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### Appreciative inquiry in design research: A case study from interior design

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#### Abstract

In the 2021 publication, 'The Ontology of Design Research', Miguel Angel Herrera Batista argues that the ongoing development of postgraduate programmes in design has led to a growing focus on establishing the field of inquiry as an independent and differentiated research area. For design research to contribute to disciplinary development, researchers need to focus not only on procedural rigour but also on ensuring that the philosophical foundations of selected methodological approaches align with the ontological reality of design. It is, therefore, necessary to encourage postgraduate students to investigate both familiar and novel research methodologies in the search for appropriate approaches to design research projects.

Appreciative Inquiry (AI) is a research methodology developed in the late 1980s to reveal often overlooked, positive aspects of experience. AI is grounded in the theory of social constructionism. It focuses on understanding processes and experiences, and on creating alternative opportunities and ways of viewing situations and problems. AI typically follows a four-stage approach: 1) Discovery (appreciating and determining the best of what is); 2) Dream (identifying what might be and envisioning results); 3) Design (determining what should be and co-constructing change); and 4) Destiny (developing ways to achieve the vision). AI is commonly used as a research tool in fields such as management studies, education, healthcare, and social work, to study and improve the effectiveness of interventions and programmes.

The paper presents an MA Design (with a specialisation in Interior Design) research project as a case study to investigate the application of AI as a methodology in design research. The case study illustrates that, although AI has not been used extensively in design research, it offers opportunities to investigate under-researched topics in the design disciplines. AI is especially valuable in areas where processes and strategic thinking may be implicit and not yet formally described. In addition, the method's future-focused, collaborative approach aligns well with the speculative nature of design thinking (ideation & prototyping) and the anticipatory mindset encouraged during the design process. The paper makes recommendations for future applications of AI in design research. The paper postulates that by encouraging students at the master's level to explore novel methodologies, design researchers, and by extension design practitioners, can gain deeper insight into design processes and build on the experiential knowledge of professionals to expand the theoretical base of the design disciplines.

**Keywords:** Appreciative inquiry (AI), design research, design thinking, interior design, research methods.

## Introduction

Like many vocational and practice-oriented fields, design seeks to establish itself as an academic discipline. Disciplinary legitimisation calls for the development of a specific knowledge base and the establishment of distinctive forms of communication and practice that helps to distinguish designers from other professionals. Scholarly design research plays a key role in aiding disciplinary development. Systematic research in design promotes academic disciplinary development and allows for the construction of solid conceptual structures that guide professional practice (Batista 2021, p. 2). Feast (2010, s.p.) refers to the relationship between practice and research as a 'knowledge-building cycle' that helps to convert tacit and experiential knowledge into explicit theories that can be "shared, contrasted, tested, and reflected upon". Experience with research strategies and methodologies can provide designers with the ability to generate knowledge across projects and can inform better design solutions by enhancing design thinking (Vaux & Wang 2021, p. 2; Groat & Wang 2013).

Batista (2021, p. 2) states that inquiry has always been an inherent part of the design practice but that design research sometimes lacks the rigour that postgraduate programmes and contemporary society require. In addition, postgraduate programmes often adopt research methods from other disciplines without prior reflection on the philosophical foundations that sustain them and evaluation of their relevance to the study of the 'reality of design' (Batista 2021, p. 2). Horváth (2007, p. 10) argues that systematic academic enquiry is supposed to explore and aggregate knowledge with sufficient veracity and construct research methodologies and methods applicable to the field. For design research to contribute to disciplinary development, researchers need to focus not only on procedural rigour but also on ensuring that the philosophical foundations of selected methodological approaches align with the ontological reality of design.

The paper considers the disciplinary identity of design research to broadly establish what differentiates the field of inquiry as an independent research area. This study's design research is positioned in the context of postgraduate education. The paper considers the value of exploring novel methodologies, such as Appreciative Inquiry (AI), in postgraduate design research to aid in scholarly identity formation and expand the theoretical base of the design disciplines.

