

Conceptual Determination when Developing a Multi-Grounded Theory – Example: Defining ISD Method

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Abstract:

Conceptualization is crucial when developing theories, especially when adopting a Grounded Theory approach. Based on the Multi-Grounded Theory approach, which is an extension and modification of Grounded Theory, a procedure for holistic conceptual determination is presented, which consists of the following steps: Determination of content, ontological position, context, functions, origin and emergence, and language use. An example of defining information systems development method is used as illustration. Pre-empirical vs. post-empirical conceptual determination is discussed thoroughly.

Keywords: Conceptualization, definition, grounding, Grounded Theory, Multi-Grounded Theory, ISD method

1 Introduction

Concepts constitute the building blocks of theories. This is well acknowledged in the Grounded Theory (GT) approach of Glaser & Strauss (1967). Concepts are abstracted and developed on the basis of empirical data. Reading Glaser (2002a), *conceptualization* is seen to be the core scientific process. GT adopts a strict inductive approach for the generation of concepts and theory (e.g. Glaser & Strauss, 1967; Strauss & Corbin, 1998). They explicitly warn against reading literature concerning other theories before performing data collection and data analysis. “An effective strategy is, at first, literally to ignore the literature of theory and fact on the area under study, in order to assure that the emergence of categories will not be contaminated by concepts more suited to different areas.” (Glaser & Strauss, 1967 p 37).

The GT approach has, however, been challenged for this strict inductive way of creating concepts and categories (e.g. Bryant, 2002; Cronholm, 2002; Goldkuhl & Cronholm, 2003). There is a need to take into account other and prior theories concerning the actual substantive area. This is one reason for modifying and redeveloping Grounded Theory into *Multi-Grounded Theory* (MGT) as proposed by Goldkuhl & Cronholm (2003). MGT is founded on three explicit grounding processes, not only grounding in empirical data as GT. Grounding in external theories and internal grounding (i.e. establishing theoretical coherence) are also essential when developing a multi-grounded theory.

The MGT approach has also been operationalised in a series of steps for developing a multi-grounded theory. The description in a list below is a transformation from a figure in Goldkuhl & Cronholm (2003):

- Theory generation I
 - Inductive coding
 - Conceptual refinement

- Building categorical structures
- Explicit grounding
 - Theoretical matching
 - Explicit empirical validation
 - Evaluation of theoretical cohesion
- Theory generation II
 - Theory condensation

The different steps should be performed in an iterative and alternating fashion and this should be done together with continuous reflection and revision of research interests. For comparing and relating the procedures of GT and MGT I refer to Goldkuhl & Cronholm (2003). One of these steps above in MGT is conceptual refinement, which is described as consisting of the following activities (ibid): 1) Critical reflection on empirical statements, 2) ontological determination and 3) linguistic determination.

The purpose of this paper is to further develop this step of conceptual refinement into an approach for “*holistic*” *conceptual determination*, since it is in the core of the conceptualization process. This approach for conceptual determination fits well into MGT. It can be however be used outside an application of MGT in other types of conceptual and theoretical developments, GT studies as well as others.

To make my presentation more concrete I use an example through my text. Since I am an information systems (IS) researcher I pick an example from my own area of interest. I will talk about conceptual determination of the notion of information systems development (ISD) method.

Before I start, I must also make one terminological and conceptual note concerning “concept”. The discussion about concepts is always pursued within the semiotic triad of word-concept-phenomenon (e.g. Ogden & Richards, 1923). Concepts are human categorisations of phenomena. As such, concepts are parts of human minds. We use words (i.e. linguistic entities) to express and talk about our concepts. Words are thus linguistic externalisations used in sentences. Words have meanings and there is often a distinction made between its sense (the concept) and its reference (the phenomenon). Phenomena are what is talked about.

Conceptual determination means that we formulate a definition of this concept. Definitions are seldom discussed within a qualitative research tradition¹. It might perhaps be too much associated with scientific traditions. I have however no problems with talking about definitions and defining. To define is simply “to determine or identify the essential qualities or meaning of something” (Merriam-Webster Dictionary; www.m-w.com).

2 Pre-empirical vs. post-empirical determination of concepts

Shall we determine and define our concepts before empirical collection or after we have collected data? One imperative in GT is to develop concepts based on empirical data. The so-called constant comparison method is used where data is examined for similarities and differences. This means that GT clearly advocates post-empirical conceptual determination.

