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Reflection/Commentary on a Past Article: "Adding Theoretical Grounding to Grounded Theory: Toward Multi-Grounded Theory"

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Introduction

In 2010, the paper "Adding Theoretical Grounding to Grounded Theory: Toward Multi-Grounded Theory" (Goldkuhl & Cronholm, 2010) was published in the International Journal of Qualitative Methods (IJQM). This article presents a qualitative research approach, called multi-grounded theory (MGT), which is based on and advances the grounded theory (GT) approach (Glaser & Strauss, 1967; Strauss & Corbin, 1990; 1998). MGT can be seen as a further development of GT. It incorporates certain important elements from GT, such as open and inductive coding of data, with the intent to build theory from empirical data. MGT adds to grounding in empirical data (as it is made in GT) also grounding in theoretical and internal sources. Theoretical grounding means grounding in existing theory and internal grounding means grounding in the emergent theory itself. The purpose of internal grounding is to arrive at a theory that is conceptually coherent and congruent. Confer Figure 1 for these three complementary grounding principles.

The IJQM paper (Goldkuhl & Cronholm, 2010) presents the core characteristics of MGT and argues for its deviations from GT. As being a journal paper, it does not present in full detail all characteristics of MGT and its foundations and origins. The purpose of this update article is to add some complementary description to the original 2010 IJQM paper. We will elaborate on the emergence of the MGT research approach (The Emergence of the MGT Approach section). This means to present a historical account of its development. The purpose is also to present some development that has occurred after the presentation of the 2010 IJQM paper (Further Development of MGT section). We will also present some concluding reflections on relations between GT and MGT (Concluding Reflections on GT Interpretations in Relation to MGT section). We will analyze some interpretations of GT and make comparisons to our MGT approach.

The Emergence of the MGT Approach

The MGT research approach has been developed within the discipline of information systems (IS). This is a social science discipline concerned with the design and use of information technology in practices. There has long been a great interest in qualitative research and the use of GT within the discipline of IS (e.g., Birks, Fernandez, Levina, & Nasirin, 2013; Wiesche, Jurisch, Yetton, & Krcmar, 2017).

The development of MGT, made by the authors Göran Goldkuhl and Stefan Cronholm, can be traced back to the late 70s when Göran Goldkuhl worked on his PhD dissertation. This was a study on the methods for requirement analysis and information modelling as parts of information systems development (Goldkuhl, 1980). IS was at that time a fairly young discipline within the social science faculty at Stockholm University. Goldkuhl's work deviated in several aspects from a typical PhD dissertation in social science at that time.

The research work was concerned with the methods for information modelling, which included *development of* such *methods*. It applied an empirical approach with *in-depth qualitative studies* of method uses often conducted in *action research settings*. The methods were applied in real IS development cases. It was a challenge at that time to argue for a research approach of methods development (as a kind of invention work) together with qualitative research in action

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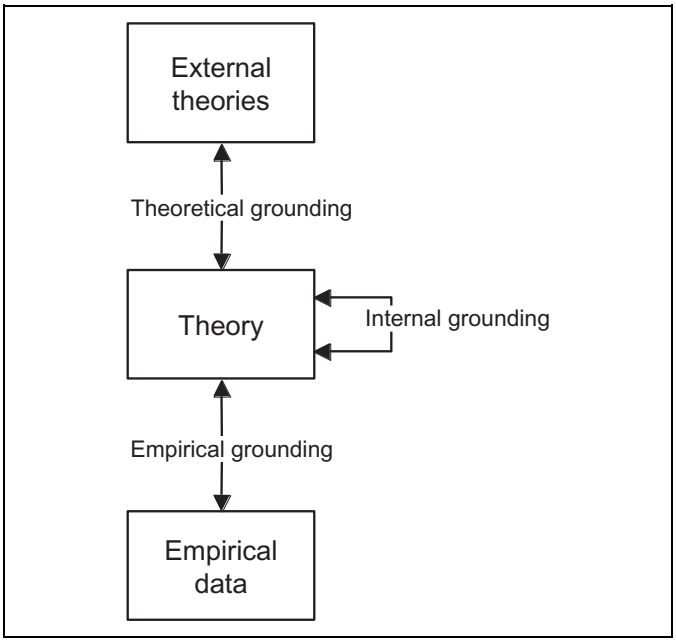

Figure 1. Three complementary grounding sources for a developed theory (from Goldkuhl, 2004a; Goldkuhl & Cronholm, 2010).

research. Goldkuhl (1980) devoted much work on the elaboration of a reflected research approach that combined method development with (1) empirical work of qualitative kind and (2) the application explicit theoretical statements that were continually developed.