## The disciplinary identity of design research

In the publication, 'The Ontology of Design Research', Batista (2021, p. 33) argues that the systematic and ordered study of a specific 'reality' or 'phenomenon' is the foundation of every research process. Design research, therefore, aims to study the ontological elements that comprise design, namely the designed object, designer and user, as well as the interactions between these. In addition, design research considers how the temporal, social, and spatial contexts affect these elements. The reality of design is complex, as it embodies both the social processes of creation and use and the inanimate products of these processes. Design research is either focused on the professional practice of design to improve products, services, or experiences; or on studying the design discipline and developing its theoretical base (Batista 2021, p. 11, 22). Whilst both research areas generate knowledge, the latter is typically positioned in the academy where dissemination of knowledge is a fundamental goal. As such, it is characterised by peer oversight and evaluation, adherence to ethical protocols, and the development of more rigorous research frameworks to guide the process.

In academic research, the researcher adopts a specific position or worldview, known as a 'research paradigm', which frames the study and bases the research process epistemologically and methodologically. Guba and Lincoln (1994) distinguish four dominant paradigms in research: the positivist; the post-positivist; the critical theory; and the constructionist. Batista (2021) argues that the complex reality of design cannot be addressed fully by any of these paradigms and presents pragmatism as an alternative philosophical approach to design research. He argues that "philosophical pragmatism can offer an adequate perspective for design research given that [...] it is based on daily experience and action habits, which is fundamental in the practice of design" (Batista 2021, p. 128). In this paradigm, design research emphasises the practical effects of ideas; research leans towards what works and what is useful; and abductive reasoning is employed to generate new ideas based on intuition and daily experience.

Feast and Melles (2010, p. 1) indicate that there are three main theories of design practice, namely, direct making, reflective practice, or rational problem-solving, that broadly correspond with the subjectivist, constructionist and objectivist epistemologies that guide design research:

The subjectivist position [...] argue[s] that all practice is research and that a thesis (written text) is unnecessary as knowledge produced through research may be read in the artefact (Frayling, 1993; Candlin 2000; Prentice 2000). The constructionist position holds that designing in itself is not research unless it is also accompanied by reflection upon the process of making (Cross 2001; Dorst 2008). The objectivist position emphasises the logical construction of theories based on discrete empirical facts (Friedman 2003; Owen 1998; Biggs & Büchler 2007).

These positions are not exhaustive but represent several seminal authors' stances on design research and its link to design practice. According to Feast (2010, p. 2), the epistemological positions locate design in either 'isolationist' or 'situated' relationships with other disciplines. The isolationist position presents design research as uniquely different from research conducted elsewhere, whereas the situated position maintains that design should seek commonalities with the larger academic community. In both instances, the methodological approach and data collection methods must align with the assumptions that the study makes about human knowledge, artefacts, and the interpretability of research findings. The field of design research is characterised by methodological diversity. Philosophical pragmatism favours mixed-method research, but this is not the answer for all research studies. Plurality and variety are typical of a developing field of inquiry but can create "multiple points of confusion for those preparing to conduct research in design" (Matthews & Brereton 2015, p. 152).