¹ It is interesting to see that the over 1000 pages *Handbook of qualitative research* (Denzin & Lincoln, 2000) has no entry of “definition” in its subject index.

We can however modulate this by introducing another important GT principle: Theoretical sampling (Glaser & Strauss, 1967; Strauss & Corbin, 1998). GT claims that data collection and data analysis should be performed in an alternating way. Further data collection should be performed governed by the evolving theory. This means that conceptual refinements can precede data collection performed in a later stage. Even if this modulation is made, GT is very clear about avoiding the use of theoretically pre-defined concepts. Concepts must emerge from an intensive study of empirical data. I think that there are mainly good reasons for this, but this view has perhaps as other matters turned into a dogmatic position of GT¹.

Are there any reasons to perform a pre-empirical determination of concepts? Yes, I think that there may be situations where a pre-empirical conceptual reflection on addressed phenomena is favorable. This would for example be the case when the researcher is going to study established knowledge phenomena such as ISD methods. In such situations there *exist already* as well scientific as ordinary conceptualizations, and these need to be taken into account.

GT has been accused of inarticulate epistemology and ontology (Bryant, 2002; Charmaz, 2000). I think in areas like information systems, it is not possible to draw a disjunct knowledge border between IS practice and IS research. There are institutionalised knowledge in IS practices. Such institutionalised knowledge is at least partially shared with IS research. If you as an IS researcher have very little knowledge about established conceptualizations in practice², you will probably enter the practice field in a naïve and fumbling way. The possibility to establish confident relations with informants (which is necessary in order to obtain data of good quality) will diminish. You do not know what data to look for and where to search. A provisional concept determination can guide and focus the collection of data and thus avoiding naïve and unfocused questions. This should not entail a definitive determination of concepts as in a classical deductive hypothesis testing. A proposed focus strategy should however be possible to combine with an open-minded and inductive attitude during collection and analysis of data. This combined conceptual strategy should enable the development of a theory, both empirically and theoretically grounded.

This argumentation is in line with the principles articulated in MGT (Goldkuhl & Cronholm, 2003). It is acceptable and often even positive to take into account other theories in an early stage of the research. The crucial issue is how we *use* established theories and concepts during data generation and data analysis. It should be possible, in phenomenological sense, to *bracket* them initially during these phases and “let the data speak”, as is the basic GT attitude. I argue for the possibility and need to *combine an open-minded and focused approach* in generation and analysis of data.

This means that conceptual determination can be performed at least partially before any empirical work has been performed, i.e. pre-empirical determination. This will be continued during data analysis where the collected data will have a major impact on the concepts, i.e. during post-empirical determination. My position is thus a combined approach. I will discuss this further in section 4 below.

¹ This can be demonstrated by Glaser’s chases for renegades and attempts to keep GT as pure as possible (Glaser, 1992; 2002b).

² Some concepts may come from practice itself and others may come from academia.

3 Holistic conceptual determination

In Goldkuhl & Cronholm (2003) conceptual determination, as part of MGT, was described as mainly consisting of ontological and linguistic determination. These two parts of conceptual determination are described in Goldkuhl (2002). I have here expanded conceptual determination into six types of determinations, since the earlier ones were not considered as giving an exhaustive definition. These six complementary aspects of conceptual determination will be described below (sec 3.1-3.6). A conceptualized phenomenon is addressed through the following six essential questions:

- “What is it?” - content determination
- “Where does it exist?” - determination of ontological position
- “What is the context of it?” - determination of context and related phenomena
- “What is the function of it?” - determination of functions and purposes
- “What is the origin of it?” - determination of origin and emergence
- “How do we speak about it?” - determination of language use

The description of holistic conceptual determination is made through the use of an example. As said above the concept of an ISD method is defined through this process of conceptual determination. I use these conceptual determinations of ISD method as a means of illustration. My purpose is not to give a completely exhaustive definition of ISD method. The use of this example is simply to make my presentation more lucid. When making these conceptual determinations I have (in some kind of GT manner) started without any prior reading of literature. Instead I initially relied on my earlier general ISD knowledge, obtained through empirical research, practical experience and of course earlier reading. After I made my conceptual determinations, I looked into some literature¹ in order to check the definitions made and to improve them.

