



## **Grounded Theory as a General Research Methodology**

Judith A. Holton, Ph.D.

### **Abstract**

Since its inception over forty years ago, grounded theory has achieved canonical status in the research world (Locke, 2001, p.1). Qualitative researchers, in particular, have embraced grounded theory although often without sufficient scholarship in the methodology (Partington, 2000, p.93; 2002, p.136). The embrace renders many researchers unable to perceive grounded theory as a general methodology and an alternative to the dominant qualitative and quantitative research paradigms. The result is methodological confusion and an often unconscious remodelling of the original methodology (Glaser, 2003). Given the various interpretations and approaches that have been popularised under the rubric of grounded theory, this paper addresses the important distinction between grounded theory as a general methodology and its popularisation as a qualitative research method. The paper begins with a brief overview of grounded theory's origins and its philosophical foundations then continues by addressing the basic distinction between abstract conceptualisation as employed in classic grounded theory and the conceptual description approach as adopted by many qualitative researchers. The paper continues with a brief overview of the criteria for judging the quality of classic grounded theory and concludes by detailing its methodological principles.

### **Origins of the Methodology**

Grounded theory originated in the mid-1960s with the groundbreaking work in medical sociology of Barney Glaser and Anselm Strauss (Glaser & Strauss, 1965, 1970, 1971, 1974, 1975) and the subsequent publication of **The Discovery of Grounded Theory**, (Glaser & Strauss, 1967). While the book is generally acknowledged as the seminal work on grounded theory, Glaser (1998) reveals that he was actually developing the method in his doctoral work at Columbia University and that he authored the first draft of **Discovery**, later sharing it with Strauss who added comments and wrote an additional three chapters (pp.22-27). While Glaser and Strauss were later to disagree about the precise nature of the methodology and discontinue their professional collaboration, Glaser is generally recognised as having retained both the spirit and the substance of the original work (Locke, 2001, p.64). His subsequent publications, together with **Discovery**, provide detailed accounts of the fundamental principles of the method (Glaser, 1978, 1992, 1998, 2001, 2003, 2005, 2007). His most recent methodological guide (2008), in particular, distinguishes grounded theory as a general research methodology.

The well documented schism in the collaboration between Glaser and Strauss occurred with the publication of **Basics of Qualitative Research** (Strauss & Corbin, 1990). Glaser's (1992) response was **Basics of Grounded Theory: Emergence vs. Forcing** in which he set out to distinguish the original methodology from Strauss and Corbin's work which he clearly regarded as a remodelled method that he has termed "full conceptual description" (p.123). His continuing concern with the eroding impact of various subsequent "remodelings" of the original methodology has motivated him to produce several additional publications in which he endeavours to clarify the purpose, principles and procedures that together constitute classic, or Glaserian, grounded theory (Glaser, 2001, 2003, 2004, 2005, 2007, 2008; Glaser & Holton, 2004). This collection of works, a result of his dedication to advancing the original methodology, offers researchers a solid base for its study and application.

### **The Qualitative Embrace of Grounded Theory**

Qualitative methods facilitate the study of issues in depth and detail (Patton, 2002, p.14). Denzin and Lincoln (1994) describe qualitative research as a complex, interconnected family of terms, concepts and assumptions that cuts across disciplines, fields and subject matter (p.3). Marshall and Rossman (1999) refer to a broad approach to the study of social phenomena that is pragmatic, interpretative and grounded in lived experiences (p.2). In describing qualitative research, these and other methodologists refer to a bewildering array of paradigms (Locke, 2001, p.6), moments (Denzin & Lincoln, 1994, p.19), genres (Marshall & Rossman, 1999, p.2), theoretical orientations (Patton, 2002, p.75), perspectives (Chia, 2002, p.6), strategies and approaches (Creswell, 2003). The varying perspectives espouse a range of epistemological and ontological premises, necessitating declaration of philosophical stance as a prerequisite of any qualitative research design. Accordingly, qualitative researchers have attempted to position grounded theory in any number of philosophical perspectives.

While Strauss and Corbin (1990, 1998) explicitly embrace the qualitative paradigm, Glaser rejects the neat divide between positivist and interpretivist paradigms claiming that grounded theory is neutral and as "issues free as research can get – conceptually abstract of issues and subject to modification by constant comparison" (Glaser, 2003, p.115). He notes that Lazarsfeld did not perceive any research method as wholly quantitative or qualitative but instead "showed constantly how all research contained both elements" (Glaser, 1998, p.29). While acknowledging the methodology's binary roots in quantitative methodology and qualitative math, he asserts its theoretical transcendence of a positivistic focus on verification in pursuit of theory generation and alludes to an early paradigmatic transcendence:

Pattern search is survey modeled as it aggregates incidents like surveys aggregate people. And then the task is to start relating these conceptualized patterns to generate a theory using theoretical codes. This was my conflicting truce at Columbia: an agreement not to conflict the

theoretical vs. the empirical side of the department but rather to combine the best of both approaches. (Glaser, 1998, p.31)

Partington (2002) echoes this transcending capacity. In reference to **Discovery** (Glaser & Strauss, 1967), he suggests that “despite the frequency with which it is cited, by no means all of those who refer to the work are true to its purpose, which was to achieve the fine balance between procedural rigour and creativity.” (p. 136)

Yet numerous methodologists persist in positioning classic grounded theory within the positivist paradigm. Charmaz (2000) notes the predominance of realist ontology and a positivist epistemology in the classic methodology (p.513) while preferring to espouse a constructivist approach to grounded theory whereby “the ‘discovered’ reality arises from the interactive process and its temporal, cultural, and structural contexts. Researcher and subjects frame that interaction and confer meaning upon it. The viewer then is part of what is viewed, rather than separate from it” (pp.523-524).

