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Constructivist Grounded Theory Methodology: A Guide to Explore the Epistemologies of the Philosophy of Design

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Abstract In the context of the philosophy of design, this research highlights modernism's foundations and impact on design and the designer's role in the everyday. Arguing that design does not attend enough to its modernist foundations. Through the lenses of cosmopolitanism and cosmopolitics, the research explores the everyday as a framework for understanding the 'common world,' where design mediates interactions between humans, non-humans, and social spaces. Building on insights from Latour, Sloterdijk, Boltanski, and Lefebvre, the research investigates the dynamic relationships between people, objects, politics, and spatial production. Further, by engaging with Parsons and Galle's philosophy of design, it proposes that everyday experiences could reshape design epistemology, steering it toward more human-centred approaches. Informed by constructivist grounded theory (CGT), the author developed a five-stage methodology process, which supported exploring philosophies of design and the everyday as a means to move towards an adapted epistemology of design.

Keywords Philosophy, Design, Epistemology, the Everyday, CGT.

Metodología de la teoría fundamentada constructivista: una guía para explorar las epistemologías de la filosofía del diseño

Resumen En el contexto de la filosofía del diseño, esta investigación destaca los fundamentos del modernismo y su impacto en el diseño, así como el rol del diseñador en la vida cotidiana. Argumenta que el diseño no presta suficiente atención a sus fundamentos modernistas. A través de la perspectiva del cosmopolitismo y la cosmopolítica, la investigación explora lo cotidiano como marco para comprender el “mundo común”, donde el diseño media las interacciones entre humanos, no humanos y espacios sociales. Basándose en las ideas de Latour, Sloterdijk, Boltanski y Lefebvre, la investigación indaga en las relaciones dinámicas entre personas, objetos, política y producción espacial. Además, al interactuar con la filosofía del diseño de Parsons y Galle, propone que las experiencias cotidianas podrían reformular la epistemología del diseño, orientándola hacia enfoques más centrados en el ser humano. Basándose en la teoría fundamentada constructivista (TCC), el autor desarrolló un proceso metodológico de cinco etapas que apoyó la exploración de las filosofías del diseño y lo cotidiano como medio para avanzar hacia una epistemología adaptada del diseño.

Palabras clave Filosofía, Diseño, Epistemología, Lo Cotidiano, CGT.

Metodologia da Teoria Fundamentada Construtivista: Um Guia para Explorar as Epistemologias da Filosofia do Design

Resumo No contexto da filosofia do design, esta pesquisa destaca os fundamentos e o impacto do modernismo no design e o papel do designer no cotidiano. Argumenta que o design não atende suficientemente aos seus fundamentos modernistas. Através das lentes do cosmopolitismo e da cosmopolítica, a pesquisa explora o cotidiano como uma estrutura para a compreensão do “mundo comum”, onde o design media as interações entre humanos, não humanos e espaços sociais. Com base em insights de Latour, Sloterdijk, Boltanski e Lefebvre, a pesquisa investiga as relações dinâmicas entre pessoas, objetos, política e produção espacial. Além disso, ao se envolver com a filosofia do design de Parsons e Galle, propõe que as experiências cotidianas podem remodelar a epistemologia do design, direcionando-a para abordagens mais centradas no ser humano. Informado pela teoria fundamentada construtivista (TCC), o autor desenvolveu um processo metodológico de cinco etapas, que apoiou a exploração das filosofias do design e do cotidiano como um meio de avançar em direção a uma epistemologia do design adaptada.

Palavras-chave Filosofia, Design, Epistemologia, o Cotidiano, CGT.

Introduction

This study explores the philosophy of design. Building on existing knowledge from different thinkers. Design is seen in everyday life, impacting human experiences and daily practices. Initial research about the philosophy of design suggests that the field does not give adequate consideration to its roots in modernism, particularly in relation to experience-driven epistemologies of design. Further research in this field and its epistemologies presented probable shortcomings. These shortcomings, presented by different thinkers are: Addressing complexities or challenges of the everyday; Focus on function and form and not the user; Impact of advancing technology; Ethics in the everyday and design thinking; Design knowledge understood through experience; Focus on human experience; Design knowledge impact on design practice and outcomes; Designer's role; Modernism's foundation. Thereby highlighting modernism's expression in design. Not that design is fixed to a modernist paradigm, rather design does not attend well enough to its modernist foundations. Parsons' (2016) thoughts on the philosophy of design and its everydayness highlight these limitations and the relationships between humans, non-humans, and their experiences. Parsons, whose ideas Galle (2017) expands upon, explores how modernist expressions in design influence everyday life.

