Grounded Theory: An Exploration of Process and Procedure

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Qual Health Res 2006 16: 547
DOI: 10.1177/1049732305285972

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Grounded theory, as an evolving qualitative research method, is a product of its history as well as of its epistemology. Within the literature, there have been a number of discussions focusing on the differences between Glaser's (1978, 1992) and Strauss's (1987, 1990) versions of grounded theory. The purpose of this article is to add a level of depth and breadth to this discussion through specifically exploring the Glaser-Strauss debate by comparing the data analysis processes and procedures advocated by Glaser and by Strauss. To accomplish this task, the authors present the article in two sections. First, they provide relevant background information on grounded theory as a research method. Second, they pursue a more in-depth discussion of the positions of Glaser, using Glaser's work, and Strauss, using Strauss's and Strauss and Corbin's (1990) work, regarding the different phases of data analysis, specifically addressing the coding procedures, verification, and the issue of forcing versus emergence.

Keywords: *grounded theory; data analysis; coding; Glaser versus Strauss*

As a research method, grounded theory is often heralded as revolutionary in the history of the qualitative traditions. Yet, at the same time, it is the most frequently discussed, debated, and disputed of the research methods. One of the most provocative controversies surrounding grounded theory involves a methodological split between its co-originators, Glaser and Strauss.[1] It was a split that surfaced publicly when Strauss and Corbin (1990) released their version of grounded theory, which Glaser (1992) aggressively argued was not, in fact, grounded theory but a new method, which he called full conceptual description. Although some of the details are discussed later, this division is what set the stage for the ongoing debate between the Glaserian and Straussian versions of grounded theory, a debate that, after some reflection, seems to us to be centered on the researcher's role, activity, and level of intervention in relation to the procedures used within the data analysis process.

In this article, we explore the Glaser-Strauss debate surrounding grounded theory by comparing the data analysis processes advocated by Glaser (1978, 1992), on the one hand, and Strauss and Corbin (1990), on the other. This discussion comprises two components. First, some pertinent background information on grounded theory are provided. Second, a more in-depth discussion of the processes and procedures used both by Glaser and by Strauss and Corbin will be pursued

QUALITATIVE HEALTH RESEARCH, Vol. 16 No. 4, April 2006 547-559
DOI: 10.1177/1049732305285972

regarding the different phases of data analysis, specifically addressing the issues of coding, forcing versus emergence, and verification.

PERTINENT BACKGROUND INFORMATION

Historically, grounded theory emerged in the 1960s as a result of Glaser and Strauss's sociological research program on dying in hospitals (Charmaz, 2000; Strauss & Corbin, 1990). Through their work, they crafted a method that enabled the researcher to generate systematically a substantive theory grounded in empirical data. The goal was to discover a theory that had grab, would fit the data, and would work in the real world (Glaser & Strauss, 1967).

Grounded theory, although clearly a qualitative method, endeavored to integrate the strengths inherent in quantitative methods with qualitative approaches. With a heritage rooted in the educational backgrounds of Strauss, from the University of Chicago, and Glaser, from Columbia University, grounded theory combined the depth and richness of qualitative interpretive traditions with the logic, rigor and systematic analysis inherent in quantitative survey research (Charmaz, 2000; Dey, 1999; Glaser & Strauss, 1967; Keddy, Sims, & Stern, 1996; Robrecht, 1995). Grounded theory challenged the then-dominant logico-deductive way of theorizing, because rather than develop a theory and then systematically seek out evidence to verify it, researchers using grounded theory set out to gather data and then systematically develop the theory derived directly from the data (Dey, 1999). Moreover, grounded theory could be distinguished from other qualitative methods because of its goal of generating theory together with its completeness of method.

At the core of grounded theory, and, arguably, at the crux of the Glaser-Strauss debate, is the data analysis process. It is a simple and complex, methodical and creative, rigorous and laissez-faire process in which the researcher engages to generate theory from the data. More specifically, Glaser and Strauss (1967) developed grounded theory as a method that combined two data analysis processes. In the first process, the analyst codes all data and then systematically analyzes these codes to verify or prove a given proposition. In the second process, the analyst does not engage in coding data per se but merely inspects the data for properties of categories, uses memos to track the analysis, and develops theoretical ideas. Glaser and Strauss (1967) determined that neither of these processes could properly accomplish the goal of generating theory from data. They, in turn, suggested a hybrid approach to data analysis: "One that combines, by an analytic procedure of constant comparison, the explicit coding procedure of the first approach and the style of theory development of the second" (p. 102). From this effort to mesh the best of both processes, grounded theory, also known as the method of constant comparison, was born.