I would also like to emphasize that this definition exercise has been performed as a pre-empirical conceptual determination (see sec 2 above), since no explicit empirical data has been used as a basis. This conceptual determination can be further improved through inductive analysis of collected data; i.e. post-empirical conceptual determination. See section 4 below.

3.1 Content determination

A determination of conceptual content is the most fundamental question – “what is this phenomenon?”. It is probably also the hardest one to answer, at least if you do not want to include any of the other aspects of conceptual determination in the answer. In a way, the answers to all the other determination questions (see below) can well cover what you mean by a concept. Anyhow, a content determination is an attempt to grasp the essence of the conceptualized phenomenon.

What is to say about ISD method? I describe ISD method in the following way giving a content determination:

An ISD method is prescribed ways to perform information systems development actions. These ways of actions consist of prescribed

- questions to ask

¹ I have used the following sources Avison & Fitzgerald (1995), Jayaratna (1994), Fitzgerald et al (2002). Confer also Goldkuhl et al (1998).

- analyses to perform
- ways of describing ISD relevant issues; i.e. ways to document answers to questions and results of analysis
- criteria and rationales to use

A content description tries accordingly to grasp the *essence* of the phenomenon. In this case “prescribed for ISD actions”. It also specifies different *components* of the phenomenon, i.e. what the phenomenon consists of.

3.2 Determination of ontological position

Content determination is to state what a phenomenon is, i.e. to make a basic ontological determination. This ontological determination (of “what”) should be complemented by a determination of ontological position. This means that the answer to the what-question should be complemented by a *where*-question; “where does this phenomenon exist?”. This follows the principle that conceptualized phenomena, if they are claimed to exist, must exist somewhere. This is a realist position (Rescher, 2000). It presumes a reality where phenomena exist. Concerning ontology, especially social ontology, there are debates concerning one vs multiple realities (e.g. Schutz, 1970; Habermas, 1984; Guba & Lincoln, 1989). The position taken here, can be seen as a synthesis of such debates. I find it appropriate to talk about a reality, but consisting of several distinct *realms*. An ontology describing different realms has been presented in Goldkuhl (2002). This ontology is called *socio-instrumental pragmatism* (SIP). The core of this socio-pragmatic ontology is acting humans. It presumes an external reality consisting of both natural and artificial things (material artefacts and symbolic objects). It also presumes human inner worlds (human internal reality). This is intra-subjective reality, which each human has a privileged access to (Schutz, 1970; Habermas; 1984). Parts of these intra-subjective worlds can however be inter-subjective; i.e. shared. Otherwise no social reality would exist. There exist language, concepts, norms, rules and other institutions, which are shared among members of a society (Schutz, 1970; Giddens, 1984). Human inner worlds and external things are created and changed through human actions. There are interpretive and reflective actions changing inner worlds and intervening actions changing external world (Goldkuhl, 2003). In this SIP ontology, human inner world is emphasised as being a practical consciousness (Giddens, 1984). The ontology of socio-instrumental pragmatism is depicted in figure 1.

The division into realms (as proposed in this ontology) is also a determination of principle places of phenomena. It is an aid for answering the supplementary ontological question “Where does this phenomenon exist?”. I propose that the SIP ontology should be used as a basis for conceptual classification. When you are in the process of conceptualization, there is a need to reflect on the ontological position of a phenomenon. A proposed category should be classified according to this ontology. Do you speak of human actions, a social institution (an inter-subjective phenomenon), a symbolic object or a material artefact? This will help you to be clear about what you really mean.

A complex social phenomenon can however exist in different realms. This will be shown below concerning ISD methods. Many social phenomena are “*multi-existing*” phenomena (Goldkuhl, 2002). Such phenomena exist in different realms. This means that it is sometimes appropriate the talk about such a multi-existing phenomenon independent of its manifestations in different realms and sometimes we need to qualify what realm-dependent phenomenon we are addressing.

An ISD method is such a typical multi-existing phenomenon. Primarily, it exists as parts of human intra-subjective and inter-subjective practical consciousnesses. It can also exist as written texts in method manuals. Sometimes it can exist (as evanescent signs) in oral advices given informally or more formally (e.g. in educational settings). ISD methods are manifested in different actors' ISD actions (interpretive, reflective, intervening). They can also exist in CASE tools, i.e. in linguistic/material artefacts (computers as software-based technology).

