	M	Exec. Director
#14	1h 17m	Designer	Graphic / Brand	Agency	13 yrs	M	Senior
#15	1h 42m	Principal Product Designer	Digital / Experience	Freelance	26 yrs	M	Exec. Director
#16	1h 44m	Design Director & Interior Architect	Interior/ Experience	Agency	26 yrs	M	Exec. Director
#17	1h 18m	Head of Human-Centered Design	Digital / Experience	In House	19 yrs	M	Director
#18	2h 2m	Head of Digital Product Design	Digital / Experience	In House	19 yrs	M	Director
#19	1h 20m	Creative Director	Graphic / Brand	Agency	21 yrs	F	Director
#20	1h 20m	Global Head of Design	Graphic / Brand	Agency	26 yrs	M	Exec. Director
#21	1h 48m	Creative Director	Graphic / Brand	Agency	17 yrs	M	Director

Table 1-1:Participant interview information

ID	Duration	Role	Expert Domain	Employment Type	Tenure	Gender	Seniority
#22	1h 45m	Principal Product Designer	Digital / Experience	Freelance	18 yrs	M	Director
#23	0h 50m	Creative Director	Graphic / Brand	Agency	21 yrs	F	Director
#24	1h 8m	Design and AI Facilitation	Digital / Experience	Agency	7 yrs	M	Mid-weight
#25	1h 23m	Brand Designer	Graphic / Brand	Freelance	7 yrs	M	Mid-weight
#26	1h 39m	Creative Director	Digital / Experience	Agency	19 yrs	M	Director
#27	1h 48m	Designer	Graphic / Brand	Agency	4 yrs	F	Junior
#29	1h 21m	UX/UI Designer	Digital / Experience	Freelance	24 yrs	F	Senior
#30	1h 22m	Creative / Art Director	Graphic / Brand	Freelance	5 yrs	F	Director
#31	1h 12m	UX/UI Designer	Digital / Experience	In House	8 yrs	M	Mid-weight
#32	1h 9m	Creative Director	Digital / Experience	Agency	20 yrs	M	Director
#34	1h 5m	User Experience Lead	Digital / Experience	In House	24 yrs	F	Director
#35	1h 44m	Head of Service Design	Digital / Experience	In House	21 yrs	M	Director
#37	1h 14m	Service Designer	Digital / Experience	In House	2 yrs	M	Junior
#38	1h 2m	Innovation Designer	Digital / Experience	In House	2 yrs	F	Junior
#39	1h 3m	Learning Experience Designer	Learning/Experience	Agency	8 yrs	F	Senior
#40	1h 23m	User Experience Lead	Digital / Experience	In House	13 yrs	F	Senior
#41	1h 11m	Principal UX Consultant	Digital / Experience	Agency	18 yrs	M	Senior
#42	1h 13m	User Experience Director	Digital / Experience	In House	27 yrs	M	Exec. Director
#43	1h 18m	Interface & Visual Designer	Digital / Experience	Agency	28 yrs	F	Senior

Table 1-1:Participant interview information (cont.)

ID	Duration	Role	Expert Domain	Employment Type	Tenure	Gender	Seniority
#44	1h 57m	Graphic Designer	Graphic / Experience	Agency	17 yrs	F	Senior
#45	1h 26m	Service & Product Designer	Digital / Experience	Freelance	13 yrs	M	Senior
#46	1h 24m	Creative Lead	Graphic / Experience	Agency	5 yrs	F	Mid-weight
#47	1h 29m	Motion 3D Designer	Digital / Experience	Freelance	23 yrs	M	Senior
#48	1h 11m	Lead Graphic Designer	Graphic / Experience	Agency	10 yrs	F	Senior
#49	1h 15m	Creative Director	Graphic / Experience	Agency	28 yrs	M	Exec Director
#50	1h 11m	Graphic Designer	Graphic / Experience	Agency	24 yrs	F	Senior
#51	1h 28m	Motion 3D Designer	Digital / Experience	Freelance	20 yrs	M	Senior
#52	1h 38m	Creative Director	Graphic / Brand	Agency	28 yrs	M	Exec. Director
#53	2h 25m	Experience Director	Digital / Experience	Agency	30 yrs	M	Exec. Director
#54	1h 10m	UX Director	Digital / Experience	In House	11 yrs	F	Director
#55	1h 4m	Graphic Designer	Graphic / Brand	Freelance	15 yrs	F	Senior
#56	1h 16m	Design Director / Principal	Digital / Experience	Freelance	21 yrs	M	Director
#57	1h 30m	Graphic Designer	Graphic / Brand	Agency	4 yrs	F	Senior
#58	1h 27m	Creative Director	Digital / Experience	Agency	28 yrs	M	Director
#59	1h 18m	Experience Director	Digital / Experience	Agency	22 yrs	M	Director
#61	1h 46m	VP Exec. Creative Director	Experiential	Agency	25 yrs	M	Exec. Director
#62	1h 24m	Design Director	Digital / Experience	Freelance	17 yrs	M	Director

Table 1-1:Participant interview information (cont.)

experience, and motion design), and *experiential* (e.g., live events and service design). The large sample size reflects the heterogeneity of the included design disciplines.

3.3 Data analysis

In keeping with the exploratory interpretive nature of the research, data were analysed using an inductive, grounded approach (Gioia et al., 2013; Glaser & Strauss, 1967). Consistent with related work on equivocal technologies (Scarbrough et al., 2024), the reflexive approach paid close attention to the trustworthiness of interpretations (Pratt, 2008). The aim was to develop a plausible explanation for the findings by specifying phenomena in terms of conditions that gave rise to them, how they were expressed through action, the consequences arising from them, and combinations of these (Corbin & Strauss, 1990). The iterative analysis meant moving between transcripts, emergent themes, and theory (Pratt et al., 2006; Locke, 2001; Isabella, 1990). Coding and analysis were conducted manually on a Mac using the software NVivo 15 to facilitate the process.

I followed three established steps (Gioia et al., 2013). The process began with open coding, identifying any elements that were aligned, misaligned, contradictory, or surprising in relation to the research questions (Gioia et al., 2013). This initial stage involved assigning thematic codes to participants' statements. Where possible, *in vivo* codes were used to emphasise the participants' spoken words (Manning, 2017), and a short descriptive phase was used for all others (Corley & Gioia, 2004). The open codes were thematically aggregated to 'symbolically assign a summative, salient, essence-capturing and/or evocative attribute' to it (Saldaña, 2009, p. 3), resulting in twenty first-order codes. The second step involved axial coding (Corbin & Strauss, 1990), moving from an inductive process to a process of abductive coding. First-order codes were consolidated, working back and forth between transcript, emerging themes and theory (e.g., sensemaking, identity and identity threats). The categories became more abstract throughout the consolidation, producing nine second-order themes (Pratt

et al., 2006). The final step involved the relational categorising of second-order codes into three aggregate dimensions as captured in the data structure (Figure 1-1). The analyses used in this paper differ from those in Papers II and III.

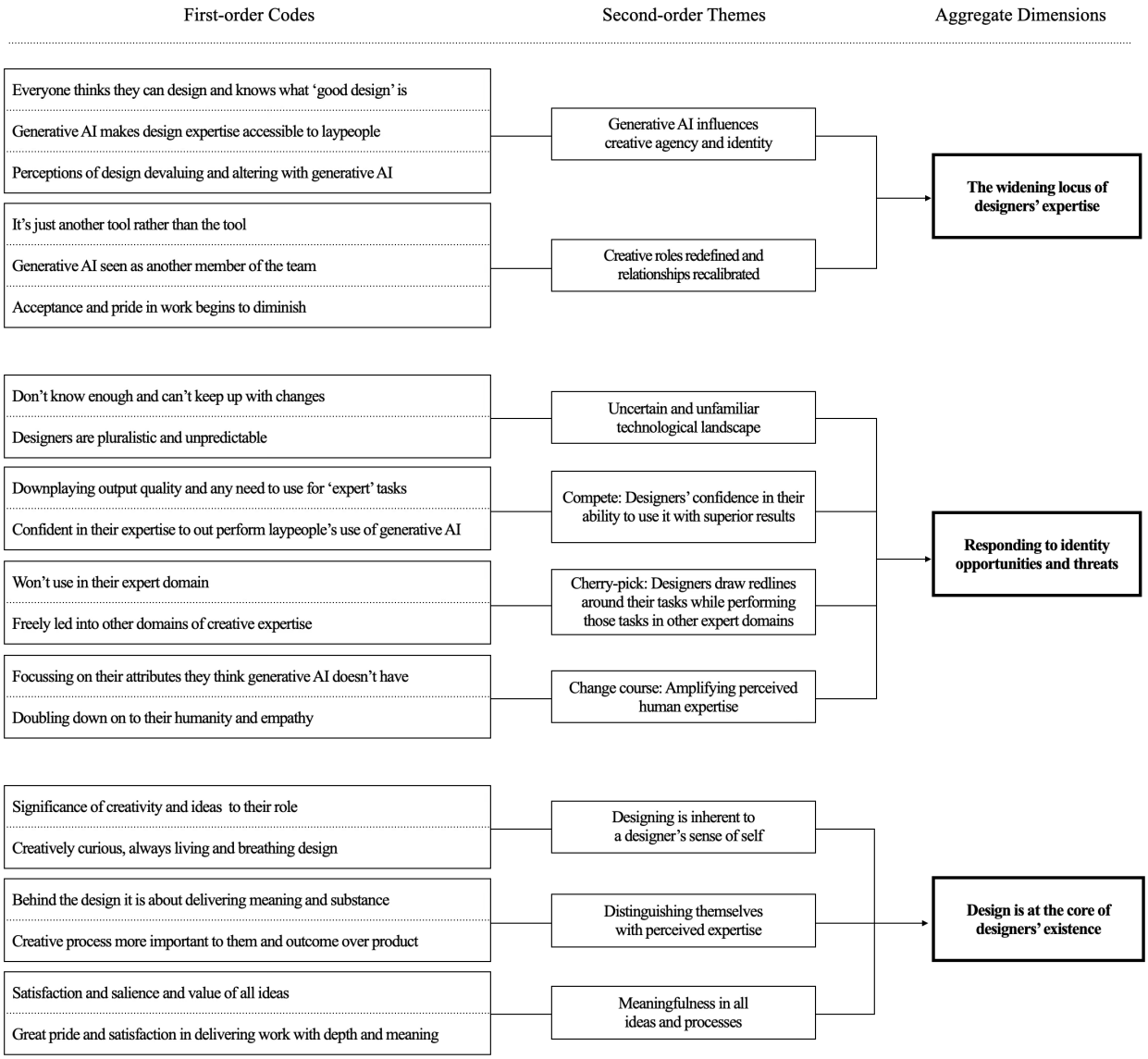

Figure 1-1: Data structure

4 Findings

The findings are first framed within the landscape of the nascent technological innovation of GenAI in which they were collected. Conducting research in real time with a nascent technology like GenAI meant that the technology's capabilities and availability increased throughout the interview process. Therefore, the designers interviewed drew on a broad

spectrum of first- and second-hand experiences to shape their perceptions of GenAI. The spectrum spanned from *never knowingly used* at one end to *weekly use* at the other. Designers were found to use GenAI in various ways and at different stages of their creative process, further highlighting the pace of technological change and the breadth of responses from the designers interviewed. Notably, although most designers were unaware of the full extent of GenAI's capabilities and had a limited understanding of where and to what extent the technology was being used, they were not short of opinions about the technology, what it generates, and what the output means to them.

What was also apparent was the level of significance designers placed on creativity in their expert work, as stated by one designer as being '100% the most important thing' (#20 Global Head of Design). Some designers expanded on the overarching sentiment, describing it as being 'Vastly important for any designer […]. That should be the heart of what we do' (#22 Principal Product Designer). They also described it as being the core motivating factor for all they do, with it being 'Really important. I mean, it's the only thing that keeps me interested' (#24 Mid-weight Designer & AI Facilitator). Furthermore, designers described how their output and ideas contained an expression of their sense of self: 'It's 50% like personality and a lot more than 50% like ideas, and what I bring to the table, I guess […] there's a little bit of me in there somewhere.' (#20 Global Head of Design). Or as another describes it 'Like a personal brand, right. That's kind of my bread and butter. That's sort of what I'm selling in. So I'm like, you know, ideas that sort of reflect my personality a bit' (#15 Principal Digital Product Designer). However, that expression may not always be explicit: '100% [self-expression]. It's not necessarily about the execution of something. It's more about the process' (#14 Senior Designer).

This section continues with findings steered towards designers' identity, expertise, and responses to GenAI in their creative work. First, with the increased accessibility and usability

of GenAI, I observe *the widening locus of designers' expertise*. Second, I report that designers are *responding to identity opportunities and threats*, triggering varied response strategies. Last, in line with past research, I found that a designer's sense of self is inextricably intertwined with their work and perceived expertise, showing how *design is core to designers' existence*. Supporting statements by designers are provided inline, with additional comments presented in Tables 1-2, 1-3, and 1-4 for the sections 4.1, 4.2 and 4.3, respectively.

4.1 The widening locus of designers' expertise

Having established that creativity is a key motivation in designers' work, this section proceeds with designers describing how *generative AI influences creative agency and identity*, followed by its impact on designers' work, where *creative roles are being redefined and relationships recalibrated.*

4.1.1 Generative AI influences creative agency and identity. Designers' creative expertise encompasses their knowledge, skills, and experience in performing tasks within their specialist domain (e.g., graphic design) to a higher quality and greater capability than individuals not from the same domain. Although GenAI does not explicitly codify a designer's creative expertise, it utilises enormous computational power and data sources to accurately mimic the designer's output. Hence, the 'democratising effect' of GenAI refers to its accessibility and usability for novices to perform expert tasks. These tasks were previously not possible without the skill, experience and membership of an expert community. In this framing, GenAI is found to have the potential to place creative expertise in the hands of novices. Moreover, with the inextricable relationship between creative workers, their work, and identity established in the existing literature, this new agentic technology—GenAI—unsettles those assumptions and the legitimacy of designers' expertise.

GenAI represents a shift in the established order of agency in performing creative tasks, with designers increasingly aware that the technology is opening the door to their domain. A situation that presents direct risks to the established practice of designers:

> 'Stakeholders having access to everyday tools is disruptive, because they can come up with designs or come up with things of their own, you know, perspective, without taking into account, you know, many of the things that designers are aware of and come up with, so the, the availability and the ease of use, you know, makes some of those early stage conversations harder, because a number of stakeholders or technology partners might think they already have the solution in place' (#09 Executive Director, UX).

Some designers do suggest it is 'Probably a good thing, that anybody essentially can, you know, be a designer' (#55 Senior Graphic Designer). A feeling also reflected by this designer, who contends, 'The people that are really excited about it are the people that haven't got the skill sets to do the things that these applications allow them to do' (#56 Design Director / Principal). Building on this point, the next designer reveals how GenAI is seen to be opening up 'A world for people who aren't as creative to be able to use that creativity, those creative assets, and that's great. But it's not original' (#59 Experience Director). Or as one designer asserted, GenAI is for 'People that don't have any expertise' (#30 Creative / Art Director). In short, the consensus of designers is that GenAI 'Means that more, less creative people are going to be competing or […] making work that's very similar to work that I make' (#03 Motion and 3D Designer). Thus, GenAI is encroaching on territory that is inherent to their identity. Nonetheless, for all the talk of GenAI being for people not like them, designers' inherent curiosity leads them to explore the possibilities of GenAI, albeit muted amongst many designers interviewed:

> 'I thought this is genuinely exciting […] and you know in design after 24 years, what's the new thing? What am I going to get really riled up about? And when I saw Midjourney, I was like, 'This is it.' I want to try this out.' (#50 Senior Graphic Designer)

In a similar vein, designers saw it as 'Being useful as a base tool for a lot of things we do' (#46 Creative Lead), with their assessment of GenAI falling broadly into two camps. The first sees them positioning it as a tool, not dissimilar to those they have learned and adapted to

through their careers, such as Computers, the Internet, or, as one notes, ‘For us, it’s another tool in our arsenal that’s going to help us create better work’ (#06 Creative Director). Indeed, many designers liken it to ‘Another tool that I can use to drive progress towards a solution, and you can only see that dependency on that is going to change’ (#52 Executive Creative Director). Notably, this designer foresaw that their use and relationship with GenAI will not stay static.

As open as designers appeared to be in exploring uses of GenAI, it was a measured and at times conflicted response as demonstrated by this designer, who contended that ‘Anybody could do it. And that’s the point, isn’t it, of these tools […] I mean, you could, on one hand, say that what they’re doing is democratising specialist problem-solving by giving everybody access to it. But by that same measure, you’re undermining everything there is about human specialisation’ (#41 Principal UX Consultant). The wavering uncertainty also surfaces in this next designer’s statement:

> ‘It’s quite exciting. I think I’m quite optimistic about generative AI. And I know some people are really not optimistic at all about it. But yeah, I think anything that makes design more accessible to more people is quite exciting. I think that it also could be a hindrance.’ (#08 Junior Designer)

Moreover, designers have always had to contend with the perception of design being just drawing images. As one designer puts it ‘People consider design to almost be a low bar, just because somebody can paint the wall and match curtains to it, they think that they have an eye for design’ (#17 Head of Human-Centred Design). Hence, GenAI is compounding an existing feeling amongst designers that ‘People already don’t understand the value of creativity’ (#25 Mid-weight Designer), something exacerbated with GenAI, as one suggests, ‘People just think it’s like we’re pressing a button, and you know, magically appears’ (#19 Creative Director). Indeed, designers feel that they have fought to attain their position, drawing attention to their experience and time served, ‘As a creative person, when you’ve spent seventeen years honing your skills […] spending thousands or tens of thousands of hours […] it’s quite annoying when someone with no skills could just use a text prompt’ (#03 Motion and 3D Designer). This

feeling is shared by other designers, with one highlighting the thousands of pounds spent on educating their expertise, and the real-world effect this has on them. ‘For me personally, who’s spent forty-five grand on a graphic design education, or whatever I’ve now got as loans. If people are able to just sort of like pick up the software and make something by generative AI magic, then that would […] be an issue for me because I’d have a lot more competition’ (#08 Junior Designer). Thus, the democratising effect of GenAI has triggered a complex and unprecedented forced period of reflection and recalibration of roles and the long-standing relationships of designers.

4.1.2 Creative roles are being redefined and relationships are being recalibrated. Designers were acutely aware that the locus of their expertise was no longer exclusively around them as designers, or even exclusively human. They are unequivocal in the distinction between the two, that GenAI is ‘Not the same as a life lived and experiences collected and emotional […] it’s got to be different because the process the equipment that they’re using, to do it is different to the equipment and the experiences that human beings are using’ (#61 VP Exec. Creative Director).

Nevertheless, designers are aware of a growing requirement to learn and work with GenAI because ‘It’s not necessarily as strong and as customised [as me, but] I think unless we figure out how to work with those and create things that work alongside them, I think it does kind of run the risk of outpacing us’ (#46 Creative Lead). Getting ahead with the technology was often how designers felt they could navigate the transformation they were experiencing: ‘I just need to make sure that I’m familiar with that going forward’ (#21 Creative Director). The majority of designers acknowledged that GenAI could not be ignored, believing it would be helpful to support aspects of their design work. Notably, with them keen to offload uncreative, repetitive and process-driven tasks, ‘I think there’s a place for it like this stuff that’s so uncreative that you just need it though […] they can go and use a robot because I’d have to be

doing that' (#47 Senior Motion 3D Designer). Designers also report seeking opportunities to use GenAI and project a sense of security in their roles: 'I'm probably more positive than negative about it. But I'm sort of apprehensive' (#02 Creative Director). Likewise, other designers share a conflicting assessment of the future: 'I think at the moment the gap is still huge, so there's no imminent worry. I just think it will change employment for people, and it will change job roles' (#24 Mid-weight Designer & AI Facilitator). The designer, when mentioning the 'gap', is referring to the space between their innate creative expertise and the accessibility and capability of GenAI, and what this means for roles and relationships. Many designers who entered the industry with a good idea about role development, career progression and organisational structure reported uncertainties about their future due to the potential for unprecedented changes in the industry, as one highlights:

> 'Macs and Photoshop completely transformed the industry. And I can see the same stuff happening with AI. I don't know if it will. But I think it's a possibility that there's a vast transformation. I think that's an incredibly exciting place to be […] slightly terrifying.' (#22 Principal Product Designer)

What is notable about designers' statements is the inescapable nervousness that often accompanies enthusiasm. Indeed, GenAI is widely seen as posing challenges closely tied to designers' identities, while also presenting opportunities to expand designers' expertise.

Designers' views on how they position it in workflows and the team stretches from one end as 'Another tool in our arsenal that's going to help us create better work' (#06 Creative Director), similarly as being 'Just another tool that got used.[…] It's another thing, rather than the thing' (#43 Senior Interface/Visual Designer). At the other end, designers describe GenAI as being more than a tool, and closer to being a team member, with some describing the relationship with it as akin to that of a new and inexperienced team member. As this designer suggests, 'You need to treat it like a first-year apprentice or like a person who's doing work experience in high school or university, right like they can do it. It's going to be passable, but it's never going to be your final product' (#38 Junior Innovation Designer). Designers share

their perceived limitations of its capability. ‘It’s like an intern or a junior. You know, where you kind of get like discrete tasks, and then you have to use your experience and judgement to evaluate [it]’ (#62 Design Director).

As with any work setting where designers must establish and maintain relationships, their interaction with GenAI is seen as no exception. Once acquainted, designers can learn how to work with the technology to understand its strengths and maximise its potential. However, although designers position their relationship with GenAI as akin to that with a human colleague, their behaviour towards, and language used by designers to describe GenAI is unlikely to be used towards a human colleague, with it belittling and describing GenAI as an ‘Embarrassing cheesy uncle’ (#23 Creative Director), with ‘Dodgy kind of stuff going on’ (#26 Creative Director) and it being an ‘Enormous metaphorical vacuum cleaner’ (#61 VP Exec. Creative Director). Similar unfavourable language is used to describe what it generates. For example, one designer referring to the output says it is ‘Generic content. It just looks like trash’ (#47 Senior Motion 3D Designer) and as a ‘Horrible kitsch pastiche’ (#42 User Experience Director). Thus, designers do not give GenAI or its output equal status as humans, even after positioning it as a team member.

Although still in its infancy, changes are already happening as a result of GenAI. These changes necessitate designers to forge new relationships with this nascent, synthetic entity that challenges the meaning of their work, relationships and output, all of which are at the heart of their creative identity. The depth of the relationship between designers’ identity and their creative ideas was evident before GenAI. The newness of GenAI meant that, when reflecting on their attachment to their work, the majority of designers referred to those self-generated.

> ‘I mean, it can it can be quite an emotional thing […] you’ve taken something and you’ve put it out there in the world. So you know, it can mean quite a lot […] it’s not like just doing sort of just, you know, just a job that anyone can do.’ (#10 Mid-weight Designer)

This connection with the ideas and creative output suggests that the widening agency of creative expertise will unsettle designers into recalibrating their relationships with their ideas and output, with clients, and unavoidably with their sense of self and identity. In short, designers 'Don't think it has the same satisfaction of being creative as humans do' (#54 Senior UX Director). A position underscored by this next designer, who sees a void in the meaningfulness of GenAI's output, 'Nothing to do with me, went into a box [algorithm] and it did something clever and came out. […] I can't take any credit for sticking the words at the beginning' (#42 User Experience Director). The strength of conviction in belief between human-generated content and GenAI-produced content was unequivocal with some designers: 'I still feel very strongly that I enjoy [using GenAI] less than the pure creation. So I think even if that was part of the process, and even if it was more efficient, I think it would still be lacking. The thing I fundamentally enjoy, which is the actual creation' (#46 Creative Lead).

Indeed, as alluded to in this next designer's comment, designers widely hold a position that GenAI could never have the capability to threaten their perceived core expertise: 'I really can't see AI ever getting to a point for us where it replaces the ideation phase of a job' (#06 Creative Director), or as this designer suggests, they are happy to 'Give it [GenAI] criteria and [for it to] give you some ideas […]a source of inspiration, but not as the source to create' (#11 Lead Digital Product Designer). Designers also reported already experiencing changes to long-standing relationships and norms in their practices by GenAI, where the 'Dependencies on agencies [and] on designers have been historically, I think it's starting to change' (#52 Executive Creative Director). One designer described changes in their relationships:

> 'It's already changed how we use suppliers […] a big shift, where we'd normally involve many more people in the process of design. So it's already sort of narrowed the field of sort of specialisms that we interact with […] and I can see that probably getting narrower.' (#21 Creative Director).

In sum, designers' optimism and excitement for GenAI were often tempered by a secondary statement expressing concern or uncertainty. Designers are experiencing pressures

and changes in their work and relationships, albeit to varying degrees, that are inseparable from their identity. Although many suggest they feel safe in their roles, designers convey a nervous enthusiasm for this inescapable predicament. GenAI places designers' identities in uncharted territory, as reflected in the diversity of responses as they navigate it.

Aggregate Dimension: **4.1 The widening locus of designers' expertise**		
Second-order theme		Statement
4.1.1	**Generative AI influences creative agency and identity**	*'I feel like it probably externally [GenAI] does slightly devalue a lot of what we do because there's a huge populace out there that probably wouldn't be able to tell you if one logo versus another […] was better' (#21 Creative Director)* *'I feel like it's going to devalue the work that is done and I think it's gonna make workers out there worse. Because the people that aren't that great can make things that are okay' (#56 Design Director / Principal).*
4.1.2	**Creative roles redefined and relationships recalibrated**	*'I still think that ultimately them tools will somehow where the design team will just be yet another tool in the arsenal. But design teams will be smaller or remember and will rely on AI to do more with less' (#17 Head of Human-Centred Design)* *'We like to think of GenAI it's just another person in the room really just another designer and you know, that may change actually, you know, sort of that servant master kind of relationship may' (#52 Executive Creative Director).* *'You'd be briefing yourself out of part of your part of your job in a sense. I mean, I know it's a tool and […]output is only as good as what you input. But you're not going to be inputting every single detail it's going to output at the same time[…] what's the difference between briefing in an AI to generate a button and briefing in a designer?' (#11 Lead Digital Product Designer).*

Table 1-2: Supporting statements for the democratisation of designers' expertise

4.2 Responding to identity opportunities and threats

As GenAI emerges, designers are experiencing growing uncertainty surrounding their work practices and, consequently, their creative identities. Designers share concerns that the democratisation of design by GenAI undermines the legitimacy of their perceived expertise, because 'If GenAI is coming up with ideas, I do think that could devalue some of our work' (#38 Junior Innovation Designer). A feeling shared among designers is this broader concern for what GenAI means for the future of the design sector, with many questioning, 'Who cares if it's only 80% as good? Only 75% as good as what [I] could do? Because, you know, like, you know, this robot has done it for a fraction of the cost' (#41 Principal UX Consultant). Similarly,

this designer explains how they ‘Feel like it’s going to devalue the work that is done […] because the people that aren’t that great can make things that are okay’ (#56 Design Director / Principal). Or as another said, ‘It’s not going to feel like a cheat to someone else who’s not invested in, you know, a lifetime of dedication to a subject [they will] just think, oh, it’s going to cost us less. Let’s go with that’ (#47 Senior Motion 3D Designer). Relatedly, designers also cautioned about the impact designers’ perceived use of GenAI will have because ‘One of the traps that we could fall into and I feel very strongly about this is that like, if we lean on it too much, people will know and people be like, “Well, I could just make this myself”’ (#39 Senior Learning Designer).

As a result of democratisation, the shift in the balance of power and creative agency with GenAI, away from the exclusive and identity-defining creative control, leads designers to respond in ways that see GenAI as both an opportunity and a threat to their identity. The responses are group into three categories: i) To *compete* with GenAI and novices with confidence in their ability to use it with superior resuls by exploiting their idenity defining expertise; ii) To *cherry-pick* the use of GenAI by drawing symbolic redlines to protect specific identity defining tasks while engaging with GenAI for mundane task in their domain and exploiting it in other expert domains; iii) To *change course* away from using GenAI and instead amplify and advocate for their inherently ‘human’ expertise. The remainder of this section expands on these three response types.

4.2.1 Compete: Designers’ confidence in their ability to use it with superior results. Designers downplay the creative potential of GenAI but also claim that they can achieve superior results to novices on the same task. Designers assume that, in their control, GenAI will produce outputs of greater creativity and substance than those of novice designers. A position formed from their years of experience and honing their identity-defining expertise: ‘Everybody can be creative, but I don’t think everybody can think of ideas in the same way

because of who they are, what their experiences are' (#20 Global Head of Design). Designers suggest that the output of GenAI is only as good as the person using it, and with this logic, their expertise means they will produce superior results. A position exemplified by this designer who asserts that, 'If you if you don't have this expertise, if you can't actually imagine what you want to get, you won't achieve great results […] as professional designer I think I will be, will still [be] more successful than those who are not professional and just using these tools' (#30 Creative / Art Director). Other designers shared similar views on the influence and importance of expertise when using GenAI: 'You have to feed it. And I think you have to have that knowledge of design in order to feed it correctly' (#34 User Experience Lead), and as this designer spells out, 'I'm still hoping that with the skill in the background, if I did use AI, I'd use it better than someone who doesn't have a design background' (#05 Senior Graphic Designer).

Overall, these responses relate to the belief designers have in their innate ability to perform creatively. Designers recognising the risks to their practice and, accordingly, to their creative identity, see it as an opportunity to actively *compete* with GenAI and potential risks by leveraging their design expertise. In short, they intend to tackle GenAI head-on, believing they will be more expert in its use than a novice.

4.2.2 Cherry-pick: Designers draw redlines around their tasks while performing those tasks in other expert domains. In the second response type, as with the first, designers report exploring how to use GenAI. However, whereas the first response was more about belief in creative ability, this response concerns the acceptance of external creative agency. Designers describe the selective acceptance and use of the technology for monotonous and repetitive tasks. The 'Things that help with mundane processes, I'm very up for things that get in the way of creativity, yeah, I'd say efficiencies are good, but replacing the sort of creative process I'd be a bit nervous around' (#21 Creative Director). As this demonstrates, designers respond with symbolic redlines that simultaneously suggest GenAI as an opportunity to explore and a threat

to mitigate. As one explains, ‘I wouldn’t like it to just kind of be like […] just press the button and make it and then you know, I go off, and I would lie down and [have] a cup of tea or whatever’ (#43 Senior Interface/Visual Designer).

This distinction surfacing with many designers is around tasks closely associated with their perceived expertise, such as this designer who described ‘The redline [I would not] cross is using it as a client to generate a final product for my client. I wouldn’t do that’ (#31 Mid-weight UX/UI Designer). Or as this designer puts it, ‘If I was being asked to use that solely to generate ideas, and those were the only ideas we could work on, I would probably quit’ (#38 Junior Innovation Designer). Designers’ discomfort with delegating autonomy to GenAI in their domain of expertise is inferred as a means of maintaining power and control over their perceived expertise and the status and distinctiveness it affords their creative identity. In short, it ‘Feels disingenuous, like it feels kind of cheating’ (#03 Motion and 3D Designer).

However, as designers drew theoretical redlines around their expert tasks, they also spoke freely and enthusiastically about using GenAI to cross expert boundaries into different expert domains. An example of this conflicted behaviour comes from a designer describing using GenAI to perform the work they would have once employed an artworker to do, as they experience ‘Huge benefits of Photoshop, with its generative fills on a job that we’ve been on. It’s been an absolute lifesaver […] speed, and actually, the outcome has been brilliant (#21 Creative Director). Designers offered further examples where the capability and accessibility of GenAI meant they were utilising it to access different domains of creative expertise, such as copywriting:

> ‘ChatGPT fills a gap for […]. If I get a briefing at four o’clock, and I want some taglines to start work on the next day [my copywriter] is not always available. So I’ve been using that more and more.’ (#13 Head of Digital Design)

Designers also describe substituting photographers and professional photoshoots, as one explains, ‘GenAI makes it possible […] before, we had to do proper shoots for this, but now

GenAI just creates another possibility' (#40 User Experience Lead). While another designer talks of using it when an illustrator could have been used, 'We used MidJourney to create these really amazing epic filmic imagery […] I used another AI tool to make still images move, so it was proper immersion in [GenAI]' (#25 Mid-weight Designer). Thus, designers symbolically *cherry-pick* the use of GenAI, avoiding it in their expert domain while using it freely for the same tasks in other creative domains.