Throughout the years, grounded theory evolved and spread, at first through the students and colleagues of Glaser and Strauss, and eventually through the texts and subsequent literature produced. Eventually, the two co-originators went their separate ways and began producing literature on their own method and the specifics of how a "grounded" theory was to be generated. In 1978, Glaser wrote *Theoretical Sensitivity* as an adjunct to *Discovery* (Glaser & Strauss, 1967). In 1987, Strauss produced *Qualitative Analysis for Social Scientists*, a significant change in terms of the original version. In 1990, Strauss and Corbin produced *Basics of Qualitative Research*,

a user-friendly attempt to explain Strauss's version of the basics of grounded theory. In 1992, Glaser responded to Strauss and Corbin with *Emergence vs. Forcing: Basics of Grounded Theory Analysis*, critiquing what was presented in *Basics of Qualitative Research*. In the end, what started out jointly eventually split into the Straussian and the Glaserian models of grounded theory (Stern, 1994). It is at this point that our discussion moves on initially to discuss the process of data analysis and then to explore further data analysis in relation to the two versions of grounded theory.

DATA ANALYSIS IN GROUNDED THEORY

Data analysis in qualitative research manages words, language, and the meanings these imply (Miles & Huberman, 1994). The magnificence of this work exists in its capacity to create rich descriptions and understandings of social life. The challenge lies in working with massive amounts of empirical data as texts that have multiple meanings, at both the individual and social levels. Qualitative data analysis seeks to organize and reduce the data gathered into themes or essences, which, in turn, can be fed into descriptions, models, or theories. Dey (1993) has suggested that "we break down data in order to classify it, and the concepts we create or employ in classifying the data, and the connections we make between these concepts, provide the basis of a fresh description" (p. 30). Coding in qualitative research is one way of exploring bits of information in the data, and looking for similarities and differences within these bits to categorize and label the data (Padgett, 1998; Patton, 2002; Tutty, Rothery, & Grinnel, 1996). To code, data are broken down, compared, and then placed in a category. Similar data are placed in similar categories, and different data creates new categories. Coding is an iterative, inductive, yet reductive process that organizes data, from which the researcher can then construct themes, essences, descriptions, and theories.

In grounded theory, data analysis has a well-defined process that begins with basic description and moves to conceptual ordering and then on to theorizing (Patton, 2002). Data analysis is accomplished through an elaborate set of coding processes. Coding, in grounded theory, is similar to its use within the qualitative traditions, but it is also much more. In grounded theory, its level of development and specificity clearly distinguish it from other qualitative methods. Coding is not simply part of data analysis; it is the "fundamental analytic process used by the researcher" (Corbin & Strauss, 1990, p. 12). It is what transports researchers and their data from transcript to theory.

GLASER VERSUS STRAUSS: A DISCUSSION OF CHOICES

As stated earlier, it can be argued that much of the disconnect between Glaser and Strauss lies in their different perspectives regarding the data analysis process, specifically the procedures used. In other words, differences are found in the interventions and activities in which the researcher engages with the data. Glaser (1992) has argued that Strauss and Corbin's (1990) method is not just a different version of grounded theory but, rather, a completely different method that results in a full conceptual description of the relationships between categories and concepts as opposed to grounded theory. Others, like Creswell (1998), Babchuck (1997), and

Melia (1996), have explored the differences between Glaser and Strauss as a way of understanding the arguments to make informed choices regarding how to do grounded theory.

Before proceeding, however, an important point regarding language and process needs to be addressed. Both Glaser's and Strauss's versions of grounded theory use coding, the constant comparison, questions, theoretical sampling, and memos in the process of generating theory. Moreover, both versions adhere to the same basic research process: gather data, code, compare, categorize, theoretically sample, develop a core category, and generate a theory. The problem is that these similarities in language and process make any discussion of differences confusing. The point is that, at the surface level, there are no recognizable differences, because Glaser and Strauss look a lot alike. What is crucial, however, is that the differences lie not in the language or general processes but in how these processes are carried out. Furthermore, these processes reflect different methodological assumptions that must be illuminated and understood if we are to make informed choices.