Others have positioned grounded theory as pragmatist (Locke, 2001), realist (Lomborg & Kirkevold; Partington, 2000, 2002) and interpretivist (Lowenberg, 1993). Charmaz (2000) attributes the confusion to a lack of explicitness in *Discovery* (Glaser & Strauss, 1967) and the subsequent search to fit the method to accepted research paradigms (p.524). She advocates the need for individual grounded theorists to examine and declare their own epistemological premises.

Much of the confusion, of course, can be attributed to the array of terminology used by various scholars to set out the boundaries and distinctions between and among the espoused research paradigms and associated issues of ontology, epistemology and methodology. While it is beyond the scope of this paper to provide a comprehensive review of the various perspectives on the matter, it is worth offering some examples of the various positions espoused. Locke (2001) cites three paradigms for qualitative research – modern (realism), interpretative and post-modern (including constructionism) ( p.6). Conversely, Guba and Lincoln (1994) suggest that qualitative research describes methods not paradigms (p.105). Chia (2002), on the other hand, avoids the use of paradigms and favours instead the notion of two basic epistemologies – empiricism and rationalism – and a “wide panoply of theoretical perspectives” (p.1) including positivism, phenomenology, realism, hermeneutics and postmodernism (including social constructivism). Lomborg and Kirkevold (2003) settle on realism as their preferred epistemological and ontological perspective on grounded theory and satisfy themselves that the methodology is about truth and validity while failing to refer to its essential nature as abstract conceptualisation. Amis and Silk (2007) offer the categorization of qualitative research into foundational, quasi-foundational and nonfoundational research orientations. While the divergence of perspectives is obvious even in this small sample, what rests at the heart of the debate is the express need of qualitative research to attempt to understand the nature of truth as a basis for generating knowledge through research.

While readily acknowledging the influence and contribution of the Chicago School and symbolic interactionism through his collaboration with Anselm Strauss, Glaser dismisses the notion that grounded theory is essentially interpretivist and insists that it is a general methodology that can be used with any kind of data – qualitative, quantitative or a combination thereof (Glaser, 2005,p.141). And, despite the enthusiastic and widespread embrace of researchers within the qualitative paradigm, a growing number of theorists trained in the classic methodology have also come to view grounded theory not as a qualitative research method but as occupying its own distinct paradigm on the research landscape.

According classic grounded theory methodology its own paradigm assists in putting to rest much of the “rhetorical wrestle” (Glaser, 1998) – a seemingly circular process that has inhibited understanding and acceptance of the methodology and has subsequently led to numerous interpretations and remodelled versions. Viewed as a general research methodology, GT is not confined to any particular epistemological or ontological perspective; rather, it can facilitate any philosophical perspective as embraced by the researcher.

Grounded theory’s particular value is in its ability to provide a conceptual overview of the phenomenon under study. It focuses on participants’ perspectives and provides them with opportunities to articulate their thoughts about issues they consider important, allowing them to reflect on these issues of concern to gain understanding and acquire new insights (Glaser, 1998, p.32). This ability does not render grounded theory superior to either quantitative or qualitative methods but rather complementary. “Quantitative research and QDA [qualitative data analysis] provide description of aggregates and in-depth cases respectively and GT [grounded theory] provides the conceptual overview with grounded interpretation, explanations, impacts, underlying causes and so forth” (Glaser, 2003, p.118). This distinction is important to advancing scholarship within both paradigms.

### **Grounded Theory Remodelled**

Glaser’s (2002, 2003, 2004; Glaser & Holton, 2004) chief concern is that the relegation of grounded theory to the qualitative paradigm remodels the methodology to the canons of qualitative research, thereby eroding its power as a general methodology. Bryant and Charmaz (2007) imply that Glaser has become “far more amenable” (p.4) to the remodelling and has adopted a “more accommodating view that at least acknowledges” (p.5) the disparities. However, one should not confuse acknowledgement with acceptance. While both Charmaz (2000) and Locke (2001) regard the modifications as a natural evolution of the methodology, others seem completely unaware of a migration from the original tenets of classic grounded theory. Again, it is not within the scope of this paper to provide an exhaustive review of the various approaches offered as grounded theories but a small sampling may serve to illustrate important examples and resultant distortions.

Locke (2001, p.30) embraces grounded theory while nestling it within a “qualitative paradigm” thereby requiring researchers to proclaim a theoretical perspective to orient their study.