Design is found in the everyday, highlighting the exploration of the nature of the everyday from cosmopolitanism and cosmopolitics. Both branches of theories offer insights into the nature of the everyday (the shared common world) and its practices, revealing the impact of design on human experiences. Contributions from Stengers (2010, 2011), Kendal *et al.* (2009) and Bray (2011), about cosmopolitanism and cosmopolitics are utilised, while philosophical insights from Latour (2005), Sloterdijk 2011), Boltanski (2005) and Lefebvre (1991) further illuminate how the social lived world is shaped, alongside cosmopolitan and cosmopolitical views. This article contributes to existing knowledge about the philosophy of design and its epistemologies by exploring the everyday following particular argumentative steps (Figure 1).

Fig 1. Argumentative Steps, Author, 2025.



Thereby presenting the epistemology of design closer to a human-experience design approach. Thus expanding an epistemological exploration of aesthetics and function, ethics, the designer's role, design knowledge and thinking, impacted by human experience and everyday life.

Review of Literature

Researching the philosophy of design from different theorists highlighted design situated in the everyday, presenting modernism's expression. Modernism is a creative and intellectual movement (HARVEY, 1990; BERMAN, 1982). Moving away from tradition by focusing on rationality, progress, universal truths, and the revolution of technological advancement (*ibid*). Beyond objects' functionality, modernism's expression influenced contemporary design (RAIZMAN, 2003, p.176; JULIER, 2013, p.102). Influence is seen insofar as design concerned with individuals' needs, presenting designs with effective expressions and experiences (LIDWELL *et al.*, 2010, p.180; GARRETT, 2010, p.67). Modernism's influence on design sees an expression of the time contributing to different cultural and individual values (KAUFMANN-BUHLER *et al.*, 2019, p.123; MARGOLIN, 2018, p.122). Technology made it possible for design to address and adapt to diverse audience needs (ESCOBAR, 2018, p.35). Through technology design became mediated, building social relationships and meeting the needs of connected individuals (*ibid*).

This article builds on Parsons' (2016) (supporting arguments given by Galle) views that design impacts the everyday from its modernist foundations. These foundations shaped the nature of designed objects, their use, purpose and expression, influenced by and influencing daily experiences and interactions (*ibid*). Parsons' (*ibid*) philosophy of design presents the relationships between humans, non-humans and experiences of engagement. The reliance on Parsons' and Galle's views about the epistemology of design is their philosophical involvement with modernist foundations impacting design theory, methods, and function. Parsons (2016) grounds design with modernist engagements to rationality, function and intention. Unlike Krippendorff (2006), moving away from modernism's objectivity, Parsons (*ibid*) guards the role and function of design. Galle (2011) defends modernism's expression in design, linking its rationality with methodological reasoning. Whilst Nelson and Stolterman (2012) and Dorst (2015) refer to the complexity of design practice and not critiquing the modernist epistemic foundations. Considering that the foundations of design impact humans' daily experiences motivated this article to align the epistemologies of design closer to a human-centred design approach.

Design is situated in the everyday, therefore this article explores the nature of the everyday to obtain an expanded understanding. Thus exploring the nature of the everyday from cosmopolitanism and cosmopolitics. These theories explain the nature of the everyday (the common world) from its practices impacting humans. This article uses a conceptu-

al analysis exploring philosophies of design and the everyday following a topic modelling process. Topic modelling is a means of exploring text and uncovering themes (UGLANOVA; GIUS, 2020). Presenting conceptual, theoretical, and innovative analysis and interpretation, drawing from diverse disciplines to construct a holistic framework of subject-specific solutions (POHL; HADORN, 2006: p.4). Here, philosophical views are linked according to meaning, forming cohesion (*ibid*). Theorists from the philosophy of design are identified by their views linked to the foundations of the epistemology of design. Similarly, theorists are identified by their views about the nature of the everyday. Stengers (2010, 2011), Kendal *et al.* (2009) and Bray (2011) explore the nature of the everyday from cosmopolitanism and cosmopolitics. Philosophers who investigate the social lived world aligned to expressions from cosmopolitanism and cosmopolitics are Latour (2005), Sloterdijk (2011), Boltanski (2005) and Lefebvre (1991). Therefore, presenting the argument that design does not attend enough to its modernist foundations, aligning the epistemologies of design closer to a human-centred approach. Thus, contributing to existing knowledge about the philosophy of design and its epistemologies by exploring the everyday following particular argumentative steps. The thought process is not intended to prematurely provide conclusions. Rather, give context and identify knowledge gaps (see Figure 1).