This research approach was embryonic to what was later developed as "well-grounded methods development" (Goldkuhl, 1993). In this article (written in Swedish), Goldkuhl elaborated a research approach on methods development that combined three forms of grounding: empirical, theoretical, and internal grounding. The concept of grounding was developed based the idea of argumentative rationality in science (Habermas, 1984), that is, the analysis and presentation of justificatory claims for a knowledge contribution. The justificatory claims can be obtained from different knowledge sources; from empirical data, existing theory, and the knowledge object itself. The division into three grounding principles was stated explicitly here for the first time (Goldkuhl, 1993). Grounding was also defined as having dual roles in relation to what it does for knowledge development: The developed knowledge (1) was during its emergence based on some knowledge source (i.e., *built from*) and it (2) was using this knowledge source for its validation (i.e., *used for justification*). There was some influence from GT in this development. Cronholm and Goldkuhl (1994) had started to use GT (Strauss & Corbin, 1990) for qualitative analyses of the use of methods and IT tools in IS development.

The multi-grounded approach from Goldkuhl (1993) was brought further in Goldkuhl (1999). The concept of method knowledge was generalized into "action knowledge", that is, all kinds of knowledge that were considered usable for action. The three grounding principles were described with an explicit basis in notions of practical rationality (Weber, 1978; Habermas, 1984) and validity claims of such knowledge (Habermas, 1984).

This work was further developed in Goldkuhl (2004a) with a specific focus on design theory. A design theory is a normative and prescriptive theory aimed to support design work. The core element in a multi-grounded design theory is a prescriptive statement, which expresses a causal relation between a proposed action and a desired effect. Such a prescriptive statement needs to be empirically grounded in observations of instantiated actions and subsequent effects. It should also be theoretically grounded in external knowledge. This comprises (1) conceptually grounding in categories and definitions, (2) normative grounding in explicit goals and values, and (3) functional grounding in explanatory theories.

This knowledge development of multi-grounding principles had so far been oriented towards methods and other types of practical knowledge. In early 2000s, we began to widen the scope further to other kinds of knowledge and also relating our work more clearly to the GT approach. Based on own experiences from GT use (e.g., Cronholm and Goldkuhl, 1994) and an analysis of Ph D students' uses (e.g., Cronholm, 2002), we developed the MGT approach in 2003 (Goldkuhl & Cronholm, 2003). This articulation of MGT (ibid) was based on (1) a critical analysis of identified strengths and weaknesses of GT and (2) an integration of the three grounding principles into MGT.

This first publishing of MGT (Goldkuhl & Cronholm, 2003) was followed by several other contributions:

- Clarification of conceptual determination (Goldkuhl, 2004b)
- The use of theory models (Axelsson & Goldkuhl, 2004; 2010)
- Reports on applications and experiences from use (Cronholm, 2004; 2005; Lind & Goldkuhl, 2006)

The MGT approach was also used in many research projects and dissertations during this time, which contributed to its validation. Some of them are mentioned in Goldkuhl & Cronholm (2010). These different developments and experiences were brought into the writing of Goldkuhl & Cronholm (2010), which was published in IJQM.

Further Development of MGT

After the publishing of "Adding Theoretical Grounding to Grounded Theory: Toward Multi-Grounded Theory" in IJQM, there has been some further development. The MGT principles have been further elaborated on, in relation to research according to *design science*. This is a research approach that has emerged within IS with a focus on the designing of IT artifacts and other related artifacts (Hevner, March, Park, & Ram, 2004). A design science approach is based on the ideas of artificial science as described by Simon (1996). The idea of design science is, however, not restricted to IS, but similar approaches appear also in other disciples, such as management

(van Aken, 2004) and human–computer interaction (Zimmerman & Forlizzi, 2014).

A first and important step toward the application of multi-grounding principles in design science was taken in Goldkuhl (2004a) where an elaboration was made concerning design theory; see The Emergence of the MGT Approach section above. A design theory can be seen as one possible outcome of a design science study. This work has later been further developed by Kuechler and Vaishnavi (2012).

Goldkuhl & Lind (2010) have worked out a research approach for design science studies based on the multi-grounding principles. They make a fundamental distinction of knowledge in design science studies between (1) abstract design knowledge and (2) concrete/situational design knowledge. Situational design knowledge is knowledge that is used and created in concrete design process. Abstract design knowledge can be design theory, design principles, methods, models, or other abstract conceptual instruments that are used in concrete design and/or generated as abstract knowledge outcomes through design science studies. Goldkuhl & Lind (2010) apply multi-grounding principles on both these knowledge layers, that is, they claim that both abstract and situational design knowledge should be empirically, theoretically, and internally grounded, confer Figure 2. What is interesting here is that (1) the abstract design knowledge functions as theoretical grounding for situational design knowledge and that (2) the situational design knowledge functions as empirical grounding for abstract design knowledge.