To explore all the differences between Glaser and Strauss could encompass a book. Glaser's (1992) response to Strauss and Corbin (1990) was, in fact, a book, in which he compared methods and, at the same time, challenged Strauss (and Corbin) and their version of grounded theory. Consequently, we have chosen to focus on two issues as they relate to the data analysis process. The first is the issue of forcing versus emerging in relation to the coding procedures. The second is the issue of verification and its role in grounded theory. These two issues, as appropriate, are intertwined into the discussion as we explore Glaser's and Strauss's data analysis methods. Coding in general, as well as the process of coding, is specifically discussed.

Coding in General: Glaser Versus Strauss

Coding in grounded theory is the process of analyzing the data. As a process within grounded theory, data analysis involves the researcher as an actor in the process. They are the people who intervene, manipulate, act on, conceptualize, and use specific techniques to generate or discover the theory. They engage in an intervention process, comprising stages or procedures, to excavate a theory from the raw data. In grounded theory, the primary intervention into the data is coding, and although Glaser and Strauss both use the word *coding*, they present it differently.

At the operational level, Glaser's (1978) coding methods appear rather simple, quite focused and more in keeping with the original version of grounded theory. Glaser has described the code as "the essential relationship between data and theory" and coding as a process that, "gets the analyst off the empirical level by fracturing the data, then conceptually grouping it into codes that then become the theory which explains what is happening in the data" (p. 55). He has divided the coding process into two procedures: substantive and theoretical coding. Substantive coding consists of two subphases, open and selective coding, and is concerned with producing categories and their properties. Theoretical coding occurs at the conceptual level, weaving the substantive codes together into a hypothesis and theory.

Strauss's coding divides the process into three phases and labels them open, axial, and selective. Strauss and Corbin (1990) have insisted on the use of the constant comparative method and questions within these phases, with each having

specific procedures aimed at achieving distinct purposes. Although Strauss and Corbin have admitted that the lines between the three phases are somewhat artificial and that open, axial, and selective coding might even be carried out concurrently, they are also clear that each phase requires different interventions on the part of the researcher. At first, their coding process appears simple; however, as one moves deeper into their methods, the procedures the researcher must use become increasingly more complex and detailed.

First, let us examine Glaser's (1992) use of the term *coding*. Glaser has defined coding as "conceptualizing data by constant comparison of incident with incident, and incident with concept" (p. 38). He has focused on the constant comparative method as the method of coding data, suggesting that it involves two simple analytic procedures aimed at creating categories and their properties. In the first procedure, the analyst makes comparisons of incident to incident to generate categories and then compares new incidents to the categories. The second procedure, or the making of comparisons, requires the analyst to examine the data through the use of neutral questions such as, "What category does this incident indicate?" (Glaser, 1978, p. 57). These two procedures, together with the use of memos that document the analyst's ideas as coding proceeds, and theoretical sorting, which organizes the data and the memos, are the essence of Glaser's method. Glaser (1992) has written, "Using the constant comparison method gets the analyst to the desired conceptual power quickly, with ease and joy. Categories emerge upon comparison and properties emerge upon more comparison. And that is all there is to it" (p. 42).

Strauss and Corbin (1990), on the other hand, have defined coding as simply "the process of analyzing data" (p. 61). When we probe Strauss and Corbin's method, we find that they also consider "the making of comparisons [and] the asking of questions" (p. 62) as basic to the coding process. There are, however, two important differences. First, they submit that the nature of making comparisons and asking questions "changes with each type of coding" (p. 62). Second, Strauss and Corbin seemed to suggest that analysis is not just a matter of making comparisons and asking questions when they wrote, "These processes are not labeled as we go along. You have to watch closely to see how we use them" (p. 63). They have taken what would appear to be a laissez-faire perspective when compared to Glaser, who has made constant comparison central within his analytic coding. Strauss and Corbin (1990) seem to have subsumed these basic procedures under the methods and techniques they advance. In a sense, they would appear to have elevated their use of tools, paradigms, and matrices to a place above the constant comparative method.