The first argumentative step explores the everyday. Providing a possible understanding of the relationships between individuals, and their daily engagements (DE CERTEAU, 2011). Everyday spaces impact individual experiences, and insights thereof provide an understanding of human experiences (MASSEY, 2013). Second, this article builds on existing knowledge of the nature of the everyday by exploring its construct from cosmopolitanism and cosmopolitics. The third order of argument, the article highlights philosophers exploring the everyday who address properties of cosmopolitanism and cosmopolitics. Latour (2004a) reflects on the relationships between humans and non-humans (an attribute of cosmopolitanism), influencing the development and understanding of daily experiences. Contributing to cosmopolitanism, everyday space for Sloterdijk (In: NIEUWENHUIS, 2014) impacts individuals' experiences by developing different spaces. Aligned to cosmopolitics, Boltanski (In: BOLTANSKI; THÉVENOT, 1999) critiques the everyday finding justice between politics, the individual and the social. Attributing to cosmopolitanism and cosmopolitics, for Lefebvre, the everyday is formed by the relationships between space, the individual and locality (city) (ZHANG, 2006).

The fourth argumentative step explores the everyday and individuals' daily experiences within the context of design. Thereby presenting the need to explain human-experience design. Human-experience design is centred around the user, their needs and daily interactions (NORMAN, 2013: p.377). Then, considering design being embedded in the everyday, the fifth argumentative step seeks to explain the impact of cosmopolitanism and cosmopolitics on human-experience design. The sixth argumentative

step contextualises the philosophy of design from different philosophers. Parsons' (2016) insights on modernism's foundations about design present his epistemology of design, impacting design and designers' role in the everyday. Parsons' philosophy of modernist expression in design explores the everyday and individuals' daily experiences. For him (2016: p.353), modernist foundations of design impact the way contemporary design addresses the needs of the time, beyond functionality, about the user and their experiences (ibid). Noting that different thinkers have addressed the philosophy of design, Parsons' (2016) and Galle's (2017) epistemological insights closely align with the nature of design, and the impact on designers and design practice. The seventh argumentative step presents the deficits of the philosophy of design to highlight possible epistemological shortcomings. The argumentative steps contribute to the philosophy of design insofar as design attends to its modernist foundations. Thereby arguing for an epistemology of design closer to a human-experience design approach.

The everyday is situated in a global space, the cosmos (a worldly construct) and the common world (social conditions of the everyday). Here, the cosmos is situated in Latour's (2005, p.29) framing. For him (ibid), the cosmos is a worldly structure. A society shaped by diverse spaces (ibid). Spaces of social sciences, politics, the individual, and technology co-exist in a network relationship (ibid). For Latour (2004b, p.451), understanding what it is to be human is to understand the social/society. Thus, the cosmos as a construct of the common world is situated alongside the theories of cosmopolitanism and cosmopolitics (STENGERS, 2010). For Stengers (ibid), cosmopolitics is not beyond politics but allows questioning the common world. Providing a means for individuals to interpret themselves and their relationship with others (STENGERS, 2011, p.355-356). Cosmopolitics enables a socio-political reflection of the everyday, a personal conception as a means of self-politics (KENDAL *et al.*, 2009). Cosmopolitanism informs an understanding of the everyday through the relationships between individuals, objects, and their space (ibid). The common world as the sum of social conditions is expressed in the works of Latour (2005), Sloterdijk (2011), Boltanski (2005) and Lefebvre (1991). Their works highlight the relationships between humans and non-humans within the context of space (ibid). Latour (1994, p.42) holds a social-scientific perspective on the relationships of the individual, society, science and technology. Sloterdijk (1987, p.164) emphasises an ontological coexistence of society, the individual, subject, object, and nature, forming a spatial connection. Boltanski and Thévenot (1999, p.364) situate Boltanski's views from a political and moral sociology. Thus, signifying society formed from an interplay and networking of diverse practices (ibid). Lefebvre (1991a:35) views society as a space conceived, perceived, and lived. Tying together the relationships between humans and non-humans in spaces experienced (ibid). Sloterdijk (In: SCHINKEL; NOOR-DEGRAAF-EELENS, 2011, p.186) mentions that individuals should acknowledge their everyday locality, then pose the question "where we are". Thereby influencing their conception of the everyday (ibid).