This kind of dual multi-grounding in design science has been applied by Goldkuhl, Persson, and Röstlinger (2015) in a case study on design of governmental digital services for business set up. These authors (ibid) make a division of the empirical basis for grounding of design proposals in three types of sources: (1) problematic situations of current practices ("problems"), (2) desired situations of future practices ("goals"), and (3) opinions and assessments of design proposals by knowledgeable practitioners including estimates of use–effects ("assessments and estimated use–effects").

Another MGT case study, which partially used a design-oriented research approach, was conducted by Hultgren (2007) and analyzed in Hultgren and Goldkuhl (2013). This was a study of digital services based on a social interaction perspective. It included empirical studies of several digital services and the development of a practical theory including values and design principles; confer Cronen (2001) on the concept of a practical theory. This developed practical theory was also applied in the designing of proposed/new digital services. The development of the practical theory was accomplished through six controlled iterations (phases). This theory evolution is described in the following way: "In each of these phases all three grounding strategies have been applied. It has not been the case of some defined sequence between the grounding strategies. The different grounding procedures have been applied at several times during the research in order to reach saturation" (Hultgren & Goldkuhl, 2013, p 113). Three theory domains have been used in the theory development process; theories from service marketing, social interaction, and information systems. The theory development process was seen as an amalgamation of these different theories (especially concepts and values) and empirical data, which were generated through multi-triangulated processes.

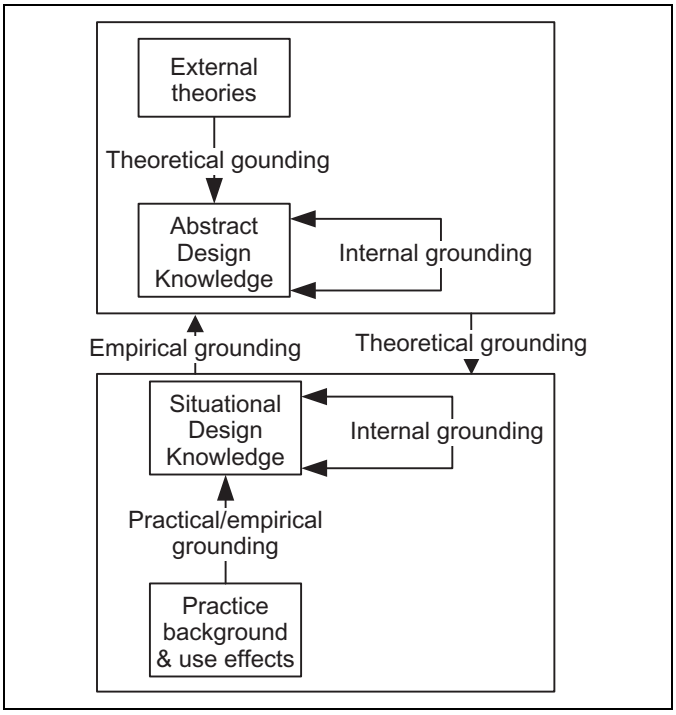

Figure 2. Multi-grounding of abstract and situational design knowledge in design science studies (with inspiration from Goldkuhl & Lind, 2010).

This pragmatically oriented work with the MGT approach continues. There is ongoing work with a design science orientation on development of IS development methods based on multi-grounding principles. There is also ongoing work on how to apply multi-grounding in action research.

We have encountered a great interest in MGT; actually greater than we expected when starting out this work. It seems to be quite some uptake of these ideas, at least when studying citation indexes. We can see, through the study of Google Scholar when writing this article (April 9, 2018), that the IJQM article (Goldkuhl & Cronholm, 2010) has 139 citations. There are also quite many citations of related MGT articles: Goldkuhl (2004a) has 199 citations; Goldkuhl & Lind (2010) has 70 citations; Goldkuhl & Cronholm (2003) has 98 citations. This great interest puts a pleasant pressure on us originators to develop this approach further and to elaborate on different aspects that not yet have been sufficiently explicated.

Concluding Reflections on GT Interpretations in Relation to MGT

We will conclude this update article on MGT with some reflections on similarities and differences between MGT and GT. This will be done based on readings of two papers that discuss

different essential aspects of grounded theory: Thornberg (2012) and Timonen, Foley, and Conlon (2018).