4.2.3 Change course: Designers advocating for skills beyond GenAI's perceived reach. Unlike the first two responses, in which designers, guided by their expertise, engage with and use GenAI, this third response reveals a different path that does not involve navigating the use of GenAI. Instead, designers focus on their distinct human expertise. Indeed, most designers amplified and advocated for their inherent humanity, empathy and relational expertise, 'It's about the relationship, the human quality, the stuff that can't be generated through input or output' (#09 Executive Director, UX). Or as another designer described, 'People aren't coming to us for the type of Macs we use or what Creative Suite we've got or whether we use AI or not. They're coming to us for our brains and how we think' (#06 Creative Director). Much like technological changes to date from traditional artificial intelligence, many convey a sense of immunity to change due to their perceived capabilities beyond those currently with GenAI:

> 'I might be really naive in thinking this, but I feel like as a designer, it will be difficult to do a lot more of the thinking of the process that a designer can do […] as a designer, you've got to have the holistic view.' (#21 Creative Director)

Designers explicitly drew attention to their unique humanness, which, when combined with their expertise and identity, is felt to give them a distinct advantage in design over machines: 'I do think there is that point of difference, and I do think people will deep down connect better with a human creative process than a generative one' (#57 Senior Graphic Designer). Or as another designer asserts that '[Designers] are going out of their way to say this isn't generated, this is like [human] made' (#03 Motion and 3D Designer). In a similar

vein, other designers argued for more specialisation in design tasks such as problem analysis beyond the capabilities of GenAI, 'I always try and get a really deep understanding of my topic that I'm working through' (#23 Creative Director), questioning 'I just don't know whether something that can kind of constantly generate quite quickly, whether it's ever going to get to that depth' (#02 Creative Director). Overall, designers' responses in this category are captured by this designer who remarked, 'I don't believe that ideas from a computer […] have that human empathy' (#17 Head of Human-Centred Design). However, a potential reason for this response is a largely unspoken theme: there is nothing else.

> 'If you have a tool where you can ask it all the same questions or feed it the same information that a client would potentially give to me […] I think there's the only distinction, […] I'm a human and I could build a relationship with the client.' (#46 Creative Lead)

These responses by designers are framed as *a shift* from being directly threatened by or using GenAI to instead focusing on tasks and a future that requires humanness.

Aggregate Dimension: **4.2 Responding to an identity opportunity and threat**		
Second-order theme		Statement
4.2.1	**Compete: Designers' confidence in their ability to use it with superior results**	*'But people who want something really new and interesting, like yeah, we'll need to still be bringing that and at the moment, I think that's generated from our kind of human creativity.' (#39 Senior Learning Designer)* *'I don't think, currently, what I do is.' (#23 Creative Director)* *'A professional designer I think will be more successful than those who are not professional and just using this tools for.' (#30 Creative / Art Director)*
4.2.2	**Cherry-pick: Designers draw redlines around their tasks while performing those tasks in other expert domains**	*'I do use it. I think someone asked me to take replace some people in the background of the photo not long ago for a postcard. And actually, the AI was pretty good for that quick easy would sort of thing that might have taken me a while.' (#32 Creative Director)* *'I used ChatGPT to quickly like reword things really useful. I also used it for all the SEO copy on my website […] when it comes to actual creative idea, that is when I think it needs you need to kind of think ethically about your presenting ideas for client, which essentially they've hired you as a creative person and your skills and your experience to give them an idea. And then the idea that you give them is actually been like generated for them. I don't think it's right (#55 Senior Graphic Designer).*
4.2.2	**Change course: Amplifying perceived human expertise**	*'I don't I can't see computers taking over that sort of, you know, that role as you know, a creative you know, as a you know, a designer for instance, it's sort of like I think, because it's so personable, it's about people' (#10 Mid-weight Designer).*

		I think maybe I'm being naive, but I like to think that you will still need humans driving it' (#15 Principal Digital Product Designer) *'It's empathy, and it's connection. Because, like I said, so much of what we do is help people navigate ambiguity. And you know, a lot of that is just building an interpersonal relationship with the person and helping them feel comfortable […] helping our clients in the business navigate that ambiguity and we're trying to be the sort of like guiding light for them through that process' (#38 Junior Innovation Designer)*

Table 1-3: Supporting statements for diversity in designers' identity-related response strategies

4.3 Design is at the core of designers' existence

Beyond seeing *design* as a reflection of their identity, designers' descriptions of their relationship with design suggest something more profound and reverent than how they see themselves or how they perceive others see them.

4.3.1 Designing is intrinsic to a designer's sense of self. For many, *design* was not a career direction they consciously chose over any other: 'I mean, for me, it's just been my lifeblood. Really, it's like it's almost like breathing is creative […] it's kind of just intrinsic to you know, even since, you know, as far back as I can remember at school is the only thing I was any good at' (#32 Creative Director). The creative pathway towards design was the only one they saw, with designers sharing that 'It was kind of all I ever really wanted to do was design in some capacity…it's just kind of life' (#55 Senior Graphic Designer). Similarly, for one designer, 'When everyone else had Mega Drives, I got an Apple Mac as my first sort of computer, so I've sort of lived and grown up with design and print since I was very young' (#06 Creative Director). Designers paint a picture of an innate ability and skill developed into expertise through years of experience, and a desire to produce the highest standards—never content with good enough. Standards they acknowledge at times can be challenging to manage, 'I don't ever want to say that's good enough, and actually don't, but I wish I did [that] a bit more, you know, I mean like life would be easier' (#19 Creative Director). Designers' perceived expertise is a personal motivating factor, 'I need to be an expert at my craft' (#58 Creative Director), and it was evident that design was core to their existence:

> ‘Creativity […] that’s the DNA. That's what gets me up. You know, I am, first of all, I’m a designer. I’ve spent years designing and creating. I love it […] literally comes from in here [the heart].’ (#53 Experience Director)

4.3.2 Distinguishing themselves with perceived expertise. Designers’ perceived distinctive expertise is the ‘superpower to be able to problem solve’ (#59 Experience Director), which reflects a broader sentiment that views idea generation through problem solving as ‘synonymous [with] creativity’ (#41 Principal UX Consultant) and as an inherent and distinguishing aspect of their domain expertise. Designers distinguish themselves by attributing their expertise to years of experience, ‘Everything I’ve learned, everybody I’ve worked for and worked with’ (#05 Senior Graphic Designer). Indeed, designers are living and breathing design; their personal experiences are as important and equally influential to their practice as the professional ones, ‘About thirty-nine years’ worth of experience has gone into this’ (#37 Junior Service Designer). Designers’ perceived expertise allows them to believe they can solve problems that others cannot. As one designer explains:

> ‘It takes experience, right. It takes knowing, you know, being able to look at a bunch of ideas […] and go, “those three have legs, and they might work. Those ones are going to come unravelled because of X, Y and Z.” You know, it’s having the experience to do that’ (#49 Creative Director).

Contributing to their expertise is time spent honing their craft and acquiring knowledge of successes and failures—in short, all ideas matter to designers. Another designer shares a similar view, ‘To get to the good stuff […] for me it’s part of the creative journey to go through all the, you know, the rubbish first ideas […], and I think for me, the unexpected outcomes are the ones that stand out. So I think there’s definitely value in those ideas that don’t work as well’ (#06 Creative Director). Embedded in this process is the designer’s belief in the meaningfulness of the work designers are doing: ‘We’re actually making a difference […] the stuff that we’re doing and helping them with design changes and all the different ideas […] I’m proud of the work that I do’ (#29 Senior UX/UI Designer). The meaning and

meaningfulness of the designers' work, expressed in the pride for what they do, are explored in greater depth in the next section.

4.3.3 Meaningfulness in ideas and processes. Designers' creative process and the perceived value (meaningfulness, not monetary) of what they create are arguably as significant as the final aesthetic of the artefact. Designers' sense of meaningfulness in their work generates a feeling of pride, which is reflected in their responses to what they do and the impact it has. The significance of ideas was made clear by this designer, who asserted, 'Ideas are important to my role. If I ran out of ideas, I'd be like sh#t out of luck' (#38 Junior Innovation Designer). Indeed, many described the critical role ideas play in their work 'Because that's the start of the journey […] there's a little bit of me in there' (#20 Global Head of Design). Some designers compared their connection to ideas as akin to the bond between parent and child: 'A sensation of giving birth to an idea. I think that's what gives it [the idea] attachment and ownership' (#17 Head of Human-Centred Design). The time and experience designers have to nurture their ideas contribute to the meaning and attachment because after 'You've crafted this thing over a period of time, you're very much involved in it' (#11 Lead Digital Product Designer). Indeed, many designers described this close attachment to their ideas, even questioning how designers could not feel any attachment:

> 'There's absolutely no question about it […] are there any kind of creative people who wouldn't feel ownership over what they're creating?' (#35 Head of Service Design)

Here, in describing doing the right thing, the designer is referring to producing work that they believe is not only visually appealing but that has substance, or put another way, something that has a meaningfulness to the designer, as they explain: 'I can't present anything without feeling some element of pride or professional, you know, professional pride that I would never ever show anything to anybody if I didn't think it was the right thing' (#43 Senior Interface/Visual Designer). A core factor in designers' satisfaction and meaningfulness in their work is the relationships. 'I think it's probably one of the reasons why I love doing what I do

[…] when somebody else [the client] is like, “Oh, this is great. This nails what we want”, like that’s that reward’ (#55 Senior Graphic Designer). Nonetheless, the broad capabilities and accessibility of GenAI are having a profound impact on designers’ work, relationships, and identity.

Aggregate Dimension: **4.3 Design is at the core of designers’ existence**		
Second-order theme		Statement
4.3.1	**Designing is inherent to a designers’ sense of self**	*‘I am practising what I should be practising because I think if I didn’t have ideas, I wouldn’t be a creative person’ (#40 User Experience Lead).* *‘I feel like now there’s almost like an innate creativity that I feel like that is just because to make something to produce something new, ultimately, is to create. So there is always creativity’ (#43 Senior Interface/Visual Designer).* *‘I enjoy a craft, my job, my role, the reason I get up and go to work, like, like it’s not, I’m not looking for someone to help me do that solution, because that solution is part of what I enjoy in my life’ (#56 Design Director / Principal).*
4.3.2	**Distinguishing themselves with perceived expertise**	*‘I don't believe that ideas from a computer his could be just be me like being like a creative. I don't believe they have that that human empathy’ (#17 Head of Human-Centred Design).* *‘It comes down to the fundamental isn't it? It's your DNA. It's your humanism, your ability to be able to notice very, very subtle things around behaviour around empathy. around seeing a problem as a creative thinker seeing a problem from a slightly different stance, that I don't think a machine will obviously be able to fully comprehend’ (#53 Experience Director).* *‘I think there’s nothing that can replicate what is in my brain, which is my own past experiences, these things I’ve been reading about, these things I’ve been thinking about, conversations I’ve had. There’s nothing else out there and no one else out there who will have that in the same way as I do […] anybody that I’m in the room with it is in exactly the same position. Nobody else is going to replicate. So everybody is bringing that uniqueness’ (#39 Senior Learning Designer).*
4.3.3	**Meaningfulness in all ideas and processes**	*‘There’s nothing better to get feedback from a client that you've really understood what they need, and that their audiences engaged with the brand in a positive way’ (#05 Senior Graphic Designer).* *‘Whenever I’m trying to make something [I’m] always trying to make it meaningful, because I think when people sort of understand something, it makes it so much more impactful’ (#10 Mid-weight Designer).* *‘I love the process. My favourite work is when the process basically informs the outcome. So I think, I think for me, it’s very important, part of the beauty and design and creativity is the journey to get there and I think it unlocks generally the finished outcome when that idea happens when’ (#24 Mid-weight Designer & AI Facilitator).*

Table 1-4: Supporting statements for design is core to designers’ existence

4.4 Summary

GenAI disrupts and threatens designers' identity-defining expertise, triggering a loosening of the attachment and meaningfulness to the process and products of their expertise, while simultaneously presenting them with the opportunity to offload work they find monotonous and the capability to access the expertise of other creative workers. As a result, designers are left grappling to simultaneously assert control and retain their status, while managing a transformation with their sense of self in a technological landscape that contributes to uncertainty and change.

5 Discussion

This paper illuminates the impact that the emergence and growing capabilities of GenAI have on the expertise and identities of creative workers. The empirical study I report here offers valuable insights into this phenomenon, using the in-depth, firsthand accounts of 56 designers. The research qualified that designers' perceived expertise (e.g., idea generation) was a defining and innate aspect of their creative identity, and GenAI was observed to widen the locus of designers' expertise—and with it agency—from professional to novice and human to machine. The design of a new technological system has long been understood to 'challenge traditional role relations' (Barley, 1986, p. 78), resulting in a power loss for one group and a power gain for another (Agrawal et al., 2022; Markus, 1983). However, what is distinctive in the research reported here is that the balance of power shows a shift is happening between designers and stakeholders, novices, but also between designers (humans) and machines.

Moreover, the power is shifting away and towards designers simultaneously. Notably, GenAI was seen as both an opportunity, providing new expertise previously inaccessible due to social structures or a lack of knowledge, as well as a threat to their work and creative identity. In what follows, I further reflect on the findings, elaborating on those particularly salient and

distinct in light of the existing literature, or that support and extend existing assumptions. I also offer opportunities for future research.

5.1 The widening locus of creative expertise

5.1.1 Locus of creative expertise. The relationship between designers, their clients and partners before GenAI has been long established (Figure 1-2). I describe this dynamic between the different parties as the *locus of creative expertise*. I define anything in the locus as being the designers' perceived exclusive creative expertise, one that affords them distinctiveness status, and the power and control that comes with it. Designers' professional relationships with clients (external or internal stakeholders) and creative partners sit outside the locus and engage with designers, accessing their expert services. Designers may require specific tasks of a project to be outsourced to a partner (e.g., copywriting or web development). However, as shown, even when working with multiple clients and partners, designers typically retain a central role, with control over the process, partners, and the relationship with clients.

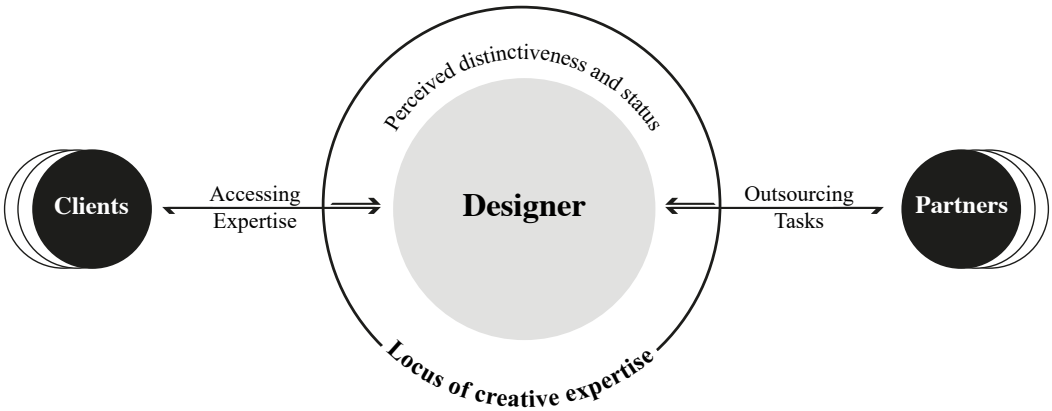

Figure 1-2: The locus of creative expertise illustrates designers at the core with professional relationships sitting outside (e.g., clients and partners)

5.1.2 The widening locus of creative expertise. Designers' practice and identity-defining expertise that afforded status and distinctiveness (Townley et al., 2009) are accessible and increasingly closely mimicked as the capability of GenAI grows. Thus, I introduce the concept of the *widening locus of creative expertise* to describe and illustrate the profound changes in established norms for the designers' expertise, relationships and control (Figure 1-3). With the

emergence of GenAI, the locus of creative expertise has widened to encompass not only clients and partners that once sat outside the locus but also include GenAI. Thus, the locus boundary is shown perforated, highlighting the now permeable nature of their creative expertise. Where designers once had an exclusive presence in the locus of creative expertise, they now have to respond to this change.

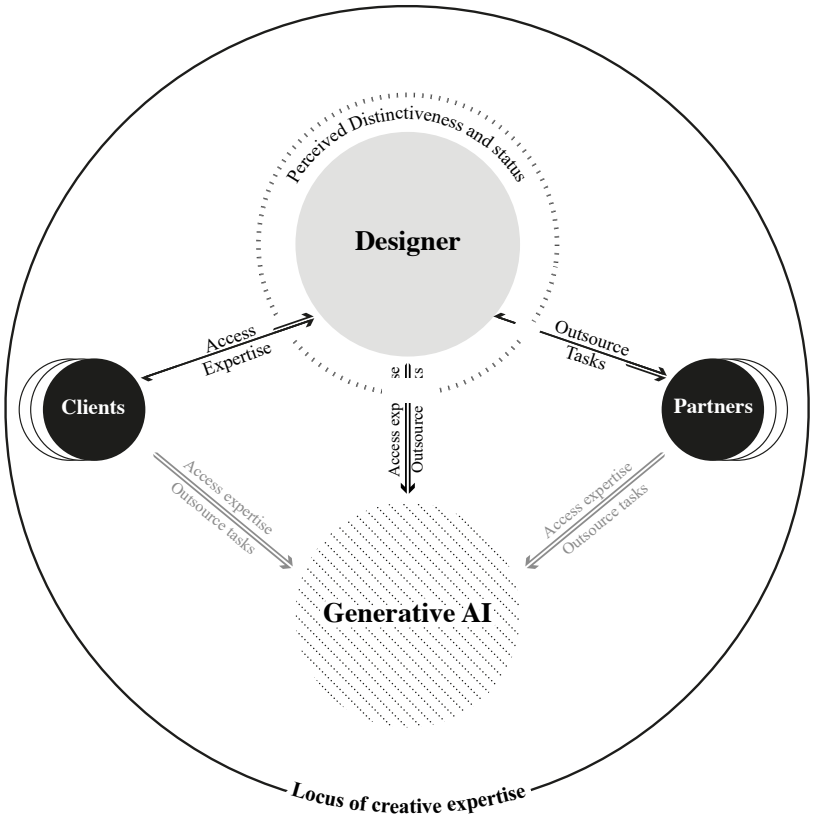

Figure 1-3: The widening locus of creative expertise encompasses professional relationships (e.g., clients, partners and GenAI)

What is also depicted in the figure is how actors once outside are now within the locus and have access to design expertise and skills—skills that defined designers' identities and conferred status and distinctiveness. However, it shows how designers are now harnessing GenAI as a substitute for outsourcing work to creative partners, such as copywriters. Strikingly, designers use GenAI to access creative expertise beyond their own perceived creative expertise. Therefore, as the locus of expertise widens, designers do not lose their expertise. Instead, their once exclusive domain expertise is democratised, their associated distinctiveness and status are

transformed as other actors and genAI access the locus. Hence, this illustrates how the widened locus not only presents designers with the threat of their perceived expertise being diluted, because anyone with access can now seek designers' expertise from agentic machines, but also offers designers the opportunity to offload work while exploiting it to amplify and extend their own expert capabilities.

5.2 Upending the established order of power and control, roles and relations

What GenAI is doing is upending the established order of roles and the location of control and power with creative expertise. The use of GenAI disrupts and shifts the agency of designers' work practices and expertise. A shift that is sometimes invited (e.g., by the designer when it is self-initiated), and sometimes forced (e.g., requested by employers or clients). It has long been understood that new technological systems have inherent political and social power (Winner, 1980) that often result in a power loss for one group and a power gain for another (Markus, 1983), with technology capable of challenging traditional role relations (Barley, 1986) and where that decision-making confers power and results in winners and losers (Agrawal et al., 2022). Building on these established findings, *widening the locus of creative expertise* represents an unparalleled multifaceted shift in the balance of agency and power over creative expertise in three distinct ways:

First, it is the release of the power and control granted designers through the status and distinctiveness afforded to their expertise; second is the power of creative agency shifting, once held by designers, now empowering stakeholders, clients and novices with the simple user experience, offering the expert design capabilities at their fingertips; and third it sees cognitive power shift from human to the computational power of machines.

It is democratising their expertise, with autonomy and control shifting from that of traditionally human agency within the boundaries of a community of knowledge workers, to the agency of a machine that is capable of assisting novices (including designers) to transcend

and perform expert tasks across previously impassable boundaries of expertise. Consequently, the inherent relationship between designers and idea generation means this power shift has wider implications than their perceived expertise and status—it goes to the blueprint of who they are—their creative DNA.

The majority of the literature leans heavily towards identity threats. This includes theoretical work, such as the 'identity threat process and response' model (Petriglieri, 2011) and a larger body of empirical research that reports identity threats from interprofessional collaborations (e.g., Ahuja, 2023), digital transformation (e.g. Nelson & Irwin, 2014) and, specifically, from AI (e.g., Strich et al., 2021). In contrast, I report the effect of threats and opportunities, which is a much smaller body of research. The findings support existing research in this domain, which shows that disruptions can be seen as both a positive challenge and a threat to identity and expertise (Beaudry & Pinsonneault, 2005). The findings are broadly aligned with theoretical work on opportunities and threats to identity (Bataille & Vough, 2022) and empirical research on the opportunities and threats that new technologies pose to identity (e.g., Perez et al., 2020; Korica & Molloy, 2010).

In addition to supporting and overlapping with this existing research, the findings reported here also contribute to it. The opportunities and threats of GenAI to designers' identity extend this literature by revealing the active, agentic role GenAI plays in the triadic relationship among itself, the designer, and novices (including designers exploring other creative domains). Designers see *opportunities* to use GenAI to process work in their domain and extend their capabilities into other expert domains. Designers also see GenAI as a *threat* because it is a new actor that widens the accessibility of their perceived expertise to two groups of actors. Both non-designers who gain access to the domain, and GenAI itself, which is increasingly autonomous and opaque, over which they do not feel in control. Moreover, the speed and exponential growth of GenAI is exacerbating the opportunities and threats and how this

research extends what has come before. For instance, creative workers may be in the middle of performing a primary and secondary appraisal of the identity threat (Petriglieri, 2011), or they might still be 'shedding' their old identity to enter a 'betwixt and between' state (Ibarra & Obodaru, 2016) so when the technology updates again or is integrated into a new product, it renders initial coping responses obsolete before it is complete.

These findings are distinct from and have implications for the existing literature due to the nature of the change brought with the emergence of GenAI. Change, which widens the locus of creative expertise and democratises expert knowledge and decision-making, results in designers facing opportunities and threats. This duality of choice triggers ambiguous responses, further contributing to the climate of uncertainty. Moreover, the significant changes that GenAI has undergone appear to also aid disruption at an unprecedented pace and scale. Thus, research exploring the nature of technological transformation and the ensuing disruption would be both scholarly and commercially valuable.

These findings also suggest that a deeper understanding is required regarding the nature of technological disruption and the perceived usefulness and acceptance of GenAI at the different stages of the creative process. Although designers perceive a potential dilution of their expertise, there appears to be variation in when and where they use GenAI throughout the creative process. Notably, surrounding decision-making (seemingly unconsciously) leads them to use it more freely for tasks perceived as less creative, and they exhibit less enthusiasm or perceived usefulness for specific tasks close to their perceived areas of expertise (e.g., idea generation). In this context, designers were also empowered by the technology, which enables them to acquire new skills and expertise. Simply put, widening the locus of expertise with GenAI is not inherently bad. By contrast, it presents both opportunities and threats, serving as both a designer's friend and foe.

Moreover, what stands out in this study is the fluidity of designers' responses at an intrapersonal level, in which they make a partial value statement and then say something to the contrary or at odds with it. This surprising and qualitatively rich narrative warrants further analysis in the current data and in future studies.

Other considerations in future research might involve developing new research methodologies to observe and capture research material—an increasingly challenging exercise due to the embedded and automated nature of technology—and should be a primary consideration and element of any future models or frameworks that incorporate emergent technologies. I interviewed designers while GenAI was being released and updated so that I could capture their real-time responses. The uniqueness of the findings illustrates the benefits of collecting real-time data. As such, I hope future research will recognise this potential and further explore shifting responses at an intrapersonal level at times of technological disruption. Doing so could, for example, explore the distinction between the constructs of relational identity, i.e., the nature of a role relationship, such as manager-subordinate, and relational identification: the extent to which one defines oneself in terms of a given role relationship (Sluss & Ashforth, 2007). The existing research assumes that these relationships are with a sentient being. This raises interesting questions relating to how, when and why creative workers might identify relationally with machines and/or in place of human agents, and identify when and at what stage in the creative process they occur.

5.3 More than just skill: Designers' expertise is identity-defining

Ideas are synonymous with creativity and have long been seen as an extension of the self, reflective of and reflected in our identity (Belk, 1988). Furthermore, hitherto, research has been based on the assumption that the ideas in question are generated by humans (e.g., Hagtvedt et al., 2024) and reinforced by suggestions that creativity (Osborn, 1953) and expertise (Pakarinen & Huising, 2025) are beyond the capabilities of technology to replace. Indeed, aligning with

existing research, the designers in this study viewed their expertise as an inextricable part of their creative identity and felt a sense of attachment and satisfaction toward the work they generated. Consistent with existing research on feelings of elevated status and distinctiveness (e.g., Townley et al., 2009), the designers in this study described idea generation and problem-solving as core to their expertise.

Identity research assumes that the sense of self is constructed and sustained through socially mediated discourse, experiences and work practices (e.g., Van Maanen & Barley, 1984). The infancy of the technology and the temporal nature of identities mean it is not possible to see the full impact of this at present. Nevertheless, when identity has long been socially constructed through experience and discourse, the opening up of agency and control—where team members and creative partners are substituted for machines—is sure to have consequential, likely profound, implications for creative workers, their processes and the creative identities as a whole. Indeed, research on occupational and professional identities stresses the significance of the relationship 'doing' and 'being' (Pratt et al., 2006) and the self-definition and enactment in the role (Ibarra, 1999). The 'enactment' of a role suggests designers perform the role when they are required to (i.e., at work). Instead, this study found that the depth of 'design' in a designer extends beyond enactment, with designers not distinguishing their professional and personal identities. In short, rather than being the 'enactment' of the role. What I find supports and adds to existing research. The act of designing for designers is more than a task and beyond an identity and sense of self. Instead, design for designers is an embodiment and lived experience that is so innate and habitual, it transcends the professional-personal boundary, subconsciously driving their existence.

The significance of expertise to the work and creative identities of creative workers serves as a springboard for future research. It is recommended to explore whether the democratising effect of GenAI on expertise results in similar identity implications and

transformation in the meaningfulness of work in other creative disciplines (e.g., illustration or copywriting), as well as beyond the creative industries to occupations where creativity may be perceived less central to their domain expertise (e.g., auditing). Addressing that question would provide further insight into the weighting of creative expertise in designers' identity and the implications of meaningfulness.

Furthermore, exploring the impact of this change to creative expertise at an industry and sector level also offers the potential for rich ground for discovery to understand how it might impact how organisations identify themselves internally and externally, and what changes in the meaningfulness of work at an organisational level might mean to employees and also for strategic business decision making, finally, with GenAI shown to democratise design. Thus, presenting designers with opportunities and threats to their creative expertise (e.g., idea generation) and creative identities, this paper hopes to encourage future research into its impact on creative workers, their creative partnerships, and client relationships over time. For example, investigating how creative workers develop their expertise from human-generated versus machine-generated ideas.

6 Limitations and Future Research

I encourage the research to be viewed with the following limitations and offer potent opportunities for novel and salient future research, in addition to those suggested above. The first acknowledges that my analysis is from a data set comprising only one collection method—interviews captured as a snapshot in time while the new technology was still emerging. The inherently temporal nature of change suggests that, to gain a deeper understanding of the phenomenon, a second snapshot would be valuable for comparative analysis. The speed of change with GenAI means that twelve months should yield salient results to better understand the perceived usefulness and acceptance of GenAI, and how expertise acts as a boundary condition or a moderator in that dynamic. There would also be value in other methods of data

capture, like observation and user diaries, where the context would allow it. Furthermore, consulting with clients and creative partners to elicit comparable perspectives would yield highly valuable insights.

Second, I took the sample from professional designers in the creative industries, who were identified as being directly and significantly impacted by GenAI for their problem-solving expertise. These findings focus on a single—albeit valuable—occupational community. Thus, I recommend opportunities for future studies in two opposing directions. One approach is to further narrow down the sample in the design sector by identifying two design professions (e.g., automotive designers and graphic designers), and then researching to draw a comparative analysis, identifying any distinctions between them and whether one is disproportionately affected more than the other. Seeking answers to questions that explore whether the type of creative output acts as a boundary condition to use would be of significant value to the design sector.

Lastly, I advocate for exploring the boundaries of expertise and knowledge by developing a theory on where and how close designers are comfortable with GenAI in relation to their expert domain—for instance, examining how the degrees of separation between GenAI and the perceived expertise may impact the decisions made by creative workers. Such work could compare how knowledge boundaries between design disciplines (e.g., automotive and graphic design) are affected by GenAI, and how designers treat professional boundaries with other sectors in the creative industries (e.g., between design and copywriting).

7 Conclusion

By turning attention to the human impact of GenAI at the work level, I qualified designers' expertise is inextricable from their creative identity. The unparalleled capabilities of GenAI to mimic designers' perceived expertise (e.g., idea generation), coupled with its democratisation and the ongoing tensions and disruptions it causes, afford designers conflicting opportunities and threats. As a result, designers' behaviour is unpredictable and inconsistent as they respond

to competing demands in a fluid landscape. This illumination of a valuable phenomenon, in an often overlooked yet fertile domain, represents an opening through which future researchers are encouraged to follow.

3.2. Paper II

Extending the Creative Process

1 Introduction

Technology has been integral to the creative process and problem-solving, dating back to the earliest stages of humankind with the creation of stone tools. More recently, innovations have revolutionised mechanisation, production, and automation, and have been responsible for occupations being sustained, changed, or, in some instances, displaced. In the creative industries (CIs), for instance, the printing press made knowledge more accessible and accelerated the diffusion of ideas; the computer transformed how creative workers developed their work and communicated; the internet transformed how we access knowledge. What these innovations have in common, despite being radical in their industrial and societal impact, is that the technology was always seen and used as a tool—sometimes an intelligent one—that creative workers have engaged with and mastered to amplify, automate, and augment their expertise and practice. In short, the technology has always been valuable yet subordinate to the creative worker. Indeed, the printing did not generate the ideas it was used to diffuse; the computer did not generate the work of creative workers, and the internet was not responsible for generating the content users access.

The latest development in artificial intelligence (AI)—*generative AI*—is distinct because it possesses broad capabilities for generating ideas (Cai et al., 2023) and for creative problem-solving (IBM, 2023). The accessibility and ease of use of generative AI (GenAI) also mean it has a 'broad and non-technical appeal' (Grimes et al., 2023, p. 1617). Furthermore, research at the intersection of radical innovation and the CIs is weighted towards the radical nature of what is generated and the creative outcomes (e.g., Cutolo & Ferriani, 2024), rather than the effects of radical innovation on creative workers' practice. Hence, as technology can now mimic human intelligence (IBM, 2025), rather than adding to the literature on innovative products, this research foregrounds how radical technological innovation disrupts the people and processes of the CIs.

Specifically, this paper highlights the impact of GenAI on design professionals in the United Kingdom. Design is everywhere. Indeed, everything has been designed to some extent; thus, it is no overstatement to suggest that design is significant in shaping the world we live in (Design Council, 2022) and is recognised for being responsible for commercial success (McKinsey, 2018). Furthermore, designers are expert knowledge workers who hold idea generation and creative problem-solving at the core of what they do and who they are. Strikingly, despite this reported value and the necessity of a voice and consideration for design from the C-suite down, graphic design, for instance, has been ranked the 11th fastest-declining job (World Economic Forum, 2025). This may be a coincidental and striking occurrence, but it does not detract from the need to spotlight the sector as it experiences the emergence of GenAI in real-time. Therefore, with the emergence of technologies like GenAI, which are perceived to mimic these once-exclusive attributes, design is a fertile discipline to study.