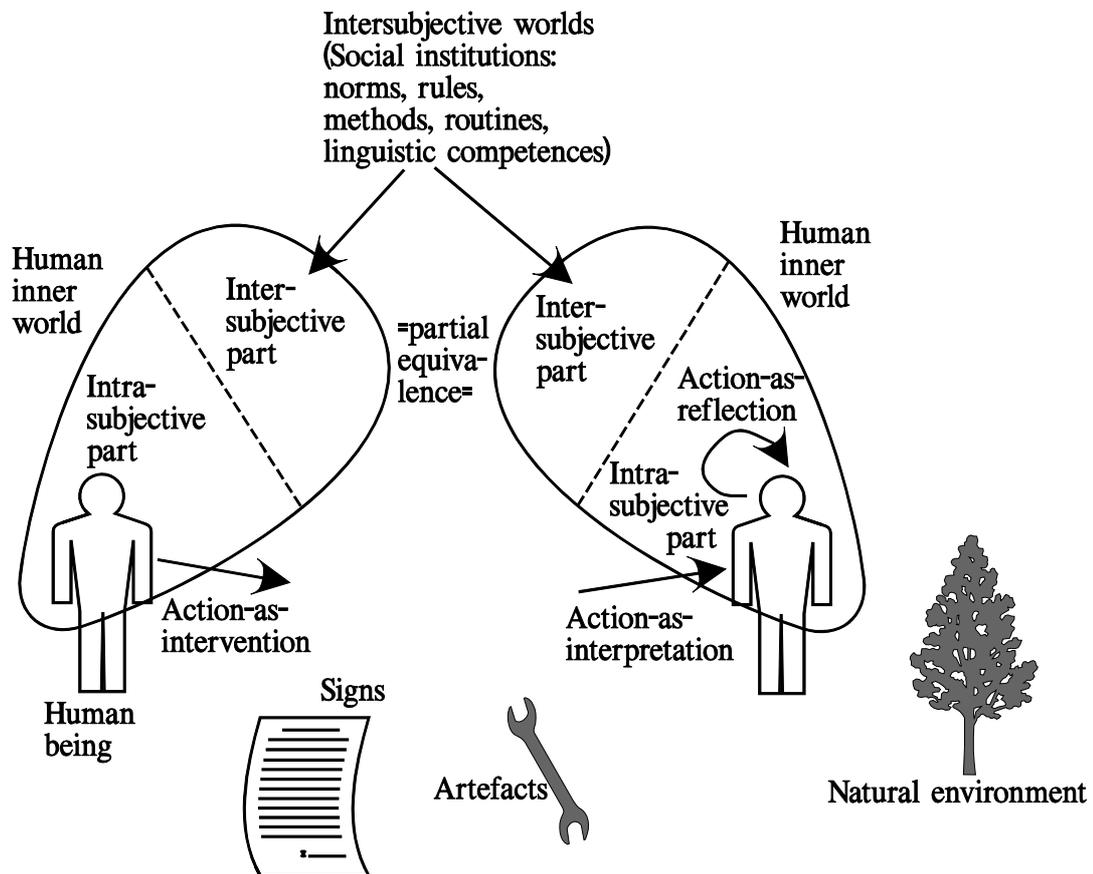


Figure 1 Different realms of the world - SIP ontology (from Goldkuhl, 2002)

A pre-empirical conceptual determination of a multi-existing phenomenon will help the empirical researcher in her work. It can guide her where to look for data. The principal ontological places (in the SIP ontology) correspond to different places in the empirical reality to study. The empirical researcher must look for data at different places and thus address data of different kinds and sources and use different methods for data collection and generation. One of the insights concerning multi-existing phenomena is that there may be differences between different manifestations of the phenomenon (Goldkuhl, 2002). This should be taken into account when studying an ISD method. For example is there a difference between the method in action and the externally and formally described method (Fitzgerald et al, 2002)?

3.3 Determination of context and related phenomena

A phenomenon does not exist in isolation. It is always related in some way or the other to other phenomena. The context of a phenomenon usually has a great impact upon the phenomenon. Often a dialectical relation exists between context (other phenomena) and the

focused phenomenon. In order to understand a phenomenon, and thus to define its corresponding concept, there is a need to determine the context (other phenomena) and the relations to these other phenomena. The questions to ask are: “What is the context of the phenomenon?”, “which phenomena exist in the context?”, “how is the phenomenon related to its contextual phenomena?”.