Phase 1: Open (as the First Part of Substantive) Versus Open

With both Glaser (1978) and Strauss (Strauss & Corbin, 1990), open coding is the initial step into the coding process. For Glaser, open coding is part 1 of substantive coding. To Strauss and Corbin, it is simply the first of the three phases. According to Glaser, open coding is the initial stage of comparative analysis. It is "coding the data in every way possible . . . running the data open" (p. 56). In open coding, analysts immerse themselves in the data through line-by-line analysis, coding the data in as many ways as possible and writing memos about the conceptual and theoretical ideas that emerge during the course of analysis. Glaser believes that if the researcher

follows this simple but rigorous process, the analysis itself "carries with it verification, correction and saturation" (p. 60). In Glaser's method, there is no quick fix, and there is no preconceived framework to follow. Only patience, persistence, and going over and over the data using constant comparison will lead to emergent categories and their properties. Open coding is complete when the analyst begins to see the possibility of a theory that can embrace all of the data. Then, within the larger context of the data developed in open coding, it is appropriate to delimit one's coding efforts and begin selectively coding for a core variable.

Strauss's version of open coding found in Strauss and Corbin (1990), although similar to Glaser's (1978), houses two important differences. First, Strauss has defined open coding as the "analytic process through which concepts are identified and their properties and dimensions are discovered in the data" (p. 101). The key difference is the reference to dimensions. Strauss and Corbin believe that dimensionalizing a category's properties (i.e., the dimension "short to long" for the property of distance) is a core task. To develop a category, and the relationships between categories, the analyst must develop the category in terms of its properties and the dimensions of the properties.

Glaser has taken exception to this level of intervention. He believes that Strauss (Strauss & Corbin, 1990) "is only half right" (Glaser, 1992, p. 46), with the "right" part being the development of a category's properties. He has alleged that Strauss and Corbin jump too far ahead in the analysis process by automatically developing the dimensions of a property and has argued that "once this form of forced coding starts, the grounded theory is usually lost, because the analyst is led far away from relevance" (p. 47). Glaser views dimensionalization as part of theoretical coding not open coding, but only as one of the 18 or more theoretical coding options.

On reflection, we believe that it makes sense to describe category properties through dimensionalization. This procedure breaks the data down and assists in the development of relationships among categories. However, this added process is difficult to follow and seems to complicate matters (Dey, 1999). One begins to question what level of intervention into the data at what time in the process is appropriate. This, in turn, leads us to Glaser's (1992) primary criticism, asking, At what point, in employment of procedures, does the researcher actually step away from what does exist and begin imposing preconceived frameworks on the data? More specifically, should properties be dimensionalized during open coding, the first stage of the process, or is this best left for later, when the data can speak clearly to this issue and the dimensions can emerge rather than be imposed? Perhaps, Glaser is correct in challenging the use of dimensionalization, if not in total, at least in timing.

A second difference that arises in open coding is the issue of theoretical sensitivity. Theoretical sensitivity is the ability of the researcher to work with the data in both theoretical and sensitive ways (Glaser, 1978). In other words, the researchers can theoretically and conceptually think about the data from a distance, while simultaneously maintaining an in-close level of sensitivity and understanding about the process and their involvement in that process. Although both Glaser and Strauss and Corbin (1990) seem to agree on the importance of achieving this theoretical sensitivity, what differs is how they achieve this goal. Glaser believes that theoretical sensitivity is attained through immersion in the data, line by line, comparison by comparison, memo by memo, and code by code. He has stated clearly that what should open up the data is "what the subjects themselves are saying" (Glaser,

1992, p. 50). Compelling questions and fancy techniques are not required if you let the data speak. Within his method, the only questions are neutral ones, and the only technique is constant comparison. Theoretical codes are available to the researcher in the latter part of the analysis process; however, these are applied in relation to what is emerging in the data, not to get the data to say something to the researcher.

Strauss and Corbin, on the other hand, have argued that theoretical sensitivity is achieved through the use of specific analytic tools, including questioning; analysis of a word, phrases, or sentences; the flip-flop technique; making close-in and far-out comparisons; and waving the red flag (see chap. 6 in Strauss & Corbin, 1990, or chap. 7 in Strauss & Corbin, 1998). In their "Techniques for Enhancing Theoretical Sensitivity," Strauss and Corbin (1990) have suggested that researchers might not see what is in the data as they become bogged down in the process of analysis. Consequently, they argued that these tools will "increase sensitivity, help the user recognize bias to some degree, and help him or her overcome analytic blocks" (Strauss & Corbin, 1998, pp. 87-88). Although, Strauss and Corbin (1990) have reminded us that we should "never impose anything on the data" (p. 94), they clearly encourage researchers to learn, practice, use, and adopt these techniques.