Drawing on 56 in-depth interviews with designers, this empirical study captured their first-hand accounts of the emergence of GenAI in their practice in real time. The overriding message of this paper is that GenAI has triggered unprecedented disruption in designers' practices, upending existing assumptions about the creative process. The paper finds that GenAI leaves designers juggling conflicting relational, ethical, economic, and personal judgements as they try to respond. These fluid value judgements reported by designers are categorised into three categories: *dehumanising creative agency*, *disorienting creative work*, and *displacing creative expertise*. The themes are described as *fluid* due to their varying strength at an intrapersonal level, as their positions shift between positive and negative. Fluid also reflects their malleability under external pressure from peers, stakeholders, and the technology itself. I posit an extension to the prototypical creative process and describe how agency shifts from being exclusively human to representing machine agency at certain stages. Indeed, the technology and tools in the creative industry are no longer constrained to

augmenting or automating specific, predefined tasks by creative workers. As designers' tasks are increasingly and effectively mimicked by the enormous amounts of data and computing power behind GenAI, it is influencing their creative process. To capture, albeit to varying degrees, where and when designers outsource tasks throughout their daily work, I notionally describe it as *extending the creative process*.

The paper proceeds with the theoretical backdrop within which the study is situated. The methodology, findings, discussion, limitations, and opportunities for future research follow this.

2 Theoretical Backdrop

This section provides an overview of related work in the two core themes of this research: *the creative process* and *technological innovation*.

2.1 The creative process

2.1.1 Foundations of the creative process. Creative processes fall into two broad categories: *compositional* processes, in which ideas are conceived and developed over long horizons; and *improvisational* processes, which are at odds with compositional processes, with the purpose of action unfolding throughout, not being defined in advance, and assessment required right then, not after. (Fisher & Barrett, 2019). The compositional process of creative workers is the focus of this research. Creative workers navigate a problem-solving process that starts with a metaphorical gap to be closed. The process, defined as 'the mental mechanisms that occur when a person is engaged in creative thinking or creative activity' (Kaufman & Sternberg, 2010, p. 24), enables 'the generation and translation of novel ideas into innovative goods and services' (Pratt & Jeffcutt, 2009, p. 4). Although traceable to Dewey (1910), who described a process with an unmistakable familiarity, it was Wallas' (1926) four-stage creative process that became widely regarded as foundational, consisting the sequential stages: *preparation,* where the problem is defined and information gathered; *incubation,* which allows for reflection and subconscious thinking; *illumination,* where an idea occurs; *verification*, which is the validation

against specification criteria. Many four- and five-stage versions have been adapted from this (e.g., Amabile & Pratt, 2016; Perry-Smith & Mannucci, 2017; Schneiderman, 2000), with a prototypical five-stage example below illustrating the core objective in each phase (Figure 2-1).

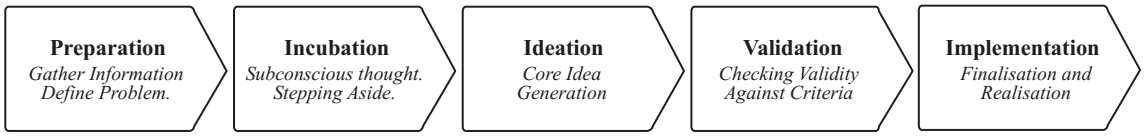

Figure 2-1: Prototypical creative process
(Adapted from: Perry-Smith & Mannucci, 2017; Amabile & Pratt, 2016; Schneiderman, 2000; Amabile, 1988; Wallas, 1926)

Another process which has received widespread attention across the public and private sectors in recent years, through the adoption of design thinking, is the 'Double Diamond' (Design Council, 2025). What is inherent in these examples is two overarching phases: First, one of *divergence*, 'the ability to think of as many different possible solutions as possible to an open question' followed by one of *convergence*, 'choosing which idea or answer is most worth pursuing' (Kaufman & Sternberg, 2019, p. 32).

2.1.2 Technology and creative process. Creativity is a 'process that uses specific objects and technology to produce content and during which idea generation and modification occur continuously' (Lê et al., 2013). Technological innovation is key to the longevity of the CIs, acting as a trigger for them to 'recreate' or 'transform' (Jones et al., 2015) where automation of creative processes has the 'underlying assumption […] creativity can be rationalised and streamlined, such as becoming automated by an algorithm' (Caramiaux et al., 2025, p. 7). However, research has described how 'the use of digital technology leads to organisational or process rigidity' (Austin et al., 2012, p. 1505).

Furthermore, although a creative process might suggest a rational, linear process, when infact, the process is iterative and 'people, in general, and creativity, in particular, are not entirely rational or linear' (Kerne et al., 2008, p. 5:41). Moreover, as well as being nonlinear, unpredictability and accidental discovery are critical to the creative process for innovation to occur. With expertise and skills identified as key factors that influence creative workers'

openness to accidents, enabling them to break out of expected outcomes, and 'those that seek original outcomes, must remain to a certain extent out of control' (Austin et al., 2012, p. 1520). In contrast, 'truly creative processes do not have pre-defined outcomes that can simply be classed as good or bad' (Anantrasirichai & Bull, 2022, p. 637). Indeed, studies of designers have reported 'opportunistic behaviour' that sees 'deviations from a structured plan or methodical process into the 'opportunistic pursuit of issues or particular solutions that catch a designer's attention' (Cross, 2004, p. 433)

Another implicit assumption of creativity research is the view of creativity as inherently human (e.g., Florida, 2012), to the extent that creativity researchers have suggested there is 'one realm of human endeavour we believe machines will never be able to touch, and that is creativity' (Du Sautoy, 2019, p. 2). Nonetheless, technology has long been part of the creative industries (henceforth, CIs) and key to their creative processes. From Leonardo's paint and canvas to Pasteur's microscope (Shneiderman, 2000), technology has long been an integral to creative work. Indeed, 'computers were designed to extend human analytical and creative power' (Selker, 2005, p. 419) because 'human time is much more expensive than a computer' (Hewett, 2005).

The progression from analogue to digital, and now to artificial intelligence, illustrates the historical precedence of technology in the creative process, where there is an acceptance that humans cannot succeed without enhancements (Newman & Blanchard, 2019). However, while these traditional AI tools substitute, supplement, or amplify most cognitive tasks (Makridakis, 2017), they have not significantly impacted creative workers. Creative work is said to require personal and cultural sensitivities that are uniquely human (Buchoud et al., 2021).

In the CIs, Anantrasirichai & Bull (2022) contribute a typology of five applications for AI in processes: i) content creation, ii) information analysis, iii) content enhancement and post-production workflows, iv) information extraction and enhancement, and v) data compression.

However, they also contend that ‘creatives have a lifetime of experiences to build on […] and ask ‘What if’ questions that cannot readily be addressed by constrained learning systems’ (p. 590). Relatedly, craft workers specifically, who adopt a humanist approach to their work, engage with mechanisation to augment human senses, yet struggle to prioritise ‘human engagement over machine control’ (Kroezen et al., 2020, p. 503). Relatedly, for expert designers, AI dramatically changes the status quo as ‘it moves digital automation upstream, from manufacturing to design’ (Verganti et al., 2020, p. 220). Thus, the scale of change of AI is suggested to be stimulating an epiphany in design that will have ‘profound implications both in terms of the object and of the process of design’ (p. 221).

There is a large corpus of research exploring digital creativity support in the creative process that stems from the human-computer interaction (HCI) community. A significant focus has been on AI to offer motivational and support strategies at various stages of the creative process, where the design of tools ‘to factilate high-quality output by supporting specific tasks’ (Nicholas et al., 2022, p. 325). For instance, computer-aided design tools for tasks such as generating drawings and models (e.g., Veisz et al, 2012). While advanced image editing tools have achieved widespread design market penetration, fulfilling crucial roles in design work, e.g., for creative exploration (Dalsgaard, 2017). Related research also explores the role of AI in the early stages of the process, for problem discovery and problem definition in the early stages of the Double Diamond (Schleith et al., 2022). Research from the advertising domain has found that the advent of digital technology has shifted the paradigm from a process where the idea came first, and technology served as a vehicle to express it, to technology serving as an inspiration for concepts and ideas designed with specific technologies in mind (Stuhlfaut & Windels, 2019).

The qualitative pace of change with AI technologies means whatever AI you are using today is sure to be the worst you will ever use (Mollick, 2024). Indeed, recently, the speed and

capabilities of epistemic technologies have advanced beyond all expectations. This is evident with algorithms creating images with 'superhuman effectiveness' (Hartmann et al., 2024), art nearly indistinguishable from human artwork (Samo & Highhouse, 2023) and 'machine-generated' media almost indistinguishable from 'real' media — especially images (Frank et al., 2023). Viewed through the historical lens of technological innovation, the recent, rapid developments in AI could be seen as the next evolution in creativity support. However, the latest development in AI—GenAI—is qualitatively different and challenges that assumption.

2.1.3 Generative AI and the creative process. Unlike earlier technologies, GenAI can assume more agentic roles than traditional computer-aided design tools and is often portrayed as a co-creator (Gmeiner et al., 2023). Indeed, GenAI is positioned as creating new (Marr, 2023) and arguably useful, high-quality content (IBM, 2024) — thus mimicking the core tenets of creativity: *new* and *useful* (Amabile, 1996). Moreover, the foundational technology of GenAI is akin to the creative process (divergent and convergent), as it uses *generators* and *discriminators* (Goodfellow et al., 2014). Thus, GenAI is semantically and functionally aligned with creativity.

The nascent nature of GenAI and the public discourse around it mean there is intense research across many domains such as healthcare (e.g., Jindal et al., 2024), finance (e.g., Mettrick, 2024), supply chains (e.g., Jackson et al., 2024) and strategy (e.g., Doshi et al., 2024). Research at the intersection of creative work and GenAI is growing, exploring novelty (e.g., Boussioux et al., 2024), homogenization (e.g., Girotra et al., 2023), diversity (e.g., Doshi & Hauser, 2023) and feasibility (e.g., Eisenreich et al., 2024). A notable commonality among these studies is that they lean heavily towards the productivity and the quality of creative output (e.g., Jia et al., 2024) and treat content and ideas generated as 'countable' particles (Hua et al., 2022)

Although the CIs—and, by extension, creative workers—thrive on technological innovations, research on the CIs is overshadowed, leaving us with very little understanding of

the qualitative human consequences of GenAI on the creative process and on creative workers in their daily work. Looking at the CIs and GenAI specifically regarding the creative process, the research is more limited. A study of creative practitioners from different disciplines reported a perceived change in role between creative practitioners and GenAI; however, creative practitioners 'do not want to use GeAI models to completely automate their creative workflow' (Palani & Ramos, 2024, p. 178). Other research in the domains of advertising and marketing finds that consumers perceive GenAI-designed luxury fashion items as reflecting and reinforcing the values of a luxury brand, with almost no difference from those designed by humans (Pantano et al., 2024). A human-led creative practice means the creative workers in the advertising sector remain in control of the process, albeit increasingly constrained by formats and metrics; in contrast, machine-led creative practice reduces the role of creativity; however, there is a constructive, dynamic relationship rather than simply a reduction in human control (Akmeraner-Kökat & Pellandini-Simányi, 2025).

Results on the impact of GenAI on convergent and divergent stages are less conclusive. A study of innovation managers found that Traditional AI is mainly used in the middle (development stage) and to some extent in implementation. In contrast, it was not used significantly for ideation—the reserve of humans 'visceral feel'. By comparison, the same study found GenAI use to be comparatively lighter (unsurprising given its novelty), but it suggests GenAI is more useful than AI for understanding competitors and developing radically novel innovations (Roberts & Candi, 2024). However, in a separate study, although it was demonstrated that it can excel in convergent tasks, humans were found indispensable in divergent tasks, with GenAI no match for the fluency, flexibility and originality of high-level human creative work (Demsar et al., 2025). Hence, they support the case for humans in the creative process, with the contention that GenAI in creative practice should not be 'an "easy button" to the final execution' (Wagler, 2025, p. 127). Nonetheless, although it may not be a

magic button, innovations that offer the ability to automate tasks, customise content and spur innovation mean GenAI will be a catalyst for change and a source of disruption in the CIs (Amankwah-Amoah et al., 2024).

2.2 Technological innovation

2.2.1 Radical innovation and the case for generative AI. A *radical* innovation is disruptive as it 'establishes a new dominant design' (Henderson & Clark, 1993) and upends the status quo (Kasmire et al., 2012). Given the parameters of radical innovation, the latest development in AI, GenAI, may fit these parameters. Unlike traditional AI, or what is often called 'narrow' or 'weak' AI, which focuses on performing a specific task (Marr, 2023), GenAI can use data to generate new content (Marr, 2024). GenAI is capable of generating new processes and improving existing methods, which contribute towards a situation that can 'redefine the notions of knowledge and expertise' (Mariani & Dwivedi, 2024, p. 15). It is an increasingly accessible technology with 'broad and non-technical appeal' (Grimes et al., 2023, p. 1617), whose capabilities are delivered through a general form of intelligence. These broad capabilities can take multiple forms and be used across stages in the creative process, including problem-solving (IBM, 2024) and idea generation (Cai et al., 2023). GenAI continues to be forecast to disrupt because 'as new data are continuously collected, and the AI engine embeds learning capabilities, the problem-solving loops improve their predictions about user needs and behaviours and therefore design better solutions over time' (Verganti et al., 2020, p. 216).

Moreover, behind the hype, the technology's capabilities are being tested and measured, and benchmarks are consistently being smashed. Recent research on AI's capacity has shown a trend of doubling every 7 months over the last 6 years (Metr, 2025). The exponential growth is forecast to continue, with it anticipated that there will be 'at least another five years of this' (Sky News, 2025). The adoption of GenAI, specifically ChatGPT, has been the fastest of any 'economically consequential technology in human history. And the speed and breadth of that

adoption (as well as its continued exponential improvement) is why we have no handle on what it all means' (Mollick, 2025).

2.2.2. Technological innovation and the creative industries. Technological innovation in the CIs is not a new phenomenon. Indeed, innovation is essential for their longevity as it drives change by enabling them to 'recreate' or 'transform' (Jones et al., 2015). Nonetheless, the emergence of GenAI into a technological landscape where 'innovation needs to be continuous, relentless, and fast' (Yoo et al., 2012, p. 1405) affords the CIs a radical transformation unlike anything before. Unlike domains where AI is replacing human labour, creative workers are increasingly suggested to work alongside, rather than supervise or be replaced by, the technology. In their review of AI in the CIs, Anantrasirichai and Bull (2022) assert that a black-box AI tool cannot be used without human supervision, and that traditional AI tools will remain heavily reliant on supervised learning, so, for the 'foreseeable future, a feedback framework with the human in the loop' (p. 637) is required.

2.3 Summary

Although the CIs—and extension creative workers—thrive on technological innovations, research on the CIs is overshadowed by other industries, leaving very little understanding of the qualitative human consequences of GenAI on the creative process and creative workers in their daily work. Indeed, applications of AI in the CIs have increased dramatically over the last five years, with a corresponding growth rate of research publications, most of which relate to image-based data (Anantrasirichai & Bull, 2022). Although creativity research continues to burgeon, no existing creativity theories have addressed 'under what conditions, experts' creative process will be inhibited or facilitated by their affective and motivational reactions to getting new ideas from machines' (Amabile, 2020, p. 353). Human-machine interaction has traditionally involved computers intervening at critical points to support the process (Johnson & Carruthers, 2006). Nevertheless, the cultural sensitivities exclusive to human creativity (Buchoud et al., 2021)

are suggested to remain out of reach of machines (Runco, 2023). A position that feels less convincing in the era of GenAI.

Moreover, scholarly attention to radical innovation in the CIs has tended to be quantitative in methodology (e.g., Askin & Mauskapf, 2017) and lean heavily on the radical and innovative nature of the creative outcomes (e.g. Cutolo & Ferriani, 2024; Becker, 1982), rather than the effect of radical innovation on creative workers and their process. Furthermore, where technological innovation in the past supported, elevated, amplified, and augmented creative expertise, this paper explores the technological innovation of GenAI that has a perceived inherent expertise. GenAI's speed of adoption and capabilities surpass anything that has come before, creating a distinct landscape of radical innovation in which to examine creative processes. Thus, rather than reinforce or extend research on creative productivity and output, I foreground the impact of GenAI on the people and processes of the CIs. It is against this backdrop that I ask:

How does GenAI affect designers' perceptions of their creative process?

3 Methodology

3.1 Research domain

Creativity is the invention of new and useful ideas—design is the refinement of those ideas through an iterative process (Design Council, 2021). For decades, Design was an aesthetic task. However, design 'isn't just about making things look beautiful; it's also about making things work beautifully' (Martin, 2009, p. 58). Design is what drives innovation (problem-solving) and ultimately, differentiation. In today's world, with the advent of digital technology, businesses must innovate and differentiate to prosper and grow. Thus, Design plays a significant role in shaping our world (Design Council, 2022) and assisting commercial success (McKinsey, 2018). Furthermore, Christensen et al. (2018) encouraged exploring the vulnerabilities of industries to disruptive innovations. GenAI has a broad non-technical appeal,

opening the domain up to anyone with a computer (Grimes et al., 2023). Therefore, with a lack of regulation or credentials (Korica & Molloy, 2010; Elsbach, 2009), the design sector is vulnerable, as its evaluative subjectivity means there is no absolute truth in design work.

To address the research question, I studied the work of UK designers. Design is a compelling context for exploring the creative process. Designers fulfil what Kaufman and Beghetto (2009) termed Pro-c: expert creativity, where design practice means 'individuals have outstanding design abilities' (Cross, 2004, p. 435). Designers' practice is increasingly disrupted as GenAI makes an irreversible and unmissable move into the design sector. One striking statistic reveals that employers predict graphic design to be the 11th-fastest-declining job, despite being considered a growing job in the same report two years ago (World Economic Forum, 2025). Furthermore, many studies of designers are 'based on novices' (Cross, 2004, p. 435); exploring experts in the domain will illuminate distinct and relevant insights into the impact of GenAI on expert creative processes. Lastly, my decade and a half of professional experience in the UK design sector provided me with unique insight and domain knowledge.

3.2 Data Collection

3.2.1 Setting. The study focused on the experiences of expert designers to explore creative practice and technological innovation at the 'work level' (Barley & Kunda, 2001). The design sector encompasses designers across various disciplines (e.g., graphic, motion, and user experience), who, unless explicitly stated, will hereafter be collectively referred to as designers. Designers instinctively follow a creative process for the client, including research, ideation, reflection, validation, implementation, and delivery. The process may not always include all stages, as a client may only want ideas, for example. Nevertheless, steering what designers do is a creative process that broadly reflects the prototypical process (Figure 2-1). Given GenAI's pervasive presence across the design sector, the sample's heterogeneity was intentional to help determine whether there is variation between disciplines or employment levels. Designers have

the skill and imagination to visualise and conceptualise the intangible. Everything you see has been designed (Design Council, 2025). Thus, the output of the sample ranged in size, scale, and subject, but had one unifying thread—they were visual. For instance, their work included designing postage stamps, creating brand experiences and service blueprints, and developing automotive interfaces. All participants were offered a gift voucher in return for their time.

3.2.2 Sampling. The Designers were identified through the first author's professional contacts in the UK design sector (n = 28). Additional participants were identified and recruited online using professional platforms, such as LinkedIn and Adobe's Behance (n = 7). A snowballing procedure (Zimmerman, 1977) was also employed to recruit the remaining participants (n = 21), in which participants were asked to recommend individuals (not limited to a specific discipline or perspective) who would offer rich, perceptive accounts (Alvesson, 2011).

The sample comprised 56 designers, of whom 19 were female and 37 were male. Notably, with 34% of the sample female, this is more representative than the disproportionately male UK design sector, where only 23% of designers identify as female (Design Council, 2022). The participants also varied in professional tenure, ranging from 1 to 35 years ($\bar{x}$ = 17 years). Employment type was either in-house (as a designer in a non-design organisation working for internal stakeholders), agency (working in a specialised design agency for external clients), or freelance (self-employed, working on temporary contracts in-house at an agency, or for clients). The designers' employment levels ranged from junior to executive creative director. The designers' disciplines sit within three groups: *graphic* (e.g., graphic and brand identity design), *digital* (e.g., digital product and motion design), and *experiential* (e.g., events and service design) (Table 2-1).

3.2.2 Interview data. This paper includes 56 semi-structured, in-depth interviews. Interviews were chosen as the collection instrument because they are 'useful and powerful

ID	Duration	Role	Expert Domain	Employment Type	Tenure	Gender	Seniority
#01	1h 17m	Creative Director / Consultant	Graphic / Brand	Freelance	30 yrs	M	Exec. Director
#02	1h 24m	Creative Director / Owner	Graphic / Brand	Agency	16 yrs	M	Director
#03	1h 35m	Motion and 3D Design	Digital / Experience	Agency	17 yrs	M	Director
#04	1h 11m	UX Director	Digital / Experience	In House	24 yrs	M	Director
#05	1h 0m	Graphic Designer	Graphic / Brand	Freelance	20 yrs	F	Senior
#06	1h 26m	Creative Director	Graphic / Brand	Agency	17 yrs	M	Director
#08	1h 15m	Graphic Designer	Graphic / Brand	Freelance	1 yr	F	Junior
#09	1h 23m	Executive Director, UX	Digital / Experience	In House	17 yrs	M	Director
#10	1h 49m	Mid-weight Designer	Graphic / Brand	Agency	6 yrs	M	Mid-weight
#11	1h 27m	Lead Digital Product Designer	Digital / Experience	In House	19 yrs	M	Director
#13	1h 45m	Head of Digital Design	Digital / Experience	In House	33 yrs	M	Exec. Director
#14	1h 17m	Designer	Graphic / Brand	Agency	13 yrs	M	Senior
#15	1h 42m	Principal Product Designer	Digital / Experience	Freelance	26 yrs	M	Exec. Director
#16	1h 44m	Design Director & Interior Architect	Interior/ Experience	Agency	26 yrs	M	Exec. Director
#17	1h 18m	Head of Human-Centered Design	Digital / Experience	In House	19 yrs	M	Director
#18	2h 2m	Head of Digital Product Design	Digital / Experience	In House	19 yrs	M	Director
#19	1h 20m	Creative Director	Graphic / Brand	Agency	21 yrs	F	Director
#20	1h 20m	Global Head of Design	Graphic / Brand	Agency	26 yrs	M	Exec. Director
#21	1h 48m	Creative Director	Graphic / Brand	Agency	17 yrs	M	Director

Table 2-1: Participant interview information

ID	Duration	Role	Expert Domain	Employment Type	Tenure	Gender	Seniority
#22	1h 45m	Principal Product Designer	Digital / Experience	Freelance	18 yrs	M	Director
#23	0h 50m	Creative Director	Graphic / Brand	Agency	21 yrs	F	Director
#24	1h 8m	Design and AI Facilitation	Digital / Experience	Agency	7 yrs	M	Mid-weight
#25	1h 23m	Brand Designer	Graphic / Brand	Freelance	7 yrs	M	Mid-weight
#26	1h 39m	Creative Director	Digital / Experience	Agency	19 yrs	M	Director
#27	1h 48m	Designer	Graphic / Brand	Agency	4 yrs	F	Junior
#29	1h 21m	UX/UI Designer	Digital / Experience	Freelance	24 yrs	F	Senior
#30	1h 22m	Creative / Art Director	Graphic / Brand	Freelance	5 yrs	F	Director
#31	1h 12m	UX/UI Designer	Digital / Experience	In House	8 yrs	M	Mid-weight
#32	1h 9m	Creative Director	Digital / Experience	Agency	20 yrs	M	Director
#34	1h 5m	User Experience Lead	Digital / Experience	In House	24 yrs	F	Director
#35	1h 44m	Head of Service Design	Digital / Experience	In House	21 yrs	M	Director
#37	1h 14m	Service Designer	Digital / Experience	In House	2 yrs	M	Junior
#38	1h 2m	Innovation Designer	Digital / Experience	In House	2 yrs	F	Junior
#39	1h 3m	Learning Experience Designer	Learning/Experience	Agency	8 yrs	F	Senior
#40	1h 23m	User Experience Lead	Digital / Experience	In House	13 yrs	F	Senior
#41	1h 11m	Principal UX Consultant	Digital / Experience	Agency	18 yrs	M	Senior
#42	1h 13m	User Experience Director	Digital / Experience	In House	27 yrs	M	Exec. Director
#43	1h 18m	Interface & Visual Designer	Digital / Experience	Agency	28 yrs	F	Senior

Table 2-1:Participant interview information (cont.)

ID	Duration	Role	Expert Domain	Employment Type	Tenure	Gender	Seniority
#44	1h 57m	Graphic Designer	Graphic / Experience	Agency	17 yrs	F	Senior
#45	1h 26m	Service & Product Designer	Digital / Experience	Freelance	13 yrs	M	Senior
#46	1h 24m	Creative Lead	Graphic / Experience	Agency	5 yrs	F	Mid-weight
#47	1h 29m	Motion 3D Designer	Digital / Experience	Freelance	23 yrs	M	Senior
#48	1h 11m	Lead Graphic Designer	Graphic / Experience	Agency	10 yrs	F	Senior
#49	1h 15m	Creative Director	Graphic / Experience	Agency	28 yrs	M	Exec Director
#50	1h 11m	Graphic Designer	Graphic / Experience	Agency	24 yrs	F	Senior
#51	1h 28m	Motion 3D Designer	Digital / Experience	Freelance	20 yrs	M	Senior
#52	1h 38m	Creative Director	Graphic / Brand	Agency	28 yrs	M	Exec. Director
#53	2h 25m	Experience Director	Digital / Experience	Agency	30 yrs	M	Exec. Director
#54	1h 10m	UX Director	Digital / Experience	In House	11 yrs	F	Director
#55	1h 4m	Graphic Designer	Graphic / Brand	Freelance	15 yrs	F	Senior
#56	1h 16m	Design Director / Principal	Digital / Experience	Freelance	21 yrs	M	Director
#57	1h 30m	Graphic Designer	Graphic / Brand	Agency	4 yrs	F	Senior
#58	1h 27m	Creative Director	Digital / Experience	Agency	28 yrs	M	Director
#59	1h 18m	Experience Director	Digital / Experience	Agency	22 yrs	M	Director
#61	1h 46m	VP Exec. Creative Director	Experiential	Agency	25 yrs	M	Exec. Director
#62	1h 24m	Design Director	Digital / Experience	Freelance	17 yrs	M	Director

Table 2-1:Participant interview information (cont.)

when they are used to discover how the respondent sees the world' (McCracken 1988, p. 21), which aligns with the aim of understanding the impact that the disruption of GenAI has on designers. For consistency (Corley & Gioia, 2004), I conducted all interviews, acting as the 'key instrument' (Creswell, 2007). My domain knowledge of the industry, working practices, and discourse allowed me to win the designers' trust and to be less obtrusive during interactions (Orr, 1996). All interviews were conducted online and recorded using Zoom and Otter.

The study followed a semi-structured interview protocol (Appendix A), which comprised 'what' questions and, importantly, 'how' questions to elicit information about temporal events as and when they occur (Van de Ven & Huber, 1990). The interview protocol was modified during the interviews to gain a more comprehensive understanding of any interesting themes that surfaced, for example, by eliciting more details about where and when they used GenAI. Interviews were conducted between November 2023 and March 2024, averaging 80 minutes and ranging from 7,000 to 12,500 words when transcribed.

Designers drew on a broad spectrum of first- and second-hand experiences to inform their perceptions and opinions of GenAI. This spanned from never (knowingly) used at one end. I introduce 'knowingly' because the pervasive and embedded capabilities of GenAI meant we were unsure if any designer had ever experienced the technology. However, they were unaware of any interaction and believed they had none. To use almost daily at the other. Although the interviews with designers focused on GenAI, many simply mentioned 'AI' without elaborating. Therefore, designers' use of 'AI' to mean 'GenAI' is accepted hereon.

3.3 Data Analysis

The analysis was an exploration to make discoveries. In this section, I provide a brief overview of the three core steps in the analysis, before describing each in detail. As with most inductive research, this study was messy, blurred, and less sequential and neat than I report here (Charmaz, 2014). The analysis broadly fell into three distinct steps, each leveraging the

most appropriate methodological templates and technologies. I started with an inductive approach (e.g., Gioia et al., 2013; Glaser & Strauss, 1967), which involved manual coding and analysis using NVivo 14 software on a Mac. This process revealed designers' experiences and perceptions of the creative process with GenAI. During this step, I also inferred a tension in certain statements by designers during the same interview. This surprising theme was intriguing and spurred me to explore it in greater depth, which required a more focused analysis of the transcripts.

The length and volume of transcripts steered me beyond a single methodological approach and to seek a supportive instrument to leverage for initial analysis. This led me to experiment with the foundational technology at the core of my research, GenAI (specifically a Business account using ChatGPT-4o), to assist in a designated, supervised, and supportive role (Mollick, 2024; Gatrell et al., 2024) to identify similar themes and examples I found manually in the transcripts. With the existing themes confirmed by GenAI and additional ones identified, along with example quotes from the transcript, they were then manually verified. Finally, I returned to an approach heavily influenced by Gioia et al. (2013) to create a data structure that moved away from the classic three-column framework. With 5 columns, each containing first-order concepts and second-order themes on either side of the aggregate dimension, I demonstrated the contrasting nature of responses at the intrapersonal level. A detailed description of each of these steps follows:

3.3.1 Analysis step 1 — Surprises and designers' experience with GenAI in the creative processes. In this first step, coding and analysis of the interview transcripts were conducted in an inductive, grounded approach (Gioia et al., 2013; Glaser & Strauss, 1967). The process began with open coding in NVivo, identifying any elements that were aligned, misaligned, contradictory, or surprisingly related to the research questions (Gioia et al., 2013). Where possible, *in vivo* codes were used to emphasise the participants' spoken words (Manning, 2017) and short descriptive phrases were used for others (Corley & Gioia, 2004), e.g., 'Avocating for

human agency and relationships.' Once the open coding process was underway, two intriguing themes emerged, albeit one more substantiated than the other. First, a clear theme emerged for how designers perceived and utilised GenAI across the prototypical five-stage creative process (e.g., Perry-Smith & Mannucci, 2017; Wallas, 1926). Second, surprisingly, a theme emerged in designers' responses that seemed conflicted, with an implied tension between two sets of values when discussing GenAI. Notably, these contrasting responses were not just at an interpersonal level (i.e., between designers) but also at the intrapersonal level (i.e., within the same designer). Such a surprising theme caught my attention and captured my intrigue, thus warranting further investigation and returning me to the data with a narrower analytical lens to assess its prevalence.

3.3.2 Analysis step 2 — Incorporating ChatGPT into the analytical workflow. In the second step, I return to the data. With an initial sample of six transcripts, I manually coded them as a proof-of-concept exercise to identify additional contrasting value-judgment themes and statements beyond those provisionally identified in Step 1. This approach was effective in identifying additional themes and statements at an intrapersonal level. For instance, I found designers navigating between the creative limitations of GenAI and its creative capabilities, such as *Resistance to GenAI in Design Processes vs. Willingness to use GenAI.*

Having demonstrated the process manually, the exponential nature of pairwise analysis across 56 transcripts prompted me to automate this step and leverage the analytical potential of the research phenomenon, GenAI. My exposure to the technology, albeit up until this point as a passive but invested observer, meant I was aware of GenAI's increasing capabilities. Notably, it was seen as highly proficient in text (Mollick, 2024), making it the most appropriate instrument to support the process. The automation sought from GenAI in this process was to hypothesise inconsistencies in an informant's transcripts that could be checked manually. Recognising sensitivities around data protection, I ensured I had access to a secure ChatGPT

Business account that does not use any data uploaded or generated for general algorithmic model learning. I also specified that it would be employed solely to assist with supervised analysis in a targeted and supportive capacity (Gatrell et al., 2024). With these assurances in place, I was given approval by my institution's ethics committee to proceed with the use of GenAI in the process. Thus, in an unexpected twist, I found myself following a sequence of tasks integrating the technology at the heart of my research phenomenon—GenAI—into the data analysis.

I conducted an initial pilot using the same six transcripts from the manual exercise. The purpose of this exercise was three-fold: i) to grasp how to use ChatGPT-4o, which included practical application of it as well as developing how to write suitable text prompts as instructions; ii) to test the reliability and validity of ChatGPT-4o in identifying the themes I had identified from the manual process; and iii) to see if ChatGPT-4o identified additional themes to those I found. The pilot proved successful on all three counts. I experimented with prompts, finding the right language and also keywords to help identify the themes. As the example prompt shows (Table 2-2), the structure fell into three parts. The first provided context and the task's aim. The second provided specifics on what to look for in the text, introducing a keyword and a brief description of it, and the third provided examples and reasoning for any decision, trying different versions of the prompts. With a focus on keywords and a description of what that meant. For instance, whether to look for *tension, fluidity*, *contradiction or inconsistency.*

Prompt keyword: **Tension**
You are an experienced qualitative researcher. You are investigating the transcripts of interviews with designers to explore if and when an individual designer in a single interview exhibits particular phenomena. *One such phenomenon is **tension** between the designer capability with generative AI and the generative AI's capability increasing - if and when the designer makes two or more comments about their design work and uses of generative AI that are potentially in **tension** with each other.* *Analyse the attached interview transcript to detect all possible cases of **tension** of capabilities between the designer and generative extract the verbatim comments from the interview.*

Table 2-2: Example text prompt highlighting structure

The following prompt (Table 2-3) is a subtle, yet effective change made to the prompt using the keyword *inconsistency*. The text was used in the study.