De Certeau reasons that the need to explore the everyday is because people adapt and use aspects of their environment to address their needs (HIGHMORE, 2002). Therefore, it is important for de Certeau to explore the everyday from a sociological, anthropological, cultural and urban lens because these aspects shape individuals' daily lives (BUCHANAN, 2000). Giombini and Kvokačka (2021, p.9,15) see everyday life expressing social spaces comprised of ordinary routines, habits and human behaviour. For de Certeau (2011, p.xi), daily routines and activities should not be overlooked because they impact how the everyday and its practices are formed and understood. Auernhammer and Ford (2022, p.5) see design universally influencing everyday spaces and daily practices. Design is a means to solve problems (ibid). Schön (1983) explored the design process, contributing to the way designers use their design knowledge in practice. Cross (2006) expanded on design knowledge by exploring design thinking. Suggesting that products designed, and everyday things influence designerly ways of knowing and understanding them (ibid). Therefore, the role of designers and their design choices to solve everyday problems, Krippendorff (2006) expresses, creates meaning in designs. The argument is not that Parsons and Galle are more important than other thinkers. But Parsons explores epistemologies of design holistically from a modernist expression, which he sets out in his book *The Philosophy of Design* (2016) (FELL *et al.*, 2016, p.174). Galle (2017, p.324) adds to Parsons' epistemology about the modernist foundations impacting design and research, influencing everyday life. From the philosophy of design, the epistemologies of Parsons and Galle contribute to expanding the foundations of design. Thereby impacting the practice and the everyday. Parsons' (2016) thoughts contribute to the way design objects are perceived and convey meaning. The meaning of design not only provides an understanding of what is produced (ibid). But the nature of the foundations of design provides an understanding of its evolutionary impact on contemporary design and the world humans live in (ibid). Galle (2008) links design knowledge to individuals' understanding of their physical world. Therefore, this article asks: How might exploring the everyday within the philosophy of design contribute to an epistemology that aligns with a human-experience design approach?

Methodology

This article employs a constructivist grounded theory methodology and conceptual analysis, a particular form of philosophical analysis. Thereby supporting its qualitative nature, justified through appropriate means of investigation and analysis. A methodology roadmap (consisting of five stages) was developed, visualised in Figure 2. Grounded theory is a qualitative method to investigate existing cases, theories, processes and their key attributes. Thus, identifying relationships between them, analyse the data obtained to arrive at new theories about what has been investigated (CHAR-

MAZ, 2014, p.57). Methodologically grounded theory aims to explore and develop theories about cases impacting on the individual's livelihood and their reality (MILLS *et al.*, 2006, p. 26). Developing new theories using grounded theory informs continued comparison of analysis from the initial data interpreted, transferred into codes and framed into more data (MILLS *et al.*, 2006, p. 27). Grounded theory from the work of Glaser (1978, 1992), Glaser and Strauss (1967), Strauss (1987), expanded from the works of Strauss and Corbin (1990, 1998) signifies an ontological and epistemological perspective. Taking into account an investigation of the human factor and interaction (*ibid*). Thus, interpretation provides processes of investigation and critique, obtaining greater insights, suggesting that theorising is a process of construction (MILLS *et al.*, 2006, p.29).

Mills *et al.* (2006, p. 31) postulate that constructivist grounded theory expresses the active involvement of the researcher in the research process, providing a participatory role in developing new knowledge. Here, the researcher explores the everyday obtaining of theoretical data from the works of Latour, Sloterdijk, Boltanski, Lefebvre, cosmopolitanism, and cosmopolitics. Explorations about design, modernism's expression in design, and the epistemology of design is done in the context of the philosophy of design from the views of Parsons and Galle. Charmaz (In: MILLS *et al.*, 2006, p.31) claims that a constructivist approach to grounded theory is important because data connotes aspects of reality and aspects about reality that are formed through interactive processes ontologically, socially and epistemologically. From a constructivist grounded theory methodology, Charmaz (2014, p.14) readdresses identified stages of coding as, "initial", "focused", and "theoretical". These stages are adaptable and interlinked with theoretical and focused coding, seen as coinciding processes, which through analysis are theoretically reflected on (memos) detailing the origin, development and newly aligned context (*ibid*). Therefore, this article argues using triangulation, interpretivism, deduction, induction and abduction to address the research question. Thus, proposing to first triangulate the theories of Latour, Sloterdijk, and Boltanski, focusing on their investigations and critiques of the everyday (common). Secondly, to contextualise Lefebvre's theory of the production of space. Thirdly, applying deductive, inductive and abductive principles of reasoning to formulate an understanding of their relationship to one another (the cosmos – common - the production of space). Providing a platform to readdress the epistemology of design. The work of Parsons and Galle within the field of the philosophy of design lastly contextualises design practice in terms of ontological, social and societal conditions. Arguably, an understanding of these relations assists in understanding the epistemology of design.