One purpose of Timonen et al. (2018) is the distillation of the core principles that underpin the different variants of the GT method.

Core Principle 1: Taking the Word "Grounded" Seriously

Timonen et al. (2018, p. 6) state "Codes and concepts must be emergent, that is, grounded in the data although, as pointed out above, they can (and must) be "put into dialogue" with existing concepts and knowledge". The taking of the word grounded seriously is something that MGT shares with Timonen et al. (2018). In MGT, grounding is a cornerstone since it emphasizes the importance of both the emergence of codes and concepts from empirical data and the importance of theoretical and internal grounding.

Core Principle 2: Capturing and Explaining Context-Related Processes and Phenomena

Timonen et al. (2018, p. 6) claim "In GT-based interviews and focus groups, the researcher must seek to probe into, and seek clarification about, how key events, incidents, and behaviors grounded in the data are shaped by context". In MGT, the process of theory generation is always contextual. MGT is stressing the importance of understanding identified phenomena based on their contexts. MGT is also claiming that the context of a phenomenon has a great impact on the phenomenon.

Core Principle 3: Pursuing Theory Through Engagement With Data

Timonen et al. (2018, p. 7) state that "... argumentation and theorizing must ultimately be brought back to, and justified, against the data." In other words, data are the most central component in GT. In MGT, data are also regarded as the most important component. However, MGT is at the same time putting a strong emphasis on preexisting theories, which are well selected for the theorized phenomena. The reason for this is that we sometimes have experienced that GT-based analysis can be too unfocused both in the empirical and theoretical phases.

Core Principle 4: Pursuing Theory Through Theoretical Sampling

Timonen et al. (2018, p. 8) state "... a GT study must always seek to theories, that is, try to elucidate and explain all or parts of a process or phenomenon under study." We agree with Timonen et al. (2018) and claim that it is not sufficient to ground the evolving theory in data and that grounding means more than empirical grounding. In MGT, there is an explicit recommendation to conduct "theoretical matching." Theoretical matching means that the evolving theory, including the categories, is confronted with and compared to external theories.

The point of departure of Timonen et al. (2018) is that there exists a misunderstanding of how to use GT. Timonen et al. (2018, p. 1) state that their article adds "concise examination of myths that has evolved around the GT method." In other words, the four suggested core principles could be seen as response to the misunderstanding of how to use GT. We can conclude that the core principles identified by Timonen et al. (2018) to a large extent correspond to MGT. However, the point of departure for developing MGT was different. As mentioned above, the development of MGT was based on identified strengths and weaknesses of GT and an integration of the three grounding principles.

Thornberg (2012, p. 243) claims that "there is a widespread idea that in GT research, the researcher has to delay the literature review until the end of the analysis to avoid contamination." Thornberg (2012, p. 244) has identified a number of problems related to this delay such as: (1) "it makes it impossible for researchers to conduct studies in their own areas of expertise," (2) it "... can easily be used as an excuse for lazy ignorance of the literature," (3) "if researchers avoid reading literature in the field but at the same time read literature in other unrelated fields, in accordance with Glaser's (1978) recommendation for enhancing theoretical sensitivity (see below), and then, at the end of the analysis, begin to review the field literature, they will soon drive themselves into a corner during their research career because of the accumulative reduction of possible research fields, which they still have not read literature about," (4) "... before the research begins, the researcher has to prepare proposals for the purpose of receiving funding for the project and undergo an ethical review. Hence, for pragmatic and strategic reasons, the researcher has to begin theorizing and reading literature before starting any data collection and analysis, because, in these review processes, an overview or summary of related literature is normally required to acquire approvals," and (5) "... ignoring established theories and research findings implies a loss of knowledge." In order to reduce these problems, Thornberg (2012) suggests the term "informed grounded theory," which means that literature review strategies are added to the GT research approach.

Thornberg (2012, p. 245) agrees with the perspective of Strauss and Corbin (1990, 1998) who "... argue that literature can be used more actively in GT research as long as the researcher does not allow it to block creativity and get in the way of discovery." This perspective corresponds exactly to one of the points of departures in MGT. MGT states the following: "If one ignores existing theory, there is a risk of reinventing the wheel. As researchers, we often build new knowledge on existing knowledge. An isolated theory development also means that there is a risk for noncumulative theory development. We believe that it is important to relate the evolving theory to established research during the process of theorizing. Existing theory can be used as a building block that supports the empirical data forming the new emergent theory" (Goldkuhl & Cronholm, 2010, p. 191).

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The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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