Prompt keyword: **Inconsitency**
You are an experienced qualitative researcher. You are investigating the transcripts of interviews with designers to explore if and when an individual designer in a single interview exhibits particular phenomena. *One such phenomenon is **inconsistency** - if and when the designer makes two or more comments about their design work and uses of AI that are potentially **inconsistent** with each other. Analyse the attached interview transcript [informantX.pdf] to detect all possible cases of **inconsistent** comments about the designer's design work and their use of GenAI.* *For each case, try to identify a minimum of 5 examples and extract the verbatim comments from the interview that are **inconsistent** and seek to describe how each set of comments is potentially **inconsistent**.*

Table 2-3: Refined prompt for keeyword: *inconsistency*.

For each prompt, I cross-checked the output generated by ChatGPT-4o against my analysis of the same transcript to understand how it worked and to be satisfied with its accuracy and alignment with my own analytical judgement and themes found. This included any additional themes that surfaced using ChatGPT-4o. Those that felt familiar, having studied the transcripts in detail but not having manually associated the statements in such a way; for instance, *AI as a Threat to Innovation vs. AI as a Tool for Creative Aid* — highlighting the analytical amplification from partnering with ChatGPT-4o. Once I was satisfied with the analysis ChatGPT generated for a single transcript, with 56 in total, I experimented to see if the results were the same if I uploaded all six transcripts at the same time. I discovered that although themes and statements were identified, ChatGPT-4o's ability to provide pairs from a single transcript or to accurately assign quotes to the right informant was unreliable. This underscored the need for transcripts to be analysed and verified individually to check the source, context and originality of the identified statements with each transcript.

Once these were complete and I was satisfied with the results using the sample transcripts, I proceeded to use ChatGPT-4o to follow the same procedure to analyse and identify pairs of *inconsistent* statements within a single interview transcript. This strict analytical procedure, using a single transcript at a time and then manually cross-checking with the transcript and my

own judgment, was the only use of GenAI in my research methodology. There is no other artificial influence or voice (Gatrell et al., 2024); the preparation, research, ideas and writing are all attributable to me. Only themes consistent with the research objectives and replicated were considered, and all paired statements were grouped into related themes.

3.3.3 Analysis step 3 — Creating order with paired statements. In this final step, I returned to Gioia et al.'s (2013) approach to leverage the data structure diagram specifically as a means of aggregation, analysis, and communication (rather than developing a theory). All statements that surfaced as inconsistent judgments were captured and laid out in pairs, side by side. Working in this way with the statements as pairs, sitting side by side, reminded me of adapted data structure diagrams (e.g., Hagtvedt et al., 2024; Stigliani & Ravasi, 2012), in which first-order concepts and second-order themes sit on either side of an aggregate dimension. In those examples, however, the polarity between the left and right sides is not as strong as in the findings here. Hence, I organised the statements into clusters of 'paired' first-order codes. That was followed by axial coding (Corbin & Strauss, 1990), moving from an inductive to an abductive coding process. The first-order concepts were consolidated by working back and forth between transcripts and emerging themes, which became more abstract, resulting in a set of second-order themes (Pratt et al., 2006). This reflexive approach paid close attention to the trustworthiness of interpretations (Pratt, 2008). I then went from the relational categorising of second-order themes to aggregate dimensions. This process yielded 14 paired first-order codes and six second-order themes, which were paired and assigned to 3 aggregate dimensions. The complete set of paired statements is presented in the data structure (Figure 2-2), where first-order concepts are presented as pairs on either side of the corresponding second-order themes, either side of a shared aggregate dimension. There is direct horizontal alignment in the first-order concepts. For example, in the second aggregate dimension is 'Mistrust and doubt towards the reliability of content' paired with 'Optimism and empowerment from use of generative AI'.

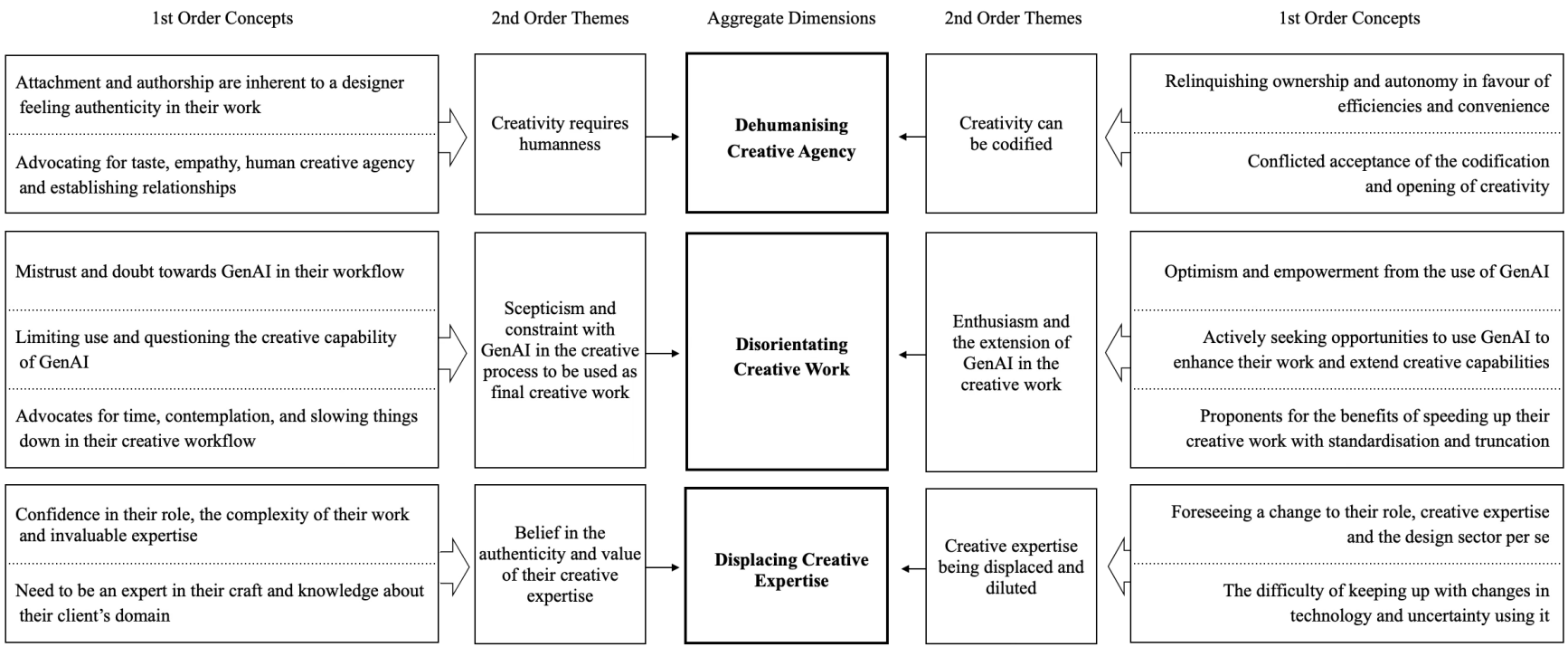

Figure 2-2: Data structure from any specific analysis in response to the research question exploring radical technological innovation on creative processe

Here, GenAI provokes a fluidity in designers' responses that are not mutually exclusive. The *fluidity* refers to malleability in response to external pressures.

4 Findings

The findings begin with the introduction of *GenAI and the creative process*. This is followed by a deeper reporting of the three aggregate dimensions: *dehumanising creative agency*, *disorientating creative work* and *displacing creative expertise*, with reference to specific stages of the creative process within each.

4.1 GenAI and the creative process

4.1.1 Introducing GenAI to the creative process. Starting with the *preparation* stage of problem definition and information gathering, designers share how they have begun to use GenAI as a desktop research tool to support their need to understand the problem domain as thoroughly as possible. This designer describes using it — akin to Google — for 'Any primary research and secondary research […] I think that's always a really interesting way to get [an understanding]' (#08 Junior Designer). Relatedly, designers describe using GenAI at this initial stage to help define the problem. As such, they note how it is handy to 'Create some audience personas […] you might say we have audiences in these areas, these are the types, create some simple personas. Off it goes in minutes. Absolutely staggering' (#01 Creative Consultant). The next stage, *ideation*, occurs when core, conceptual idea generation takes place, with designers acknowledging the capability of GenAI to support idea generation. As one explains, 'It can be beneficial for being another being […] another additive to be able to add more ideas to the mix' (#25 Mid-weight Designer).

In the penultimate stage, *validation*, ideas are validated against the briefing and specification criteria. Although it may be possible with GenAI to verify output against validation criteria, there is currently no evidence to support this. Instead, designers universally want to validate what is generated because they 'Wouldn't trust it and send stuff blindly [to

clients] that it produced' (#23 Creative Director). Moreover, the lack of evidence in this stage of the creative process exemplifies its application in other areas where it was identified. *Implementation* is the last stage, where the designer's work is finished, realised, and ready to be handed over to clients or stakeholders. In this stage, designers already appear to have familiarity and acceptance, with many leaning on the technology embedded in Photoshop to work on production-heavy and repetitive tasks before work leaves their process because, as designers see it, if you use GenAI to 'Do the drudge stuff that everyone always underestimates how long designers take' (#42 User Experience Director).

There is a notable omission from the stages illustrated in the prototypical creative process (Figure 2-1)—the second stage of *incubation*, where designers step away, and a process of reflection and subconscious thinking takes place. There was no suggestion from designers that this traditionally human, serendipitous stage was even possible by GenAI. By contrast, they spoke about the value this stage brings to the quality and depth of output: 'A gestation period […] you need to kind of make interesting connections, you need to dwell on something, you need to sit on something, you look at, you know, a lateral space and […] room to be able to let you know, let things marinate in those thoughts' (#59 Experience Director). Alternatively, another suggests:

> 'Some quiet time […] I need to step back, and I probably can't be at my computer. I need to have paper, a pen and some physical things. It's hard for me to be creative on the computer' (#39 Senior Learning Designer).

Hence, in this statement, the designer advocates for time away, from technology to help ideas develop in a period of reflection or incubation. In a similar fashion, in this next pairing of statements, the design expresses how their role and thought throughout process is critical, 'I might be really naive in thinking this, but I feel like as a designer, it will be difficult to do a lot more of the thinking of the process that a designer can do […] as a designer, you've got to have the holistic view' (#21 Creative Director). But in the following statement shifts and advocates

for its use in what would be the implementation stage: ‘To help us some further down the line in the design process most the time and yeah, extending background is probably our number one use at the minute which I very aware probably isn’t harnessing the true power of AI but that’s where we’ve been using it’ (#21 Creative Director).

Creative process stage: **Preparation**	
#46 Creative Lead	*‘Rather than reading 8000 pages of, you know, a document from this company on how to do something technical, you can I would kind of go to ChatGPT and be like can you summarise the key elements of this in a very simple way to try and get my head around it. So often it was research but more like a consolidation or, like simplification of concepts to then be able to go okay, that's clicked for me.’*
#55 Senior Graphic Designer	*‘So does that mean that this [genertiave] AI I think AI for sure is is speeding up or getting rid of certain points in the creative process like you just type it in, and then there's your mood board and it's done. Whereas now, that would have taken you in a day or so by calling through Google researching.’*
#43 Senior Interface / Visual Designer	*‘We used it to try and create persona images. Because we didn’t want we want to sort of more they were sort of rather than more finished personas, they were more like sketch personas, so they were very much more you know, here’s a rough idea of a particular type of person. So rather than having an image a photographic image, which can sometimes skew, we thought right, let’s use one of these in, the AI generating, and it was fine.’*
Creative process stage: **Ideation**	
#10 Midweight Designer	*‘To help you kind of like, you know, mindmap those ideas and get ideas down on paper quickly, just to sort of like help you get to a more clear kind of like, picture in your head. I think it's I think it's a good thing.’*
#20 Global Head of Design	*‘If there’s something that can help me come up with like 10 different ideas that have gone in 10 different directions in terms of like their thought patterns, like over here one from over here from him, etc. Then I think like that’s only a good thing because it means that we can be more rounded or like be more thorough in our ideas, maybe and also take on different perspectives a lot.’*
#11 Lead Digital Product Designer	*‘But if you can use an AI to to give it all those criteria and give you some ideas. It could be useful as a source of inspiration.’*
Creative process stage: **Validation**	
#56 Design Director / Principal	*‘The AI is not approving that it’s happy with it. I am so. I’m happy then I give it to the client.’*
#02 Creative Director	*‘I'm using AI they’re [clients] still paying for me to curate what’s coming back and sense check whether it’s right and put in the right prompts.’*
#17 Head of Human-Centred Design	*‘There’s still something going on where you’re trying to send check things and does this feel relevant to our audience, but does it have like a human that have the empathy that that's needed? I don’t believe that GPT or tools like that have that yet.’*

Creative process stage: **Implementation**	
#21 Creative Director	*'So it's only if there's something for a visual that it needs to be double the length that I'll ask for some help that it's always based off of what I've written rather than me prompting. It's very much as a as a tool to help us some further down the line in the design process most the time and yeah, extending background is probably our number one use at the minute.'*
#23 Creative Director	*'As a tool in the same way that I use Photoshop or Illustrator currently. So at the moment, I think we're okay but I don't know where it's gonna go.'*
#04 UX Director	*'We use a lot of colours and there's also a lot of emphasis on accessibility and and getting the right ratio between different colours and so on. So if AI can help me pick colours, that would be compliant with accessibility guidelines.'*

Table 2-4: Supporting statements using GenAI in the creative process

In sum, the emergence and growing capabilities of GenAI expand the agency and control of GenAI in the creative process (Table 2-4). The key stages of the creative process are still in play, but who, when and how they are performed is increasingly less certain. The capability of GenAI enables creative agency, once exclusive to humans, to now be possible for machines.

4.1.2 The importance of a creative process. Designers were united in the critical role the creative process plays in their work. For some, it's 'A way of derisking the […] to make sure that whatever we ended up building is the right product and solve the real problems' (#04 UX Director). A position shared by other designers where the process is 'Key to having that, creativity, expressed in a way that is understandable for somebody else' (#14 Senior Designer). This designer reflects this notion of the process shaping the product. 'I love the process. My favourite work is when the process basically informs the outcome' (#24 Mid-weight Designer & AI Facilitator). With some going as far as to say 'I think creativity is a process. I really do […]. If you just go in and go right, "I've got the solution," invariably it will fail' (#52 Executive Creative Director). While the process and practice of creativity is deemed 'There is a process, the cogs are turning […] without even being aware of it' (#13 Head of Digital Design).

The section now expands and explores the three aggregate dimensions and their impact on designers' relationships with GenAI in their creative processes. i) *dehumanising creative*

agency; ii) *disorientating creative work*; iii) *displacing creative expertise.* The findings are supported by inline example statements and supporting examples in Tables 2-5, 2-6 and 2-7.

4.2 Dehumanising creative agency

In this first dimension, the primary focus is on the agentic role of humans in relation to creative acts. The dehumanisation of creative agency refers to designers juggling a position where they perceive creativity as inherently human and essential to be able to connect with another human, through the process or the output. This position shifts towards a view that with the increasing capability of GenAI to perform creative tasks once thought to be only capable by humans, and accepting the codification of areas of creativity. In short, this relates to designers' perceptions of creativity, from being inherently and exclusively human to being capable by machine. Thus, designers' value judgments fell across a continuum, from *creativity requires humanness* to *creativity can be codified* and was manifested in two forms.

4.2.1 Attachment and authorship are inherent to a designer feeling authenticity in their work, while also describing *relinquishing ownership and autonomy in favour of efficiencies and convenience*. In these first examples, designers are discussing the ideation stage of the creative process, which is key to establishing a sense of ownership in what they do: 'You've crafted this thing over a period of time, you're very much involved in it' (#11 Lead Digital Product Designer). The designer continues to describe how this deep connection they have with their work will fundamentally change with GenAI, because it is 'Not gonna feel like yours, you may have researched and narrowed [it] down, might choose your colour […] but it's not your design' (#11 Lead Digital Product Designer). Similarly, this next designer again talks about an innate connection to their work being akin to 'A sensation of giving birth to an idea. I think that's what gives it attachment and ownership' (#17 Head of Human-Centred Design). As GenAI changes the process and is anticipated to have a significant effect on attachment, the

designer's position changes, 'It wouldn't feel like I've gone through the stages […] gone through different iterations' (#17 Head of Human-Centred Design).

Relatedly, designers speak of their inherent connection and authorship of the work they produce, and the value of that as a form of creative currency. 'I've never been able to sort of disassociate or you know, remove the kind of meaning or ownership of things [created], you know, because you have put so much time and energy. It is sort of like our currency' (#58 Creative Director). The designer then describes instances where they allow GenAI into their workflow, 'The sort of more monotonous stuff becomes just done by the computer, which is great. I don't think any designer actually likes doing that' (#58 Creative Director). In these statements, the designer demonstrates a fluidity in responses, as the shift from talk of ownership in the earlier ideation stage of the process, but in describing the use of GenAI for monotonous tasks, they are referring to the implementation stage of the process, widely seen as less creative and repetitive in tasks. However, they are conflicted, as although they suggest that offloading work to GenAI can yield efficiency gains, it also affects their perception of the legitimisation of their work.

4.2.2. Advocating for taste, empathy, human creative agency and establishing relationships, but also a *conflicted acceptance of the codification and opening of creativity.* The second manifestation, in the era of GenAI and codifying of creative skill, designers see a distinct need for humanness and lived experience and an innate sense of 'taste', something that sits within the incubation or validation stages and is currently not something expected of GenAI:

> 'Taste still matters. Inference still matters; the ability to judge whether something is appropriately competent still matters. And that comes from experience of having done it' (#59 Experience Director).

At the same time as highlighting the value of their experience, the designer acknowledges that GenAI is playing a role in the democratisation of design in the ideation phase, albeit unconvinced:

> ‘It’s opened up a world of people who aren’t as creative to be able to use those creative assets, and that’s great. But it’s not original […] a lot of it is a self-perpetuating cycle’ (#59 Experience Director).

Designers also express concern about their innate human ability, and are keen to highlight that their core ideation work requires the uniqueness of a human touch:

> ‘I could [use it for ideation]. But it doesn’t feel the right thing […] I don’t believe that ideas from a computer, this could just be me […] I don’t believe they have that human empathy’ (#17 Head of Human-Centred Design).

However, despite their belief in the uniqueness of human empathy, they are fluid in their judgment, even within the same ideation phase, and continue to describe how the technology is already playing a key role in their process:

> ‘We will feed in ideas […] maybe we do a design thinking workshop. We generate 100 ideas. You could manually sort through them [or], we can use GPT to cleverly make assumptions on our behalf and give us things that we can’t tell [infer]’ (#17 Head of Human-Centred Design).

In sum, designers are found to be juggling an inherent belief in human involvement with creativity and an acceptance of the codification and agentic creativity enabled by GenAI. Moreover, they allow GenAI into their workflow for monotonous tasks. They accept codifying creativity, but they tend to view these tasks as uncreative or peripheral to their core work.

Aggregate dimension: **Dehumanising creative agency**			
#25 Mid-weight Designer	*‘It’s really difficult to not form an attachment to the ideas that you've come up with, because they have come from you and your mind and your brain.’*	↔	*‘For it to suddenly just appear of you being able to put in a few words. I think it’s immediately lost all of its value, and people won't feel connected.’*
#42 User Experience Director	*‘I think you care about your work but I think sort of [you] need to be very careful where that is’s because you can’t give yourself away every day 100%’*	↔	*‘Yeah, nothing to do with me, went into a box and it did something clever and came out […] I can’t take any credit, I can’t take any credit for sticking the words at the beginning.’*
#35 Head of Service Design	*‘Evangelising, communicating, convincing. Clarifying our ways of working the benefits […] Otherwise people will say […] “there's no point to this”.’*	↔	*‘I’m not comfortable with it ideologically, but the reality of markets competing is that it’s going to be cheaper, so people will […] if the output is of the right standard, then I don’t think people should come to me.’*
#46 Creative Lead	*‘If you have a tool where you can ask it all the same questions […] a client would potentially [ask]. I think there’s the only distinction really is the fact that I’m a human and I could build a relationship with the client.’*	↔	*‘I don’t think there’s anything where I would say categorically it would never be part of the process. I can see it being useful as a base tool for a lot of things we do.’*

Table 2-5 Supporting value judgment statements for dehumanising creative agency

4.3 Disorientating creative work

This second dimension illuminates how GenAI is disrupting the everyday creative work of designers, as one designer notes, 'GenAI is actually taking part of the process out of my head and putting into [the] machine' (#16 Design Director & Interior Architect). With *disorientating creative work*, the fluidity of where and how GenAI does/not sit in the designers' workflow is prevalent in responses. Designers' value judgements range from distrust and dismissal to optimism, with some seeking to incorporate it into their workflow. Manifesting in three forms, this dimension spanned a continuum from *scepticism and constraint with GenAI in the creative process to be used as final creative work,* to e*nthusiasm and the extension of GenAI in the creative work.*

4.3.1. Mistrust and doubt towards GenAI in their workflow, while expressing a sense of *optimism and empowerment from the use of GenAI*. In this initial manifestation, there is intrapersonal fluidity in designers' thoughts on whether the creative capabilities of GenAI can perform tasks throughout a designer's creative process and whether and how willing they are to utilise it. With this designer describing confidence in their ideation process:

> 'I really can't see AI ever getting to a point for us where it replaces the ideation phase of a job.' (#06 Creative Director).

Nevertheless, this designer continued to describe a way of working that would leverage GenAI and empower their ideation when they find it:

> 'Hard to sort of get out of that tunnel vision […]. If AI can help you show some different avenues that you can potentially take. I think that would definitely help inform the process' (#06 Creative Director).

Designers express concern about creating anything with GenAI that would be used in a commercial setting because of ongoing uncertainty around the reliability and trustworthiness of the foundational technology. Designers express concern about how the technology works. 'I want to understand how it got there. And so in that sense, maybe wrongness, but I view it as this sort of certain black box […], you don't actually know what's going on in the box' (#42

User Experience Director). This apprehension for using GenAI anywhere in the creative process is reflected by other designers 'If anything was going forward to be used commercially, then we would probably commission someone to create their own version of it so that we had rights to it' (#20 Global Head of Design). For all their signals of doubt surrounding the legal ramifications of using GenAI, this designer was later clear in their position on a future with GenAI in it, at what could be the ideation stage, but most likely implementation in the development and roll-out of ideas and output: 'I think it's a good thing. I think it will open the space up to new ways of thinking and different executions' (#20 Global Head of Design). This example illustrates how these shifting judgments move from distrust to embracing the benefits of a future with GenAI.

4.3.2. Limiting use and questioning the creative capability of GenAI, alongside *actively seeking opportunities to use GenAI to enhance their work and extend creative capabilities*. In this second manifestation, designers were initially firm in their conviction that GenAI was not a creative entity. In this context, designers are broadly discussing it's application in the ideation stage of the process, the one they feel is most creative, as they attempt to diminish any threat from technological advances with GenAI to their creative work: 'I don't think the AI itself is creative. Well, I suppose that the idea of creating the AI is creative, but the actual AI itself, I don't perceive as being like a creative entity' (#08 Junior Designer). However, having explained they don't believe GenAI to be have inherently creative capability, they show fluidity in value judgements describing 'It definitely has potential […] if you use it almost as like your benchmark or to bounce ideas off of, almost as if it's your creative partner' (#08 Junior Designer). Thus, they advocate for GenAI being a 'creative partner', a creative role during the ideation stage for a technology they suggested was not creative. Similarly, designers downplay the creative capability of GenAI in the ideation stage to produce something distinct and novel:

> 'I think it's not creative […] I would be very sceptical that GenAI could create something that no one else has ever thought of' (#47 Senior Motion 3D Designer).

However, although highly sceptical about GenAI's ability to generate something novel and steering away from use for such tasks, designers do describe seeking out a place for it to help them in their workflow in a useful capacity, seemingly at the convergent stage of ideation:

> 'I use AI as a contributing thread to something, particularly in areas where I'm struggling to consolidate things. It helps me simplify concepts to then create something meaningful' (#47 Senior Motion 3D Designer).

4.3.3. Advocates for time, contemplation, and slowing things down in their creative workflow, which is paired with being *proponents for the benefits of speeding up their creative work with standardisation and truncation*. The last manifestation of this dimension is a contrast between a desired pace to the creative process and GenAI acting as an accelerator of that. Some designers initially highlighted the value of time, arguing that design cannot be rushed and requires time in the incubation phase. For instance, this next designer provided an anecdote comparing speeding up design to speeding up a pregnancy:

> 'Nine women can't have a baby in a month. Which is really good when you think about it […] things just take time, and you can't throw money or […] resources at something necessarily and do it quicker, because it's got to kind of mature' (#19 Creative Director).

However, this same designer continues to offer a recent example where they were happy to use GenAI to speed up their work in the implementation phase:

> 'The image stuff in Photoshop right now is certainly a brilliant tool for me, and it's saving me a lot of time […] I would have had to have done by hand […] would have taken quite a while, and the AI did it in, you know, five seconds' (#19 Creative Director).

There is a strong consensus among designers for the incubation stage in the creative process and, in their words, the importance of time for their work to 'marinade' (#40 User Experience Lead), advocating a 'gestation period' (#59 Experience Director) and time to step away and allow for 'rumination' (#41 Principal UX Consultant). A process that, to some, is so innate they are not always conscious of it. 'I'm thinking something, but I think that's it. You know, I challenge it, and there is a process; the cogs are turning. As I say, it's funny what that

process has done without even being aware of it' (#13 Head of Digital Design). However, for their talk of the need for a process and incubation to enable their 'cogs to turn', the same designer enthusiastically talks about the change in pace that GenAI brings and how, when referring to the implementation stage, they describe how 'It speeds up the process for me. It actually gives me the confidence knowing that I can deliver your projects because there's a very short timeframe. It gives me the confidence to get that part of the process out of the way (#13 Head of Digital Design).

In sum, creative work is being displaced, and there is a fluidity in designers' value judgements between distrust and dismissal, which constrains its usefulness. However, designers are also optimistic and view it as an enhancement to their creativity, looking for opportunities to incorporate it into their workflow where it is useful.

Aggregate dimension: **Disorientating creative work**			
#04 UX Director	*'I can use AI to generate microcopy or simplify journeys, and it's exciting to think about how that can improve my workflow.'*	↔	*'If AI starts to generate fully-fledged ideas, I worry about the creative process becoming obsolete. My role isn't just about execution—it's about solving problems creatively.'*
#22 Principal Product Designer	*'I suppose I feel slightly sceptical […] I guess I've struggled to be hugely excited by it.'*	↔	*'I'm super excited, but as a user I'm a little bit sceptical and unsure.'*
#52 Executive Creative Director	*'If you're using GenAI to solve the problem […] as a creative director, what value do you bring into the process.'*	↔	*'I do think it [GenAI] will make roles more interesting, particularly […] if you're kind of working in a small team, I think it will get you […] supercharged capability.'*
#40 User Experience Lead	*'The focus to just kind of marinade, marinade it, meditate on it to kind of have this big mass in your head just cooking there.'*	↔	*'Those things that enable you to do the mundane tasks quicker so you can exercise your brain, your thinking muscle more.'*
#47 Senior Motion 3D Designer	*'The more time you get to try things out, the better it'll be. Yeah. A felt lot of the time, I've just had enough time to barely get it done. So that skill set because you have to be by editorial. But the best stuff to develop when there [is] time to develop, time is important.'*	↔	*'That's where it is for me. It's like it can do it quick. And it can do a lot a lot of things soon. So that's it. That's its power. Is the speed.'*

Table 2-6: Supporting value judgment statements disorientating creative work

4.4 Displacing creative expertise

This final dimension is specifically interested in the fluctuating direction of the designer's expertise. Where *dehumanising creative agency* focuses on creativity being something inherently human or capable by GenAI, and *disorientating creative work* highlights GenAI influencing designers' workflow, this final dimension reveals the fluid value judgements designers are facing relating to their perceived expertise in relation to GenAI. This ranges from a *belief in the authenticity and value of their creative expertise* to *creative expertise being displaced and diluted,* which manifests in two forms.

4.4.1. Confidence in their role, the complexity of their work and invaluable expertise, while also *foreseeing a change to their role, creative expertise and the design sector per se.* The first form relates to designers' perception of their role and expertise that makes them less susceptible to the impact of GenAI or less inclined to engage with it, as this designer expresses, 'Not me personally, not with the type of work that I produce' (#14 Senior Designer). Nonetheless, the designer, in their role, suggests that they are consciously avoiding its use in their role for self-preservation, 'If you allow it to be more invasive and you don't put any boundaries on it […] I think I might be having to look for a slightly different career for the next 30 years' (#14 Senior Designer). There are other examples of shifts in designers' judgements, from an initial stance of not changing their approach to the creative process:

> 'Would I have the inclination to go, "you know, I'm going to forget everything I've done [for] many years and kind of adapt and change?" Probably not' (#26 Creative Director).

This position evolves towards the future with GenAI, and concedes that it is already in their current workflow, being used for implementation and use in this context is almost unavoidable:

> 'It's baked into Photoshop. It's baked into Illustrator. So it's kind of there […]. Yeah, it'd be tough to not adapt to and not be aware of it' (#26 Creative Director).

4.4.2. Need to be an expert in their craft and knowledge about their client's domain, as well as the *difficulty of keeping up with changes in technology and uncertainty using it*. In this

second form, designers pride themselves on their expertise and feel like experts, and the speed of change with GenAI means they are not feeling so expertly skilled. The technological landscape in which the data were collected was marked by developments in GenAI capabilities and the increasing availability of products during the interviews. This presented designers with a moving target to scramble to keep up with, something they found difficult to reconcile with their personal need to have and be perceived as having expertise and depth of knowledge. The uncertainty and scale of change were on designers' minds, 'I think it's going to affect everything. So everyone's going to be affected. I think it's so big that we can't comprehend that' (#47 Senior Motion 3D Designer).

Designers need to feel and be seen as an expert, with one explaining how they 'Have to be more creative than other people around me […], more creative than the client would expect' (#46 Creative Lead). This desire to be an expert is challenged in the presence of GenAI, with expressions of uncertainty in what they are doing, as the same designer explained while describing their experience with GenAI, 'Definitely not. I think there's a big gap in my knowledge […] how to use it effectively, like asking the right questions, the right phrases'(#46 Creative Lead).

Designers often feel they lack sufficient knowledge, let alone mastery of GenAI, which is at odds with a need to control, 'I need to be an expert at my craft […] beautifully crafted experiences and products you know, I love the aesthetic side of it, but it for me, it's about design, the power of design to improve people's lives' (#58 Creative Director). However, at odds with the need to be an expert is the fluidity of the technological landscape and what the technology affords them because, as the designer continues to point out, 'We have to be careful about our jobs and about what we create [with GenAI] to make sure we are adding value and that will change over time' (#58 Creative Director).

Aggregate dimension: **Displacing creative expertise**			
#37 Junior Service Designer	*'About thirty-nine years' worth of experience has gone into this.'*	↔	*'It's a case of, rather than get replaced, learning how to work with it and how to incorporate it within my role. It's the 21st-century learning.'*
#25 Mid-weight Designer	*'So yeah, I see my uniqueness as being able to sort of combine a lot of skills from a lot of different places and my experiences'.*	↔	*'I guess I'd feel differently if it started to mimic what I could do and suddenly I didn't have a job.'*
#26 Creative Director	*'Would I have the inclination to go you know, I'm going to forget everything I've done many years and kind of adapt and change. Probably not in all honesty then because I think you get to a point where so it's not it's not my game anymore'*	↔	*'I think you'll make a lot of people lazier designers. I think there's a real risk of making people lazy […] I think if you're in a world where everyone's just comfortable going to various sites and creating a piece of artwork, and then that's just devaluing what you're trained to be.'*
#46 Creative Lead	*'This is what I love. This is the effort and the time and the thought that I've put into it […] the human element of I've really enjoyed doing […] sweat and tears into it versus you know, the websites or the sources'*	↔	*'We're having clients come to us say, "Oh, actually, we don't need you guys to do animation because we can do this with you know, this tool" […] I think it does kind of run the risk of outpacing us a bit.'*

Table 2-7: Supporting value judgment statements for displacing creative expertise

4.5 Summary of findings

Designers are contending with technological change unlike anything they have encountered. Where incumbent technologies have amplified and augmented designers' expertise, GenAI offers an inherent expertise accessible to anyone—whether expert or novice—with the proper access. Strikingly, designers' approach to such a radical technological transformation is far from consistent. The uncertainty of this ongoing innovation leads designers to make mixed value judgements about humanness, expertise, and their work. I find designers' judgments fluctuating as they attempt to hold a position. Still, self-imposed or external pressures are forcing them to shift their stance and seek space for GenAI in their practice.