In some ways, it is difficult to tell who has the better approach. Although Strauss and Corbin (1990, 1994, 1998) do not directly connect one particular coding phase with the use of the analytic tools they provide, there are cues in their writing that these tools should be used. At the same time, their points are well taken, and one is left wondering what is wrong with using these seemingly harmless tools. In fact, taken at face value, Strauss and Corbin might simply be articulating some of the natural cognitive processes we use when we compare things. Glaser (1992), however, has claimed that these tools force the data in preconceived ways. In a sense, he is also correct, especially when we must heed what is actually happening in the data. The important question then becomes clear: At what point does the researcher's intervention or techniques force, instead of allow for, emergence?

Phase 2: Axial Versus Selective or Axial Versus Theoretical

Axial coding is the second of Strauss and Corbin's (1990) three-phase method. It is a step that is key to Strauss's version but missing from Glaser's. The purpose of axial coding, according to Strauss and Corbin (1990), is to put the fractured data back together in new ways "by making connections between a category and its subcategory" (p. 97). This connecting is accomplished through the use of a coding paradigm, which focuses on three aspects of the phenomenon: the conditions or situations in which phenomenon occurs; the actions or interactions of the people in response to what is happening in the situations; and, the consequences or results of the action taken or inaction (Strauss & Corbin, 1998). During axial coding, the researcher works to understand categories in relationship to other categories and their subcategories. The purpose is to delineate and extricate relationships on which the axis of the category is being focused (Strauss, 1987).

In comparison, Glaser (1978, 1992) does not support axial coding. He does have a second step called selective coding, but this is actually the second half of his first phase, substantive coding. For Glaser, selective coding simply marks the transformation from "running the data" open to delimiting the coding process around a core category. Selective coding bears little relationship to axial coding, although

both seem to have an element of selectivity in their process. Glaser selectively codes around a core category. Strauss selects categories to examine using the coding paradigm.

In terms of methodological differences, essentially, the process of axial coding is so foreign to Glaser's method that there is little basis for direct comparison. Strauss (1987) believes that the coding paradigm, discussed above, is "central to coding procedures" (p. 27), and as such, "coding is not coding without it" (p. 28). Strauss and Corbin devoted an entire chapter to the explanation of axial coding and, more important, how to use the coding paradigm (see Strauss & Corbin, 1990, chap. 7; 1998, chap. 9). Glaser's (1992) response to Strauss and Corbin was fierce and immediate. He considered axial coding "a very clear example of Strauss' lack of scholarship in his entire book" (p. 61), claiming that it ignores the fundamentals of theoretical coding and the associated coding families, which actually "emerge as connections between categories and their properties" (p. 62). Glaser believes that the coding paradigm imposes one coding family on the data and through this procedure forces the data into a full conceptual description. Furthermore, he takes exception to Strauss and Corbin's use of the inductive process of verifying within grounded theory, especially during axial coding. Glaser's position is that if you code only for what is in the data allowing for emergence, then verification automatically occurs. We will elaborate on this issue of verification presently.

Three points need clarifying with respect to axial coding and the coding paradigm. First, it is interesting how Strauss and Corbin (1998) have afforded the paradigm such status within their methods. As Dey (1999) asked, "Is this privileged status of this paradigm not paradoxical given the emphasis on emergence and discovery in grounded theory?" (p. 107). This is a poignant question that is not readily answered, except when Strauss and Corbin (1998) suggest, "The paradigm is nothing more than a perspective taken toward the data, another analytic stance that helps to systematically gather and order data in such a way that structure and process are integrated" (p. 128). Yet, perspective or not, Strauss and Corbin have previously made their position clear regarding the importance of the paradigm, given that both editions of *Basics of Qualitative Research* (1990, 1998) devoted entire chapters to axial coding and the implementation of the coding paradigm.

The second point is that it could be argued that the coding paradigm incorporates most of Glaser's (1978) 18 coding families (Dey, 1999). In reviewing the list of the codes Glaser proposes, many could be subsumed by the coding paradigm, especially if you recall that dimensionalization of properties was to be accomplished in open coding. Could this have been the goal of Strauss's work? Did he intend to simplify or bring clarity to the vagueness of Glaser's 18 coding families? Notwithstanding, it is odd that Strauss (1978) made no direct reference to Glaser's earlier work in *Theoretical Sensitivity*, nor has he explained why he changed both the procedure (theoretical coding to axial coding) and the timing of the procedure (axial coding before selective coding). Remember that Glaser has placed theoretical coding after selective coding, whereas Strauss has placed axial coding before selective coding. If the coding paradigm was to replace the theoretical codes, why did Strauss and Corbin change the original order? The answer is not clear; however, it does seem that, in some ways, Strauss and Corbin have made the entire data analysis process more obvious but markedly more complex in terms of actual procedures.

