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Societal Impact Through Research Methodology: Constructivist Grounded Theory Method in Design Research

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Abstract: The aim of this article is to explore, how the nature and extent of societal impact of design research is rooted in the very core of research practice – the research design and its epistemology. I propose that achieving societal impact in design research begins with the research method. Furthermore, I reflect on my personal experience of using the Constructivist Grounded Theory Method (CGTM) in my ongoing PhD study and describe what I view as the societal impact derived from my work. Using CGTM offers three angles to societal impact: Finding meaningful and impactful research challenges, creating substantial theories that have explanatory power for practitioners, and bridging the gap between academic research and practice. The quality of grounded theory is evaluated by credibility, originality, resonance, and usefulness. The same criteria can be used to enhance the potential of doctoral education in design to tackle societal problems.

Keywords: societal impact, Constructivist Grounded Theory Method, design research, architecture research methodology, built environment research

1. Introduction

Societal impact can be assessed from many perspectives, such as social, cultural, environmental, and economic returns (Bormann & Marx, 2014, p. 211). There is an urgent need for a discourse about social usefulness of research to achieve positive outcomes beyond the realm of academia. Some of this stems from a necessity to demonstrate the performance, impact, and value of various funding programs (Marti et al., 2020, p. 948), but the need goes beyond this to the fundamental justification of doing academic research. Nevertheless, researchers face difficulties in articulating and proving the social impact of their work (Bornmann, 2013, p. 218). For example, humanities and social sciences have recently faced hardships in proving their importance (Marti et al., 2020, p. 948), and the same could be said for design research, at least to some extent.

Much of the societal impact in research of design practices stems from the notion that design should be used for the good of the world. The idea of betterment is rooted deep in the concept of design. Herbert Simon writes that “everyone designs who devises courses of action aimed at changing existing situations into preferred ones” (Simon, 1988, p. 67). This calling is strong today. We are

facing complex and interconnected societal challenges including but not limited to accelerating urbanization, climate change, biodiversity loss, issues in disaster resilience and problems of health and wellbeing. There is a feeling of responsibility and a code of ethics that make designers accountable to people and the planet. As a result, the design discipline is called upon to not only create solutions, but also new methodology and approaches to tackle the “wicked problems” of our time. It is therefore central to pay attention to the outcomes of design, but also on how we design to get there.

Design is and always has been developing in application of the praxis, and much of this “designerly ways of knowing” (Cross, 1982, p.221) should be brought continuously to academic discourse. On the other hand, academic research cannot do its part in solving issues of design practice, if it does not understand the conditions of it. Research can both mediate knowledge between practitioners but also construct concepts and theories that have explanatory power to build understanding within the design discipline. Amidst the day-to-day life of practice, it can be hard to see the forest for the trees. However, research can crystallize key understanding of design action and process, and thus offer ground for reflection and dialogue.

Design practitioners have been applying and developing design approaches in response to the growing needs of their clients in the face of complexity and rising challenges (Wallin & Horelli, 2010, p. 775). My own research topic has risen from this realization. I began my PhD study as I was witnessing the rise of Design Thinking (DT), Service Design (SD) and other similar design approaches in the design and development of built environments. SD and DT are an “interdisciplinary/holistic approach that aims to systematically design service value propositions using frameworks, methods and tools” (Torres & Miranda, 2020), and their emergence is changing design practices in the field of architecture and urban planning. Even though I completed basic SD studies at university and consumed literature on the topic, I was left wondering how theory translated into the practical work of those designing and developing built environments. At the same time, I noticed that SD and DT were developing in two fronts, both in theory and practice. There seemed to be a gap between the two.