## Design research in postgraduate education

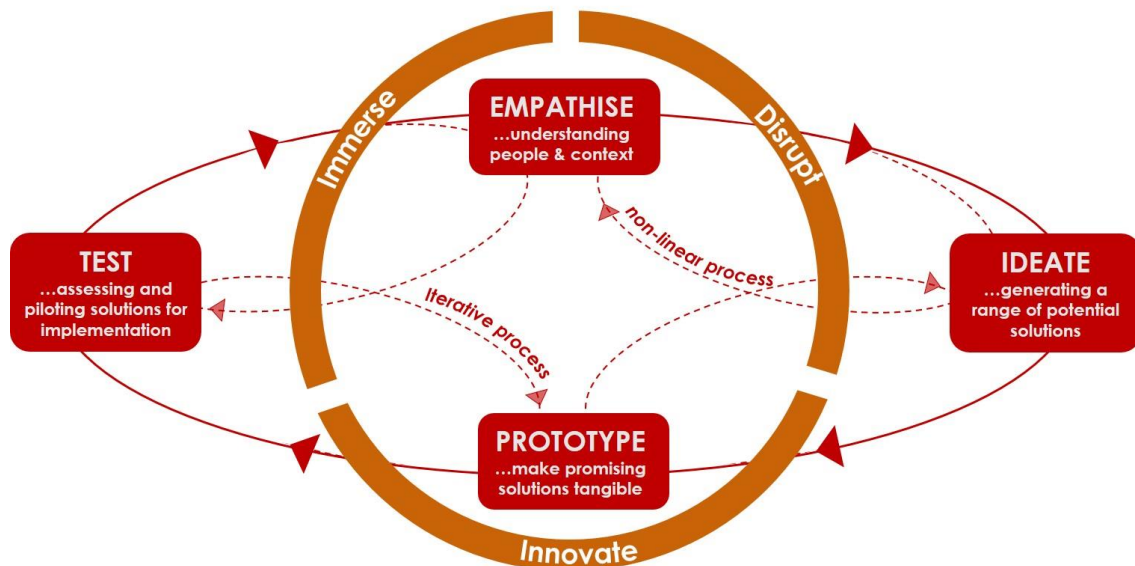
Scholarly design research is by no means the exclusive domain of higher education, but postgraduate study is often the designer's main introduction to the purpose, nature, norms, and processes of design research. At the undergraduate level, curricula in design disciplines tend to be modularised, with 'design process' and 'research process' practices dealt with independently. At the postgraduate level, students enrolled in coursework programmes are expected to integrate these two practices, whereas students enrolled in research-focused programmes are expected to conduct research as independent scholars. There may be variations to this model, but by and large, postgraduate programmes place a greater emphasis on research design, methodological rigour and academic writing practices than is typically required at the undergraduate level.

Students may find it challenging to transition from the literacy practices of the collaborative, trial-and-error-based studio environment to the independent, scholarly environment of postgraduate study. Melles (2008, p. 262) argues that developing academic disciplines and practice-oriented fields such as design are often under pressure to conform to the dominant academic literacies and processes of the larger academy. One can argue that the design discipline's drive to legitimise its existence in academia leads to a disregard for the multiple literacies developed during earlier design education and professional experience. Unfortunately, the supervisory process often overlooks the disciplinary specificities of design practice in favour of academic enculturation.

### The identity of the design researcher

Postgraduate design education is approached with a dual goal: on the one hand, it serves to develop the knowledge base of the design discipline(s) through systematic research; and on the other, it serves to develop the scholarly identity of the designer (student). Philpott (2015, p. 63) states that many professional doctorate students have no desire to become academics and that they aim to be 'scholarly professionals' rather than 'professional scholars'. We argue that this also holds for many postgraduate design students. In research-focused programmes, such as a Master of Arts (MA) qualification, students often continue to work part-time in the design industry whilst studying. In the design disciplines, there is not necessarily a direct link between gaining a postgraduate qualification and professional advancement. This likely indicates that students seek what Philpott (2015, p. 61) refers to as 'professional renewal' – a search for revitalising personal practice or obtaining a different perspective on professional practice. Barnacle (2012, p. 82) argues that producing academic text involves 'text work' and 'identity work'. The latter refers to the process of discovering an authoritative voice related to the discipline whilst mediating the 'practitioner-researcher-self' conjunction. Successful identity development in postgraduate design study demands consideration of the researcher's designerly identity during the supervision practice.