Deductive stance is seen to develop a hypothesis(es) from existing theory, guiding the development of a research strategy to test the proposed hypothesis (WILSON, 2010, p.7). A deductive approach is inclined to let the concepts provide clarity and definition (YIN, 2011, p.94). Induction is de-

fined as a logical process of reasoning, collecting data to shape the theory that is being developed (SAUNDERS *et al.*, 2003; SAUCE; MATZEL, 2017, p.1). Abduction is a method that complements exploration and interpretation, enabling an evolved understanding of complex social phenomena, including the conditions under which knowledge within a specific discipline comes to exist (ZELECHOWSKA *et al.*, 2020, p.2).

Data Collection

Contributing to a constructivist grounded theory methodology, this article advocates collecting data from a process of theoretical sampling. Providing an in-depth analysis to critique or expand conceptions about an empirical problem identified (CHARMAZ, 2014, p.221). Ligita *et al.* (2020, p.117) posit that theoretical sampling signifies the active involvement of the researcher being adaptable to choose which conceptions from data will be investigated. Charmaz (2014, p.402) maintains that theoretical sampling is an approach supporting the investigation of social worlds. Here, the epistemologies of design from Parsons and Galle, reflecting on modernist foundations impacting design, the role of designers, practice and everyday experience are explored. Thus exploring the philosophical conception of the relationship between individuals and the everyday. Theoretical sampling supported the investigation of the everyday alongside theories of cosmopolitanism and cosmopolitics from the views of Stengers (2010, 2011), Kendal *et al.* (2009) and Bray (2011). It afforded the means of an in-depth exploration of the everyday highlighting additional concerns about properties constituting social conditions expressed in the works of Latour (2005), Sloterdijk (2011), Boltanski (2005) and Lefebvre (1991). They have a social ontological conditioning, whose views Brightenti (2010) utilises in support of organising the social lifeworld.

Theoretical sampling assisted in the theory development of the epistemology of design, indicating conceptions of design knowledge from the views of Jones *et al.* (2016, p.3-4) related to “human constructions of meaning.” Poldma (2013, 2015) indicates that design knowledge is concerned with the individual and the dynamics between people. Data obtained from the initial research about the everyday highlighted conceptions of cosmopolitanism and cosmopolitics by Stengers (2010, 2011), expanded by Kendal *et al.* (2009) and Bray (2011), suggesting an evolved understanding of the relationship between humans and non-humans. Investigating the sum of social conditions provided data on the relationships between the identified conceptions of the everyday from Latour (2005), Sloterdijk (2011), Boltanski (2005) and Lefebvre (1991). Presenting the relationships between humans, non-humans, and social structures in the cosmos alongside Lefebvre’s (1991) notion of the production of space. Theoretical sampling aided the means of investigating conceptions from data obtained researching the field of the philosophy of design and the inherent episte-