5 Discussion

I set out to discover what GenAI's technological innovation means for creative workers and the creative process. In response to Amabile (2020), who highlighted that we know very little about 'under what conditions, experts' creative process will be inhibited or facilitated by their affective and motivational reactions to getting new ideas from machines' (p. 353), this paper draws on the firsthand accounts of 56 expert designers in the UK design sector.

Where technological change is commonly known to trigger a shock and then settle (Clark, 1985), the exponential growth of GenAI shows no sign of settling soon (Metr, 2025). This creates a distinct phenomenon with GenAI compared with previous technological innovations in the design sector. Designers are found navigating the radical technological innovation of GenAI with fluid value judgments. The notion of fluid in this context reflects the varying strength and consistency of designers' value judgements (i.e., subjective assessments) about GenAI. Judgements that are malleable and easily influenced by external pressures from peers, stakeholders and the technology. As a result, GenAI's capabilities are expanding into the once-exclusive domain of expert designers. Technology is no longer solely about supporting, augmenting, or automating specific, predefined tasks. With enormous amounts of data and computing power, GenAI can, albeit to varying degrees, substitute for designers' control across all stages of their work. Specifically, I describe how GenAI is altering designers' perceptions and experiences of their creative process.

5.1 Extending the creative process

Hitherto, research on GenAI and the creative process has not specifically changed the prototypical creative process diagram. The findings reported here lead to a revision of the diagram to illustrate an extension taking in GenAI.

5.1.1 Introducing an emerging extension of the creative process. Figure 2-3 illustrates findings from the data that suggest an extension of the prototypical creative process. It shows how designers' expert knowledge and agency, which once exclusively controlled and completed the process through its different stages, have been extended to account for GenAI, which can codify designers' explicit knowledge, meaning tasks are 'outsourced' and run in parallel with the core process. The result is a tentative extension of the diagram showing the three stages where designers reported outsourcing tasks during the creative process: *preparation* (for research and project establishment), *ideation* (for developing ideas), and

implementation (for executing production tasks). By outsourcing, I mean expert designers using GenAI to perform tasks that they would previously complete themselves with less intelligent, creativity support tools. Notably, the work being outsourced during the preparation and implementation stages was reported to a greater extent and in a more comprehensive manner than during the ideation stage. In the ideation stage, although it could be outsourced, it was used more limitedly, with the designers more guarded, as it was not something they generally engaged with. When designers did use it, they did so as a supplementary process rather than a primary one. The designers are leveraging the capabilities and speed of GenAI in those stages, depicted with a chevron to indicate its expedited task processing. The three stages where GenAI is being outsourced are labelled as 'explicitly sufficient' to indicate that explicit knowledge of design in these stages is formalised and systematic and sufficiently codified for designers to use. The two stages where designers are currently not outsourcing GenAI (Incubation and Validation) are labelled 'tacitly dependent' to reflect the contextual and subjective nature of the work involved in these stages that has not been codified.

Therefore, the relationships between the designer and GenAI are not omnidirectional, as indicated by the upward arrows from GenAI to the expert designer in those stages. Indeed, the outputs from GenAI are fed back into the designers' process from the three stages identified. The outputs at each stage are distinct for that part of the process. For example, in *preparation,* it included client and competitor audits; in *ideation*, it served as inspiration for additional ideas; and in *implementation,* it was used for accessibility compliance. Hence, the once master-and-tool relationship is looking more akin to a reciprocal partnership. Nevertheless, designers also believed they were in control throughout the process.

5.1.2 Why the process diagram warrants updating with GenAI. Previous research on creative processes has not provided such an update to the diagram. This may, in part, be due to the technology's limited, task-based function at each stage. Research on the role of Traditional AI

in creative processes reported on the initial stages of the Double Diamond (e.g., Schleith et al., 2022). The agentic properties of GenAI mean the technology is not simply influencing decision-making and ideation (e.g., Stuhlfaut & Windels, 2019); it is making the decisions. These present findings extend prior research by showing that GenAI is distinct from merely shaping decision-making in a human-led creative process. These tasks are now shown to be machine-led and capable of making decisions on behalf of the designer. Wagler (2025) uses survey data to identify potential applications for creative workers' use of GenAI. However, this was not developed to overlay the creative process or provide any substantive qualitative reporting. Furthermore, the referenced study was conducted with students rather than expert designers. Unsurprisingly, because 'many studies of designer behaviour have been based on novices (usually students) […]. But if studies of designer behaviour are limited to studies of rather inexpert designers, then our understanding of design ability will also be limited' (Cross, 2004, p. 435). In other words, empirical research of expert designers is of significant value. The section proceeds by drawing on the three aggregate dimensions and showing how each advances knowledge in relation to existing literature.

5.1.3 Dehumanising creative agency. The increasing agency of GenAI also advances our knowledge of control and autonomy in the creative process. For many years, creativity (e.g., Florida, 2012) and the creative process (e.g., Lubart et al., 2019) have been discussed as being inherently human, with it commented that there is a constituency that feels there is 'one realm of human endeavour we [society] believe machines will never be able to touch, and that is creativity' (Du Sautoy, 2019, p. 2). A common thread in this body of literature is that the creative agency responsible is assumed to be the exclusive domain of humans (Runco, 2023). Furthermore, a description of the creative process, singling out the human, reflects this as the 'mental mechanisms that occur when a person is engaged in creative thinking or creative activity' (Kaufman & Sternberg, 2010, p. 24).

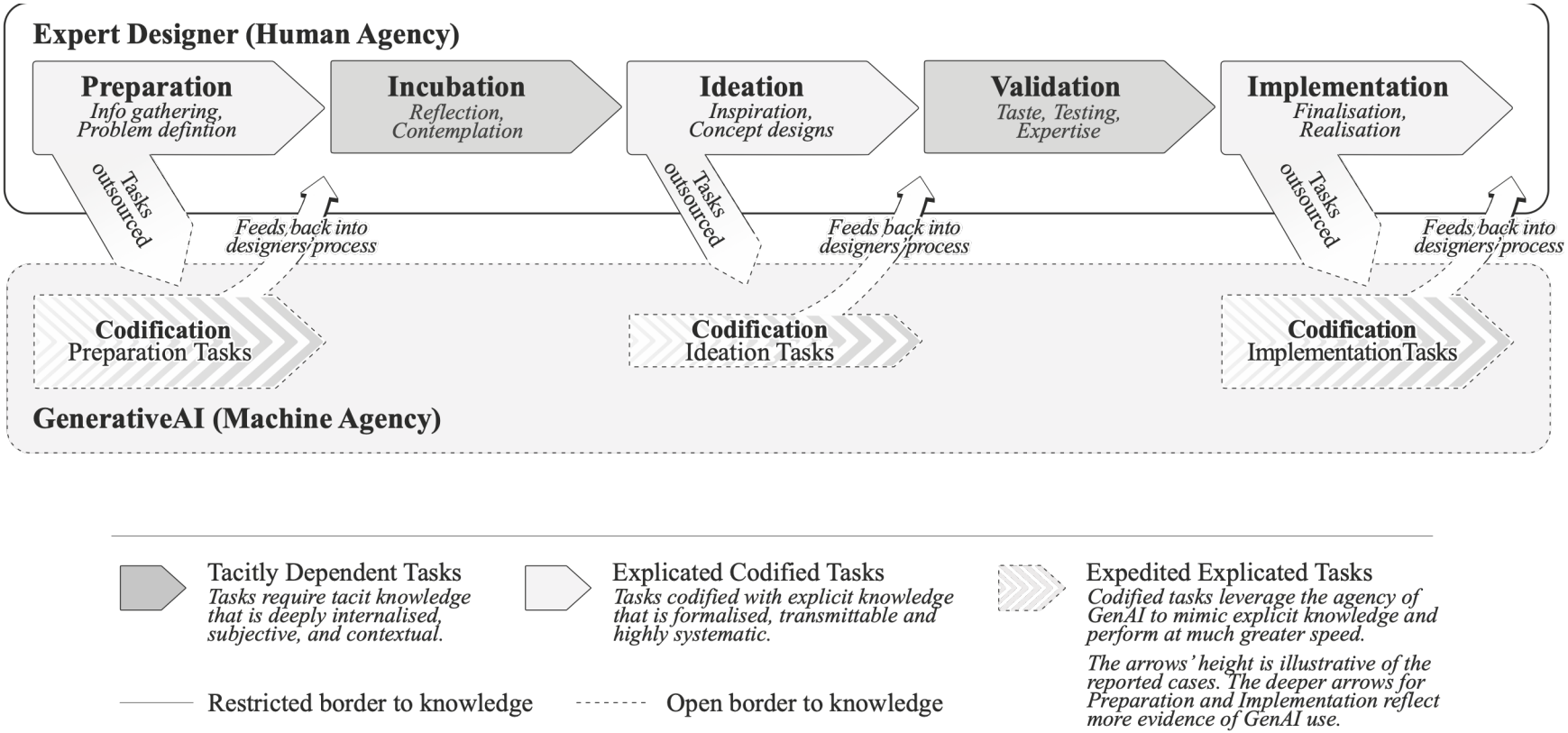

Figure 2-3: Extending the prototypical creative process with the outsourcing and codification of tasks to the agentic role of Generative AI.

The research reported here builds on this existing corpus of literature, revealing the agentic capability of GenAI. Specifically, GenAI will not only change how routine or mundane tasks are perceived, but also have the ability and agency to control creative tasks. GenAI redistributes human-led control and agency from humans as the sole creator to a hybrid-led co-creator or curator role that handles human-generated and GenAI output at different stages of the process. As a result of the disruption of work at these key stages in the creative process, the agency of creative tasks is dehumanised, and designers' creative expertise becomes fluid and disorienting. The fluidity in designers' work and greater aversion to the use of GenAI in the idea stage has parallels with Kroezen et al. (2020), who identified that craft experts struggle to prioritise 'human engagement over machine control' (503) as they see their craft and expertise diluted in exchange for efficiencies from an increased mechanised future.

Research has also shown that creative practitioners do not want to use GenAI models to automate their creative workflow completely (Palani & Ramos, 2024, p. 178). Traditional AI tools were suggested to remain heavily reliant on supervised learning, meaning the human in the loop for the foreseeable future (Anantrasirichai & Bull, 2022). A human-led approach has meant humans have remained in control of the key stages in the process, albeit 'significantly constrained' by the technology; in contrast, a machine-led approach was possible but with diminished human engagement (Akmeraner-Kökat & Pellandini-Simányi, 2025). The findings of this present study constructively support and extend this example. First, I show that giving GenAI greater control reduces the designer's role in these tasks. However, this is nuanced, and there are specific tasks designers seek to offload because they do not want such an active role.

What differentiates this research from other research is that, in a human-led scenario, expert designers do not report feeling constrained by the metrics or formats afforded by the technology. Instead, they are constrained by a lack of skill to use the technology as they wish. They are also constrained by perceptions resulting from a lack of trust, eroding expertise and a

diminished legitimacy and meaningfulness of their work. Given the impact on designers to date and the exponential emergence of GenAI, how near the 'mechanised future' is feels increasingly uncertain and proximal. This points to future areas of research going deeper into the dehumanisation of expertise and suggests that, as GenAI continues on its exponential curve (Metr, 20025), it is becoming the agent of change in CIs for the 21st century.

5.1.4 Disorientating creative work. Expert designers view GenAI as a way to outsource repetitive, process-heavy, and mundane tasks. GenAI can execute and expedite these tasks in seconds, maybe minutes (instead of counting human hours or days). Thus, such a radical change in the designer's daily practice has a disorientating effect. The lure of efficiencies in some areas, weighted against concerns of quality and trust regarding the legalities. A designer's traditional creative process is critical to their practice, involving working iteratively from concept through one or more stages of the prototypical creative process. A significant amount of research centres on a *compositional* process with ideas developed over a long horizon, whereas the alternative is an *improvisational* process in which the purpose unfolds throughout (Fisher & Barrett, 2019). The speed afforded by GenAI is radically altering the creative process. That is not to say the process is now improvisational. It does engender a feeling amongst designers that offloading the mundane will free up time to be more creative. However, there is no evidence that this would be the case. Instead, outsourcing work that is then completed at such a rate, returning to the designer quicker than if they had worked on it themselves. Thus, the outsourcing arrangement does not necessarily leave more time for the tasks designers perceive as 'creative'. Indeed, GenAI's ideas can be generated and developed into products and services much more quickly, thereby impacting decision-making speed and process duration. Hence, reflective of designers' disoriented position under the spotlight with GenAI. This, in turn, risks influencing external perceptions and pressuring designers' productivity and delivery when using GenAI.

This increase in technological speed aligns with the demands of an impatient client, partners, and other stakeholders. One that stems from a broader societal influence, where 'convenience culture seduces us into imagining that we might find room for everything important by eliminating only life's tedious tasks' (Burkeman, 2021, p. 38). Instead, it is suggested that technological innovation in fact 'exacerbates our feelings of impatience' (p. 105). Hence, this expedited creative process disorients the notion of developing ideas 'over a long horizon' in the *compositional* process. Moreover, the expediency that GenAI brings to the creative process contrasts with the need for time to think as widely advocated for with human creativity. For example, the need for 'prolonged thinking' and 'sustained effort' (Rhodes, 1961), once considered fundamental, has become a desirable but optional aspect. Hence, creative work is disoriented by GenAI, and the creative process is undergoing an irreversible transformation with a technology that has had 'the fastest adoption of an economically consequential technology in human history' (Mollick, 2025). Thus, warranting further research into the unexplored disorientating impact of GenAI's expanded capabilities, accessibility, and speed on the creative process.

5.1.5 Displacing creative expertise. As outlined at the start, GenAI is distinct from previous technological innovations in its ability to have work offloaded to it, and for GenAI's output to feed back into a designer's process. Designers described where and how they used GenAI in their process. Their accounts of GenAI's active and agentic role at various stages of the creative process were inferred to influence their decisions about when and where to use it, and about which aspects of their expertise to outsource.

Extant research describes the use of GenAI in specific stages of the creative process but does not provide a detailed diagram (e.g., Demsar et al., 2025). Palaini and Ramos (2024) use the Double Diamond to broadly categorise GenAI use across stages. They conclude that creative practitioners 'do not want to use GenAI models to completely automate their creative

workflow' (p. 178). However, they don't explicitly discuss the consequences of GenAI performing the tasks at any identified stage. Moreover, the heterogeneity of their sample of creative workers (i.e., graphic designers to science fiction writers) leaves room for a distinct contribution from the expert designers reported here. Indeed, designers in this present study also reported wanting to retain control, as once exclusive expertise is displaced by GenAI. Furthermore, this study contributes empirical data from the design experts on where they are willing and where they are less enthusiastic for GenAI to be integrated with their creative process; in other words, where, when and how enthusiastically their expertise is displaced.

Looking at related research from innovation management, there is no process diagram showing empirical effects on the process. For example, Roberts and Candi (2024) plot survey data for the use of AI and GenAI across the innovation process, notably showing slight variation in the use of GenAI across the stages. There is no qualitative depth explaining why or how this may be the case. By contrast, the expert designers reported in this paper showed a less consistent pattern of adoption across the five stages of the creative process. Designers were also resistant to specific capabilities of GenAI, reflected in their strategic use of GenAI. They were more open and actively seeking opportunities to utilise GenAI for mundane 'support' tasks than with tasks described as being more creative. Hence, many designers have shied away from using GenAI for ideation.

On the surface, this is reflective of research that suggests 'experts do not benefit as much from the use of GenAI in their work performance as novices' (Hsu & Bechky, 2024, p. 7). However, in the present study, the data reveal a more nuanced picture because, although expert designers' statements on one hand inferred a reluctance or no need to use GenAI, they also made statements that demonstrated they were benefiting from outsourcing the mundane tasks to GenAI. Thus, the research reported here offers a snapshot of the stages and tasks in the creative process where GenAI's benefits are felt and expertise is displaced. Consequently, it

also reveals stages and tasks where benefits are not ignored, opening up avenues for valuable future enquiry.

The results of this study show expert designers' use in the *preparation* and *implementation* stages. Also, the use in the *ideation* stage, although it is more controlled, there was no concrete evidence to support use in the *incubation* and *valuation stages*. Instead, the designers' comments suggest that the reason lies in the nature of the requirements in these two stages. First, incubation is an inherent human attribute, one in which designers step back and reflect. Currently, it is not possible with GenAI. GenAI may be reflecting in some form; however, it is at a speed and opacity that are not evidenced or captured in this research. Validation was also reported as inherently human, with designers suggesting that taste and empathy are core measures in this stage. These findings point to future research to address questions such as: where and when is expertise displaced by GenAI? How and why do designers incorporate GenAI into the creative process? Furthermore, given that designers easily pursue issues opportunistically (Cross, 2004), research on the stages where GenAI is not currently employed and expertise is not displaced in the creative process, would be valuable.

6 Limitations and Future Research

I encourage this research to be viewed through a lens that considers the following limitations, which offer potent opportunities for novel and salient future research, in addition to those suggested in the discussion above.

The qualitative methodology and interpretive nature of the research and analysis mean it is open to alternative interpretations by humans or GenAI. This paper analyses and presents data on inconsistencies between positive and negative statements across three dimensions (creative agency, creative work, and creative expertise). There is scope for a narrow focus on specific themes. For instance, at a task level where statements could be attributed to specific

stages in the creative process, investigating motivating factors for why it is used more or less would be of both scholarly and managerial value.

Building on the previous point, the sample of professional designers in the CIs describe havingtheir creative process impacted by GenAI . Future research would be warranted to discover exactly how and where GenAI affects the creative process through ethnographic studies and observations, to witness first-hand what changes there are, and how they arise. The idiosyncratic nature of designer disciplines points to a future direction: narrowing the sample further to identify two design professions (e.g., landscape and user experience), researching their comparison to determine whether one is disproportionately affected, and understanding what is driving the difference. Furthermore, looking beyond the design sector to the creative industries and other creative workers warrants future exploration of the impact of genAI on the creative process in other sectors in the CIs. For instance, investigating the role of GenAI in the publishing process, or where GenAI is influencing photographers' creative processes. Also, discovering how GenAI, specifically text generators like ChatGPT and Claude, are impacting copywriters' processes, where and when do they outsource their tasks and possibly their expertise? What might they hold on to? And why are they doing that?

Acknowledging that, although valuable in capturing the disrupted creativity, the analysis is based on a single data set at a snapshot in time, while new technology was still emerging. More research is required that explores GenAI as a key agent of change in the CIs. Indeed, research examining the potential temporal nature of disrupted creativity is needed: Will it persist? How might it change? Why does that change occur? Furthermore, what does the elimination of social interaction, the lowering of expert boundaries, concealment of decision-making, and the truncation of creative thought and process mean for the future of a designer's expertise? Most significantly, what does the continuing effect of dehumanising creativity

agency, disoriented creative expertise and disrupted creative processes mean for the future of creative work? And the creative industries?

7 Conclusion

This paper explores the intersection of radical technological innovation and creative work, seeking to understand its disruptive influence on creative workers and their creative processes. By focusing attention on radical technological innovation in the people and processes of the creative industry, I highlighted the radical innovation of GenAI. The broad capabilities, appeal, and accessibility underscore the 'radical' nature of the technological innovation in great AI. The paper demonstrates how the disruption initiated by GenAI is sustained by a fluid mix of shifting value statements and ongoing technological developments. Furthermore, the study contributes to understanding the creative process in the era of GenAI. Specifically, the real-time impact on designers' practice, illuminating fluctuating behaviour within and between stages as the creative process extends.

3.3. Paper III

Proximity of Creative Expertise

1 Introduction

Technology is central to the work of many expert occupations (Nelson et al., 2023), facilitating the development of expertise and the creation and communication of such expertise within and across knowledge boundaries (Leonardi et al., 2019). Such knowledge boundaries are typically drawn around expert knowledge and practices, comprising knowledge workers responsible for creating, sharing, and applying expertise (Abbott, 1988)—who act as the gatekeepers to protect the boundaries of expert domains (Susskind & Susskind, 2018). The expertise and skill of knowledge workers in these communities are vital to value creation (Muzio, 2019), affording them control over a problem domain (Anthony, 2021). While knowledge and expert practices are easily shared within the same community, they are challenging to share with a different community (Waardenburg et al., 2022).

The creative industry comprises communities of knowledge workers, built on the understanding that humans cannot succeed without the help of technology (Newman and Blanchard, 2019). Hence, technology has been critical in the creative industries by driving change that results in them 'recreating' or 'transforming' (Jones et al., 2015). Nonetheless, traditional AI technologies have hitherto not significantly impacted creative workers' expertise, with human creativity seen as unmatched by machines (Runco, 2023). However, creative workers are experiencing a transformation in their work due to the increasing accessibility and computing power enabled by the latest developments in artificial intelligence (AI)—generative AI.

Research at the nexus of creativity and generative AI (GenAI) is a growing field. However, the focus has leaned towards quantification and performance of creative output over the effect on the creative workforce. For example, one study finds that the idea-generation capabilities of GenAI surpass those of humans (Girotra et al., 2023), while another suggests that GenAI can enhance individual creativity by offering new creative possibilities (Doshi & Hauser, 2023). Although GenAI is anticipated to have a significant impact on the creative workforce, there is

limited understanding of its implications for creative workers. More specifically, there is no known research exploring how GenAI, a technology that can imitate human expertise (Krakowski et al., 2023), such as creative idea generation (Cai et al., 2023), will impact the established knowledge boundaries in the creative industries.

To foreground the impact that GenAI's dynamic pace of change and capabilities are having on creative workers and their expert domains. A temporal study allows for observing the co-evolution of people and technology (Orlikowski, 1992). This paper highlights the salient role of affordances as the theoretical lens for examining change over time. Introduced by Gibson (1977), affordances explain 'why, how and when new technologies become enrolled in and affect organisational action' (Leonardi & Vaast, 2017, p. 9), and their theoretical and empirical significance led this research to use an affordance lens for analysis at the nexus of creative workers, expertise and the acceptance of GenAI.

The design sector was chosen as the creative industry for this research because it is creative work where expertise has long been amplified and augmented, but not fully automated, by technology to realise and elevate ideas and output. Design also plays a critical role in shaping our world (Design Council, 2022) and ensuring commercial success (McKinsey, 2018). However, despite the reported necessity of design, graphic design has been ranked as the 11th fastest-declining job (World Economic Forum, 2025). This may be a coincidence, but it further highlights the need to spotlight the sector as it experiences the emergence of GenAI in real time at multiple points. This research illuminates the salient role of affordances as a theoretical lens for examining their impact on creative workers. Through signalling the actions possible between a user and technology, affordances are effective for understanding unfolding changes (Faik et al., 2020). Thus, their proven effectiveness at capturing temporal changes makes them ideal for this study that takes a real-time view of technological change. Drawing on 88 in-depth interviews with expert designers, this empirical study uses data collected in two phases over approximately 12 months.

Moreover, I spoke to the same 44 designers in the second phase of the interview as I did in the first. They provided a rich data set for temporal comparison.

The overriding message of this paper is that the distance between a designer's perceived expertise and that which they afford GenAI is moderating their perceived usefulness and acceptance of it. The three core findings of this paper are: i) the first use of affordances for the acceptance of GenAI, demonstrating its effectiveness for revealing changes in attributed expertise and behaviours towards GenAI; ii) the construct of *proximity of expertise* is introduced as a practical framework that illustrates the phenomenon and is helpful for predicting usefulness and technological acceptance; iii) GenAI facilitates *creative trespassing* by designers as well-established knowledge boundaries are crossed and the expertise in them 'looted' in acts of betrayal. This paper continues by providing the theoretical backdrop on which it stands, followed by the methodology, findings, discussion and then limitations and opportunities for future research.

2 Theoretical Backdrop

What follows is an introduction to the core themes of this research, illustrating their empirical and theoretical relevance and significance. This section proceeds with relevant work on i) *expertise and knowledge boundaries,* ii) *artificial intelligence and epistemic technology,* iii) *algorithmic avoidance, resistance and acceptance,* and iv) *sensemaking through an affordance lens.*

2.1 Expertise and knowledge boundaries

Expertise is acquired through the development of specialised knowledge and sustained practice over specific, unique tasks (Anteby et al., 2016), giving individuals the 'capacity to perform a task better and faster than others' (Eyal et al., 2013, p. 877). Vital to value creation (Muzio, 2019), expertise is valuable knowledge held only by a select group (Treem, 2016) who use it to assert authority and control in a problem domain that others cannot solve (Anthony, 2021). Being socially constructed as part of a group, expertise is vulnerable to external influences such

as technological change (e.g., Nelson et al., 2023; Lifshitz-Assaf, 2018; Nelson & Irwin, 1994), and it can be diminished or lost with time away from the community (Collins & Evans, 2007). Expertise is more than just acquiring the right skills and natural endowment (Bourne et al., 2014). It is a lived experience that requires time, deliberate practice, and growth through education, training, and social interaction (Pratt et al., 2006), as well as domain experience (Skovholt et al., 2016).

First-hand experience and practice are essential to understanding work for the generation and transmission of expert knowledge (Miron-Spektor et al., 2011). This 'relational knowledge' is thought to be impossible to codify, instead being tacitly preserved and nurtured (Pakarinen & Huising, 2023; Verganti, 2009) and, over time, diffusing through organisations (Nonaka, 1994). The skills and knowledge that workers possess and are closely identified with, due to the time and investment made in them, can be referred to as 'signature skills' because of their idiosyncratic nature and the depth of expertise they entail (Leonard-Barton, 1995). Indeed, the expertise of knowledge workers affords them elevated social status (Larson, 1979). It is their distinct knowledge that secures experts' recognition, which allows them to protect their expertise (Eyal, 2019).

Experts act as gatekeepers, protecting the socially constructed knowledge boundaries around jurisdictions of different expertise (Susskind & Susskind, 2018). These boundaries around domains of expertise prohibit the effective delivery of knowledge across and between organisational functions and individuals (Brown & Duguid, 2001). Knowledge boundaries are socially constructed barriers that enable different professional groupings to develop distinctive knowledge bases (Van Maanen & Barley, 1984; Ferlie et al., 2005). These groups comprise knowledge workers responsible for creating, sharing, and applying expertise (Abbott, 1988) in their pursuit of intellectual authority over a particular domain (Gieryn, 1983). Domain

boundaries are typically drawn around practices easily shared between actors of the same community that are difficult to share with a different community (Waardenburg et al., 2022).

Technology is central to the work of experts (e.g., Nelson et al., 2023; Strich et al., 2021; Lifshitz-Assaf, 2018), for the creation and communication of expertise within and across knowledge boundaries (Leonardi et al., 2019). Information technology systems can extend and improve human agency and can produce new knowledge when users have the competence and opportunity to express it; those who achieve this attain legitimisation (Zuboff, 1988), where epistemic algorithmic technologies are central in the ongoing construction of knowledge (Anthony, 2018). Beyond the construction of knowledge, AI is suggested to be a challenging expert authority, making it less clear 'who or what can claim expertise on a given issue' (Heimstädt et al., 2023, p. 5). Thus, it transforms what has traditionally been thought of as knowledge boundaries (Dell'Acqua et al., 2025).

2.2 Artificial intelligence and epistemic technology

Artificial intelligence (AI) is fuelling the Fourth Industrial Revolution (4IR), impacting both society and firms (Makridakis, 2017). There is no escaping the pervasive influence of AI, which is fuelled by exponential increases in computing power and vast amounts of data—blurring the boundary between the physical and digital (World Economic Forum, 2022). Although there is no widely accepted definition of AI (Wang, 2019), in general terms, AI is the leveraging of 'computer systems and machine learning to mimic the problem-solving and decision-making capabilities of human intelligence' (IBM, 2025), a description adopted for this research.

Scholarly enquiry in the domain is broad, extending on the premise that 'every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it' (Dick, 2019, p. 2). As such, AI is an invisible superpower, increasingly interwoven through all aspects of our lives, permeating the professional and

personal spheres. Put differently, AI is ‘unlike singular inventions from the past, it behaves more like electricity in that it powers tools and devices that run almost every aspect of society and our lives’ (Smith et al., 2019).

The increasing presence and capabilities of epistemic technologies—capable of generating and disseminating knowledge historically performed by humans—are anticipated to ‘transform expertise in organisations, reshape work and occupational boundaries, and offer novel forms of coordination and control’ (Faraj et al., 2018, p. 62). Technology is a critical factor for transformation in the creative industries—changes that trigger the creative industries to ‘recreate’ or ‘transform’ (Jones et al., 2015). Humans have always sought to harness technology to further their creative ambitions (Shneiderman, 2000). Indeed, computers are designed as tools to extend human creative power (Selker, 2005), and technologies continue to be developed in the knowledge that humans cannot succeed without enhancements (Newman & Blanchard, 2019).

The recent developments in AI—specifically, generative AI (GenAI), the technology powering tools such as ChatGPT and MidJourney—have taken enhancements to an unparalleled level. GenAI is emerging as an epistemic and equivocal technology—one with a pluralistic and contested meaning (Weick, 2020). The equivocality of such emerging technologies is growing as AI’s capabilities to replace professionals’ knowledge and expertise increase (Scarbrough et al., 2024). Unlike traditional AI, which focuses on performing specific tasks intelligently, GenAI boasts extensive capabilities in general intelligence, affording it ‘broad and nontechnical appeal’ (Grimes et al., 2023, p. 1617) accessible to experts and novices alike.

This democratisation of knowledge production technology enables actors outside traditional boundaries to access unique knowledge (Lakhani et al., 2013). Relatedly, as Eyal (2019) points out, ‘remembering’ specific knowledge is no longer something an expert has exclusivity over. Instead, experts have increased their reliance on technology, with their

cognitive competence redistributed through the codification of specific rules that now reside within the increasing epistemic capabilities of computers. Technological transformation has shown that those with 'expertise, question their technologies, whereas users without expertise accept them' (Anthony, 2018, p. 662), and without their successful adoption, technological change will 'fail to deliver their promise' (Mehri, 2023, p. 2).

2.3 Algorithmic avoidance, resistance and acceptance

The diffusion and adoption of new technology depend on how group members perceive it and whether they resist, adapt, or adopt it. Resistance behaviours are 'intended to prevent the implementation or use of a system or to prevent system designers from achieving their objectives' (Markus, 1983, p. 433) and occur 'following perceived threats that result from the interaction between initial conditions and a given object' (Lapointe & Rivard, 2005, 482). Falling on a continuum, from *overt* (e.g. sabotage) to *covert* (e.g. inertia) (Hirschheim & Newman, 1988), the stronger the perceived threat, the greater the propensity to resist (Joshi, 1991). Technologies that question experts' legitimacy, learning algorithms are argued likely to be resisted, with the technology's opacity and an anticipated influence on implementation and risk to expertise (Faraj et al., 2018, p. 65). For example, physicians were discovered to find AI technology invasive and resisted its implementation for fear of losing the 'ability to make their own decisions, noting that 'physicians feel responsible for their patients' (Reis et al., 2020, p. 287), and computer engineers anticipating a 'competence penalty' afforded to their perceived ability and if they were to use a state-of-the-art AI coding assistant strategically avoided it (Gai et al., 2025). Relatedly, the notion of *uniqueness neglect* describes where 'people have a need to see themselves as unique and distinct from others' because 'machines treat every case in the same way', and consequently, people opt for the care of inferior human providers 'because the prospect of being cared for by [superior] AI providers is more likely to evoke a concern that one's unique characteristics […] will be neglected' (Longoni et al., 2019, p. 630).