There was little existing academic literature about the practice of using SD in the context of the built environment. I therefore decided to take on a grounded theory study, where I investigated the experience of Finnish architects, interior architects and those identifying themselves as service designers on how SD and DT is applied in their work as designers of built environments. As I framed my research to the Finnish construction and building context, the number of possible informants was limited, but I conducted 19 interviews of 20 participants between November 2019 and March 2020, and later three group interviews in March 2023. The interviewees were asked about various themes, such as experiences of using SD and DT for the design and development of built environments, design process, roles of designers, attitudes, and the challenges they face in their work. The aim of the interviews was to understand how these designers see what they do and how they do it. The grounded theory approach seemed suitable, as it aims to understand the actions and processes of the people being studied.

In this article, I reflect on my own experience about how societal impact of research begins in the standings of the research methodology. The purpose for referencing the interview data in this article is not to say much about its substance in depth, but rather to use it as a reflection point and a means for deriving illustrative examples for my thoughts about the relationship between research methodology and societal impact.

In this article I touch on these questions: What is the potential of doctoral education in design to tackle bigger societal problems and have an impact outside of academia? How can we position doctoral education in design and share its value outside of academia? How can we assess the social impact of design research? Why is it important? How can a better understanding of social impact untap the potential of design research across industries and sectors?

2. Constructivist Grounded Theory Method

The Grounded Theory Method (GTM) was first developed by Barney Glaser and Anselm Strauss in 1967 and published in a book titled *The Discovery of Grounded Theory* for “formulating theoretical interpretation of data grounded in reality” (Strauss & Corbin, 1990, 9). GTM has a complex intellectual history, and it has evolved through the years (Urquhart, 2013). Originating in the work of Glaser and Strauss, GTM was further developed by Anselm Strauss and Juliet Corbin in 1990. A later branch of the method by Kathy Charmaz offered the constructivist approach as a response to some critique received by the earlier version of the method (Charmaz, 2014, p.14). In this article, I focus mainly on the features of the constructivist approach, although much is common to them all. Grounded theory was first developed in the field of sociology (Strauss & Corbin, 1990: 24), but it has later been used in a variety of fields, e.g., design and architecture (e.g., Allen & Davey, 2018; Venkatesh et al., 2012).

Put simply, research can be approached from two ends: One where an existing theory is tested with empirical data, and another where theories are induced from empirical data (Strauss & Corbin, 1990, p.23). The Grounded Theory Method is in line with the latter. According to Charmaz, “Grounded Theory methods consist of systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories from data” (Charmaz, 2007, p.1). Where descriptive analysis often groups data under summarizing themes, theory building acquires formulation of concepts and statements on how concepts are related to one another (Strauss & Corbin, 1990, p.29). There is an idea of abstract interpretation that goes beyond the descriptive narrative of the data (Cho & Lee, 2014, p.5). Grounded Theory aims for the building of substantial theory, meaning that the aim is to offer a theoretical explanation or concept of one setting. It does not aim to create general theories (Strauss & Corbin, 1990, p.29).

Grounded Theory can be used if there is little existing theoretical background in the studied topic, or the researcher wishes to find novel insight into a topic that has been thoroughly studied (Urquhart, 2013). According to Strauss and Corbin, the research questions in grounded theory study are formulated as statements that aim to identify the central phenomenon under study (Strauss & Corbin, 1990: 38), instead of specific, detailed questions. The attitude of open-endedness is central, and researchers are encouraged to act upon the adage of “theory emerges from the data” (Bryant & Charmaz, 2007).

The Grounded Theory Method has some distinctive features that allows for theory building. Conducting data collection and analysis, or construction of the substation theory, occurs simultaneously in an iterative manner (Charmaz, 2014, p.15). Researchers are encouraged to interact with their data throughout the process (Charmaz, 2014, p.15). This means that the researcher goes back and forth between data, codes, concepts, and the analysis. Researchers also employ comparative methods to build alignment between data and analysis.

Grounded theory originates from a positivistic tradition of doing systematic, rigorous, and inductive research (Strauss & Corbin, 1990, 27). CGTM developed into a different epistemological position by bringing relativity and subjectivity into the discussion (Charmaz, 2014, p.13) and moving away from the idea of “scientification” of qualitative research and positivism. The constructivist approach is also more abductive than the more inductive approach of Glacier, Strauss, and Corbin.