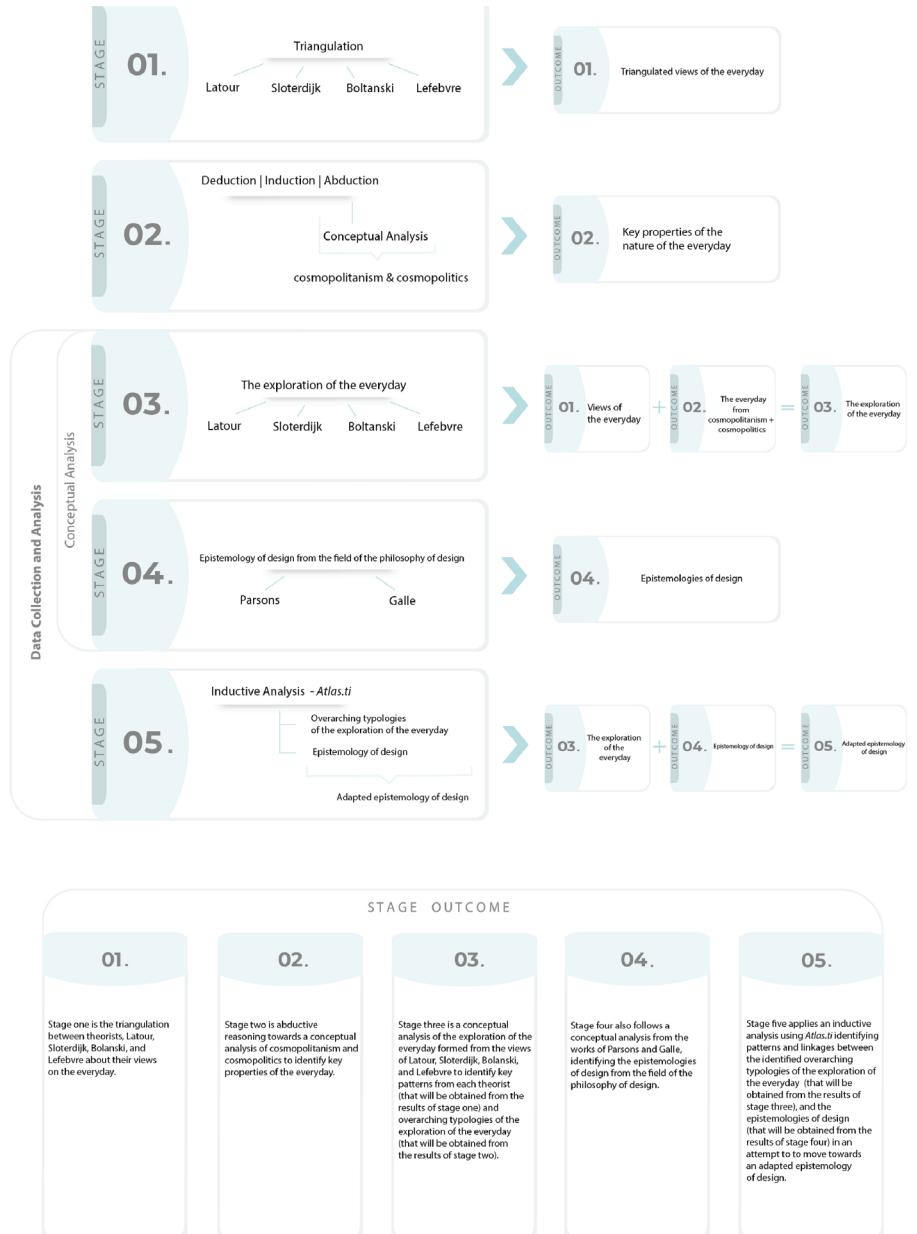
mology of design, the social, cosmopolitanism and cosmopolitics, the production of space and the relationship between humans and non-humans. Thereby supporting this study to present an epistemology of design aligned with a human-experience approach by exploring the everyday in the context of the philosophy of design.

Using a conceptual analysis to explore philosophies is supported by employing a topic modelling process. Topic modelling is a statistical process to analyse text and uncover themes, but it should be appropriated differently to literary text outside of its linguistic structures (UGLanova; GIUS, 2020). In this case, literary text pertains to text that has linkages according to meaning. For cohesion, this is situated in the umbrella term of topic modelling that the researcher assigns (*ibid*). In this research, conceptual analysis supported by the process of topic modelling is applied to the exploration of the everyday. This is seen by the views of the mentioned theorists, highlighting possible overarching typologies linked to the epistemology of design in the context of the philosophy of design. Thereby allowing a possible means to explore such epistemologies.

Five-Stage Methodology Process

Adopting a constructivist grounded theory methodology, supported by conceptual analysis (a form of philosophical inquiry) reinforces its qualitative approach. Justifying the methodology, investigation and analysis, the study developed a five-stage methodology roadmap (Figure 2). The stages of the methodology roadmap are: Stage one - triangulation between theorists, Latour, Sloterdijk, Boltanski, and Lefebvre about their views of the everyday. Stage two - conceptual analysis of cosmopolitanism and cosmopolitics to identify key properties of the everyday. Stage three - a conceptual analysis of the exploration of the everyday formed from the views of Latour, Sloterdijk, Boltanski, and Lefebvre to identify key patterns from each theorist (that will be obtained from the results of stage one) and overarching typologies of the exploration of the everyday (that will be gathered from the results of stage two). Stage four - a conceptual analysis from the works of Parsons and Galle, which identified the epistemologies of design from the field of the philosophy of design. Stage five - an inductive analysis using *Atlas.ti* identifying possible patterns and linkages between the identified overarching typologies of the exploration of the everyday (that will be obtained from the results of stage three), and the epistemologies of design (that will be gathered from the results of stage four) to move towards an adapted epistemology of design. Therefore, an adapted epistemology of design brings together and expands on existing knowledge about the philosophy of design and its epistemologies. This is done by exploring the everyday from argumentative steps, seen in Figure 1.