Partington (2002) espouses a similar need. “Theoretical frameworks which make explicit the researcher’s ontological and epistemological assumptions provide the best foundation on which to construct and defend a theoretical argument.” (p.141). While neither Locke nor Partington appear to recognise grounded theory as a general methodology, Partington (2002) does, however, recognise the erosion of grounded theory through the qualitative embrace when he says,

in qualitative management research, the term ‘grounded theory’ has taken on a more generic meaning, tending to embrace all theory-building approaches that are based on coding of qualitative data. An inevitable consequence of this broadening of meaning has been a certain loss of attention to the essential principles of the Glaser and Strauss approach, and to their purpose. (p.136)

He acknowledges, as well, the general inconsistency with which research methods are applied in qualitative management research. “One of the consequences of this lack of uniformity is that every qualitative researcher tends to develop their own individual approach.” (p.137). Partington (2002) then proceeds to outline several requirements that, in effect, produce another remodelled version of grounded theory. He requires the advance establishment of research questions and a theoretical perspective (p.140), thus encouraging preconception and forcing on the research the professional concerns of the researcher, regardless of what might emerge as the real concern of the research participants. Partington also pre-selects and forces specific theoretical codes, namely the conditional matrix and stimulus-organism-response, on the data rather than trusting to the emergence of theoretical codes from within the data (p.49).

While calling for procedural rigour in management research methods, Partington appears to omit two essential principles of classic grounded theory: conceptual memoing and hand sorting of memos to integrate the theory. His advocacy of taping and transcribing interviews indicates a need for full data capture rather than a reliance on the researcher’s ability to capture the data on a conceptual level through field notes. He emphasises audit trails to validate the research results and identifies criteria for judging the quality of a grounded theory which are in fact, qualitative research criteria and not the criteria of fit, work, relevance and modifiability that govern classic grounded theory (Glaser, 1978, 1998; Glaser & Strauss, 1967). Use of phrases such as “thickness of description” (Partington, 2002, p.154) and “full richness of the data” (p.144) also mirror the concerns of qualitative data analysis for full conceptual description rather than the abstract conceptualisation of grounded theory.

While Charmaz (2000) does acknowledge the general nature of grounded theory methodology when she suggests the method can be used with either quantitative or qualitative data and from either an objectivist or constructivist perspective, her references to grounded theory as explaining data and offering analytic interpretations of data demonstrate the blocking of conceptualisation. Glaser (2002) offers a strong rejection of Charmaz’ remodelled version:

Constructivism... is an epistemological bias to achieve a credible, accurate description of data collection (para. 10)... her quest is not to take the data as it comes but to be sure it is accurate,

so she gets to mutual interpretation as the answer (para. 8)... Personal input by a researcher soon drops out as eccentric and the data become objectivist not constructionist (para.24)... Charmaz has clearly remodelled GT from a conceptual theory to a QDA conceptual description method with worrisome accuracy at issue (para. 38)...The strength of QDA research has clouded and swayed her view of GT, and thus she denies and blocks its true conceptual nature.” (para. 28)

Bryant (2003) appears to miss entirely the distinction between the abstract conceptualisation and conceptual description. While his fervent defence of constructivist grounded theory may be attributed to his being firmly fixed within the qualitative paradigm, it serves to illustrate the limiting capacity of a qualitative embrace on classic grounded theory methodology. He confuses his argument still further by citing grounded theories that have, in fact, adopted the remodelled methods that are the focus of Glaser’s concern.

Bryant and Charmaz (2007) make two rather peculiar assertions that seem to suggest a lack of currency in their own scholarship of classic grounded theory methodology. First, they suggest that Glaser has “recently changed his stance on the GT quest to discover a single basic social process” (p.9) despite Glaser’s (1978) clear insistence that the basic social process is only one type of theoretical code that may apply in generating grounded theory (p.96). Secondly, they suggest that he has recently “distanced” himself from theoretical codes (Bryant & Charmaz, 2007, p.19), which does seem rather absurd given his publication of **The Grounded Theory Perspective III: Theoretical Coding** (2005). Their claims would appear to suggest that remodelling not only erodes the power of the classic methodology but also undermines its scholarship in the qualitative paradigm as further evidenced by the predominance of remodellers among the contributors to their Handbook.

Douglas (2003) borrows a number of assumptions from qualitative research (taping and transcribing interviews, conditional matrix) and, in a taken-for-granted manner, applies them to grounded theory unaware of the eroding impact of his remodelling. Rennie’s (2000) authoritative attempt to reconcile grounded theory with qualitative research, in particular with hermeneutics, belies a miss of the distinction between abstract conceptualisation in building theory and the interpretation of descriptive detail from which a theory might be conjectured. Hall and Callery (2001) offer another remodelling that focuses on social constructivist concerns with the interactional dynamics between the researcher and participants. While a concern of qualitative data analysis, such dynamics are not an issue; rather, they are simply additional variables to be integrated into the conceptualisation of data if and when they prove to be relevant to the emerging theory. Miller and Fredericks (1999) offer still another critique of grounded theory which is in effect a criticism of Strauss and Corbin’s method of conceptual description but which once again adds further methodological confusion.