Nevertheless, a lack of perceived usefulness and acceptance may not always reflect deliberate resistance. Instead, it might be determined by other less explicit or consciously driven factors, such as the cognitively-driven *blindness to innovation* where expert innovators are blinded to the fact that other actors might construct different problems and solutions when faced with the same situation they 'fail to see why they do and miss the opportunity to understand that they are actually in the midst of constructing very different problems' (Leonardi, 2011, p. 350). Perceived expertise is also shown to be a determinant of constraints on individuals' recognition of opportunities enabled by new technologies. Because when experts become aware of a new technology, they may 'still avoid it if they perceive it as requiring the development of expertise too different from their own' (Nelson & Irwin, 2014, p. 669).

2.4 Sensemaking through an affordance lens

This research illuminates the salient role of affordances as a theoretical lens to examine the impact on creative workers from the dynamic pace of change and capability brought by GenAI over time. Introduced by Gibson (1977) to help describe animals' perceptions of the world, an affordance does not refer to what an object is. Rather, 'it implies the complementarity of the animal and the environment' (p. 127). In short, affordances are the possibilities offered to an animal by the environment, either for good or ill' (p. 127). Scholars have adopted the notion of affordances in many fields, notably, for this study, design, where Norman (2013) asserts that 'a good designer makes sure that appropriate actions are perceptible and inappropriate ones invisible' (p. xii). In other words, a design with strong affordances communicates what it does, how to use it and who it is for.

Also of note for the present research is the use of affordances applied to technology (e.g., Conole & Dyke, 2004; Gaver 1991), where affordances are signals for the actions possible between a user and technology and are effective for understanding unfolding changes (Faik et al., 2020) of emergent technology (Vaast & Kaganer, 2013). They are the 'action possibilities and

opportunities that emerge from actors engaging with a focal technology' (Faraj & Azad, 2012, p. 238), and the functional and relational aspects for agentic action (Hutchby, 2001). In short, affordances are effective in capturing changes in behaviour over time.

Affordances help to describe the potential for social action provided by technological forms (Kellogg et al., 2020), they help explain 'why, how and when new technologies become enrolled in and affect organisational action' (Leonardi & Vaast, 2017, p. 9). They are not about technology per se, and 'agnostic to particular features of technology' (Treem & Leonardi, 2012, p. 147). Affordances have been shown to trigger changes in individuals' routines, while constraints of technology lead to changes in technology (Leonardi, 2011). Relatedly, they have also been used to examine GenAI and the 'digitalisation of individuals' (Park, 2024). Moreover, it has been contended that affordances 'have an existence that is dependent on the abilities and practices of humans' (Rietveld & Kiverstein, 2014, p. 339). In other words, affordances can be viewed in relation to individuals' expertise.

Expertise resides external to the expert; it is attributed by others and located in the relationships between them (Eyal, 2019). Likewise, affordances are not inherent in an object or individual but are used to examine the space between actors and technology. This research seeks to better understand creative workers' relationships with knowledge boundaries when technology seemingly encourages individuals to cross from their expert domain into another. Thus, adopting an affordances lens is both methodologically and theoretically appropriate for this temporal study. However, although applied in research exploring technology trajectories (e.g., Nelson et al., 2023), algorithmic systems (Kellogg et al., 2020) and artificial intelligence (e.g., Anthony, 2021), affordances have yet to be used to further our understanding of expertise and technology. Specifically, in this paper, the possibilities for action that are afforded to designers by GenAI and the impact this has on knowledge boundaries.

2.5 Summary

Specialist expertise has been core to establishing and clearly differentiating between communities of experts. Furthermore, with expertise comes status and legitimacy that help to protect the knowledge boundaries between experts. The emergence of GenAI as the first epistemic technology to convincingly mimic the perceived expertise of creative workers is anticipated to affect these long-standing assumptions on expertise, jurisdiction and epistemic technologies. The creative industries are communities of experts experiencing issues with the diffusion of AI creativity tools. Empirical studies have identified creative workers' reluctance to engage with these tools (Maiden et al., 2019) or to leverage their potential fully (Maiden et al., 2018). This unwillingness to engage with AI or acknowledge its direct impact on their work by members of the creative community is likely compounded by the latest development in AI.

Knowledge boundaries share qualities that go back to Durkheim's (1893/1984) theory of Organic Solidarity, whereby society is a socially constructed organism, constituting multiple, functioning, independent parts, as much as they depend on another part and the other parts on it. Thus, the creative industries are such an organism, with the interactions across expert boundaries akin to one part feeding another and vice versa, e.g., designers and copywriters. When a technology actively encourages users to cross expert boundaries, to access the unique skill of another functioning part, what does this do to established norms and the solidarity of the workforce? Moreover, GenAI, which can truncate processes and compromise the quality of in-depth thinking and reasoning (Mollick, 2024), likely has greater implications for creative workers and their expertise. Thus, this paper foregrounds creative workers' behaviours and responses to GenAI. Specifically, when GenAI enables novices to be experts, I sought answers to the research question:

How does a creative worker's perceived expertise influence their relationship with GenAI and established knowledge boundaries?

3 Methodology

3.1 Research setting

I studied the design sector in the United Kingdom. Chosen as a fertile setting for exploring the role of expertise in creative workers' responses to GenAI in their daily work for two reasons. First, designers are suggested to be archetypal knowledge workers—individuals with expertise at the core of what they do (Scott, 2008). They possess expertise that expands through education, training, and social interaction (Pratt et al., 2006), as well as domain experience (Skovholt et al., 2016). Second, GenAI has made an irreversible and unmissable move into the design sector and is expected to be at risk of 26% automation (Goldman Sachs, 2023). Furthermore, employers predict that graphic designers will be the 11th-fastest-declining job, striking given it was in growth two years ago (World Economic Forum, 2025; 2023).

Accordingly, the design sector is ideally placed for researching expertise and emerging technologies at a work level. However, the global scale of the design sector, combined with territorial uniqueness, required focus. My fifteen years of professional experience as a designer and creative director in the UK focused my attention there. A decision underscored by the United Kingdom's creative industries as an ideal setting to research innovation (e.g., Li, 2020) and *its* economic value to the UK, sitting at the 'heart of the nation's competitive advantage' (DCMS, 2018) and responsible for circa 2 million jobs (WDO, 2024).

3.2 A temporal approach

A longitudinal design was conducive to the inherently temporal nature of technological change because time is 'capable of revealing the temporal patterns, causes, and movements from continuity [and] underlying logics that give events meaning and significance' (Pettigrew, 1990, p. 273). This approach accounts for the co-evolution of people and technology (Orlikowski, 1992) and the 'potential changes in perceptions and affordances' (Leonardi & Vaast, 2017, p. 13). As this study seeks to understand the influence of an emerging technology

on expertise and knowledge boundaries, more than one phase of data collection is paramount. Therefore, I interviewed each participant twice at 9-12-month intervals over 14 months, starting in November 2023. The result is a data set of 88 in-depth interviews with 44 expert designers across 2 phases, 9-12 months apart.

3.3 Data sample

To study expertise and GenAI at a 'work level' (Barley & Kunda, 2001), designers were specified as the target population. The design sector constitutes various disciplines (e.g., graphic, motion and user experience), which are collectively referred to as designers unless explicitly noted. Designers' outputs are varied but predominantly visual. Thus, the sample sought was responsible for generating or directing creative output that was primarily visual—albeit varying in size and subject. Purposeful recruitment identified designers in such roles. All participants were offered a gift voucher in return for their time. Importantly, designers were identified, vetted, and recruited through professional platforms such as LinkedIn and Adobe's Behance, ensuring they were employed full-time in their design roles. A snowballing procedure (Zimmerman, 1977) was also employed to recruit additional designers, whereby participants were asked to recommend individuals they thought offered rich, perceptive accounts of the research setting (Alvesson, 2011).

The author's domain experience enabled him to win the participants' trust and be less obtrusive (Orr, 1996) in questioning. After removing participants who did not meet the inclusion criteria of the targeted population, fifty-six designers were originally interviewed in Phase I. The target population for Phase II was those fifty-six designers who participated in the first phase. Of those fifty-six designers, forty-four were successfully re-recruited for Phase II.

This study reports the analysis of 88 in-depth, semi-structured interviews with the same 44 designers in both phases (Table 3-1). This included 17 females and 27 males, with seniority ranging from Junior Designers to Executive Creative Directors and tenures of 1 to 35 years

(with an average of 17 years). Employment type fell into three categories: in-house (as a designer in a non-design organisation working for internal stakeholders), agency (working in a design agency for external clients) and freelance (self-employed working on temporary contracts either in-house, at an agency or for their own clients). The designers sit within the disciplines of *graphic* (e.g., graphic and brand identity design), *digital* (e.g., digital product, experience, and motion design), and *experiential* (e.g., live events and service design).

A semi-structured interview protocol was followed, asking 'what' and 'how' questions to elicit information about temporal events as and when they occur (Van de Ven & Huber, 1990). All interviews were conducted online in English and recorded using Zoom or MS Teams. Otter was used to provide a draft transcription, which was then edited in real-time with the audio playback to ensure the accuracy of the reported content. Data collection yielded over 130 hours of digitally recorded material, each producing a transcript of 7,500-12,500 words.

3.4 Data analysis

3.4.1 The approach. The exploratory qualitative nature of the aims and data collected for the research required an interpretive approach. The volume of data and complexities relating to affordances across time that surfaced as the data was processed required a method with greater flexibility beyond using a sole, established template. As a result, a flexible, less orthodox approach was taken, which meant deviation from the conventions provided by the scope of any individual methodological template. Instead, having the agency and flexibility to select core elements of specific templates. Thus, this pluralist approach aligns closely with *methodological bricolage* (Pratt et al., 2022). Specifically, the thematic analysis required of the data was well suited to being analysed and aggregated into a data structure (Gioia et al., 2013) whilst retaining discipline, methodological care (Ravasi, 2022) and 'qualitative transparency' (Pratt et al., 2022).

The aim of the analysis is to develop an explanation and theoretical model for what was

ID	Phase 1	Phase 2	Role	Expert Domain	Employment Type	Tenure	Gender	Seniority
#01	1h 17m	1h 15m	Creative Director / Consultant	Graphic / Brand	Freelance	30 yrs	M	Exec. Director
#02	1h 24m	1h 10m	Creative Director / Owner	Graphic / Brand	Agency	16 yrs	M	Director
#03	1h 35m	1h 2m	Motion and 3D Designer	Digital / Experience	Agency	17 yrs	M	Director
#04	1h 11m	1h 11m	UX Director	Digital / Experience	In House	24 yrs	M	Director
#05	1h 0m	1h 5m	Graphic Designer	Graphic / Brand	Freelance	20 yrs	F	Senior
#08	1h 15m	0h 50m	Graphic Designer	Graphic / Brand	Freelance	1 yr	F	Junior
#09	1h 23m	1h 17m	Executive Director, UX	Digital / Experience	In House	17 yrs	M	Director
#10	1h 49m	1h 5m	Designer	Graphic / Brand	Agency	6 yrs	M	Mid-weight
#11	1h 27m	1h 10m	Lead Digital Product Designer	Digital / Experience	In House	19 yrs	M	Director
#14	1h 17m	0h 49m	Designer	Graphic / Brand	Agency	13 yrs	M	Senior
#15	1h 42m	1h 20m	Principal Product Designer	Digital / Experience	Freelance	26 yrs	M	Exec. Director
#16	1h 44m	1h 21m	Design Director & Interior Architect	Interior/ Experience	Agency	26 yrs	M	Exec. Director
#17	1h 18m	1h 3m	Head of Human-Centered Design	Digital / Experience	In House	19 yrs	M	Director
#18	2h 2m	1h 27m	Head of Digital Product Design	Digital / Experience	In House	19 yrs	M	Director
#19	1h 20m	1h 23m	Creative Director	Graphic / Brand	Agency	21 yrs	F	Director
#20	1h 20m	1h 19m	Global Head of Design	Graphic / Brand	Agency	26 yrs	M	Exec. Director
#21	1h 48m	1h 3m	Creative Director	Graphic / Brand	Agency	17 yrs	M	Director
#23	0h 50m	0h 53m	Creative Director	Graphic / Brand	Agency	21 yrs	F	Director
#24	1h 8m	1h 20m	Design and AI Facilitation	Digital / Experience	Agency	7 yrs	M	Mid-weight

Table 3-1: Participant interview information.

ID	Phase 1	Phase 2	Role	Expert Domain	Employment Type	Tenure	Gender	Seniority
#26	1h 39m	1h 32m	Creative Director	Digital / Experience	Agency	19 yrs	M	Director
#29	1h 22m	0h 55m	UX/UI Designer	Digital / Experience	Freelance	24 yrs	F	Senior
#30	1h 22m	1h 7m	Creative / Art Director	Graphic / Brand	Freelance	5 yrs	F	Director
#32	1h 9m	1h 20m	Creative Director	Graphic / Brand	Agency	20 yrs	M	Director
#35	1h 44m	1h 1m	Head of Service Design	Digital / Experience	In House	24 yrs	M	Director
#37	1h 14min	1h 12	Service Designer	Digital / Experience	In House	2 yrs	M	Junior
#38	1h 2m	1h 4m	Innovation Designer	Digital / Experience	In House	2 yrs	F	Junior
#39	1h 3m	1h 9m	Learning Experience Designer	Learning/Experience	Agency	8 yrs	F	Senior
#40	1h 23m	1h 14m	User Experience Lead	Digital / Experience	In House	13 yrs	F	Senior
#41	1h 11m	1h 23m	Principal UX Consultant	Digital / Experience	Agency	18 yrs	M	Senior
#43	1h 18m	1h 19m	Interface & Visual Designer	Digital / Experience	Agency	28 yrs	F	Senior
#44	1h 9m	1h 13m	Graphic Designer	Graphic / Experience	Agency	17 yrs	F	Senior
#45	1h 57m	1h 13m	Service & Product Designer	Digital / Experience	Freelance	13 yrs	M	Senior
#46	1h 26m	1h 7m	Creative Lead	Graphic / Experience	Agency	5 yrs	F	Mid-weight
#48	1h 11m	0h 55m	Lead Graphic Designer	Graphic / Experience	Agency	10 yrs	F	Senior
#49	1h 15m	1h 7m	Creative Director	Graphic / Experience	Agency	28 yrs	M	Exec Director
#51	1h 28m	0h 55m	Motion 3D Designer	Digital / Experience	Freelance	20 yrs	M	Senior
#52	1h 28m	1h 2m	Executive Creative Director	Graphic / Brand	Agency	28 yrs	M	Exec. Director
#53	2h 25m	1h 15m	Experience Director	Digital / Experience	Agency	30 yrs	M	Exec. Director

Table 3-1: Participant interview information (cont.)

ID	Phase 1	Phase 2	Role	Expert Domain	Employment Type	Tenure	Gender	Seniority
#54	1h 10m	1h 12m	UX Director	Digital / Experience	In House	11 yrs	F	Director
#55	1h 4m	1h 2m	Graphic Designer	Graphic / Brand	Freelance	15 yrs	F	Senior
#57	1h 30m	1h 15m	Graphic Designer	Graphic / Brand	Agency	4 yrs	F	Senior
#58	1h 27m	1h 1m	Creative Director	Digital / Experience	Agency	28 yrs	M	Exec. Director
#59	1h 18m	1h 9m	Experience Director	Digital / Experience	Agency	22 yrs	M	Director
#61	1h 46m	1h 2m	VP Exec. Creative Director	Experiential	Agency	25 yrs	M	Exec. Director

Table 3-1:Participant interview information (cont.)

found in the data. The volume of the data requires a flexible approach to steering beyond any single methodological template or tool for analysis, if required—a *bricolage method* (Pratt et al., 2022). Starting with an inductive approach (e.g., Gioia et al., 2013; Glaser & Strauss, 1967), initial coding and analysis were conducted manually, supported by the software NVivo 15, to capture and manage the codes following established steps (e.g., Gioia et al., 2013). The temporal nature of the data meant an iterative analysis moved between transcripts and emergent themes (Pratt et al., 2006; Locke, 2001; Isabella, 1990), specifically looking for differences between Phase 1 and Phase 2. Such a reflexive approach facilitated the reliability of interpretation (Pratt, 2008). By late 2024, the study had generated a rich body of research material for analysis. This included two sets of interview transcripts from the same cohort of 44 designers, separated by 12-14 months. Phase 1 transcripts had previously been analysed. These were recoded with the Phase 2 transcripts.

3.4.2. Data structure. The outcome was the formation of a data structure diagram (Gioia et al., 2013) as a means of aggregation, analysis, and communication (rather than theory development). Furthermore, the traditional data structure was adapted to display comparative responses for each of the three dimensions in Phase 1 and, in a grey box, for Phase 2 (Figure 3-1). The codes and analysis used in this paper are distinct from those in Papers I and II, yielding sixteen first-order codes, six second-order themes, and three aggregate dimensions.

3.4.3 Adopting an affordance lens. An affordance lens was employed during the analysis to identify statements made by designers that responded to the research questions, an explorative enquiry of GenAI, expertise and everyday work. It proved effective in highlighting three categories of designers' work tasks: *signature*, *peripheral and external.* Captured at an individual level (not weighted by discipline or seniority), these formed the basis for the data structure, with designers' statements—albeit shifting between Phase 1 and Phase 2 using the following definitions:

Signature tasks. These take a lead from Leonard-Barton (1995), as the skills in a designer's process that afford them the greatest satisfaction and are seen as central to defining their perception of themselves in their role. (e.g., ideation and concept design). Notably, these are the tasks designers perceive GenAI as being least capable of performing. They were also tasks in the earlier stages of the creative process and, fundamentally, tasks that, if outsourced, left them questioning their authenticity and feeling like a cheat. As one describes: 'I wouldn't be comfortable using purely AI-generated images as the end product. It feels disingenuous, like cheating, and lacks authenticity' (#03 Motion and 3D Designer).

Peripheral tasks. These fall within what a designer perceives as their principal domain, but outside of their perceived signature tasks, and still within their domain (e.g., competitor audits, user personas and design development). Such tasks were afforded less satisfaction and were viewed by designers as the mundane 'churn' which, although they wanted to control them, saw advantages in automating and outsourcing them to GenAI—freeing up time and creative capacity to focus more on the perceived signature tasks. As in this statement: 'Anything that can take the pressure off those like menial tasks or like things that just you press a button, it generates it, and something that used to take like three hours now takes 10 minutes. Amazing […] do the rubbish stuff for you' (#55 Senior Graphic Designer).

External tasks. Those identified as any that sit beyond a designer's perceived signature and peripheral tasks, extending beyond what they are expected to do, into the domain of other disciplines. For example, where traditionally a designer may commission an illustrator to generate visuals for an aspect of a project, or similarly seek the services of a copywriter for naming, headline or other copy—GenAI now offers designers (and anyone with access to the services) the potential to generate that type of content themselves, as shown in this statement 'I don't need to commission an illustrator […] I can type or use a

search or type of basic prompts, and I can find the thing that I need from there' (#15 Principal Digital Product Designer).

Figure 3-1: Data structure

4 Findings

This section begins with a snapshot of the two phases. It continues with detailed descriptions of the three task groups, with the findings from Phases 1 and 2 reported consecutively for each.

4.1 Phase 1 and Phase 2 snapshot

2nd Order theme	#	Statement
Signature Tasks **Unskilled Cheating**	**#04 UX Director**	*Sometimes I wonder, am I cheating by using AI for things I should be able to come up with myself? It feels like I'm bypassing part of the creative process*
	#14 Senior Designer	*If that's your passion and you want to draw but you can create illustration from being a designer. So, there was a bit of like, a bit of a I feel like a bit of a cheat here because I've not had to involve the person in that industry to create this thing for us.*
Peripheral Tasks **Narrow Utility**	**#29 Senior UX/UI Designer**	*So, technology has helped us like immensely in terms of being able to turn things around quicker than what we previously would have done. And one example would be like retouching […] rather than previously when we used to have to budget and make it up and like merge images together.*
	#55 Senior Graphic Designer	*I think anything that is kind of secondary to the idea itself. So extended backgrounds, mock ups and stuff, that's all fair game because that again is just a tool to help like showcase the idea or to make the image fit in whatever it is. So that I don't think is necessary to sort of say image made with AI or whatever.*
External Tasks **Explorable Capability**	**#15 Principal Digital Product Designer**	*I don't need to commission an illustrator because […] I can type or use a search or type of basic prompts, and I can find the thing that I need from there.*
	#24 Mid-weight Designer & AI Facilitator	*I know what my budgets generally aren't gonna aren't gonna sort of be able to pay a 3D designer and stuff. So, it's never been on something that has a big you know, that I would have been able to it just means that I can produce different style of creative but in house.*

Table 3-2: Supporting statements from Phase I

In the first round of interviews, 44 expert designers were interviewed from late 2023 to early 2024; the technology's infancy, combined with developments in the capabilities and availability of GenAI, continued to increase throughout the process. The meant designers drew on a broad spectrum of experiences to inform their views of GenAI, underscoring the rapid pace at which this emerging technology has permeated the creative industry. Designers' experiences spanned from a handful that saw no need to engage with the technology, as one designer explains, 'Would I have the inclination to go, "You know, I'm going to forget everything I've done [for] many years and kind of adapt and change?" Probably not' (#26 Creative Director). In contrast, most designers acknowledged it cannot be ignored, because

‘Absolutely. There’s a new relationship that needs to happen’ (#17 Head of Human-Centred Design). However, some felt their hand being forced ‘I do have reservations about what’s next […] but, you know, kind of got to like, join in or be left behind’ (#19 Creative Director). Supporting statements from Phase 1 are detailed in line, and additional statements are presented in Table 3-2.

The second round of interviews, with 44 of the same expert designers from Phase 1, was conducted in late 2024, 12-14 months after Phase 1. Developments in GenAI capabilities continued to increase since the first phase, along with the availability of products. Designers’ experiences with GenAI were still varied, ranging from one designer with no known use (although the pervasive nature of GenAI technology made that claim somewhat unstable) to those using it multiple times daily.

What was clear was that they widely reported ‘That it is just everywhere’ (#43 Senior Interface/Visual Designer) and use of GenAI had universally markedly increased, as this designer notes ‘I probably would use it maybe a couple of times a week, or sort of a lot on one project and not on the other, but I think multiple times a day now I’m using ChatGPT […] two or three times a week I’ve been using MidJourney […] on a daily basis I’d be using generative fill in Photoshop […] yeah, multiple times on a daily basis now I’d use it for work’ (#23 Creative Director).

The increase in use was not solely down to choice and capability, as this designer explained: ‘It’s everywhere. It’s in all my toolsets, whether I ask for it or not’ (#41 Principal UX Consultant), and as this designer explains, use of it is seemingly paradoxical because to use it may pose a threat, but not to use it poses a greater risk: ‘I will use it because I have to, I learned from the past not to stay behind […] if you’re still doing things like you used to […] then you’re not gonna last long’ (#54 Senior UX Director). Thus, designers’ use of GenAI is almost a forgone conclusion, even if using it affords them such conflicted feelings:

> ‘I don’t see how I can’t [use GenAI] in the future […]. An anxiety is, every time we ask these things a question, every time we take the piss out of an image […] every time we go on Twitter and say “Haha, look at this, [the] machine didn’t respond in any realistic way […] I’d have done it like this.” All we’re doing is training and more and more, and they’re gonna get better and better […] to the point of our own redundancy’ (#41 Principal UX Consultant).

There is a shared certainty between designers that things are changing, but no one is quite sure where, and how impactful it will ‘Is this thing [GenAI] replacing my ability to generate wealth like for myself, or […] is it going to steal my job? But I think it comes down to that. It’s like, you know, capitalism is like a zero-sum game, right? […] output is our value, but we’re also creating this, like AI, that potentially is going to disrupt that’ (#55 Senior Graphic Designer). Statements from Phase 2 are in line, and additional statements are in Table 3-3.

2nd Order theme	**#**	**Statement**
Signature Tasks **Unqualified Deception**	**#14 Senior Designer**	*I wouldn’t want someone to generate an entire brand and logo, because that’s, you know, part of our business, and that’s what we do. So, it kind of diminishes what we are.*
	#09 Executive Director, UX	*Pride of your kind of subconscious, protecting the time spent doing the design, right? So, you kind of like spent an hour or two doing something […] was a good use of my, two hours, right? The kind of process of going through the design, if it took like five minutes, you probably wouldn’t have as much pride in it […] like I cheated the system.*
	#43 Senior Interface/ Visual Designer	*I think as far as, like, just, all those years of experience are still counting for something, ultimately, that I think one can sort of complement the other one can never replace the other. […] I still feel like, you know, the GenAI tools are there to support me in my role. And I actually still don’t feel like they would replace me.*
Peripheral Tasks **Tactical Proficiency**	**#19 Creative Director**	*I couldn’t physically do before, what would you do? I would have told the client, we can’t use that image […] probably been like “Okay, well, that image isn’t going to work.” But actually, it means that this image now can [work], because we can create a whole extra section over there, that means it can work.*
	#24 Mid-weight Designer & AI Facilitator	*It’s replacing potentially, hours and hours of hunting through books in the Internet to half an hour of speaking with GenAI.*
	#38 Junior Innovation Designer	*I’m quite happy for it to generate, and then my refining of it is minor. So, something like that, it really helps me with the other thing I'll say is we just started using a new AI tool, and I played around with-it last week, and it sort of blew my mind in that sense.*
	#15 Principal Digital	*I don’t think I ever will buy into, like, this sort of empty, white screen, like, generate me a website that looks kind of moody, cool, slick, whatever, that I find I'm more comfortable doing myself and using AI to maybe help with some little*

External Tasks **Exploitative Expertise**	**Product Designer**	*animations or enhance stuff I'm already doing, generate Some photography, that kind of thing.*
	#39 Senior Learning Designer	*I feel like there is more value in it than I saw before, particularly in producing things that I don't know anything about.*
	#59 Experience Director	*I've been using a lot more for storyboarding, for example, like customer journeys […] back in the day, I probably would have got storyboard artists to draw me those images. Can the client afford a storyboard, I just know, so, okay, I will be using AI to do those, even if they could. Would I have because it was faster, possibly, you know, so it will have a material impact. There's no doubt […] I knew people who were just storyboard artists*

Table 3-3: Supporting statements from Phase 2

4.2 Signature tasks

4.2.1 Phase 1 Signature — Unskilled cheating. Signature tasks are those from which a designer derives the greatest satisfaction and are fundamental to a designer's sense of self and their understanding of how clients and peers perceive them. In this first phase, while discussing their signature tasks, designers afforded GenAI the status of an *unskilled cheat*. This affordance is based on designers' almost universal position that technology is not creative and thus lacks their perceived 'signature' expertise and skill. Moreover, designers strongly identify with these tasks and believe that they are what they are known for by clients, stakeholders, and peers. Thus, the use of GenAI to perform such tasks feels tantamount to cheating. A sentiment expressed here:

> 'I would feel, as a creative, like this kind of cheat. I'm not cheating or silly, but like if you can't come up with ideas, you're not a very good creative' (#55 Senior Graphic Designer).

The strength of feeling for the use of GenAI in these signature tasks is reflected by this designer, who is clear that 'If I was being asked to use that solely to generate ideas, and those were the only ideas we could work on, I would probably quit' (#38 Junior Innovation Designer). Notably, with some designers, the thought of using GenAI for such tasks is not even something that comes into their consciousness, as this designer describes how they 'Probably would never think of using a text prompt as a final product' (#03 Motion and 3D Designer). Relatedly to feelings of cheating and diminished authenticity, designers moral and ethical compass is

triggered at the proposition of using GenAI for these tasks they perceive as being signature, and the implication it has on their acceptance of the technology in these tasks: ‘I suppose then, this comes back to the idea of, then if you take that idea and personalise it and change it, and put your thumbprint on it […] those that are willing to use it as the catalyst for something or those that are just purely going to, you know, [pull] that wool over someone’s eyes and say that’s my idea, then it just comes down to morals to that and how you feel about it’ (#53 Experience Director).

Designers also downplayed the skill and creativity of GenAI to perform their perceived signature tasks, as one provides their view on what was generated ‘It does seem to be creating one specific style and I know that will evolve, but it’s very sort of like young child-like, cartoony as opposed to being anything that I think a human could make’ (#26 Creative Director). The distinction raised by this designer, between human and artificial creativity, is raised by other designers to discredit and distance themselves from it, as this designer suggests, ‘I don’t necessarily think it’s creative in the sense that a human is creative […]; it’s pulling from other people’s experiences or other things that have been added on the internet. So, human creativity is different to AI creativity’ (#14 Senior Designer). A sentiment also mirrored by this designer who noted, ‘I think that [problem-solving and idea generation] is the crux of what makes the human like creative, and I don’t believe that AI or ChatGPT is our level yet where it can like think in that way because it’s just you know, it’s just sort of regurgitating like, everything in the world’ (#55 Senior Graphic Designer). In short, the designers in this first phase of signature tasks suggest GenAI creates ‘some bonkers stuff, like some crazy crazy visuals’ (#02 Creative Director) and also that:

> ‘It’s not creative. No, it’s just trawling, you know, information, and it’s able to link it up, you know, quicker than the human brain can do it […] It’s totally bonkers’ (#19 Creative Director).

4.2.2 Phase 2 Signature — Unqualified deception. Designers' stance on GenAI to perform their perceived *signature tasks* largely persisted in the second round of interviews. Signature tasks are those that a designer perceives as the most satisfying and defining, and which they want to be defined, and also the tasks that they perceive GenAI as least capable of performing. Whereas previously, the technology's limited capabilities meant that GenAI did not match designers' skills, improvements in what it generates have shifted designers' affordances for these tasks. Use for these types of tasks did not leave the designers feeling good; on the contrary, as one explains, 'I've done that, which is kind of useful. Annoyingly, it's only useful because it does make, like, you feel a little bit dirty doing that' (#26 Creative Director). With the repeated concerns raised about cheating from Phase I, 'It just feels to me like you're cheating and like you can go, oh, well, we inputted all the right things, and this is what it came up with. Oh, it just doesn't sit right with me' (#05 Senior Graphic Designer).

Digging deeper, the increased capability of GenAI is reflected in a subtle shift in designers' responses. In short, the technology now might have the capability to generate something of an acceptable quality to include in the early stages of their work. However, designers still had an aversion to using it in that way because this was work that they derived a deep sense of pride from. As this designer explains, not using it for the perceived signature tasks is:

> 'Probably more just a pride thing of feeling like I have done this myself from scratch, and I can claim, you know, ownership of responsibility or credit for all of it, whereas, to a degree, I think using something else, using a tool, even though it is a tool to come up with some of those ideas, I think that's what I get. Since a lot of people place value on visual design, the idea. So then, if I'm not the one that comes up with idea, I feel like I have less ability to take credit for it' (#46 Creative Lead).

Similarly, these are the tasks in everyday work that designers feel great satisfaction in performing. 'I'll be a bit uncomfortable with that, because, yeah, it's the bit that I enjoy the most in what I do. So, I sort of strip away that […] bring into question if job satisfaction would go with it as well' (#21 Creative Director). Moreover, the increased accessibility and ubiquitous

nature of GenAI within and outside of their industry (i.e., clients and stakeholders having access to tools) has led designers to double down on their expertise and experience that qualify them to use the tools more effectively than non-designers. A position described by this designer, whereby GenAI 'Can devalue that process, that craft, that thinking. And, yeah, it seems to be easy to come up with all of these things [yourself]. Then, you know, why do you want to pay somebody to do it? Right? So that's the worry' (#58 Creative Director). A sentiment like that shared by this designer who emphasises the distinction professional designers bring, 'I think this is where taste comes into it. So, I think you'll still get, you always get a much better result if you're, even if you're essentially getting a professional designer to use AI tools, that you'll get a better output than if you're the kind of average Joe thinking,' (#15 Principal Digital Product Designer). This notion of 'taste' threads through designers' responses:

> 'It comes down to like taste, and taste, you can't define it. You can't learn it. […] we know when something is nice and it's not. It's hard to define why it's good, like, but it's taste […] I don't think AI has taste, it's just indiscriminate, and the very reason why it's like democratised is the reason why it's not good because it's not discerning, it's not like curated' (#55 Senior Graphic Designer).

Despite the increased use and recognition of their capabilities, designers still emphasise their point of differentiation for signature tasks. In short, designers do not believe GenAI has the expert capability to do what they do. An overriding position summed up by this designer

> 'It's really good at, like, replacing a search engine and having chats, and like opening up new ways of researching, and it's really great in all of those, and becoming a coach or helping you learn, basically augmenting things you can already sort of do. It's not so good when it comes to actually, like, maybe replacing full skill sets […] it won't replace a designer, I'm still of the opinion it can't replace my job' (#24 Mid-weight Designer & AI Facilitator).