The design disciplines are characterised by the concept of 'design thinking', which embodies a set of cognitive approaches, mindsets, and practices that guide how designers approach problems. As such, design thinking underscores teaching and learning strategies in higher education. Dorst's (2010) research on the nature of design thinking positions designers' cognitive approaches as fundamentally different from that of fields based on analysis and problem solving. According to Owen (2007, p. 17) "design thinking is in many ways the obverse of scientific thinking. Where the scientist sifts facts to discover patterns and insights, the designer invents new patterns and concepts to address facts and possibilities". Designers follow abductive reasoning processes, i.e., solution-focused thinking processes that simultaneously involve problem solving and reframing the problem. Design thinking is characterised by integrative thinking to bring competing constraints into balance, leading to experimentative and explorative, even optimistic mindsets. Hassi and Laakso (2011) identify visualising, thinking by doing, collaborative work-styles, and human-centred approaches to problem solving as some of the most recognisable design thinking practices. Design thinking is a non-linear, iterative process that typically involves four phases – 'Empathise', 'Ideate', 'Prototype' and 'Test' (Figure 1). Designers immerse themselves in the context of the design problem to develop a variety of potential solutions. These are made tangible through visualisation or physical prototyping to test their viability. The cycle of immersion, disruption, and innovation is repeated to arrive at a solution that best addresses the unique aspects of the context.



**Figure 1: The non-linear, iterative process of design thinking (adapted from models of the Hasso-Plattner-Institut School of Design Thinking (2023), IDEO (2023), the Institute of Design at Stanford (2010), and the Interaction Design Foundation (2016))**

Vaux and Wang (2021, p. 1) indicate that designers find learning about research methods challenging. The incremental, procedural approach may appear contrary to the non-linear designerly process of approaching a project as a unique challenge that requires a distinctive solution. Matthews and Brereton (2015, p. 152) echo this when stating that "methodological concerns can be paralyzing for novice researchers" as it can seem that one has to become an expert in philosophy before starting the research project or that one has to commit to one methodological tradition and work solely within it. Procedural determinism is unfamiliar territory for designers and not in keeping with the flexibility and solution-driven approaches to problem solving encouraged by design thinking. In order to develop the designer's scholarly identity, we should aim to align research practices as far as possible with design thinking. The goal is to build on previous experience and embedded literacies and to provide the novice researcher with a framework of experiences that can be translated into practice. Research methods that align with the characteristics of pragmatism present opportunities for improved methodological alignment in the postgraduate research process. We argue that it is necessary to encourage postgraduate students to investigate both familiar and novel research methodologies in the search for appropriate approaches to design research projects.

### Appreciative inquiry

Appreciative Inquiry (AI) was developed in the late 1980s by Cooperrider and Srivastva (1987) as an affirmative form of inquiry to complement conventional forms of action research. AI aims to reveal often overlooked positive aspects of experience and is positioned in opposition to conventional, problem-driven research (Clouder & King 2015, p. 2). Cooperrider and Srivastva (1987, p. 147) argue that problem-solving research assumes that something is broken and that it needs to be fixed. The researcher is positioned as an 'objective third party' who is discouraged from speculating or acting as a 'utopian thinker'. In contrast, AI focuses on understanding processes and experiences without automatically phrasing a situation as problematic. Clouder and King (2015, p. 3) argue that "Cooperrider and Srivastva (1987, p. 129) saw rehearsing problems as constraining human imagination when new ideas were the force for change and social innovation". AI is therefore viewed as an enabling agent of social transformation, specifically organisational change. The following five

principles form the basis of AI (Clouder & King 2015, p. 3; Cooperrider & Whitney 2001, p. 14-17; The Center of Appreciative Inquiry 2023):

- *Constructionist (words create worlds)*: reality is socially constructed through language and interaction. The action of inquiry generates an understanding of future possibilities;
- *Simultaneity (inquiry creates change)*: inquiry is an intervention, i.e., change begins at the inception of inquiry and continues via the questions we debate;
- *Poetic (we can choose what we study)*: what we choose to study influences what we discover. Daily discourse constantly recreates the story of an organisation and, like a poem, interpretations are endless;
- *Anticipatory (image inspires action)*: human systems move in the direction of their images of the future, i.e., behaviour is influenced by the images of the future that we collectively imagine;
- *Positive (positive questions lead to positive change)*: momentum for change requires positive thinking which is best generated through positive questions that amplify the positive core.