3. Pathways to Societal Impact Through Constructivist Grounded Theory Method

The pathways to societal impact are intrinsically part of the methodological approach. In this section, I reflect on how I understand the societal impact of academic work in relation to the methodology I

have employed so far in my ongoing research project. Using CGTM offers three angles to societal impact: 1) Finding meaningful and impactful research challenges, 2) creating substantial theories/concepts that have explanatory power about the “real world” experience of practitioners, and 3) bridging the gap between academic research and practice by embracing dialogue between the two. Making use of the methods and strategies of CGTM intrinsically leads the researcher to create value also to those outside of academia. The potential of doctoral education in design to tackle bigger societal problems lies in going back to the same criteria that are used in the evaluation of grounded theories: credibility, originality, resonance, and usefulness.

3.1 Societal impact through finding meaningful and original research topics

A central aspect of achieving societal impact in design research is finding impactful research topics. The originality of the research is viewed as one of the key elements when evaluating its quality in grounded theory (Charmaz, 2014, p. 337). The emergent theory should “challenge, extend or refine current ideas, concepts, and practices” (Charmaz, 2014, p. 337). This does not mean that research should discard all previous scientific knowledge or find originality at the expense of all else, but it does direct attention toward exploring insights that would provide novel understanding of the subject area of study. The inductive nature of the research process allows for the “emerging” of theory (Bryant & Charmaz, 2019), but before that, the methodology allows for the discovery of topics that seem meaningful.

In my own study, I originated with a broad research topic as guided by the CGTM. I set out to study how SD and DT are used for the design and development of built environments in Finland. A colleague of mine, who had practical experience of building projects where these methods were utilized, suggested looking into the knowledge flow between designers and architects. In her experience the issues in “knowledge transfer,” as she called it, were one of the big challenges for practitioners. Informants echoed this notion, and it opened a completely new direction of study for me. It turned out that topics of information and knowledge are central to the work of designers in the field and something that they are concerned with. It seemed that even when valuable insight is gained in the SD phase, it does not always translate into the finished outcome of the design. I then included further questions on the subject in later interviews and gained a cumulative conceptual understanding. When I went back to do the second round of interviews, the informants were interested to know what insight I had derived from my research concerning knowledge flow in the project. This made me realize that the topic seemed relevant and meaningful to informants. As a result, a section of my study leans toward information studies, a direction I would have never thought of had I not talked to my colleague and informants, who had witnessed the importance of this topic in their work in the “real world.” Later in my literature research, I found out that this topic could also be interesting academically (Leinonen & Roto, 2023). These “pivotal insights” (Charmaz, 2014, p. 18) are central in the iterative process of grounded theory research. Directing focus toward impactful topics stems from the very core of the methodology of my choosing.

3.2 Societal impact through greater explanatory power of theories and concepts

In addition to originality, a grounded theory study is evaluated through credibility, resonance, and usefulness (Charmaz, 2014, p. 337). Credibility, of course, is the primary step toward societal impact of academic research. If we assume that research is done following the necessary steps and procedures, credibility is most likely achieved. Beyond credibility and originality, CGTM also places emphasis on the resonance and usefulness of the theory and concept. To evaluate the quality of the study, researchers should ask whether the grounded theory makes sense to the informants or people

who have experienced similar circumstances, and whether the substantial theory offers them a profound insight about their lives and worlds (Charmaz, 2014, p. 338).