An ISD method can be related to different contextual phenomena, such as ISD actors, ISD actions, ISD documentation, information systems and workpractices and also to method constructors and CASE tools. A suitable way to describe a conceptualized phenomenon and its relations to contextual phenomena is through a conceptual diagram. Such a diagram is depicted in figure 2.

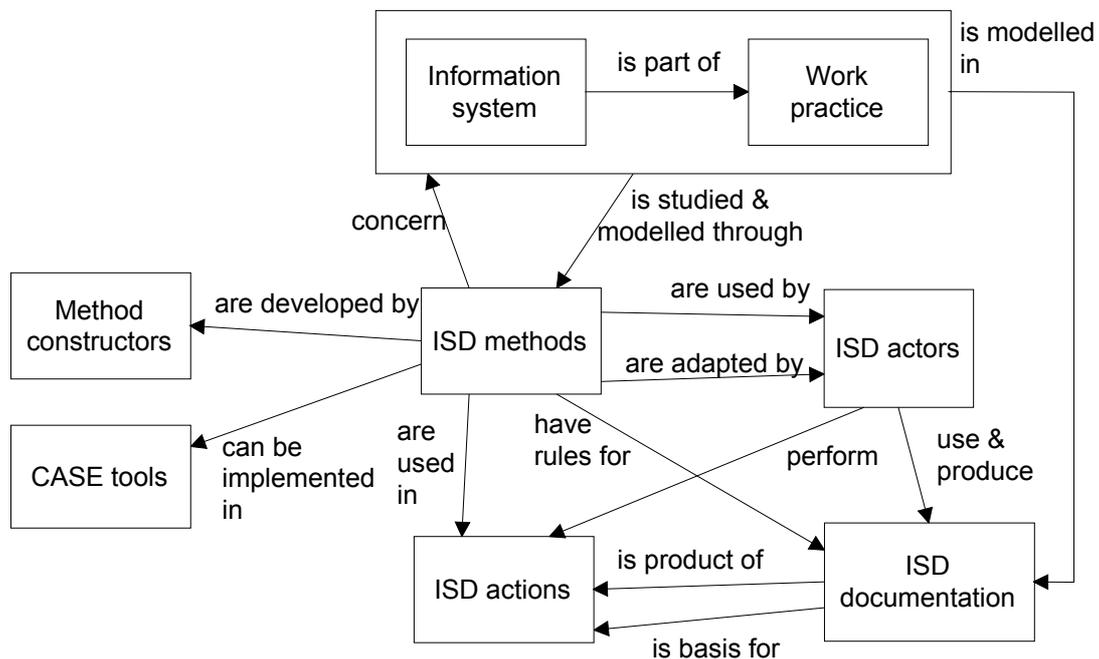


Figure 2 Conceptual diagram describing a conceptualized phenomenon's relations to contextual phenomena (example ISD method)

Pivotal is the focused phenomenon, in this case ISD method. Relations to identified contextual phenomena are described. In some cases, relations between different contextual phenomena are described, but this is not the main task. The relations may be of different kinds. We define the different semantic relations, which may exist between the conceptualized phenomena.

3.4 Determination of functions and purposes

Social phenomena usually have functions and often even purposes with explicit intentions. To understand a phenomenon it is important to state what kind of function it has in relations to humans or other phenomena. This is a very important aspect of a social phenomenon, i.e. what normative and practical roles it plays in a social setting. To work with functional determination is to accept the *value* character of many social phenomena. What is the social value of it? As Dahlbom (2002 p 24) states “the artificial world is suffused by values”.

What are the functions of an ISD method? This is the crucial question to pose here. What kind of role do methods play in the ISD process? Answers to these questions can partially be given through other conceptual determinations, especially in the content determination (sec 3.1 above). The functional determination is to specify in more detail the functions of a conceptualized phenomenon.

An ISD method has functions of serving the ISD actors with prescribed/proposed typical questions to ask, analyses to perform and ways to document. The purposes of an ISD method are to contribute to reflective, systematic, collaborative, effective and efficient development of information systems in workpractices. Reasons for using an ISD method are to take steps forward in the ISD process.