The use of GenAI as an effective means of conducting research as they try to develop an understanding and level of expertise about a new domain quickly was reflected by different designers, such as this one who explained, 'We always call ourselves sort of shallow experts across lots of things, and we try and do that with every client' (#21 Creative Director). Indeed, designers overwhelmingly fall in behind the position that their roles are too nuanced and

complex for a machine to mimic, meaning GenAI is no threat because 'There's a lot of personal contact, a lot of understanding the personality involved, and the industry sector […] there is so much nuance' (#18 Head of Digital Product Design). Put another way, what designers believe GenAI lacks—all its billions of data sources notwithstanding—is their worldly experience and emotional intelligence. 'That's part of the joy of putting your human beings' thinking into your work. Because in the end of day, you are trying to solve the human problems. You need a kind of human input into it, because a lot of what we do is about life events, about how people emotionally engage […] You can't just use a machine, expecting to do something and just squeeze that into your brain. You need that kind of human input and emotional inspiration to help humans to do something' (#44 Senior Graphic Designer). In short, although GenAI might be able to perform perceived signature tasks, designers highlighted their superior experience, as well as raising concerns about the tension using it caused with their perceived distinctiveness. As a result, the perceived affordance of GenAI during this phase, strengthening from an *unskilled cheat* to an *unqualified deception*.

4.3 Peripheral tasks

4.3.1 Phase 1 peripheral — Narrow utility. Peripheral tasks are those that sit within a designer's domain but sit outside perceived signature tasks, still within the domain of their role (e.g., competitor audits, design development, customer personas). Designers' affordance of GenAI is strongly influenced by trust; the topic of trust was frequently raised for different reasons. The unpredictable nature of the output was a significant determinant in designers' affordances of GenAI, as one designer describes GenAI as being 'Rather like a very clever friend. That's a bit renegade […] I don't really know whether I trust it' (#01 Creative Consultant). Likewise, this designer describes, 'To me it feels so sort of wild what you might get that you cannot really bank on it' (#02 Creative Director). Thus, the ambiguity of the legal and reliability of GenAI narrowed designers' perceived use of the technology. The trust and

legal uncertainties notwithstanding, designers found the technology effective for administrative and repetitive tasks that fell outside their perceived expertise. In short, they sought to use it in areas of their work beyond signature tasks that they ultimately deemed less creative: 'Things that help with mundane processes, I'm very up for things that get in the way of creativity' (#21 Creative Director). Furthermore, when GenAI is discussed as assisting designers, in the context of down-the-line production tasks and repetitive work, designers are happy that 'The sort of more monotonous stuff becomes just done by the computer' (#57 Senior Graphic Designer).

By contrast with the broad unease afforded towards GenAI for peripheral tasks, most designers reported regular use of the generative fill tool within Photoshop. They spoke favourably about its efficiency and capability, which is proving more reliable than other engagements with GenAI they were having. With the hesitation and ambiguity of many designers' experiences and mixed feelings towards GenAI, designers' views of the embedded tool in Photoshop were markedly positive. Photoshop is a 'workhorse' go-to application for most designers, used to complete tasks throughout the creative process:

> 'Seeing huge benefits of Photoshop, with its generative fills on a job that we've been on. It's been an absolute lifesaver […] speed, and actually, the outcome has been brilliant (#21 Creative Director).

As this next designer reflects, there is less feeling of ambiguity with it, 'Photoshop [generative fill] just sort of makes us really speedy. And they're less morally ambiguous because it's just a little extending a background, or it's stuff that you would have to have done manually' (#23 Creative Director). Benefits repeated by other designers, with optimism about this new capability in a technology they use frequently 'Historically […] you get images from clients that are probably aren't the best for what we need and using like tools that Photoshop gives us to either cut people out or to be able to extend the background and stuff and you can do it in a matter of seconds […] technology is like a massive part of what we do and it helps us like every single day' (#29 Senior UX/UI Designer).

4.3.2 Phase 2 Peripheral — Tactical proficiency. The second phase of interviews revealed that most designers acknowledged that the capability and quality of GenAI had advanced in the intervening period. Earlier concerns were less constraining, and so too were restrictions imposed on its use. In short, a positive change and outlook led to GenAI extending from being afforded *narrow utility* to *tactical proficiency*. Designers' perceptions of GenAI's capabilities had increased in the intervening period, leading them to have greater confidence in the technology. They saw it as a proficient support they could now rely on to tactically use.

Thus, with GenAI becoming more accessible (and unavoidable in some instances) to designers, they are actively using and seeking further opportunities to incorporate it into the work for specific peripheral tasks, as this designer introduces the notion of 'low rent jobs' to describe the monotonous, low cognitive requirement, easy to pass off for automation, 'I am using it for those small, automated, low rent jobs, and my all my colleagues do the same. I do believe it's the thin end of the wedge I was' (#41 Principal UX Consultant). Further, this designer describes their use now as:

> 'A little more tactical or a little more kind of, you know, very direct and specific in terms of, I need, X, or, you know, I need this visual. Or, you know, what are some ideas for? You know, what are naming ideas for, blah, blah, blah. Or very kind of executional' (#48 Lead Graphic Designer).

This notion of tactical execution aligns with other designers who stressed the use of GenAI as being tightly controlled in terms of where and when it is used. Ground rules are required, as outlined by this designer, 'It is also important to understand when not to use it, how to use it. And one of the things I've pushed for is that it's not just a case of turning on the taps to the AI like it' (#61 VP Exec. Creative Director). Moreover, where previously GenAI was only considered for the mundane work, the increase in capability meant it was now extended to a general affordance of supporting to get work done quicker 'I use it for images when it comes to posters or some buttons for digital usage, not when it comes to branding, logos, packaging, definitely so when it comes to packaging design, it's all about sketching it

[…] I've never tried to write a prompt [to] generate the packaging design for this kind of brand' (#30 Creative / Art Director). What is significant in this designer's statement, and the one before, is the tasks they won't use it for, as much as those that they will. As part of this, to support clients' demands to see work faster, designers are leaning on GenAI to help visualise their ideas to communicate an idea faster. Notably, it is still the designer's idea, where GenAI can 'Speed things up that haven't yet replaced the cognitive part, the human part, the flair, etc. […] I can do things quicker. I can actually get my idea across to my client much quicker' (#01 Creative Consultant).

Building on the theme of speed and external pressures, another designer offers a complementary standpoint, noting that GenAI 'Definitely helped me to produce something much quicker, to be able to speed up this process. Tell people what is working […] rather than try to search online or […] doing the actual photo shoot, (#44). A similar use to this designer 'I'd say, at least three times a week to create visuals for proposals, […] to bring an idea to life that I'm selling into a client' (#23 Creative Director). Designers' acceptance is also mirrored by a change in positioning—almost justification—of it being a new way to do what they have always done. This designer explained 'That's all we ever do as creatives, as human beings, we look around us, we borrow things, we say, especially as designers, we fill a wall with stuff that we found on the internet or in books and say, oh, yeah, that could work well, if we reinterpreted it in this context, or if we just twist it a little bit so nobody can recognize that it was that Illustrator. You know, I don't know why we're so outraged, because we have been doing what machine learning is doing for generations' (#01 Creative Consultant). This also eliminates the loss of authenticity or the feeling of short-changing clients—felt in their perceived signature tasks—when viewed in this way: As this designer explains:

> 'It's just a quicker way of doing it, like a computer-generated way of doing it, [an] AI way of doing it. And I think when you look back in time, people have always done that […] that's where ideas come from. So, to try and shut that down, as it's just a tool that's copying

> lots of other stuff as well, then, that's what everyone else has been doing anyway' (#20 Global Head of Design).

4.4 External tasks

4.4.1 Phase 1 External — Explorable capability. This category of tasks is those that sit outside a designer's domain and are (the signature and peripheral) tasks of other creative workers like photographers, illustrators and copywriters. Indeed, in the first phase, designers were freely discussing what was once incomprehensible, using GenAI as a substitute for tasks of creative workers from other domains:

> **'**It's always been that there's like a designer and a copywriter and never the twain shall meet, you know, they work together but you can't do each other's job. And it really feels like that is now blurring' (#55 Senior Graphic Designer).

Indeed, designers widely reported using GenAI for copywriting tasks, as this designer notes using 'ChatGPT or Bard by Google […] when it comes to generating text, I use it probably every day […] we're designed with much more what would be a better team communicating visually. So that is why it helps me a lot in texts' (#30 Creative / Art Director). Interestingly, this designer, who is responsible for visual output, volunteers a distinction between the type of content being generated and the perceived usefulness of GenAI, specifically between text and image outputs. In other words, seeing utility in the capability of text generators that are further away from their signature or peripheral tasks. Similarly, this next designer discusses using text generators because they too are out of their domain requirements, and GenAI opens that up to them in a way it was previously out of reach: 'Creative writing […] makes me very curious […] I want to explore more, probably because it's a bit out of my comfort zone' (#48 Lead Graphic Designer).

The breadth of GenAI capabilities means designers are not limited to text or image creation in the external domain. As one designer described, they are seeing benefits from audio generators in their work when they recalled how they 'Created a voiceover the other day for a video for a brand, and I think that opened up a can of worms in a way and what it does to

voiceover artists […], but it also for a client, that's great. It's time and money that they save' (#24 Mid-weight Designer & AI Facilitator). What is also raised in that statement is the human 'can of worms' because of their use of GenAI. Thus, alluding to the established order and accepted norms that have long been understood and abided by between creative disciplines. Whereas now, GenAI is opening creative capabilities that begin to break the established relationships and conventions of the creative industry. A handful of designers did acknowledge what this might do to the creative workers they were exploring using GenAI to perform the tasks of 'I used to ChatGPT to quickly like reword things, really useful. I also used it for all the SEO copy on my website, which I feel really guilty about because I know a lot of copywriters' (#55 Senior Graphic Designer). What this highlights is uncertainty around the role of creative expertise and partnerships. Designers predict further change in those relationships, as explained by one designer who foresaw a narrowing of their creative network because they 'Can actually see how it could play a partner. So that would already be potentially one avenue where we wouldn't partner with a strategist, copywriting the stronger that gets the less need for help with copywriting' (#21 Creative Director).

4.4.2 Phase 2 External — Exploitative expertise. The change between Phase 1 and Phase 2 saw constraints on external tasks shift from an *exploratory capability* to *exploitative expertise.* This sees designers move from an exploratory, curious mindset for what was possible, to increasing the frequency and scope of what they use GenAI for. Designers' reference to GenAI extended it beyond being 'just another tool,' which is still a position held by some, and was the dominant narrative during the first phase. Instead, it is seen as more of an extension of the team, and an increasingly reliable extra pair of hands, as this designer explains, 'It is an assistant to me, you know, I use it if I'm just trying to find quick research on things. I usually use it just to proofread stuff […] I've actually used it before when clients have sent over confusing statistics' (#10 Mid-weight Designer).

The improvements in capability mean it provides a level that is usable and increasingly being seen by designers as harder to outperform and to differentiate from perceived 'human' generated output, 'It is getting very, very sophisticated that, you know, it can whereas, you know, sort of a year ago, I could, I could outsmart it, I could write better now, now we've built capabilities where I can't work as well as the I can't generate text that predict that it's that's likely to perform as well as the AI is. And, you know, we've sort of spoken to lots of copywriters over the last since we last spoke, and there is a genuine nervousness about what's coming down the line in terms of this capability (#52 Executive Creative Director). Although acknowledging some feelings of anxiety with their use of it in other creative domains, designers are increasingly using GenAI to exploit the expertise of different creative disciplines at the expense of established creative partnerships:

> 'Once I started to realise what it could do, I started to [get] ChatGPT to write some copy when I normally work with a copywriter […] the brief that I would give the copywriter, I do' (#02 Creative Director).

Similarly, this designer describes using 'ChatGPT probably every day now for everything, for generating text, for a description of my project, on my portfolio, even for like, when I create the presentation with different design concepts, I create the full description for it' (#30 Creative / Art Director). This next designer is drawing a clear line between the use of GenAI for external and signature tasks. 'It is not replacing me [e.g., signature tasks], but doing the things I can't do seems okay, yeah, in a weird sort of way, like if they were, if I need to help writing copy headlines or sales headlines or something […] I guess that I would feel okay about that. But if I asked it to design a logo, I'd be offended' (#05 Senior Graphic Designer). The use of GenAI for external tasks was widespread amongst designers. It included what would be described as administrative tasks and as a substitution to traditional search engines 'I use it for a range of things, and kind of trying to reflect back, I think sometimes I'll go, how would you define a

thing, and that that is probably quicker than or richer than going to Google and asking for a thing like that a definition' (#35 Head of Service Design).

Designers' use for external tasks was occasionally met with a realisation of the human implication of their action, 'I wouldn't say, "No, I'm not going to use these because, you know, of my artistic integrity" […]. That wouldn't be a red line for me' (#19 Creative Director). However, as much as designers exhibited this hesitant exploitation, and, as this designer shows, they continue to lament the effect on other creative disciplines, '[It] must be incredibly frustrating if you're an illustrator and you know, people are basically creating your style through AI. That must be very difficult. But what can we do? I suppose at this point, you know the cat's out of the bag' (#19 Creative Director). However, what's striking is that although they acknowledge the impact on other creative workers, they still use it.

This discovery reveals an interesting distinction between the affordance of GenAI in designers' workflows. What is described is 'embedded' GenAI technology (such as Photoshop's generative fill), which gives designers access to it within their existing workflow. In contrast, 'standalone' generators (those which require designers to introduce a new step in their workflow, i.e., accessing ChatGPT or MidJourney). The role of embedded and standalone play a noticeable role in the affordances and acceptance designers have for GenAI. However, it is nuanced, with GenAI technologies embedded in their existing workflow used for peripheral and external tasks, 'Yeah, well, it's then it's difficult to avoid it. Now, I say [it is] difficult to avoid. I've not been actively seeking to avoid it, but it is popping up in more and more places […] Figma, which I work out of a lot. There are lots of there are several AI GenAI plugins, which I've used for creating random faces put into artwork' (#54 Senior UX Director). Accordingly, designers anticipate that as the capability of embedded generators increases, they will increasingly use them to perform work closer to and even within their signature expertise—something currently excluded with the affordance of standalone generators.

Embedded GenAI will moderate and normalise GenAI for signature expertise, as contemplated by one designer:

> 'It just feels part of the program you're using that you've been using your entire sort of professional career […] doesn't feel like a cheat or a shortcut, even though it is doing something very sort of powerful and something that you may have used to have to farm out […] probably quite hard to stop using something as soon you see the benefits' (#21 Creative Director).

4.5 Summary

Designers' affordances towards GenAI form three defined task groups that are comparable between Phase 1 and Phase 2. It was noted that designers' affordances became more accepting in Phase 2, albeit with nuance and a notable relaxation, as more GenAI was used in line with their perceived signature expertise (Table 3-4).

	Signature Tasks Devalued cheating	Peripheral Tasks Tactical control	External Tasks Enabled exploitation
Phase 1	**Unskilled Cheating**	**Narrow Utility**	**Explorable Capability**
Phase 2	**Unqualified Deception**	**Tactical Proficiency**	**Exploitative Expertise**

Table 3-4: Designers' affordances of GenAI for each task group for Phase 1 and Phase 2

5 Discussion

This paper reports the exploration and effective use of an affordance lens at a 'work level' (Barley & Kunda, 2001). It demonstrates the value of research into the creative industries, specifically within the design sector, to examine the space between designers and GenAI. Designers' responses to GenAI's growing ability to perform creative tasks deepen our understanding of computational creativity. Creativity (Florida, 2012) and, by extension, idea generation (Osborn, 1953) have long been assumed by many to require distinctly human attributes (Buchoud et al., 2021). Machines have also been suggested to not be truly capable of mimicking human creativity (Runco, 2023) or imitating other inherent human capabilities and expertise (Krakowski et al., 2023).

This paper finds that it is no longer the case. GenAI is provoking a paradigm shift in the behaviours of creative workers. Importantly, this study does not report on the creativity of the output of GenAI; indeed, it never sought to. What it does show is a positive uptick in the perceived usefulness and acceptance of GenAI by designers, who once dismissed the 'uncanny valley' output and spoke to it being a cheat, to a more vocal acknowledgement of GenAI's benefits. Indeed, within each task group, the frequency of tasks in Phase 2 was higher than in Phase I. There was also an increase in the types of tasks it was used for in Phase 2 compared to Phase I. The idiosyncratic nature of perceived expertise and designers' experiences means that a perceived signature style or styles of one designer will not be identical to those of the next. Thus, perceived signature and peripheral tasks will vary depending on the designer. However, external tasks, although they may differ, would all sit outside the domain of design (signature and periphery).

Looking at the change in task groups individually: Perceived signature tasks transitioned from *unskilled cheating* to *unqualified deception*, triggered by the increased capability of the technology, as measured by designers' perceptions of their expertise expectations. Put differently, designers in Phase 2 were less critical about the creative capability of GenAI but felt the use of it for the perceived expertise was a form of betrayal to them and their clients. Peripheral tasks evolved from GenAI being a *narrow utility* to *tactical proficiency*, leveraging the increased capability of the technology and the user's competence. In other words, designers went from a limited use, such as image extensions in Photoshop, to seeing GenAI as affording them time and practice-based advantages, such as recommending accessible colour palette variations. External task affordances shift from *explorable capability* to reflect designers' inherent curiosity, to *exploitative expertise*, as they seek to harness their full potential in domains of expertise other than their own. In short, the designers' curiosity from Phase 1 had

transitioned into a concerted and compelled position to leverage the expertise of other domains that GenAi afforded them.

The analysis through an affordance lens showed that the three task types were interwoven with a designer's expertise. The perceived signature tasks were those in which designers had the strongest perceived expertise and that afforded the highest status. Peripheral tasks were those that sat within a designer's domain of expertise; however, they were not tasks that they wanted to be known for. Hence, they were happy to offload them to GenAI. The discussion then introduces the framework of *proximity to creative* expertise as an instrument for analysing and predicting acceptance of epistemic technology. This is followed by *creative trespassing and expert betrayal,* as designers cross creative boundaries to different creative expertise.

5.1 The proximity of creative expertise

An affordance lens has enabled the development of a new framework—*proximity of creative expertise*—for analysing and predicting the perceived usefulness and acceptance of GenAI. Three proximal factors that affect a designer's relationship with GenAI are key to determining the *proximity of creative expertise*: i) *within the perceived signature expertise-defining tasks* refers to the proximity of GenAI to a designer's perceived signature expertise. For example, how close the capability of GenAI is to mimicking the signature problem-solving, idea-generating, identity-defining traits of designers (e.g., logo design for a graphic designer); ii) *within peripheral tasks* refers to work that is broadly speaking in a designer's domain, but those outside the *signature* to the boundary with external tasks and might involve development of ideas and client amendments; (e.g., from logo development to presentation templates); iii) *within external tasks* refers to tasks beyond the periphery of a designer's domain and into another creative workers' domain (e.g., that of a copywriter or illustrator).

The supporting diagram (Figure 3-2) illustrates the *proximity of creative expertise* as a cone. The cone is split into the three degrees of tasks reported above. Proximity of creative

expertise refers to designers' perceptions of GenAI's capabilities relative to their own expertise. For example, a designer who perceives idea generation as a signature of their expertise demonstrates less acceptance of GenAI for those tasks, whereas they will accept and use it for preparing presentations and retouching imagery. The three degrees of task shown in the cone are not an exact depiction of the percentage split designers make between signature, peripheral, and external tasks. Instead, it highlights the perceived distinctiveness and exclusivity designers attribute to their signature expertise in the broad domain of design.

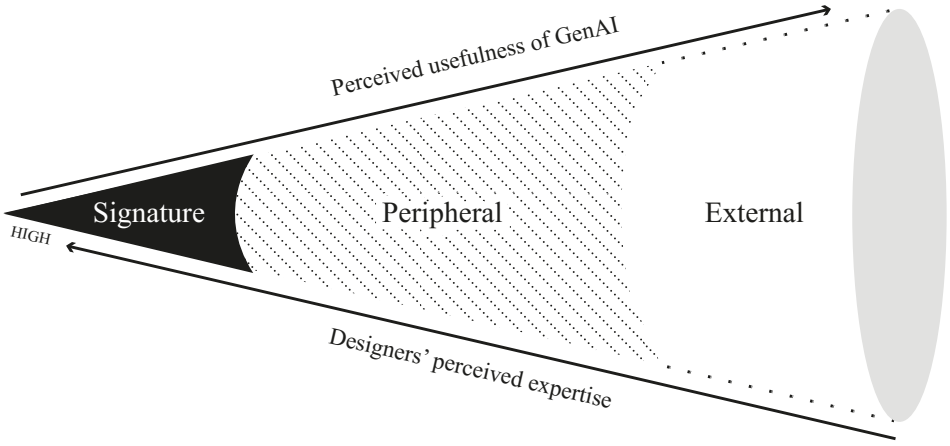

Figure 3-2: The proximity of creative expertise

If the expertise of GenAI is perceived as being proximally closer to a designer's perceived signature expertise, there is a corresponding decrease in the positivity of affordances and designers' perceived usefulness and acceptance. Where designers perceive GenAI to be proximal to their own expertise, it will influence their acceptance and use of it. To the left, at the tip of the cone, is where designers perceived expertise is most significant and distinctive in relation to their *signature* tasks, hence why it is so acute. As the tapering expands to the right, it encompasses *peripheral* tasks that increasingly become less associated with the designer's perceived expertise. At the far side of the cone, it opens out to *external* tasks not associated with any aspect of a designer's role, where we see their perceived usefulness and acceptance

of GenAI to be the highest. In short, the closer GenAI is to a designer's perceived expertise, the less they will accept it.

The *proximity of creative expertise* framework offers the basis for a qualitative instrument for predicting and accepting technology. As established in prior research, the affordance lens effectively explained why, how and when new technologies are adopted (Leonardi & Vaast, 2017). This study builds upon previous research in similar fields of technology, such as technology trajectories (e.g., Nelson et al., 2023) and artificial intelligence (e.g., Anthony, 2021), and is understood to be the first to apply an affordance lens to work-level tasks in relation to an individual's expertise. Thus, this research contributes to the literature on affordances and technological acceptance and opens opportunities for future research to test the transferability of GenAI affordances in design across disciplines and technologies. Although affordances are a fundamental design principle, this research is the first to use them in the design sector and on technology capable of mimicking designers' expertise. Furthermore, it provides a possible explanation for empirical studies that identify creative workers' unwillingness to engage (Maiden et al., 2019) or to exploit (Maiden et al., 2018) AI creativity tools—where journalists perceive writing and story generation as their signature skill to what they do and therefore are potentially more resistant to technology that mimics that part of their expertise.

Further exploration using the *proximity of creative expertise* framework is encouraged and believed to warrant testing its effective transferability between creative domains of expertise, where the novelty and distinctiveness of output differ from those in the creative industry. Furthermore, although it is anticipated to be an effective qualitative measure for predicting and analysing other emergent, yet unknown, technologies in the creative industries, this new *proximity of creative expertise* framework requires robustness testing. Future research exploring all tasks in a designer's workflow and the percentage of each they place in signature and peripheral to further strengthen the framework through the proportionality of the section

sizes. Building on this, future research into the nature of acceptance designers have for a human or machine within a particular space would be of merit. For example, exploring differences based on the perceived expertise of creative partners and peers compared to GenAI, also the relationship designers establish with GenAI and where it is portrayed as a tool, and when it is that of a partner.

Underpinning all this is a context that moves core innovation literature into the era of GenAI. Where research spoke of 'powerful competitors' (Utterback, 1996) and 'challengers' or 'incumbents' (Christensen, 1997), these were referring to one form of technological innovation pitted against another. Even though these were written in an era before the AI of today, their relevance and transferability to an age of increasingly capable artificial intelligence are as relevant as they were at the time they were published. Indeed, this has been observed in this extensive empirical study with creatives and GenAI, where it is essential to remember that although the challenger is a technological innovation (i.e., GenAI), the incumbent it is replacing is not; it is human. However, as with the case of digital synthesisers (Nelson et al., 2023), the benefit for humans may be in the distinctiveness that they are not digital, even if their cognition is no longer superior. Of course, we have witnessed technological change displace and replace humans before. However, these were always specific technologies that substituted for expertise (e.g., Nelson & Irwin, 20014); no technology has ever had the accessibility and capability to be agnostic to domain expertise.

Thus, this research contributes by reinforcing existing research that highlights the vulnerability of expertise to technological change (e.g., Nelson et al. 2023; Liftshitz-Asaf, 2018; Nelson & Irwin, 2014). Furthermore, aligning with Bourne et al. (2014), designers spoke of their 'lived' experiences being unique and of significance to their work and expertise, as too is their professional experience (e.g., Skovholt, 2016). Nevertheless, when first-hand experience is essential for knowledge generation and transmission (Argot & Spektor, 2011), the increasing

autonomy and capability of GenAI begin to call this into question as designers increasingly use the technology for different tasks that once formed their corpus of experience and knowledge. Relatively, signature skills are positioned as attained and rewarded through depth of expertise (Leonard-Barton, 1995). Indeed, designers prided themselves and were keen to protect their perceived signature skills. However, the broad and accessible capabilities of GenAI challenge the assumption, affording novices a vehicle to perform tasks and generate inputs akin to expert designers' perceived signature work.

5.2 Creative trespassing and expert betrayal

Of the three proximal factors identified in the proximity of creative expertise, the most significant interest lies in the stark contrast between designers' behaviour when GenAI is proximal to signature (expertise-defining) tasks and when it is proximal to external tasks. Strikingly, designers' responses lacked evidence that they made distinctions between signature and peripheral tasks in external tasks of other expert domains. This demonstrates the breadth and strength of GenAI's capability to eliminate boundaries between and within different domains of expertise. Put another way, the capability and accessibility of GenAI enabled access to other creative domains, prompting some to lament the impact on creative workers of those domains. However, these statements were not matched by behaviour, with designers justifying their use of GenAI in those other domains. In short, designers betray the established assumptions and order of the relationships between the functioning parts of the creative industry, and in doing so, weaken the solidarity of creative workers, within and between disciplines. The trust and accepted norms of long-standing relationships and established practices in the creative industry are being leveraged by using GenAI to tap into the expertise of other creative workers.

Moreover, upon reflection, what was more noticeable in its absence was that, despite designers discussing how GenAI opens creative domains for them, there was no suggestion

that it might happen to them in reverse. For example, a designer makes a clear distinction between using GenAI for external work and the redlines they draw around their perceived signature task (e.g., a logo design). What was also surprising was that with the accessibility of GenAI, designers fail to acknowledge the possibility that tasks they call signature might be external task for creative workers in other disciplines, and thus these individuals might use the technology in a similar way designers' use it to exploit other creative expertise (e.g., a copywriter using GenAI to perform a task a designer perceives as signature). Thus, their responses are loosely akin to the 'blindness' described of one group of actors who are blinded to the possibility that other actors might interpret a situation differently (Leonardi, 2011). Adapting this, designers seem to exhibit a form of 'epistemic blindness' by failing to acknowledge the expert potential that GenAI offers creative partners. Hence, capturing first-hand accounts of creative workers from other disciplines will provide valuable insights into perceived usefulness and acceptance of technological innovation, as well as when and how knowledge boundaries are treated.

The diagram reveals the broader implications of designers' responses and behaviour to GenAI in the context of the creative industries. The *proximity of creative expertise* framework can be extended to serve as a valuable instrument for use at the industry level (Figure 3-3). The cone of the design sector can nest within other sectors of the creative industries. Significantly, as demonstrated by the dotted lines, you see the boundaries that were once protecting domain expertise now perforated by the capability and accessibility of GenAI. Furthermore, the double-ended arrows convey the indiscriminate nature of designers' behaviour as they afford GenAI the *exploitative expertise* to cross freely within their own domain but also across boundaries and task levels with other domain expertise. This clearly illustrates how designers preserve the tasks in the perceived signature expertise, but those rules do not apply in other domains. Thus, unlike previous technological transformations, with GenAI, boundaries with different domains

of creative expertise are simultaneously demolished, opening the door and emboldening creative workers (with login details) to what amounts to *creative trespassing,* where creative experts of one discipline use GenAI to enter the previously protected expert domains of other disciplines. A dynamic that, for some, arguably amounts to what I describe as *creative looting,* resulting in uncertainties about the value and legitimacy of expertise and doubts about long-standing, widely adhered-to creative boundaries and knowledge work.

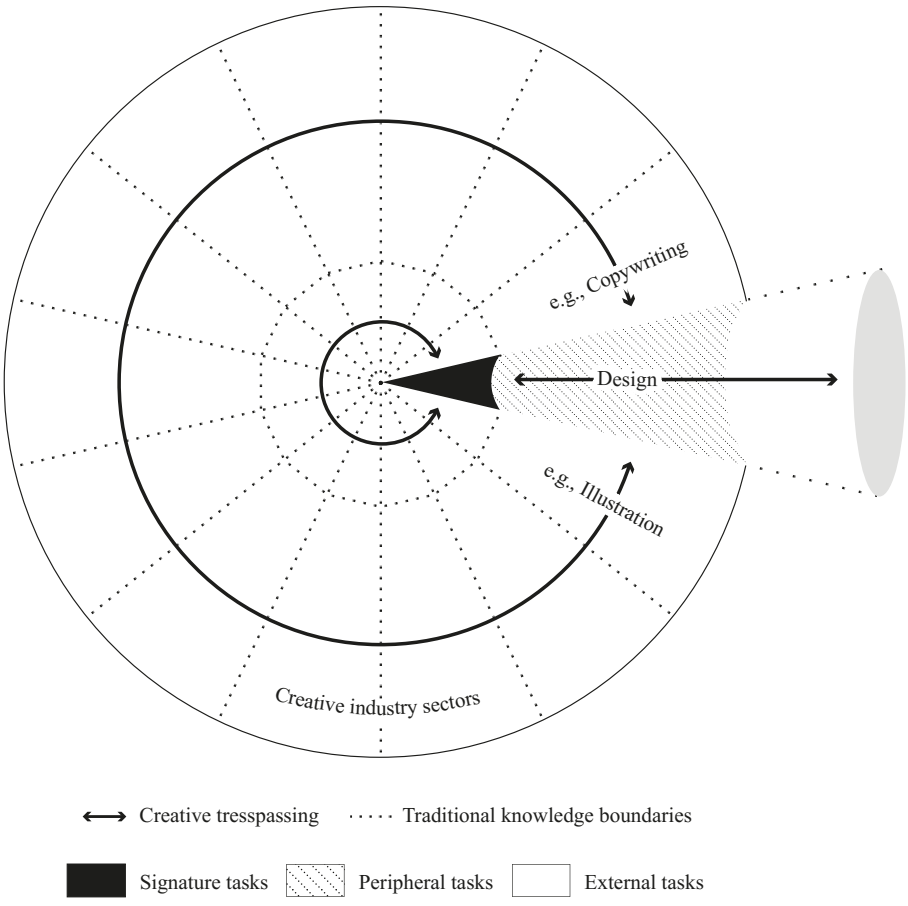

Figure 3-3: Proximity of creative expertise expanded to show the creative industries and Illustrate where designers are creative trespassing

Knowledge workers are responsible for the creation, application, and dissemination of expertise (Abbott, 1988) to attain and retain intellectual authority over a particular domain (Gieryn, 1983). However, the exploitative affordances designers have for GenAI in other creative domains, and the redlines they draw around using GenAI for the different tasks, suggest the socially constructed boundaries built by occupational communities to protect their

distinctive knowledge (Ferlie et al., 2005) are permeable and exploited with GenAI. Where knowledge and expert practices were once challenging to share across expert domains (Waardenburg et al., 2022), this is no longer the case. Thus, the established gateposts of expertise—already creaking with their longevity in doubt (Susskind & Susskind, 2018)—have been pulled down and boundaries flattened by GenAI, thereby emancipating expertise.

This research also contributes by extending earlier research with distinct findings on expertise and knowledge boundaries. Notably, acknowledging and adding to that spoke of expertise used to assert authority over a problem domain (Anthony, 2012) and to perform tasks better and faster than others (Eyal, 2013, p. 877). In this study, GenAI is used by expert designers for its speed, which is increasingly quicker than humans at certain tasks, and the subjectivity of design means some might perceive it as equal or even better than human output, with it becoming increasingly indistinguishable (Samo & Highhouse, 2023). Furthermore, GenAI is also used by designers to perform tasks beyond their knowledge boundaries, in the signature and periphery of other expert domains. Thus, the assumption that deep knowledge secures experts' recognition and ability to protect areas of expertise (Eyal, 2019) is weakened. In short, GenAI turns this assumption on its head, and allows novices to enter expert domains, allowing outside actors entry to expert domains (Lakhani, 2013). However, GenAI is more than just allowing entry; it has the capability to perform tasks autonomously and has the potential to do it quicker and better than humans.