In my experience, usefulness and resonance of grounded theory research can be found in two levels: Mediating knowledge between practitioners, and helping practitioners understand their actions and processes by theorizing about them. Mediating knowledge between practitioners refers to sharing best practices from one to another. According to Strauss and Corbin, grounded theory research focuses on the concerns informants have and the strategies they employ to overcome those concerns (Strauss & Corbin, 1990). In the case of my research, designers described what strategies they had used to overcome the challenges of knowledge transfer. In my experience, academic research can facilitate this changing of “designerly knowledge.” Sharing the best practices benefits the design discipline at large by providing fodder for further discussion and development. This, again, is an inherent part of the method, because according to Charmaz one of its aims is to inform policy and practice (Charmaz, 2014, p.14). However, only showcasing strategies and practical advice may easily become descriptive research by nature. This is not the aim of grounded theory research. These insights may, however, inform and explain the substantial theory at large.

Even more than mediating knowledge between practitioners, grounded theory research can construct concepts and theories that have explanatory power to build understanding within the design discipline. At best, the theory seems to “fit” and describes the everyday reality of the participant or their peers. If so, the theory can provide a basis for self-reflection and further understanding of one’s actions and processes. This surely increases the experience of value of academic research from the part of the practitioner.

3.3 Societal impact by bridging the gap between academic research and day to day practice of design

In essence, finding meaningful research topics and offering concepts that have explanatory power for practitioners bridges the gap between academic research and the design practice. When the research topic feels significant and the substantial theory offers valuable insight, academic research grabs its audience. In grounded theory research, the collection of data and analysis go hand in hand. This also means that preliminary theoretical ideas or memos can be tested in the process of constant comparison (Charmaz, 2014, p.18). This may lead to dialogue between the researcher and the informant throughout the research process. In my experience, this dialogue is enriching for both parties. Therefore, insights may be exchanged in informal conduct in addition to the more conventional forms of sharing academic knowledge.

The epistemology of grounded theory ensures that the experience of the participant is valid and interesting. The researcher conveys that they are specifically interested in the actions, processes and experiences of the research participants. Articulating this interest, as such, can make the research feel more relevant to the participant.

It is important to think about the issues of social impact because it goes deep into the justification of doing academic research in the first place. If academic research does not benefit the people and the planet, it loses its value altogether. When evaluating the quality of grounded theory, Charmaz invites the researcher to ask “how does your work contribute to knowledge? How does it contribute to making a better world?” (Charmaz 2007: 338). What this implies is that the betterment of the world is in fact written into the idea of conducting CGTM research. Furthermore, it implies that contributing to the betterment of the world is at heart an epistemological question. What is the knowledge and understanding we bring to the world with the academic work we endeavor? In essence, good academic research is impactful by its very nature.

4. Conclusion

Increasing complexity and rising societal challenges cause researchers to reflect on the social impact of design research beyond academia. However, societal impact of design research cannot be discussed without looking into the research design and methodologies we employ. The quality of academic research begins in research design, namely its methodological and epistemic decisions. The same can be said for social impact. Even when societal impact is not consciously thought about, it is something that emerges as one leans into the process of the methodology and aims to execute it to the best of their ability. Improving the methodological capability of researchers to do systematic and rigorous qualitative research improves societal impact as well.

The Constructivist Grounded Theory Method provides three angles to societal impact: 1) Finding meaningful research challenges, 2) creating substantial theories that have explanatory power for practitioners, and 3) bridging the gap between academic research and practice. The potential of doctoral education in design to tackle bigger societal problems lies in going back to the same criteria that are used in the evaluation of grounded theories: credibility, originality, resonance, and usefulness. Making use of the methods and strategies of CGTM intrinsically leads the researcher to create value to those outside of academia as well. The potential of doctoral education in design to tackle societal problems and have an impact outside of academia is augmented if we can understand the “real world” and the experiences of design practitioners. We can be close to the practical design life and at the same time gain the necessary conceptual and theoretical thinking in service of academic advancement.

Design practitioners and design research both deal with issues of social impact. Design research can study practices in design discipline to explain and conceptualize existing practices but also aid in developing new ones. Both parties gain from shared knowledge. If the research is meaningful outside of academia, it is more likely heard and its societal impact comes to fruition.

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