It is important to acknowledge that an inquiry that seeks positive experiences "may be perceived as restrictive and uncritical in the academic world" (Clouder & King 2015, p. 3). AI practitioners distinguish between deliberately choosing a positive starting point to initiate an inquiry and disregarding negative and difficult experiences to achieve a predetermined naïve ideal. AI aims to create an environment where people can speak freely without feeling the need to justify or defend experiences. AI practitioners acknowledge that the resultant research will be 'partial' in some sense, but one can argue that no research methodology can claim to uncover all perspectives of a set of experiences. Clouder and King (2015, p. 11) suggest that AI can engage more holistically with the complexity of the research domain if the researcher adopts a reflective and reflexive approach to the facilitation process. This requires some affirmatory facilitation experience or, at the very least, consultation with experienced AI practitioners.

AI typically follows a four-stage approach: 1) Discovery (appreciating and determining the best of what is); 2) Dream (identifying what might be and envisioning results); 3) Design (determining what should be and co-constructing change); and 4) Destiny (developing ways to achieve the vision). The 4-D Model, as it is known, was later expanded by Watkins, Mohr and Kelly (2011, pp. 36, 37) to include 'definition' (planning the interview structure and questions) as a preceding stage (Figure 2).

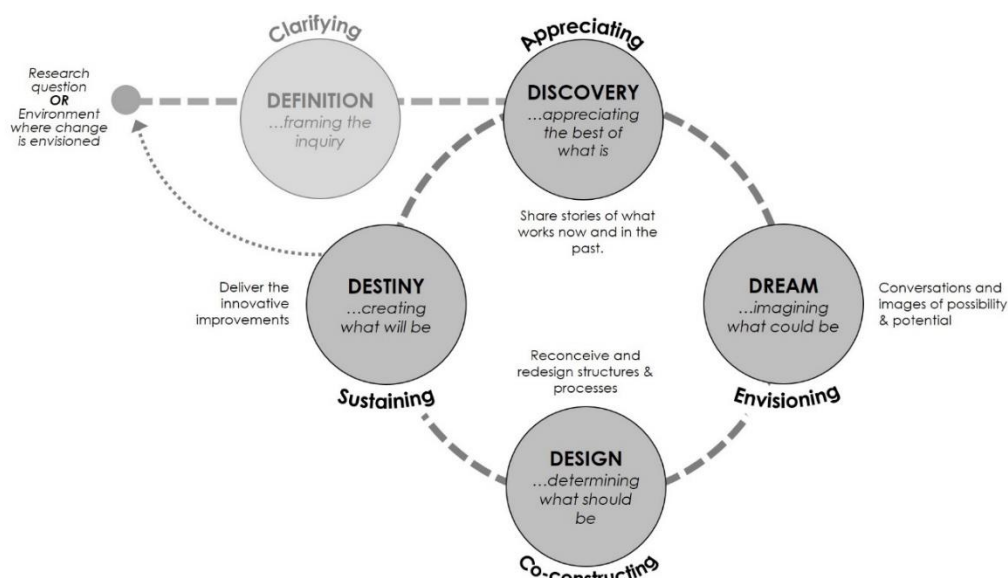


Figure 2: The 4-D Appreciative Inquiry Model, with the addition of the definition stage, adapted from (Cooperrider & Whitney 2005, p. 43)