Glaser (2003) has dealt extensively with Lincoln and Guba’s (1985) positioning of grounded theory within the qualitative paradigm. He views their naturalist inquiry perspective as, “changing views of worrisome

accuracy, but always accuracy. It does not address the abstract nature of GT ... a flexible, conceptual, inductive methodology abstract of their discussion on finding the right truth, belief, to wit their focus on worrisome accuracy” (p.182).

A rather simple yet critical issue between classic grounded theory and various remodelled, or “evolved” (Charmaz, 2000; Locke, 2001) versions is the distinction between a “grounded analysis” (Johnson & Harris, 2002, p.113) and a grounded theory. Glaser (2001) clearly articulates this as the difference between abstract conceptualisation (grounded theory), whereby theory must be grounded empirically in the data yet transcend the data to form theory, and conceptual description (grounded analysis) which, while also grounded in data, fails to conceptually transcend the data to produce an integrated theory. Describing what is going on does not explain conceptually what is going on as a fundamental pattern of social behaviour (Glaser, 2002, para. 41). Such description lacks core relevance. “This overdue of descriptive capture, by going on and on at some length and redundancy, loses the parsimony of good GT explanation.” (Glaser, 2001, p.33).

Morse (1997) suggests that qualitative researchers are theoretically timid and may be inhibited by what she sees as the hard work of conceptualisation necessary to produce theory. While acknowledging the possibility of timidity, Glaser (2001, pp.26-27) refutes her assertion of the work of conceptualisation, instead maintaining that many researchers simply lack knowledge and competence in conceptualisation. Therefore, they embrace with enthusiasm but without understanding. The resultant approaches to using grounded theory with qualitative data are often a dim reflection of the theorising power of classic grounded theory methodology.

### **Grounded Theory as a General Methodology**

To understand the nature of classic grounded theory, one must understand the distinction between conceptualisation and description. Glaser (2003, p.127) claims that classic grounded theory stands alone as a conceptualisation method. With roots in inductive quantitative analysis and theory construction, hypothesis generation in grounded theory is essentially the statement of probabilities that explain latent patterns of social behaviour (Glaser, 1998, p.22). As a form of latent structure analysis, grounded theory reveals fundamental patterns in a substantive or a formal area. With concepts grounded in empirical data and theoretical coding integrating the concepts into theory, hypotheses can be written in quantitative or qualitative terms depending on the data and the researcher. Lomborg and Kirkevold (2003) suggest that this inductive process of data collection and analysis at the heart of grounded theory is the methodological pivot for this systematic generation of hypotheses (p. 191).

Grounded theory is not about the accuracy of descriptive units. It transcends descriptive methods and their associated problems of accuracy, interpretation and constructionism. In so doing, grounded theory offers qualitative researchers a systematic and rigorous method for developing theory but it requires that they transcend the canons of the qualitative paradigm if they are to access its power about social processes. As such, conceptualisation is not an act of interpretation;

it is an act of abstraction. This abstraction to a conceptual level theoretically explains rather than describes behaviour that occurs conceptually and generally in many diverse groups with a same concern (Glaser, 2003, p.117). Abstraction thereby frees the researcher from qualitative research's concerns with accuracy and interpretation of multiple perspectives by putting the focus on concepts. "Only concepts can relate to concepts to achieve hypothesis construction... Descriptions cannot relate to descriptions in any clear or precise way if at all. Hypotheses, if achieved, are unit empirical with no generalizability." (Glaser,2001,p.38). Thus, whether data are viewed as interpretative or objectivist is immaterial in classic grounded theory methodology, as it is not the descriptive detail that concerns the grounded theorist but the abstract concepts that lie within the data. While qualitative research is interested in context, this is just another variable for grounded theory. The contextualisation of meaning may or may not be relevant for a theory's explanation of how a main concern is continually resolved (Glaser, 2004, para 62). What matters are the concepts. The skill of the grounded theorist is to abstract concepts by leaving the detail of the data behind lifting the concepts above the data and integrating them into a theory that explains the latent social pattern underlying the behaviour in a substantive area (Locke, 2001, p.ix). The result of a grounded theory study is not the reporting of facts but the generation of probability statements about the relationships between concepts – a set of conceptual hypotheses developed from empirical data (Glaser, 1998, p.3).

Glaser (1998) attributes his early training in "explication de texte" at the Sorbonne as a foundational influence in grounded theory, particularly the constant comparative method at the heart of conceptualisation. He advocates its influence in enabling the researcher to examine and conceptually code data with "as little imputation and interpretation as possible" (p.24).