Fig 2. Five-stage methodology process,
Author, 2025.



Data Analysis

Analysing and interpreting data (that encompasses theoretical literature) through the means of grounded theory follows three phases of coding, “first, initial/open...and focused” (LINDQVIST; FORSBERG, 2023, p.204). From a constructivist grounded theory methodology, Charmaz (2014:114) readdresses these phases of coding as “initial”, “focused” and “theoretical”. These phases are adaptable and interlinked with theoretical and focused coding (*ibid*). The context of the phases of data coding from a constructivist grounded theory will be related to this research’s methodology roadmap (Figure 2), as mentioned previously. The notion of “ini-

tial coding" enables the process of classifying and understanding the data identified, which applies to this research's methodology roadmap (Figure 2) stages one and two (LINDQVIST; FORSBERG, 2023, p.205). This aligns with objectives to: explore the philosophy of design to address the complexities of everyday experiences. Also, exploring the relationship between human experiences and the philosophy of design. The second phase of data coding within constructivist grounded theory indicates the means to investigate further, qualify and conceptualise the initial codes through typologies of codes that are developed as "focused codes" (ibid). The focus codes expand further the initial codes to reveal salient patterns and linkages (ibid). Thus, it assists in managing the data and means of analysis to refine formed conceptualisations (ibid).

The concept of focus codes applies to this research's methodology roadmap (Figure 2) stages three and four. Thus aligning with the final objectives: investigate design foundations aligned to experience-focused design epistemology. Also, exploring philosophical concepts about everyday interactions and relationships between humans, non-humans, and spaces that influence design. The third phase of data coding in constructivist grounded theory is "theoretical code", which signifies the means to develop a theory further (LINDQVIST; FORSBERG, 2023, p.206). Notably, focused coding and theoretical coding are interlinked and coincide, indicating the relationship between codes informing reasoning found in other theories (ibid). One could advocate that the approach of theoretical coding applies to this research's methodology roadmap (Figure 2) stage five, when the analytical tool *Atlas.ti* will be used. Smit (2002, p.65-67,69) posits that *Atlas.ti* is a computer-aided qualitative data analysis software, which is greatly influenced by grounded theory advocating for the quality of data. Providing the researcher with the means of becoming aware of possible biases (ibid). In this research, *Atlas.ti* will be used to possibly identify prevalent patterns and linkages between the identified epistemologies of design and properties of the overarching typologies formed from exploring the everyday. Referring to Charmaz (2014, p.57) grounded theory is a means of investigating existing theories, identifying and analysing relationships between them to provide new theories of those investigated. Deductive, inductive and abductive reasoning is applied in the methodology roadmap (Figure 2). Deduction is positioned in stage one of this research's methodology roadmap (Figure 2). Stage one - triangulation between theorists, Latour, Sloterdijk, Boltanski, and Lefebvre about their views of the everyday. Induction is positioned in stages two to four. Stage two - conceptual analysis of cosmopolitanism and cosmopolitics to identify key properties of the everyday. Stage three - a conceptual analysis of the exploration of the everyday formed from the views of Latour, Sloterdijk, Boltanski, and Lefebvre to identify key patterns from each theorist (that will be obtained from the results of stage one) and overarching typologies of the exploration of the everyday (that will be gathered from the results of stage two). Stage four - a conceptual analysis from the works of Parson and Galle, that identified the epistemologies

of design from the field of the philosophy of design. Abduction is positioned in stage five of this research's methodology roadmap (Figure 2). Stage five - an inductive analysis using *Atlas.ti* identifying possible patterns and linkages between the identified overarching typologies of the exploration of the everyday (that will be obtained from the results of stage three) and the epistemologies of design (that will be gathered from the results of stage four) to move towards an adapted epistemology of design.