AI was originally developed to investigate and initiate organisational development, especially in the corporate environment. It has subsequently been used as a research framework in fields such as management studies, education, healthcare, and social work, to study and improve the effectiveness of interventions and programmes. Ideally, AI should complete all four stages to initiate change. However, AI can be used in alternative ways as a research tool if organisational change is not the researcher's aim. Michael (2005) used AI as an interview protocol by conceiving her research as a "mini-version of the Discovery phase of the appreciative framework". Michael (2005, pp.226-228) relays that three clear benefits emerged throughout the 60 interviews she conducted: 1) interviewees were eager to tell their stories; 2) interviewees offered dynamic and unrehearsed information; and 3. interviewees spoke more openly, with less defensiveness or fear of reprisal. Although the discovery stage was isolated from the other three stages of the full AI cycle, Michael (2005, p. 229) indicates that respondents were naturally drawn towards 'dreaming' of change as the interviews progressed. An appreciative interview framework can empower participants to consider change, even if this is not the researcher's aim. Michael's experiences with AI indicate that it has the potential to be used successfully as a stand-alone research tool.

### AI and design thinking

AI is grounded in the theory of social constructionism and has been aligned with action research (AR) from its initial development. It is theoretically grounded and oriented towards practical knowledge and pragmatic action-oriented research. Therefore, we can position AI as a solution-oriented research paradigm that reframes problems as potential opportunities. Similarly, designers use 'solution-focused cognitive strategies' (Lawson 1979) to develop innovative approaches to ill defined or 'wicked problems'. AI's future-focused, collaborative approach aligns well with the speculative nature of design thinking and the anticipatory mindset encouraged during the design process. Two recent articles (both focused on enhancing educational practices) presented AI and design thinking as analogous appreciative frameworks (Buyarski 2021; Sriharan, Smith, Shea & Berta 2021). Figure 3 highlights some of the commonalities shared between AI and design thinking by overlapping the stages of both processes.

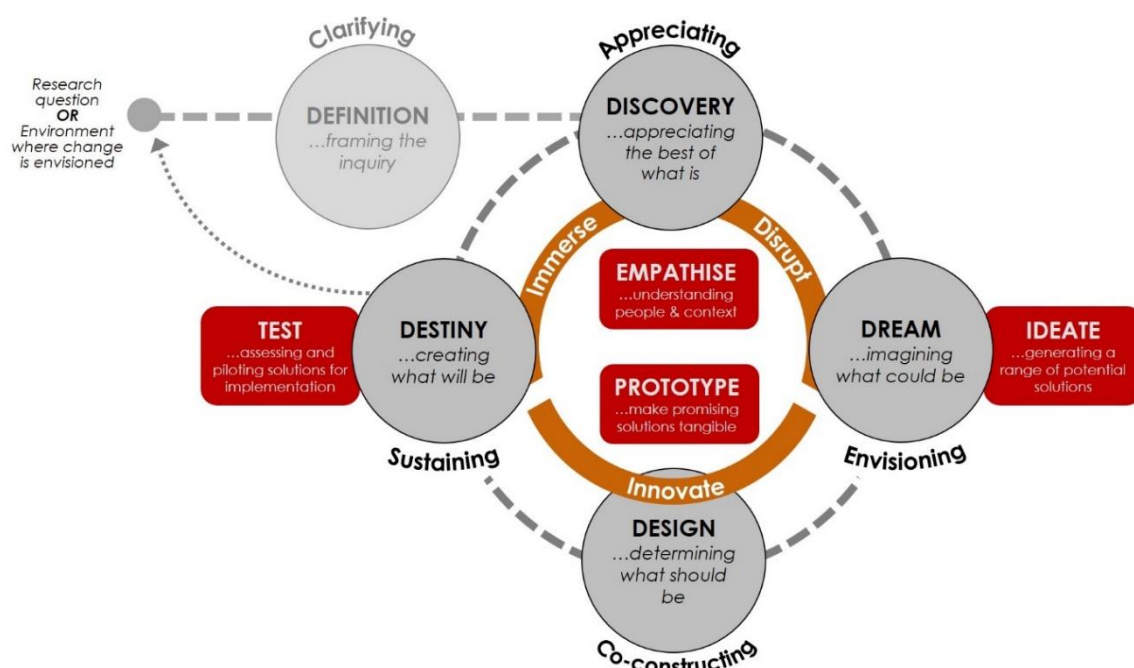


Figure 3: The 4-D Appreciative Inquiry Model as analogous to design thinking

Both AI and design thinking centralise the process of asking questions in a safe, collaborative environment to uncover assumptions and unstated perspectives on a current situation. In addition, both approaches focus on stimulating free thinking to generate possible solutions, with designers typically employing an array of visual methods to achieve this. Despite these overlaps, there is limited evidence that AI has been used as a tool in design research. The paper presents a MA Design (with a specialisation in Interior Design) research project as a case study to investigate the application of AI as a methodology in design research.