GT's paradigm is to trust to emergence and by constant comparison, conceptualize the latent patterns. The social organization of life goes on and on. The GT goal is to discover it conceptually not describe it....The worldview of GT is to allow the researcher the freedom to discover and generate conceptual theory about 'whatever' and not preconceive its nature. Its limits are the researcher's self and resources. (Glaser, 2003, p.127-128)

By contrast, Strauss and Corbin's linear, prescriptive approach to data analysis (Douglas, 2003, p.47) lays the foundation for the forcing of preconceived theoretical frameworks on data that Glaser finds so antithetical to the classic grounded theory methodology. Rather than trusting to the emergence of theory through the systematic application of grounded theory's twin pillars of constant comparison and theoretical sampling, Strauss and Corbin (1998) seek to guide the researcher by advocating that they establish, in advance, a theoretical framework. This is achieved through such mechanisms as a pre-formulated problem and research question (pp.36-42), a "sensitizing" review of the literature (pp.46-48) and the use of one theoretical code – the conditional matrix or coding paradigm (pp.181-199). The result is a blocking of the potential emergence of a grounded theory in favour of a conceptual description of a preconceived problem that may or may not be relevant to anyone other than the researcher (Glaser & Holton, 2004, para. 24).

## Judging the Quality of Grounded Theory

The very “grab” of conceptualisation, however, creates a dilemma for many qualitative researchers. The excitement created by generating concepts from data can actually derail their attention from abstraction to description. As such, they neglect to stay with the full method of classic grounded theory and are unable to tap its potential in developing a conceptually integrated theory. The resultant theory is “linear, thin and less than fully integrated” (Glaser, 1978,p.116).

Thus, attempts at grounded theory vary in quality according to the methodological thoroughness of the study, the significance of the research questions and the incisiveness of the analyst. These must be assessed from the internal logic of the grounded theory methodology itself and not from the inappropriate application of external criteria from other research paradigms and methodologies (Charmaz, 1994). Thus, the canons of quantitative and qualitative methodologies do not provide appropriate criteria for assessing the quality of a grounded theory. The criteria established by Glaser and Strauss (1967, pp.237-250) and reaffirmed by Glaser (1978, pp.4-6) remain the standards by which the quality of a grounded theory should be assessed. The four criteria are fit, work, relevance and modifiability:

- **Fit** refers to the emergence of conceptual codes and categories from the data rather than the use of preconceived codes or categories from extant theory.
- **Work** refers to the ability of the grounded theory to explain and interpret behaviour in a substantive area and to predict future behaviour.
- **Relevance** refers to the theory’s focus on a core concern or process that emerges in a substantive area. Its conceptual grounding in the data indicates the significance and relevance of this core concern or process thereby ensuring its relevance.
- **Modifiability** refers to the theory’s ability to be continually modified as new data emerge to produce new categories, properties or dimensions of the theory. This living quality of grounded theory ensures its continuing relevance and value to the social world from which it has emerged.

To enhance the potential for a rich multivariate conceptual theory, rigorous adherence to the complete grounded theory method is essential (Glaser, 2003, p.151). “A grounded theory is neither right nor wrong, it just has more or less fit, relevance, workability and modifiability. Readers of grounded theory should evaluate them against these criteria” (Thulesius, 2003, p.27).

## Methodological Principles

Glaser has articulated the essential elements that comprise classic grounded theory methodology (Glaser, 1978, 1992, 1998; Glaser & Holton, 2004) and emphasises that a study can only be considered as a true grounded theory when the complete package is utilised. The essential methodological principles as follows are largely excerpted from (Glaser & Holton, 2004):

## **Theoretical Sensitivity**

Theoretical sensitivity, the ability to generate concepts from data and relate them according to normal models of theory in general, requires two things of the researcher. It requires first of all, the personal temperament to maintain analytic distance, tolerate regression and confusion and trust in preconscious processing and conceptual emergence and, secondly, the ability to develop theoretical insight and conceptualise data.

## **Getting Started**

As a generative and emergent methodology, grounded theory requires the researcher to remain open to discovering what is really going on in the field and not what should be going on according to extant theory or the preconceived notions of the researcher's worldview. Getting started in grounded theory means entering the research field with no preconceived problem statement, interview protocols or review of literature but instead remaining open to the discovery of the main concern of the participants and their multivariate responses to its resolution. The forcing, preconceived notions of an initial professional problem or an extant theory and framework are suspended in the service of seeing what will emerge conceptually by constant comparative analysis.

## **All is Data**

This dictum expresses the flexibility of grounded theory in utilising all types and sources of data as opposed to a focus on one specific type of data. The grounded theorist uses all data that are available. The richer the range of data, the greater the potential for producing multivariate theory.

## **Use of the Literature**

It is critical in grounded theory methodology to avoid unduly influencing the pre-conceptualisation of the research through extensive reading in the substantive area and the forcing of extant theoretical overlays on the collection and analysis of data. To undertake an extensive review of literature before the emergence of a core category violates the basic premise of grounded theory—that the theory emerges from the data, not from extant theory. The presence of advance subject expertise also increases the risk of clouding the researcher's ability to remain open to the emergence of a completely new core category that has not figured prominently in the research to date, thereby thwarting the theoretical sensitivity. Practically, it may well result in the researcher spending valuable time on an area of literature that proves to be of little significance to the resultant grounded theory. Instead, grounded theory methodology treats the literature as another source of data to be integrated into the constant comparative analysis process once the core category, its properties and related categories have emerged and the basic conceptual development is well underway.