3.5 Determination of origin and emergence

A social phenomenon has an origin. It emerges from some kind of situation. How has the phenomenon originated? Why was it created? Is it created intentionally or unintentionally? Questions can be posed concerning the initial occurrences of this type of phenomenon. When and how did it appear at first? We can also pose questions how instances of this kind of phenomenon regularly emerge. The creation can be done in different ways and for different reasons.

An ISD method may emerge in different ways. It can emerge through a conscious and planned endeavor of method construction. The method constructors must then transfer this method knowledge to other actors who are interested in using the methods. This can be done in different ways; orally, documented in method descriptions or implemented in method software (confer determination of ontological position, sec 3.2 above). This kind of emergence represents the planned intentional development situation.

There are however another ways, by which methods can arise. A method can emerge through a successful praxis. A person performs ISD actions (without explicit method support), and these actions evince to be successful. The ISD actor experiences the favourable outcome of his actions and these kinds of actions may be included in his future action repertoire. This may be an unintentional by-product of his action; the emergence of successful habits through his experiential learning. One can of course question if a person's ISD habits should be seen as an ISD method. I think that some ISD researchers would not accept one person's standardised ways of working as a method. This is, however, not the crucial question here, even if I think it may be relevant to speak of a single person's method. The crucial point is about methods' emergence. It is obvious that many methods do not only arise through conscious development efforts. They may arise through praxis and its integrative continual learning.

We can thus distinguish between two principle ways of method emergence and origin: 1) Through planned and intentional development and 2) through unintentional habitualisation of successful practice. In the first case methods originate through construction and communication. In the second case methods arise through experience and habitualisation.

Methods can emerge in these two ways, but also in combinations of these ways. A constructed method may be used, adapted and gradually changed through exertion. And the way around can also apply: Experiences from felicitous actions can be a basis for an intentional development of systematic methods.

3.6 Determination of language use

All the described aspects of conceptual determination described are concerned with different aspects of the conceptualized phenomenon. Linguistic determination is concerned with how we speak about the concept. Different scientific concepts are always linguistically codified. Language and its components (different words) are the instruments we use for conceptualization. We engage in different *language games* as Wittgenstein (1958ab) puts it. The conceptualization made should be well reflected concerning its language use. The linguistic instruments we use should be the most proper ones.

Linguistic determination, as part of a conceptual determination has been described in Goldkuhl (2002). The influence from the language game view of Wittgenstein (*ibid*) is great. The meaning of words consists of their use. This is sometimes called semantical pragmatism (Rescher, 2000).

We give a concept a linguistic form. We label a concept with a particular word or word combination in order to designate what we are meaning. But words can be of different kinds. There are for example nouns, verbs and adjectives, which denote different kinds of phenomena. Wittgenstein warns explicitly for a widespread and unreflective use of nouns. “We are up against one of the great sources of philosophical bewilderment: a substantive makes us look for a thing that corresponds to it.” (Wittgenstein 1958a p 1). Many concepts are often given a substantival form instead of an original adjective or verb form. Researchers may fall in the traps of such a noun disease. They may search for the essential *thing* behind the concept. But if the concept is given a noun form of an original attribute concept, then we might run into trouble. I think, following Wittgenstein, that what is often expressed as a noun and thus treated as separate entity often is an attributive concept. It is something that is a property of an entity and not an entity in itself.

In Goldkuhl (2002) a way to perform linguistic determination is described. A proposed concept should be investigated in relation to different linguistic forms; noun, verb and adjective forms. For example, the concept information (as exemplified in Goldkuhl, 2002) can be analysed in relation to such word forms, which gives: information (noun), to inform (verb) and informative (adjective). Each word form should be analyzed concerning their meanings and the relations between the concepts/word forms should be determined.

If we analyze the concept of method in this way what will emerge? Method is noun form. Methodical is an adjective form. There does not seem to be any verb form, however the concept is clearly related to activities. A method is a way of doing something. This means that it is an abstraction (typification) of actions. It is not an entity (thing) that has a separate existence. We can compare with the determination of ontological position (sec 3.2 above). Method is positioned both as actions (actions are enactments of methods) and as parts of human inner world (procedural knowledge). To be conceived as a method, this way of doing something must be seen as orderly in some fashion. We can call actions and processes methodical if they are conceived as orderly.