## Case study

The MA Design research project investigated design strategies that address the consumer behaviour of millennials in South African furniture retail stores. The study was positioned in the social constructionism paradigm and used qualitative research interviewing methods aligned with AI as an affirmative form of inquiry. AI is well suited to the study as it investigated an under-researched topic of design practice. AI can be used successfully to extract information from interviewees that may not be known to them through its collaborative, positive approach. The researcher consulted an AI specialist to guide the inquiry process and assist with defining appropriate interview questions and methods of probing. Since organisational change was not the aim of the study, the specialist recommended focusing on the 'definition' and 'discovery' phases of the 4-D Model of AI.

### Sample group

The study employed purposeful sampling to select participants. The literature review guided the criteria and defined conditions to ensure the participants from the sample group had in-depth and detailed information about furniture retail design strategies. The sample group comprises employees from retailers who are significant role players in the South African furniture retail industry and who target millennial consumers through an omnichannel retail model. Participants represented various employment ranks involved in defining and implementing design strategies, including the strategy director, head of marketing, marketing manager, brand manager, buyer, visual merchandiser and interior designer.

### Data collection

Semi-structured interviews were conducted virtually and in person and lasted, on average, 40 minutes. The participants consented to the recording of interviews and the researcher noting their answers. Semi-structured interviews are typically used for AI as it is considered an effective method to collect sufficient data in a short timeframe (Watkins & Cooperrider 2000, p. 5). Semi-structured interviews offer flexibility because the questions can be adapted to probe with follow-up questions, which can uncover unexpected emerging themes and thus generate an understanding of future possibilities.

Participation was voluntary, and participants were not forced to share their identity or personal information if they did not wish. The researcher obtained consent from individual participants and their employers before the interviews. Individual consent was given through a signed consent form, which stated the purpose and background of the study, their expected contribution, and their right to withdraw from the study at any point. The researcher obtained consent from representatives of the respective employers through an institutional consent form that outlines how the employers' interests will be protected. The employers' representatives and the participants were informed that a copy of the study's results could be requested upon completion. Apart from the ethical considerations in this approach, creating a safe and collaborative environment where participants can speak freely, without



feeling the need to justify or defend experiences, aids in uncovering assumptions and exploring unstated perspectives.

The interviews followed the SOAR Model (Stavros, Cooperrider & Kelly 2003), meaning the interview technique aims to identify the topic's strengths, opportunities, aspirations, and results. The SOAR Model is a positive, future-focused approach that aligns with the five principles of AI mentioned earlier: constructionist, simultaneity, poetic, anticipatory, and positive. Interview questions were aligned to broad topics that emerged from the literature review, namely 'the millennial consumer'; 'the furniture industry, both locally and internationally'; and 'the interior environment of furniture retail stores'. The interview questions typically introduced the topic in a positive, future-focused manner, to open the conversation for further open-ended probing questions, e.g., "Tell me about some successful examples you know of where furniture retail stores are adapting to millennials".

### Data analysis

The researcher transcribed the recorded interviews and examined them using reflexive thematic analysis (TA) as defined by Braun and Clarke (2021, p. 31). TA is often used in qualitative research and is appropriate for under-researched topics. Themes are generated from the data and not developed before the data collection. Reflexive TA recognises the researcher as an active participant in the process and acknowledges their subjectivity in interpreting the data. The researcher's perspective and potential biases are paramount, given that the method relies on an adaptive approach. This principle aligns well with the reflexive mindset inherent to AI. The researcher engaged in a recursive process where each step feeds into the next and utilised the six-phase structure for reflexive TA as presented by Braun and Clarke (2021, pp. 56-57).