## **Theoretical Sampling**

Theoretical sampling is the process of data collection for generation of theory whereby the researcher jointly collects, codes and analyses the data and decides what data to collect next and where to find them, in order to develop the theory as it emerges. The process of data collection is controlled by the emerging theory, whether substantive or formal. Beyond the decisions concerning initial collection of data, further collection cannot be planned in advance of the emerging theory. Only as the researcher discovers codes and tries to saturate them by looking for comparison groups, does both (1) what codes and their properties and (2) where to collect data on them emerge. By identifying emerging gaps in the theory, the researcher will be guided as to next sources of data collection and interview style. The basic question in theoretical sampling is, to what groups or subgroups does one turn next in data collection—and for what theoretical purpose? The possibilities of multiple comparisons are infinite and so groups must be chosen according to theoretical criteria. The criteria—of theoretical purpose and relevance—are applied in the ongoing joint collection and analysis of data associated with the generation of theory. As such, they are continually tailored to fit the data and are applied judiciously at the right point and moment in the analysis. In this way, the researcher can continually adjust the control of data collection to ensure the data's relevance to the emerging theory.

### **Open Coding**

To begin open coding—with a minimum of preconception—tests the researcher's ability to trust in herself, the method and her skill to use the method to generate codes and find relevance. The process begins with line-by-line open coding of the data to identify substantive codes emergent within the data. The researcher begins by coding the data in every way possible—"running the data open." From the start, the analyst asks a set of questions of the data—"What is this data a study of?" "What category does this incident indicate?" "What is actually happening in the data?" "What is the main concern being faced by the participants?" and "What accounts for the continual resolution of this concern?" These questions keep the researcher theoretically sensitive and transcending when analysing, collecting and coding the data. They force her to focus on patterns among incidents that yield codes and to conceptually transcend the detailed description of these incidents. She codes for as many categories as fit successive, different incidents. New categories emerge and new incidents fit into existing categories.

Open coding allows the researcher to see the direction in which to take the study by theoretical sampling before she has become selective and focused on a particular problem. Thus, when she does begin to focus, she is sure of relevance. The researcher begins to see the kind of categories that can handle the data theoretically, so that she knows how to code all data, ensuring the emergent theory fits and works. Open coding allows the researcher the full range of theoretical sensitivity by encouraging the generation of codes that fit and work.

Line by line coding forces the researcher to verify and saturate categories, minimises omission of an important category and ensures the grounding of categories in the data. The result is a rich, dense theory with the feeling that nothing has been left out. It also corrects the forcing of "pet"

themes and ideas, unless they have emergent fit. It is essential that the researcher do her own coding. Coding constantly stimulates ideas.

### **Constant Comparative Method**

The constant comparative method enables the generation of theory through systematic and explicit coding and analytic procedures. The process involves three types of comparison. First, incidents are compared to incidents to establish underlying uniformity and varying conditions. The uniformity and the conditions become generated concepts and hypotheses. Then, concepts are compared to more incidents to generate new theoretical properties of the concept and more hypotheses. The purpose is theoretical elaboration, saturation and verification of concepts, densification of concepts by developing their properties and generation of further concepts. Finally, concepts are compared to concepts. The purpose is to establish the best fit of many choices of concepts to a set of indicators, the conceptual levels between the concepts that refer to the same set of indicators and the integration into hypotheses between the concepts, which becomes the theory.

### **Interchangeability of Indicators**

Grounded theory is based on a concept-indicator model of constant comparisons of incidents to incidents and, once a conceptual code is generated, of incidents to emerging concept. This forces the researcher to confront similarities, differences and degrees in consistency of meaning between indicators, generating an underlying uniformity which, in turn, results in a coded category and the beginnings of the properties of that category. From the comparisons of further incidents to the conceptual codes, the code is sharpened to achieve its best fit while further properties are generated until the code is verified and saturated.

Conceptual specification, not definition, is the focus of grounded theory. The grounded theory concept-indicator model requires concepts and their dimensions to earn their way into the theory by systematic generation of data. Comparing in new incidents and thereby generating new properties of a code can only go so far before the researcher discovers saturation of ideas through interchangeability of indicators (incidents). This interchangeability produces, at the same time, the transferability of the theory to other areas by linking to incidents (indicators) in other substantive or sub-substantive areas that produce the same category or properties of it. Interchangeability produces saturation of concepts and their properties.