The third point of clarification, which requires some discussion, involves the issue of verification within the grounded theory method. With respect to axial

coding, Strauss and Corbin (1990) have made a number of references to validation, verification, checking, and deductive thinking. These terms, as traditionally used, seem intuitively inconsistent with a philosophy of emergence Recall that in Glaser and Strauss's (1967) original work, they confronted the doctrine of verification, stating,

> While verifying is the researcher's principal goal and vital task for existing theories, we suggest that his main goal in developing new theories is their purposeful systematic generation from the data of social research. . . . Thus, generation of theory through comparative analysis both subsumes and assumes verification, and accurate descriptions, but only to the extent that the latter are in the service of generation. (p. 28)

Glaser's (1978) version decisively adheres more to this original perspective. He has stated that the "the line by line approach forces the analyst to verify and saturate categories" (p. 58) and that this is how one's theories become grounded. Strauss and Corbin (1990) have approached the issue of verification differently. They stated, "While coding we are constantly moving between inductive and deductive thinking. . . . There is a constant interplay between proposing and checking. This back and forth movement is what makes our theory grounded!" (p. 111). Glaser (1992) responded by arguing that what they propose is actually verification, whereby they use constant comparison, analytic tools, and the coding paradigm to deduce something, but then they have to go back and verify what they have found.

At first, one could see this as an issue of semantics, with each using the word *verification* differently. With more thought, however, questions surface. Does the thoroughness achieved using the constant comparative method constantly in some way equate with the kind of verification required in this method? Arguably, if you do something meticulously, going over and over it at the time of doing, there is no real need to go back to check if you did it correctly. Yet, as Strauss and Corbin (1994) have pointed out, checking or verification might simply be part of the inductive process; hence, their reference to verification and validation is merely articulating our basic cognitive processes. Is deductive checking what makes the theory grounded? Likely, both constant comparison and checking can help make a theory grounded in the data. Are both necessary, such that verification is a required facet of the method? The answer to this question is where Glaser (1992) makes his point well. The method of constant comparison, if completed properly, checks or verifies the accuracy of the work through the comparison itself. As Glaser has contended, if you use constant comparison faithfully, verification inheres within it. It might be true that the researcher will naturally go back and check, but this is a somewhat moot point within the debate.

One wonders if Strauss and Corbin's (1994, 1998) perspective and their use of the term verification add some kind of scientifically derived legitimacy to their method. As Charmaz (2000) has suggested, "Perhaps the scientific underpinnings of the 1990 book reflect both Corbin's earlier training and Strauss' growing insistence that grounded theory is verificational" (p. 512). Strauss and Corbin might appear to be more preoccupied with the notion of science as reflected in their use of standard scientific terminology and the canons of good science (Corbin & Strauss, 1990; Strauss & Corbin, 1994, 1998). It is interesting, that in the second edition of their methods text, Strauss and Corbin (1998) seem to have adjusted their

perspective ever so slightly. Keeping with the science theme, they suggested that in all science "there is an interplay between induction and deduction" (p. 137). They claimed that deduction is simply part of the interpretative process, which must be used to adjust for the human element or error in data analysis.

So it seems that despite the fact that the coding paradigm, with its emphasis on context, conditions, and consequences, makes good heuristic sense (Dey, 1999), Strauss (Strauss & Corbin, 1990) does impose, and perhaps even forces, a position on the data. In truth, Strauss and Corbin are much clearer on how to reconnect or integrate the categories and their subcategories. This clarity, however, is derived at the expense of true emergence and through the use of complex procedures, a fact that Strauss and Corbin (1990) readily admitted when they wrote, "If these procedures, techniques, and steps in axial coding seem overwhelmingly complicated, remember that reality, alas, is complex" (p. 110).