A linguistic determination of this kind should also include an investigation of etymological meaning. Through such an investigation we can be informed about possible language use problems. Confer e.g. the analysis of “information” in Goldkuhl (2002), where semantic ambiguities were revealed. The word “method” originates from Greek; *methodos* (*meta-* +

hodos) with the meaning of “way” (Merriam-Webster Dictionary; www.m-w.com). This etymological meaning is congruent with contemporary meanings discussed in this paper.

4 Conceptual determination and empirical grounding

How is conceptual determination, as it is described in this paper, related to empirical grounding? I will continue the discussion concerning pre-empirical and post-empirical conceptual determination started in section 2 above. Conceptual determination is *not* a way to force pre-defined categories onto an empirical study and empirical data. Pre-empirical conceptual determination is a way to reflect upon the main phenomena given by the research interest and mentioned in the research questions. It is a way to be well prepared for the empirical study, to know where to look for data and what appropriate data generation methods to use. The GT imperative to be open-minded in data collection and data analysis should be followed.

A post-empirical conceptual determination will be concerned with pre-reflected concepts as well as empirically discovered concepts. Pre-empirical determinations should be challenged by generated data. Pre-empirically determined concepts may be changed according to observations made. Definitions may be augmented through scrutiny of data and many new properties and side-categories may be discovered and formulated. All concepts in the evolving theory should be well grounded in the empirical data. It must be a good empirical – conceptual fit as is stated in GT (e.g. Glaser & Strauss, 1967; Strauss & Corbin, 1998).

There are other quality criteria than fit for grounded theories mentioned (*ibid*). In the original version of GT (Glaser & Strauss, 1967) there was a clear emphasis on that a theory should be applicable to the addressed substantive area. Besides *fit*, they pronounce (1) that the theory should be *understandable* to laymen, (2) that it should be *general* so it could be “applicable to a multitude of diverse daily situations within the substantive area” (*ibid* p 237) and (3) that it should be possible to exert partial *control* over situations. The description of these three criteria is done with an emphasis of the practical use of the theory. We can here trace a clear influence from roots in pragmatic philosophy. Anselm Strauss had a background in American pragmatism and symbolic interactionism (Strauss, 1987; Strauss & Corbin, 1998). This influence is obvious when reading Strauss (*ibid*), but not so obvious in other readings and many applications of the GT approach. A developed theory should be used as an *instrument* to manage practical situations (Dewey, 1931; Cronen, 2001; Goldkuhl, 1999; 2004). Taking this position seriously means that it is not enough with an *observational fit* concerning concepts. We have to raise questions concerning their *applicability in practical situations*. It is interesting to read Glaser & Strauss (1967) where they actually made a note on this issue, which however later seems to have been disregarded when discussing and using GT: “The by-product of such changes, occasioned by the application of grounded theory, is a correction of inaccuracies in observation, and reintegration of the correction into the theory. The application is thus, in one sense, the theory’s further test and validation.” (*ibid* p 243f). I think that it is important to make this explicit and thus to differentiate empirical grounding into two types of grounding:

- observational grounding
- application grounding

Application grounding must of course include observations and observational grounding. This differentiation of empirical grounding means that concepts and theories should be grounded in observations, however also that these concepts/theories should be grounded in

their successful practical application. I do not find this issue to be addressed to a large extent in the GT tradition; see Simmons & Gregory (2003) and their Grounded Action approach for one exception. In the emergence of the MGT approach, these issues of application grounding have been well addressed; confer e.g. Goldkuhl (1999) about grounded action knowledge and Lind & Goldkuhl (2002) on grounded method.

5 Concluding remarks

The fundamental questions to ask in conceptual determination are definitely not questions only to state in advance to an empirical study. I have argued for the need of a pre-empirical conceptual determination in order to guide the search for data and decrease the risk for unfocused data collection. I can argue as strongly for post-empirical conceptual determination, but of course partially with other arguments. The proposed questions in holistic conceptual determination can and should be used in the process of data analysis and category generation. Strauss & Corbin (1998) have suggested a repertoire of generative questions to ask when analysing the data material. The questions proposed here (in sec 3 above) can be added to these generative questions in order to sharpen the evolving theory.

Holistic conceptual determination is a way to both anchor the conceptualizations to practical reality and to ensure that they are well reflected and coherent. Coding and conceptualization should not degrade into an abstract conceptual algebra. Holistic conceptual determination should be a way to prevent from that.

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