### **Core Category**

As the researcher proceeds to compare incident to incident in the data, then incidents to categories, a core category begins to emerge. This core variable, which appears to account for most of the variation around the concern or problem that is the focus of the study, becomes the focus of further selective data collection and coding efforts. It explains how the main concern is continually resolved. As the researcher develops several workable coded categories, she begins, as much as possible, to

saturate those that seem to have explanatory power. The core variable can be any kind of theoretical code—a process, a condition, two dimensions, a consequence, a range and so forth. Its primary function is to integrate the theory and render it dense and saturated. It takes time and much coding and analysis to verify a core category through saturation, relevance and workability. The criteria for establishing the core variable within a grounded theory are that it is central, relating to as many other categories and their properties as possible, and accounts for a large portion of the variation in a pattern of behaviour. The core variable reoccurs frequently in the data and comes to be seen as a stable pattern that is increasingly related to other variables. It relates meaningfully and easily with other categories. It has clear and “grabbing” implications for formal theory. It is completely variable and has a “carry through” within the emerging theory that enables the researcher to get through the analyses of the processes that she is working on by virtue of its relevance and explanatory power.

### **Selective Coding**

The emergence of a pattern marks the beginning of selective coding. The researcher ceases open coding and delimits coding to only those variables that relate to the core variable in sufficiently significant ways as to produce a parsimonious theory. Selective coding begins only after the researcher is sure that she has discovered the core variable.

### **Delimiting**

Once the researcher has identified the core variable, subsequent data collection and coding are delimited to that which is relevant to the emerging conceptual framework. This selective data collection and analysis continues until the researcher has sufficiently elaborated and integrated the core variable, its properties and its theoretical connections to other relevant categories.

Integration of a theory around a core variable delimits the theory and thereby the study. This delimitation occurs at two levels—the theory and the categories. First, the theory solidifies, in the sense that major modifications become fewer and fewer as the analyst compares the next incidents of a category to its properties. Later modifications are mainly about clarifying the logic, taking out non-relevant properties, integrating elaborating details of properties into the major outline of interrelated categories and—most important—reduction. Reduction occurs when the researcher discovers underlying uniformity in the original set of categories or their properties and then reformulates the theory with a smaller set of higher-level concepts.

The second level of delimiting the theory is a reduction in the original list of categories for coding. As the development of the theory progresses and it becomes reduced by delimiting, it increasingly works better for ordering a mass of qualitative data and the researcher becomes committed to it. This allows her to pare down the original list of categories for collecting and coding data, according to the present boundaries of the theory. She now focuses on one category as the core variable and only variables related to the core variable will be included in the theory. The list of categories for coding is further delimited through theoretical saturation.

## Memoing

Theory articulation is facilitated through an extensive and systematic process of memoing that parallels the data analysis process in grounded theory. Memos are theoretical notes about the data and the conceptual connections between categories. The writing of theoretical memos is the core stage in the process of generating grounded theory. If the researcher skips this stage by going directly to sorting or writing up, after coding, she is not doing grounded theory.

Memos are the researcher's theoretical notes about her data and the conceptual connections between emerging categories. Memo writing is a continual process that helps raise the data to a conceptual level and develop the properties of each category. Memos also guide the next steps in further data collection, coding and analysis. They present hypotheses about connections between categories and their properties and begin the integration of these connections with clusters of other categories to generate a theory.

The basic goal of memoing is to develop ideas (codes) with complete freedom into a memo fund that is highly sortable. Memo construction differs from writing detailed description. Although typically based on description, memos raise that description to the theoretical level through the conceptual rendering of the material. Thus, the original description is subsumed by the analysis. Codes conceptualise data. Memos reveal and relate the properties of substantive codes—drawing and filling out analytic properties of the descriptive data.

Initially, memos arise from constant comparison of indicators to indicators, then indicators to concepts. Later memos generate new memos. Reading literature generates memos; sorting and writing also generate memos. In grounded theory, memoing is never done! Memos slow a researcher's pace, forcing her to reason through and verify categories, their integration and fit, relevance and work for the theory. In this way, she does not prematurely draw conclusions about the final theoretical framework and core variables.

## Theoretical Coding

The conceptualisation of data through coding is the foundation of grounded theory development. Incidents articulated in the data are analysed and coded, using the constant comparative method, to generate initially substantive, and later theoretical, categories. The essential relationship between data and theory is a conceptual code. The code conceptualises the underlying pattern of a set of empirical indicators within the data. Coding gets the researcher off the empirical level by fracturing the data then conceptually grouping it into codes that then become the theory that explains what is happening in the data. A code gives the researcher a condensed, abstract view with scope of the data that includes otherwise seemingly disparate phenomenon. **Substantive codes** conceptualize the empirical substance of the area of research. **Theoretical codes** are abstract models or frameworks that conceptualize how the substantive codes may relate to each other as hypotheses to be integrated into a theory. Theoretical codes give integrative scope, broad

pictures and a new perspective. They help the analyst maintain the conceptual level in writing about concepts and their interrelations.

### **Sorting and Writing Up**

Throughout the constant comparative coding process, the researcher captures the emergent ideation of substantive and theoretical categories in the form of memos. Once the researcher has achieved theoretical saturation of the categories, she proceeds to review, sort and integrate the numerous memos related to the core category, its properties and related categories. The sorted memos generate a theoretical outline, or conceptual framework, for the full articulation of the grounded theory through an integrated set of hypotheses.