However, the capability of GenAI and its increased use in expert domains raise some profound questions and illuminate fertile ground for future enquiry. With GenAI now truncating processes and reducing the quality of thinking (Mollick, 2024), what does this mean for the future of experts and expertise? This research also highlights the need for further investigation into expert jurisdictions and knowledge boundaries, where experts have long served as gatekeepers (Susskind & Susskind, 2018) to socially constructed knowledge boundaries around

distinctive knowledge (Van Maanen & Barley, 1984; Ferlie et al., 2005). Thus, this irreversible opening of expertise and knowledge boundaries has left designers advocating for human-only attributes and distilling distinction down to what they describe as 'taste', which closely aligns with a 'visceral feel' (Roberts & Candi, 2024). This clearly signals the need for research at the frontier of expertise, humanness, and epistemic technology has never been timelier or more salient.

6 Limitations and Future Research

This research should be viewed through a lens that accounts for the following known limitations, which open opportunities for future research and raise broader questions.

First, the data analysed, albeit from two phases and with over 100 informants in total, was still collected in a climate of change where updates and new technologies were being released, albeit less in Phase 2 than in the first phase. It would be hugely beneficial to collect more data. Given the pace of change, it would be valuable to conduct that at six-month intervals over 18-24 months—the challenges for access notwithstanding.

Second, although it is sizable, the study solely draws on interview data. It is encouraged for future research to draw on other data from other stakeholders to discover if other creative workers respond in the same way as designers, or if they exhibit unique behaviours. Introducing additional collection methods, such as user diaries and observations, would also be an advantage. However, the increasingly embedded and invisible nature of GenAI makes observation tricky. Thus, introducing a pluralistic method that builds on the core findings of *proximity to creative expertise* and *creative trespassing,* with a survey that includes both scales and open-ended responses, would be valuable.

Lastly, in addition to these proximal factors of expertise identified and discussed, one complementary and possible moderating factor for acceptance surfaced regarding whether GenAI was observed to be embedded in a designer's workflow (e.g., Photoshop's generative fill) versus standalone options (e.g., MidJourney)—a phenomenon notionally described as the

proximity in workflow. The full implications of this are unknown, but these results suggest that an increased capability of embedded GenAI will lead to a greater use of previously protected signature tasks. Thus, it's encouraged to explore answers to the question: How does the proximity of GenAI in a designer's workflow influence designers' acceptance of new technologies?

7 Conclusion

This research examined the space between creatives and GenAI, seeking to understand the role of expertise in creative workers' responses to GenAI and its impact on their daily work. The expanding accessibility and capabilities of GenAI fuel the technology's agency and ability to transcend and transform expertise and work in the creative industries. The framework of *proximity to creative expertise addresses* a gap in understanding designers' perceived usefulness and acceptance of GenAI. It highlights the effective role of an affordance lens in understanding the impact of expertise on technological transformation. The framework also helped demonstrate *creative trespassing*, as GenAI was found to eliminate established knowledge boundaries and remove gatekeepers to creative expertise. Both frameworks demonstrate positive attributes that make them transferable to other creative domains, industries and for the application of technological acceptance and use.

In an era of ongoing and unprecedented change, the *proximity of creative expertise* is anticipated to be effective for future research as a qualitative measure, using perceived expertise as a determinant of technological usefulness and acceptance. It is expected to have real-world benefits for predicting when, where, and how designers utilise GenAI in their daily creative work, for anticipating and managing responses, and for furthering understanding of expertise. Moreover, this research aims to catalyse a broader research agenda that explores expertise in this era of GenAI.

CHAPTER 4
The Conclusion

Situated at the nexus of creativity and technological innovation, this thesis sought to understand how generative AI (GenAI) is impacting the people and practices in the creative industries (CIs). Thus, responding directly to the overarching research question steering the thesis: How does GenAI influence creative workers' expertise, identity, and practice?

In the papers, I specifically focus on the UK design sector as it experiences the technological innovation of GenAI. This thesis documents the unfolding experiences of expert designers as they navigate the complexity of ongoing technological innovation from GenAI in real time. In this dynamic landscape, I captured a compelling story of uncertainty in designers' responses mixed with their innate creative problem-solving, curiosity, passion and expert betrayal. I find that creative expertise is no longer exclusively the domain of creative experts or of humans altogether, and that technology is no longer a tool controlled by humans in the pursuit of creative practice and distinction. GenAI represents a shift in the established order of creativity and expert agency.

This fascinating process of discovery has illuminated an industry that is often overlooked in management research. Indeed, for the abundance of literature on creativity, only a small proportion is grounded in the creative industries and creative workers. Moreover, there is even less situated in the domain of design. Hence, the three papers draw on qualitatively rich accounts from 100 interviews with expert designers, recorded in two phases approximately 12 months apart. Each presents salient findings and makes a distinct contribution through specific analysis that draws on different theoretical perspectives. I recorded and analysed designers' first-hand accounts, yielding novel and valuable insights into the impact of GenAI on the emergence of expert designers' work, identity, and expertise. Papers I and II draw on data collected in the first phase. The temporal aspect of the research design was critical in eliciting the findings reported in Paper III using data collected in Phases I and II.

The multidisciplinary research draws inspiration from the domains of creativity (Kaufman & Sternberg, 2019; Amabile, 1996; Osborn, 1953; Guilford, 1950), expertise (Pakarinen & Huising, 2023; Eyal, 2019; Leonard-Barton, 1995; Abbott, 1988) and identity (Nelson et al., 2023; Pratt et al., 2006; Ibarra, 1999). Motivated by these, more specifically, I drew on multiple conversations regarding creative problem-solving and ideas (Jia et al., 2024; Ananth & Harvey, 2023; Toivonen et al., 2023; Cai et al., 2023; Grimes, 2018); creative processes (Design Council, 2022; Amabile & Pratt, 2016; Perry-Smith & Mannucci, 2017; Schneiderman; Wallas,1926), identity threats and opportunities (Ahuja, 2023; Strich et al., 2021; Perez et al., 2020; Petriglieri, 2011; Korica & Molloy, 2010), and knowledge boundaries (Anthony, 2021; Leonardi et al., 2019; Muzio, 2019; Susskind & Susskind, 2018). These established perspectives afforded me a rich corpus of knowledge on which to develop the nuanced position and distinct contributions in the three papers reported here, situated at the intersection of designers, expertise, and daily work.

4.1 Salient findings

The three papers that constitute this thesis present emergent findings that, individually and combined, paint a compelling narrative: GenAI is quickly becoming the agent of change in the design sector. Moreover, they argue that, at the individual level, creative expertise is no longer exclusively the domain of creative experts or of humans in general, and that creative support tools are no longer solely under human control. The papers report complementary and progressive findings that build on each other.

For instance, in Paper I, GenAI is shown to be transforming designers' daily work, challenging established assumptions and expectations of creative practice, and the legitimacy of designers' expertise. Indeed, a consequence of GenAI democratising access to information (MIT Sloan, 2025) is the dilution and democratisation of expertise. I provide empirical data from 56 in-depth interviews I conducted with expert designers that support the prevailing

notion in public discourse that GenAI has a democratising effect. I refer to it in terms of accessibility and usability for novices to perform expert tasks, which, until very recently, were not possible without the skill, experience, and membership of an expert community. As a result, the designers' relationships with peers, clients, and creative partners are transforming, as is their relationship with the technology—a dynamic I notionally call the widening locus of creative expertise (Figure 1-3). The capability of GenAI to mimic designers' once-exclusive, identity-defining expertise is reflected in changes to designers' inherent relationship with their ideas and output, creating a climate of uncertainty and ambiguity. Designers see GenAI as both an opportunity and a threat to their identity. Reporting mixed responses, as they are found to compete, cherry-pick and change course.

Paper II explores in greater depth the duality found in designers' responses. I analysed the 56 transcripts of expert designers, looking for what are described as inconsistent or fluid value statements at an intrapersonal level about humanness, expertise, and their work practices. The notion of fluidity in this context refers to the varying strength of value judgements at an intrapersonal level. By this, I refer specifically to value judgments (i.e., subjective assessments) originating from the same designer, as their positions shifted between positive and negative, and vice versa. Fluidity also reflects the malleability of judgments from the external pressure from peers, stakeholders, and the technology itself. I discovered that GenAI is a technology capable of more than just supporting, augmenting, or automating specific, predefined tasks. Instead, GenAI can substitute for designers at stages in their creative practice. I show the shift in agency with an *extension of the creative process* (Figure 2-3). This depicts how the sole agentic role of designers across the stages of the creative process can now be outsourced to the increasingly capable agency and indistinguishable output of GenAI.

For Paper III, I leveraged data from Phase 1 and II interviews. The paper draws on 88 in-depth interviews with the same 44 expert designers, conducted across two phases

approximately 12 months apart for temporal comparison. I employed an affordance lens as the theoretical perspective to analyse the data, as it is proven to help identify any changes over time. The paper reports on the effectiveness of an affordance for revealing changes in attributed expertise and behaviours towards GenAI. This third paper builds on the two before it, seeking to understand what is driving designers' decisions about where they use GenAI in their design practice. The affordance lens revealed that the distance between a designer's perceived expertise and the expertise they afford to GenAI is moderating their use and acceptance of it.

I introduce the construct of proximity of creative expertise (Figure 3-2) to describe the phenomenon. The closer generative AI is to performing tasks in a designer's perceived signature expertise, the lower the perceived usefulness of it. In contrast, GenAI is used by designers on tasks they perceive as further away from their signature skills and perceived expertise. The data also found that GenAI is empowering designers to cross knowledge boundaries and perform signature tasks in other expert domains. In doing so, designers betray longstanding relationships by creative trespassing as they harness (and exploit) GenAI to access the expertise of other domains (Figure 3-3). As they cross boundaries, they engage in creative looting of expertise from other domains while excluding GenAI from their own.

4.2 Distinct contributions

The findings of this thesis advance understanding and add rich new layers of narrative to ongoing conversations and start new ones. The findings support and extend existing conversations on individuals' responses when identities can be provoked. Most discussions focus on identity threats, whether theoretical (Petriglieri, 2011) or empirical, relating to interprofessional collaborations (e.g., Ahuja, 2023), digital transformation (e.g. Nelson & Irwin, 2014) or AI (e.g., Strich et al., 2021). The disruptive effect of GenAI on designers' identities aligns more closely with Beaudry and Pinsonneault (2005), who contend that disruption can be seen positively as a challenge and negatively as a threat. Indeed, a small body of research

examines both opportunities and threats to identity (Bataille & Vough, 2022; Perez et al., 2020; Korica & Molloy, 2010).

Nevertheless, they do not reflect the nuanced and distinct opportunities and threats that designers experience with GenAI. GenAI is adding to the layers of understanding of the subject, revealing the agentic role it plays in a new triadic relationship between designers, novices (notably, novices also capture designers exploring other creative domains) and itself. Where extant research talked of primary then secondary appraisal of the identity threat (Petriglieri, 2011), the speed and exponential change and capability seen with GenAI (Metr, 2025) challenge existing assumptions. The speed means designers do not have the time assumed within existing models to 'shed' their old identity or experience a 'betwixt and between' state (Ibarra & Obodaru, 2016) before the technology updates again. Thus, the technological landscape is shaping the distinctiveness of designers' responses to the effects of GenAI on their identity.

Turning attention to creativity, the thesis contributes to conversations on the creative process, responding to Amabile (2020), who asserted that very little is known about 'under what conditions, experts' creative process will be inhibited or facilitated by their affective and motivational reactions to getting new ideas from machines' (p. 353). No significant changes have been made to Wallas' (1926) 4-stage creative process since its inception, aside from adaptations that have revised terminology and added a fifth stage. Extant research on creative processes has tended to focus on a specific stage (e.g., Schleith et al., 2022). This thesis extends this knowledge base by examining the distinct characteristics of GenAI and demonstrating the designer's relationship with it at stages across the creative process. Hence, contributing a revised model, taking the foundational prototypical 5-stage process (Figure 2-1) as a basis for extending the creative process to include the agentic role of GenAI, as shown in Figure 2-3. Moreover, extant research has shown that technology influences decision-making and ideation (e.g., Stuhlfaut & Windels, 2019). The extended creative process shows designers offloading

creative tasks, with decision-making and ideation now capable of being performed by GenAI. Furthermore, this thesis offers qualitative insights into designers' use of GenAI at each stage that illuminate behaviours that question core assumptions, for instance, what outsourcing work to GenAI (that can process work in seconds) does to a creative process that has been shown to benefit from 'prolonged thinking' and requires 'sustained effort' (Rhodes, 1961).

The last conversation this thesis joins is that of technology and knowledge boundaries. Supporting prior research, technology for designers is central to their work, as it is in many expert occupations (Nelson et al., 2023). Further, this thesis supports research showing that technology facilitates the creation of expertise and the communication of that knowledge, whether within or across knowledge boundaries (Leonardi et al., 2019). Furthermore, designers are also found to construct boundaries to protect their distinctive knowledge (Ferlie et al., 2005) and act as gatekeepers to their domain of expertise (Susskind & Susskind, 2018). This thesis further contributes by extending this knowledge by revealing how GenAI affords designers the ability to use GenAI to exploit creative expertise in other domains. Thus, I add to the conversation, showing how the established gateposts of expertise and the norms of behaviour across once-impermeable knowledge boundaries are transforming. GenAI is emancipating expertise from tightly controlled expert communities. The days when possessing deep knowledge of an expert domain afforded individual's expert status, enabling them to defend their expertise (Eyal, 2019), are ending. Extending research that reports on technology allowing actors from outside an expert domain to enter (Lakhani, 2013). GenAI shows how technology can not only let outside actors in, but it also empowers and equips them to perform expert tasks once they are there. Beyond the construction of knowledge, AI is suggested to be a challenging expert authority, making it less clear 'who or what can claim expertise on a given issue' (Heimstädt et al., 2023, p. 5). Thus, transforming what are traditionally thought of as knowledge boundaries (Dell'Acqua et al., 2025).

More broadly, fifty years ago, if was written that ‘There is a widespread suspicion of artificial intelligence among the general public, based on the common philosophical assumption that regarding man as a computational mechanism entails denying human subjectivity, individuality, and moral freedom’ (Boden, 1978). What was true half a century ago accurately describes the prevailing narrative today. Indeed, designers’ perceptions of GenAI are tainted in a belief that it will stifle their decision-making, individuality, and their moral compass. So in this regard, the technology has changed, but regarding perception and behaviour, the dial appears to have hardly moved.

4.3 Contributing to a higher narrative

Beyond each paper’s distinct contributions, the papers combined reveal salient themes that, upon stepping back, surface and are threaded through each, albeit some are identified more explicitly than others. Thus, this strengthens the thesis and contributes to a more nuanced, deeper understanding of the nexus of creativity and technological innovation in the era of GenAI.

Throughout the thesis, recurring themes lead me to question the foundational literature on creativity and technology. Hitherto, the literature makes no allowance for the possibility that a machine can perform creative tasks. Existing research has long assumed, whether explicitly stated or not, that creativity is inherently human (e.g., Florida, 2012), something that is ‘in our DNA, woven into every fibre of our being’ (Psychology Today, 2025). Building on this inherently human position of creativity is the assumption that machines are incapable of truly replicating human creativity (Runco, 2023) and of generating ideas (Osborn, 1953). The papers of this thesis show that this longstanding position is no longer the only perspective. The empirical findings point to a once-unimaginable paradigm shift in creativity, in which it is now not only possible to achieve creativity by machine but also for it to be almost indistinguishable from human creativity (Samo & Highhouse, 2023).

This thesis also builds on related foundational assumptions in the creativity literature that treat creative agency solely as a human skill and process (Amabile & Pratt, 2016; Perry-Smith & Mannucci, 2017; Schneiderman; Wallas, 1926). A position these findings call into question, as I suggest they are now extended with the discovery of the *widening locus of creative expertise*, *extending the creative process*, showing change in creative agency and control throughout. Although identified, much is unknown about this change. The literature has long assumed that expertise is established through professional experience (e.g., Skovholt, 2016), where first-hand experience is essential for knowledge generation (Argot & Spektor, 2011). Indeed, designers spoke of their 'lived' experience and its heavy influence on their work. Thus, when that lived experience, so central to a designer's sense of self, is removed in the case of GenAI, it raises the question of what that means for designers. How do they inform their expertise and output? Creative processes and, with them, expertise, are increasingly handled by machines or novices with the machine in a fraction of the time it might take an expert designer. Which leads to thoughts on what this means for future design expertise? And for the field of design per se?

Lastly, in the proximity of creative expertise, the perceived creative expert agency of GenAI is found to be a determining factor in designers' perceived usefulness and acceptance of the technology. Upon deeper examination, the thesis reveals that the literature on ideas widely holds that ideas are generated by humans (e.g., Hagtvedt et al., 2024). However, as this thesis has shown, although research has already demonstrated GenAI's ideation capabilities (Doshi & Hauser, 2024; Jia et al., 2024), it has focused on quantitative and performance aspects. Indeed, limited, if any, consideration has been given to the qualitative effect this new, creative agent will have on the literature from here on, with machines capable of performing human tasks.

Stemming from this higher theme is one that is woven through each paper: a shift in the balance of creative agency, power and control. Indeed, this thesis supports established findings

on the inherent power in technological systems (Winner, 1980), showing how technology can upend role relations (Barley, 1986) and where decision-making confers power (Agrawal et al., 2022) that results in the loss of power for one and gains in power for another (Markus, 1983). Moreover, the thesis constructively adds to this conversation by empirically revealing the democratisation of creative expertise with a shift in the power of creative agency and expertise. The expertise prized by designers that affords them status and distinctiveness (Townley et al., 2009) is now in the hands of creative partners, stakeholders and novices who are empowered by the simple user experience and accessibility of GenAI. Moreover, the power of creative cognition is not only shifting (with GenAI) from the designer to other humans, but also from designers to the increasingly autonomous computational creative cognition and power of machines. In doing so, designers respond by cherry-picking the use of GenAI, as shown in Paper I, where it fits into the creative process; in Paper II, how it influences when and where designers use it; and in Paper III, how perceived expertise influences when and where designers use it. Moreover, the temporal contribution of Paper III revealed that, over time, there was greater acceptance and perceived usefulness of GenAI, most notably in external domains, with their signature tasks still ringfenced.

The question that this provokes is 'For how long?' Given that this thesis has shown how designers leverage GenAI to access other domains of expertise, which means there is no reason to suggest that individuals from other domains will not use GenAI to enter the designers' domain. Indeed, designers reported betraying longstanding relationships and trespassing into other creative domains. Were these deliberately vengeful moves? Or was it designers drawing on their innate problem-solving capability? In an era in which a prevailing discourse suggests that GenAI will have an existential impact on expertise (WSJ, 2025), rather than the inferred betrayal, is designers' behaviour an act of survival?

I found a change in designers' behaviours over the 12 months from Phase 1 to Phase 2, and the technological landscape has not stayed still since the second phase of data collection. Indeed, GenAI has been advancing exponentially (Mollick, 2025), doubling every 7 months over the last 6 years (Metr, 2025), a trajectory anticipated to continue for at least another 5 years (Sky News, 2025). Thus, where might this leave designers in 12 months? Let alone in five years? To adopt another metaphor, is the net closing in on design expertise? What is sacrosanct to them is now accessible and exploited by GenAI. Thus, whether designers choose to use GenAI or not is strategic and symbolic. Symbolic in that designers are working in an era of unprecedented and ongoing transformation in the knowledge that GenAI is still on the charge.

A follow-up to the question about how long designers' ring-fencing would last, would be: if the ring-fencing goes, what is left to derive expert status and distinctiveness for designers? Indeed, what is left when GenAI can perform (potentially outperform) designers in many of their tasks? In some responses, designers are already alluding to this question, as they discuss the distinct humanness of their role, highlighting 'human' attributes such as empathy, taste, and relationship-building. However, creativity is possible with machines, having long been thought out of reach of machines. Furthermore, there is evidence that you can form a type of relationship with AI companions (Malfacini, 2025) and technology can influence human behaviour when users feel emotionally close to their chatbot (BBC, 2025). Thus, this circles back to the earlier questions for a designer: How long will that position last? How long can designers hold on to 'humanness'? If that goes, then what are designers left holding on to?

4.4 Situating GenAI with designers past technological innovations

Humans have always sought to create and harness technology to extend their capabilities. Designers and the design sector are no different in this regard; they have experienced and weathered the transformation amid numerous technological innovations, both analogue and digital. Since the Gutenberg printing press of the 1440s, designers have worked within constraints of

technology. The process was digitised in the 1970s with the personal computer revolution pioneered by individuals such as Steve Jobs and engineer Steve Wozniak at Apple (Victoria and Albert Museum, 2024). This period also saw the introduction of design software such as AutoCAD (MIT, 2021) and greater access to hardware, including printers and office peripherals (Ceruzzi, 2003). The 1980s introduced the world to Adobe Photoshop (Manovich, 2013) and to 3D printing (MIT, 2021). The 1990s brought the World Wide Web (Cern, 2026), and the infrastructure of cloud-based computing and software-as-a-service arrived in the 2000s (Matana, 2024). Digital technology and innovations have emerged in the field of design and been used by designers to shape their work practices and ideas. These technologies have also shaped design as a domain, dividing design disciplines into more facets of expertise 'across digital, physical, and service-based affordance' (Bethune, 2022).

What all digital transformations to date share in common is that they have enabled the amplification, augmentation and semi-automation of designers' expert practice. Notably, the designer retains agency and control. Where agency refers to Gray et al. (2007), the ability to think creatively, perform creative tasks, retain and retrieve creative ideas, and generate creative output, designers have always retained agency over each stage of the creative process and each task within it. For instance, in the ideation stage of a new logo, a graphic designer would commonly begin by looking through design books and blogs for reference and inspiration, as well as tapping into their distinct reservoir of tacit knowledge and experience (Leonard & Sensiper, 1998). Ideas would be sketched on paper to experiment with different ideas, throughout the process quickly, the designer assumes full agency and control, making hundreds of decisions, some so micro, quick and innate like muscle memory, they do so unconsciously in dialogue with the idea with on-the-spot decision-making and detection of consequences and implications, as they listen to the evolving idea and reframe problems (Schön, 1983). In sum, technological innovations changed how designers worked, but they did not have the ideas and create the work.

Furthermore, in addition to retaining agency, there was an expert boundary, albeit unregulated, on the use of digital design tools. Indeed, beyond tacit knowledge, designers required training to develop the skills and knowledge to operate the technically advanced software. As well as training to use the software, each version required its own licence, which could cost hundreds of pounds. Hence, the training and licensing help to construct a boundary around the designers' domain. Notably, Adobe's 2013 transformation from an individual software package licensing model to a cloud-based, subscription-only model made the latest digital design tools more cost-effective and accessible.

Nevertheless, there is no free subscription, and you still require significant training to use them effectively. In other words, designers have felt ripples of 'democratisation' with earlier technological innovations. However, designers have retained agency, control and the skills needed to use the tools to generate outputs at the highest levels.

Turning to GenAI, on the surface, it is akin to many other digital transformations in the design sector, met with mixed responses, with acceptance varying from revelry to reticence to resistance. The introduction of GenAI to processes and workflows increases efficiency and has the potential to elevate designers' work. Where I suggest GenAI differs is in the agentic capability it possesses, combined with its accessibility, which is free at an entry level. All you need is a device and internet access. This is unique to GenAI, stemming from technological changes in design of the past, and a significant shift that opens their once-protected (albeit fragile) expert boundary, as it now allows novices close access to what designers do and who they are. In short, with a text prompt, anyone with access can generate creative output with no tacit or explicit knowledge of skills or training. Indeed, overlaying the agency definition adopted by the thesis (an ability to think creatively, perform creative tasks, retain and retrieve creative ideas, and generate creative output), what was once the closed preserve of designers is now possible with the transformation enabled

by GenAI. Albeit with one important distinction, akin to research on older versions of AI, that, currently, a human is still needed in the loop (e.g., Anantrasirichai & Bull, 2022)

In other words, a human is needed to enter a text prompt and make a judgment over the output. However, even authorship of prompts is becoming blurred, with libraries of templated prompts available online and the ability to use GenAI (e.g., Claude and ChatGPT) to create prompts that can then be pasted into image generators. In all, the agency of GenAI means it can perform tasks that designers do, with designers outsourcing to it, or with clients bypassing designers and going straight to GenAI as a 'design agent'. Furthermore, compounding the impact of GenAI on designers' practice, albeit not the focus of this thesis, is the quality of the output generated. Studies are now regularly demonstrating that GenAI is indistinguishable from human-generated imagery (e.g., Frank et al., 2023). GenAI is understood to have been trained on human-generated content. However, with it now increasingly impossible to spot the difference in outputs, a position compounded by the fact that the AI used today is sure to be the worst you will ever use (Mollick, 2024), future versions of the technology will only be even better and harder to distinguish. Furthermore, they will be increasingly trained on human and hybrid (human/GenAI) data, leading to the prospect of wholly GenAI-generated work.

Hence, I suggest this begins to explain the designers' fluid behaviour as a community of knowledge workers who feel a sense of emancipation from their mundane tasks while simultaneously feeling their expertise under siege. Nonetheless, designers are turning their professional problem-solving skills on themselves, with inherent resilience and flexibility to withstand uncertainty and adapt to the ambiguity of change enabled by GenAI. However, the growing capabilities and agency of GenAI through this codification mean that computers are increasingly expected to complete explicit, rational knowledge work. At the same time, the capabilities of GenAI will expand to encompass more of what is currently tacit knowledge. The

tacit knowledge left remains to be seen. What is foreseen is that any distinctly human tacit knowledge may be reduced in scope but increase in value.

4.5 Looking beyond to consider GenAI and other creative disciplines and industry sectors

Drawing on informant anecdotes, broader conversations with creative workers, and available research, the findings of the three papers raise salient themes that are likely to recur beyond the designers and their disciplines in this study. From the more strategic to the executional (Bethune, 2022), different design disciplines will accept GenAI to differing degrees and for different tasks to support the extended creative process. For instance, graphic designers in this study use GenAI less in the ideation phase, whereas industrial and automotive designers are anticipated to use it more freely and intensively. One suggestion is that graphic designers' work involves a much less intensive production process. In contrast, the development and manufacturing processes involved in automotive manufacturing are significantly extended and complex, meaning the designs are temporally and physically further removed from the final output. Furthermore, a graphic designer typically works on their own or as part of a small team.

There is also only a limited number of steps from design to the final design output, which means they are closer to it. In some cases, they design and deliver it to a client with no other involvement. By contrast, in automotive design, there may be one person who sets the direction, involving a raft of designers, engineers, and other experts. There are strict international regulations governing automotive design, including due diligence, environmental considerations, and other factors. Moreover, the automotive designer will never create the final output [a vehicle] themselves—these distinctions between designers and between the stages of the creative process warrant further inquiry.

In another scenario, the notion of *proximity of expertise* is strongly expected to have generalisable parameters that extend from designers to other creative industries and beyond.

Indeed, perceptions of expertise as a moderating factor in the acceptance and use of GenAI is likely present in all roles where the relationship between the nature of the work and the sense of self is intrinsic. Furthermore, the concept of *creative trespassing,* applied here to the creative industries as a case example, can be relabelled as *epistemic trespassing* to serve as a broader framework for predicting and analysing experts' acceptance and use of GenAI at both an intra- and inter-sector level.

4.6 Limitations and future research

This thesis should be viewed through a lens that accounts for the stated limitations and invites future research to explore the opportunities. For instance, the research was purposefully situated in the UK design sector. Thus, it is limited in its exploration of the rest of the creative industries, signalling merit in the future discovery of other sectors in the CIs to understand where and how other creative workers are employing GenAI in their practice. Beyond seeking answers to whether the concepts contributed to this thesis (i.e., widening locus of creative expertise and the proximity of creative expertise) hold up in those domains. Seeking further understanding of practice by exploring their creative processes is valuable. How, where, and why they are using GenAI would help form a more macro understanding of the CIs and anticipate how they will transform in this era of change. Are there differences in the creative output? Does the tactility and tangibility of the output moderate use? Does the creative workers' proximity to the final output play into it? Do creative workers' traditional roles in the production of the output have an effect?

The thesis benefited from data collected across two periods. Nevertheless, in an era where technology is advancing in capability and adoption like never before, it invites future research into the temporal changes brought by GenAI. Research that revisits the designers who are the subject of the thesis. There were already changes in behaviour and attitudes in the 12 months since I first spoke to them. I am more than intrigued by what their relationship with it might be

now. Where is it? What is informing it? Has the bubble burst? Moreover, beyond the subjects of this study, a temporal methodology will be an essential tool for future research on GenAI.

There is already significant attention on the role of GenAI in education. However, it focuses on harnessing and controlling the technology's potential throughout the learning process. This thesis, highlighting the changing landscape of expertise and knowledge, underscores the value of research examining the future of design education. Traditionally, designers go through some form of higher education, enter the industry and work their way up a typically hierarchical structure, from intern to creative director, learning on the way. GenAI is already affecting design careers in the industry. Thus, it is anticipated to have a significant effect at the start of their careers, while they are learning. Therefore, research on what is needed in design education to position future designers for success in the industry would be hugely valuable. Furthermore, what happens to the traditional hierarchical model in the industry when GenAI changes roles?

4.5 Concluding thoughts

As GenAI widens the locus of creative expertise, it ironically narrows designers' relationships with other creative workers with whom they would traditionally partner. GenAI is also empowering designers to enter other expert domains, broadening their scope of skills, from being an expert in one domain (i.e., design) with the potential of being a generalist across many domains simultaneously. They are anticipated to evolve from design experts in curation and control. Indeed, designers have traditionally seen themselves as being at the helm, curating and coordinating projects and creative partnerships. Where this differs is that they are beginning to see GenAI replace roles previously associated with human team members and creative partners.

Moreover, the transition to what may be described as a curator or conductor is potentially misleading and overlooks the broader displacement of designers and creative workers. For

instance, in a museum or gallery, you will have a handful of curators compared with the entire workforce. Likewise, in an orchestra, there is only one conductor for all the musicians. Thus, these analogies present a problem: for instance, if all designers become conductors, there would need to be an increase in work and a seismic shift in how creative work is produced to satisfy a world of conductors and far fewer musicians. Tying this back to designers, a world of conductors would be akin to a design sector with only creative directors. That being the case, what will the future shape of the design sector and, more broadly, the creative industries look like? This triggers further questions about the implications of GenAI beyond the design and CIs. With GenAI on an exponential trajectory, and this thesis demonstrating how it can be harnessed to access once-restricted domains of expertise, more profound questions arise that warrant scholarly enquiry. To begin with*:* **How will GenAI influence the future of experts and expertise?**

CHAPTER 5

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CHAPTER 6
Appendices

Appendix A: *Example Interview Transcript*

APPENDIX A

Example Interview Questions

1. **Please tell me a little about your background (as a designer).**

   What motivates you as a designer?

2. **How would you define your professional role?**

   What makes you distinctive?

3. **What does it take to be successful and effective in your current role?**

   What do you think clients are looking for?

4. **What is it that clients come to you for?**

   How important is the client relationship in the process, in the ideas/creative output?

5. **What does creativity mean to you?**

   How important is creativity in your role?

6. **How important are ideas to your role?**

   Where and how do your ideas come from?

7. **How important is the 'creative process' to the idea / out you product?**

   How does your work benefit from time to reflect and incubate on ideas?

8. **Tell me what your ideas mean to you.**

   How important are ideas to the definition of the role?

9. **Where and how does digital technology (AI, cloud computing, IoT) fit into your process?**

   What do you feel toward its use? Where does it work well? Or disrupt your flow?

10. **What do you know about generative AI technologies like DALL · E and ChatGPT?**

    Have you/would you consider using them to problem-solve and generate ideas?

11. **How do you feel about idea generation moving from you to the machine?**

    Do you trust it?

12. **What do you think GenAI will mean for your role?**

    Can it enhance creativity? Does it substitute it?

13. **What will GenAI mean for your broader profession?**

    How might internal/external perceptions of creative professionals change with using GenAI?

14. **Thinking back to the meaning of ideas… if you use GenAI, do you see that changing?**

    Do you think the feelings of others towards your work change? And yours of theirs?

15. **If you could shape GenAI's future — what would you suggest?**

    How would you achieve that, and why?