Conclusion

This article integrates a constructivist grounded theory and conceptual analysis — a philosophical approach supporting its qualitative framework. This methodology was validated through appropriate investigative and analytical techniques, which presented a five-stage methodology roadmap developed (Figure 2). Data analysed included theoretical literature and followed three coding phases in grounded theory: “initial/open, focused, and theoretical” (Lindqvist; Forsberg, 2023). Charmaz (2014, p.114) adapted them as “initial,” “focused,” and “theoretical” coding phases. These are interconnected, and theoretical reflections detailed their nature and newly aligned context. This methodology roadmap (Figure 2) presented the phases of data coding within a constructivist grounded theory framework. Initial coding (Lindqvist; Forsberg, 2023, p.205) facilitated data classification and comprehension, aligned to stages one and two of the roadmap that addressed the research's first two objectives: exploring the philosophy of design to address the complexities of everyday experiences. Thereafter, exploring the relationship between human experiences and the philosophy of design. The second phase, focused coding, widened initial codes into typologies, that further showed patterns and linkages (ibid).

Focused codes assisted in contextualising data analysis that formed and explicated concepts that emerged (ibid). The focused coding phase was aligned with stages three and four of the methodology roadmap (Figure 2), which maintained the research's final objectives: investigate design foundations aligned to experience-focused design epistemology. Then, exploring philosophical concepts about everyday interactions and relationships between humans, non-humans, and spaces that influence design. The third phase, “theoretical coding,” enabled evolved theoretical development (Lindqvist; Forsberg, 2023, p.206). This corresponded with stage five of the methodology roadmap (Figure 2), where the analytical tool *Atlas.ti* was used. Smit (2002, p.65-67,69) noted that *Atlas.ti*, impacted by grounded theory, is a qualitative analysis tool that assisted researchers having identified potential biases and improved data quality. *Atlas.ti* assisted in identifying patterns and linkages of the epistemologies of design and properties of the overarching typologies drawn from having explored the everyday. Following the argumentative steps (Figure 1) of this research, this article argues that the methodology roadmap (Figure 2) is a means to develop adapted epistemologies of design to address

diverse aspects of the everyday. Therefore, the field of the philosophy of design, having explored the everyday will present the design discipline, practice, and designers with evolved properties to address and consider. Arguably, bringing the epistemologies of design closer to an experience-driven and human-centred approach.

The argumentative steps of this research enabled an exploration of the everyday, building on existing knowledge of its nature from cosmopolitanism and cosmopolitics. Thereafter philosophers (Latour, Sloterdijk, Boltanski and Lefebvre) were investigated who addressed the everyday aligned with properties of cosmopolitanism and cosmopolitics. Then the everyday was explored against individuals' daily experiences that contributed to human-experience design. Considering the everydayness of design, the research then investigated the impact of cosmopolitanism and cosmopolitics on human-experience design. Also, researching the philosophy of design from different philosophers led towards identifying deficits and possible epistemological shortcomings. These steps were mapped out according to the methodology roadmap that argued for an epistemology of design closer to a human-experience design approach.

The novelty of this research combines the philosophy of design with an in-depth exploration of the everyday (sociology). This research expands design epistemologies to address diverse everyday contexts, aligning them with a human-experience approach. Drawn from philosophy (epistemology of design) and sociology (the everyday), aligned with the methodology roadmap (Figure 2) developed, this article proposes that a framework can be developed to contribute new knowledge by offering design practitioners a meta-perspective of identified design epistemologies, each adapted to address diverse everyday properties. The proposed framework has the potential to unlock the world of philosophy and sociology for practising designers. The research's philosophical approach offers an in-depth exploration of existing theories and phenomena related to the everyday within the design context. Thereafter, the framework's possible implementation into the design field could offer practising designers evolved knowledge about design and its epistemology, impacting daily life. Applying philosophical thoughtfulness with real-world social dynamics can advance design research toward more inclusive, human-centred transformation. This approach not only advances theoretical discourse but also informs practices that respond to complex, everyday challenges. An evolved understanding of the epistemology design could also benefit design educators and students. Thereby encouraging students and educators to think differently about design processes and the epistemologies of design. That now encompasses more diverse aspects of the philosophy of design and the everyday (sociology), which presents alternative design considerations to solving problems. Such integration could foster classroom dialogues and reflections. These could include the designer's role, the nature of everyday lived space, the relationship between humans and non-humans, the impact of the philosophy of design, design's societal impact, and an epistemology of design moved

closer to a human-experience design approach. The research can also contribute to advancing design considerations and addressing functional and societal complexities. Thereby ensuring the evolution of the field while adhering to modernism's foundations.

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