The majority of responses aligned clearly with 'discovery', i.e., defining and appreciating 'the best of' the area of investigation. However, some responses were future-focused and therefore aligned to AI's 'dream' stage. The researcher noted in the study that "the participants were eager to share their future-focused ideas" even though this was not the aim of the study. The researcher developed a sub-code to identify and distinguish these responses. They were included under relevant themes and differentiated by prefacing findings with sentences such as: "When dreaming about the future"; and "Looking towards the future".

### Implications of the study

The study indicates that using AI as a methodology, specifically as an interview protocol, can benefit both the researcher and the research project. Like most novice design researchers, the researcher had little to no experience with conducting rigorous research for dissemination. As expected, this resulted in a lack of confidence regarding research methodologies and the seemingly inflexible approach required for the development and implementation of interview protocols. Consultations with an AI specialist helped the researcher to realise that the reflective, explorative mindset adopted during the design process is akin to the outlook adopted by AI facilitators to ensure that an interview remains positive and probing. Once the researcher identified the overlap between the implicit designerly strength and the AI interview process, we (as supervisors) observed that the researcher approached the interviews with increased confidence. In a follow-up supervisory meeting, the student expressed her frustration with the "backwards-and-forwards" process of compiling the literature review. In contrast, she expressed "excitement to get started" with the interviews and described the data collection process as "enjoyable [because] I understand what to ask and how to keep the interview going". Devos (2005) describes the process of 'becoming' a researcher as a complex process that goes beyond acquiring new skills, knowledge and networks. Instead, she argues that this process requires

the taking up of a new identity and conducting oneself accordingly, or 'performing' the scholarly identity. Confidence in the research process, and the realisation that one can tap into professional experience, assists the novice researcher in developing a scholarly identity that is aligned with personal histories and choices.

The study aimed to identify and describe design strategies within a specific context. AI creates a collaborative interview environment where the sharing of ideas is encouraged, and where implicit processes can be uncovered through speculative discussions. Without aiming to do so, the interviews naturally progressed into the 'dream' stage. AI provided a platform for participants to envision a desirable future (dreaming), thereby offering the researcher insights that stretch beyond current practices to include potential development opportunities. AI can offer even more insights into design processes if the full 4-D cycle is employed to not only 'discover' and 'dream', but to also co-construct change ('design') and consider how such change can be sustained ('destiny') in design practice.

## Conclusion

This paper provides valuable insights and recommendations for future applications of AI in design research. The selected case study used AI as a research methodology and as an interview protocol. In doing so, it demonstrates the value of this approach to gain a deeper understanding of design processes, especially when exploring under-researched fields. By using AI as the method of inquiry, unexpected data emerged, and new themes became apparent, highlighting the capacity of AI to uncover hidden insights and drive innovation in design research.

The paper argues that a strong alignment exists between AI and a designer's identity. It describes how designers exhibit a natural curiosity to interpret and make sense of current conditions and engage in creative problem solving to find a feasible solution. This predisposition to interpret and solve problems is further refined through their education and training, thereby making designers well suited to embrace the AI approach and leverage its potential in their research endeavours. Integrating novel methodologies that complement how we address complex design challenges into design research has significant implications for academia and professional practice. Academic research can contribute to the advancement of the design by eliminating the differences between ill-defined problems encountered in practice and theoretical interpretation in the academic domain. An iterative process of applying knowledge acquired through practice and integrating it into academia creates a cycle of continuous improvement that expands the theoretical base of the design that feeds back into practice.

The practical application of speculative approaches, such as AI, facilitates the evolution of design research, enabling it to be impactful in addressing real-world challenges. The paper encourages supervisors to motivate students to move beyond traditional research methods and embrace the opportunity to discover new perspectives, challenge existing paradigms, and push the boundaries of research in design.

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