Such memos are the ideational fund of grounded theory. Theoretical sorting of the memos is the key to the formulation of the theory for presentation or writing. Sorting is essential—it puts the fractured data back together. With grounded theory, the outline for writing is simply an emergent product of the sorting of memos. There are no preconceived outlines. Grounded theory generates its outline through the sorting of categories and properties in the memos into similarities, connections and conceptual orderings. Through theoretical coding, patterns emerge that shape the outline.

To preconceive a theoretical outline is to risk logical elaboration. Instead, theoretical sorting forces the “nitty gritty” work of making theoretical discriminations as to where each idea fits in the emerging theory. Theoretical sorting is based on theoretical codes. As the researcher sees similarities, connections and underlying uniformities, she bases the theoretical decision about the precise location of a particular memo on the theoretical coding of the data grounding the idea.

If the researcher omits sorting, the theory will be linear, thin and less than fully integrated. Rich, multi-relation, multivariate theory is generated through sorting. Without sorting, a theory lacks the internal integration of connections among many categories. With sorting, data and ideas are theoretically ordered. This sorting is conceptual sorting, not data sorting. Sorting provides theoretical completeness and generates more memos—often on higher conceptual levels—furthering and condensing the theory. It integrates the relevant literature into the theory, sorting it with the memos.

Sorting also has a conceptual, zeroing-in capacity. The researcher soon sees where each concept fits and works, its relevance and how it will carry forward in the cumulative development of the theory. Sorting prevents over-conceptualisation and pre-conceptualisation, since these excesses fall away as the researcher zeros in on the most parsimonious set of integrated concepts. Thus, sorting forces ideational discrimination between categories while relating them, integrating them and preventing excessive proliferation.

### **Analytic Rules Developed through Sorting**

While theoretical coding establishes the relationship among variables, analytic rules guide the construction of the theory as it emerges. They inform the theoretical sorting and subsequent writing of the theory. Analytic rules detail operations, specify foci, delimit and select use of the data and concepts, act as reminders of what to do and keep track of and provide the necessary discipline for sticking to and keeping track of the central theme as the total theory is generated.

There are several fundamental analytic rules. First, sorting can start anywhere. It will force its own beginning, middle, and end for writing. The important thing is to start. The researcher tries to conceptually locate the first memos thereby forcing a start to reasoning out the integration. Once started, she soon learns where ideas are likely to integrate best and sorting becomes generative and fun. Starting with the core category, or variable, and then sorting all other categories and properties only as they relate to the core forces focus, selectivity and delimiting of the analysis. Theoretical coding helps in the determination of the relationship of a concept to the core variable. Once sorting on the core variable begins, the constant comparisons are likely to generate many new ideas, especially on theoretical codes for integrating the theory. The researcher stops sorting and memos her ideas; then, she sorts the memo into the integration.

The researcher carries forward to subsequent sorts the use of each concept from the point of its introduction into the theory. A concept is illustrated only when it is first introduced so as to develop the imagery of its meaning. Thereafter, only the concept is used, not the illustration. All ideas must fit in somewhere in the outline or the integration must be changed or modified. This is essential, for, if the researcher ignores this fitting of all categories, she will break out of the theory too soon and necessary ideas and relations will not be used. This rule is based on the assumption that the social world is integrated and the job of the researcher is to discover it. If she cannot find the integration, she must re-sort and re-integrate the concepts for better fit. She moves back and forth between outline and ideas as she sorts, forcing underlying patterns, integrations and multivariate relations between the concepts. The process is intensely generative, yielding many theoretical coding memos to be resorted into the outline.

Sorting forces the researcher to introduce an idea in one place and then establish its “carrying forward” when it is necessary to use it again in relations to other ideas. When in doubt as to the place to sort an idea, the researcher puts it in that part of the outline where the first possibility of its use occurs, with a note to scrutinise and pass forward to the next possible place. Theoretical completeness implies theoretical coverage as far as the researcher can take the study. It requires that, in cutting off the study, she explains the behaviour and problem under study with the fewest possible concepts and with the greatest possible scope and with as much variation as possible. The theory thus explains sufficiently how people continually resolve their main concern with concepts that fit, work, have relevance and are saturated.

## **Pacing**

Generation of a grounded theory takes time. It is above all a delayed action phenomenon. Little increments of coding, analysing and collecting data process, mature and emerge later in

theoretical memos. Significant theoretical realisations come with growth and maturity in the data, and much of this is outside the researcher's conscious awareness until a preconscious processing facilitates its conscious emergence. Thus, the researcher must pace herself, exercising patience and accepting nothing until this inevitable emergence through preconscious processing has transpired. Survival of the apparent confusion is important. This requires that the researcher takes whatever amount of quality time that is required to do the discovery process and that she learn to take this time in a manner consistent with her own temporal nature as a researcher—her personal pacing. Rushing or forcing the process will shut down the researcher's creativity and conceptual abilities, exhausting her energy and leaving her empty and her theory thin and incomplete.

### **Author**

Judith A. Holton, Ph.D.  
Mount Allison University  
Sackville, NB, Canada  
Email: jholton@mta.ca 89

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