Phase 3: Theoretical Versus Selective

In this last phase, the analyst is charged with the task of integrating the data around a central theme, hypothesis, or story to generate a theory. Glaser's (1978) integration is accomplished using theoretical coding, a step that might be more analogous to axial coding. Strauss and Corbin (1994) have tied their work back together using selective coding, which should not be confused with, but at the same time is similar to, Glaser's selective coding step. Admittedly, the similar use of language, together with the timing of procedures, is confusing to follow.

Theoretical coding, as presented by Glaser (1978), is the process of using theoretical codes to "conceptualize how the substantive codes may relate to each other as hypotheses to be integrated into a theory" (p. 72). Theoretical codes emerge from the "cues in the data," are integrative at the conceptual level, and work to "weave the fractured story back together again" (p. 72). Recall that theoretical coding is actually comparable to Strauss and Corbin's (1994) axial coding, the difference being that theoretical codes, as Dey (1999) has noted, "presents a wider range of perspectives on data than the coding paradigm" (p. 107).

Selective coding, according to Strauss and Corbin (1998), is the "process of integrating and refining the theory" (p. 143). To accomplish this final task, the analyst selects a core category and then relates all other categories to the core as well as to the other categories. Selective coding is similar to axial coding, in which the categories are developed in terms of their properties, dimensions, and relationships, except that the integration occurs at more abstract level of analysis (Strauss & Corbin, 1990). Strauss's use of selective coding should not be confused with Glaser's. Both processes, nevertheless, do focus on selectively coding around a core variable that has been identified in the data.

There are three issues regarding the differences between Glaser (1978) and Strauss and Corbin (1990) First, which we noted earlier but is also relevant here, is the timing of processes. Glaser's method is to fracture and select in substantive coding, then relate and integrate in theoretical coding. Strauss's method is fracture in open coding, relate and integrate in axial coding, and then select and integrate in selective coding. Consequently, it is difficult to directly compare theoretical versus selective coding directly.

Second, Glaser (1978) has portrayed his method in two simple phases, substantive and theoretical coding. However, when we look beneath this simplicity, substantive coding actually consists of two processes, and there is another process called theoretical sorting, which could be construed as yet another step in Glaser's data analysis process. In *Theoretical Sensitivity*, Glaser (1978) took the time to explain theoretical sorting, its purpose and method. He claimed, "While ideational memos are the fund of grounded theory, the theoretical sorting of memos is the key to formulating theory. . . . Sorting is an essential step in the grounded theory process which cannot be skipped" (p. 116). The importance of theoretical sorting as an aid to coding is also evident in Glaser's (1992) critique of Strauss vis-à-vis the glossing over of the importance of theoretically sorting memos. Strauss and Corbin (1994), on the other hand, have talked little about theoretical sorting but have discussed memoing at length, dividing it into three types associated with each phase of coding. It is curious that Strauss values memoing as an analytic aid but does little to develop or explain the procedure of theoretical sorting. It is also curious that Glaser values sorting but does not specifically incorporate it into one of the coding phases.

The third and final issue to be discussed is the conditional matrix. Although not directly related to Strauss and Corbin's (1994) selective coding, it seems most applicable within this phase but is also usable in axial coding. The matrix is an extension of the coding paradigm, which focuses solely on the conditions and consequences related to the phenomena under study. Strauss has advanced the conditional matrix as another analytic aid that sensitizes the researcher to the variety of conditions and consequences that surround the actions and interactions of people. Metaphorically, this aid views the situation under study, the phenomena, or the categories through a zoom lens. The researcher can explore the conditions or consequences that exist in the individual, group, or family context using a close-in micro lens, or explore the community or national context using the faraway macro lens. Glaser (1992) has claimed that this matrix imposes a too detailed and preconceived way of viewing the data. Strauss and Corbin (1990) asserted that it is but one tool of many that should help the researcher look beyond the obvious, linking process to structure. Used as an extension of the already privileged coding paradigm, this matrix has the potential to force data further in preconceived ways. Used as a tool, based on emergence, the matrix and the tracing of conditions and consequences can enrich a theory.

CONCLUDING THOUGHTS

So we come to the end of our journey, an exploration of the subtle and not-so-subtle differences between co-originators, Anselm Strauss and Barney Glaser. As a product of its history and epistemology, grounded theory is an evolving method premised on the inductive generation of theory derived from data. It is a complete package of procedures, techniques, and assumptions related to the discovery of practical theory.

In terms of data analysis, there is no doubt that coding is at the core of both Glaser's and Strauss's method. However, there is also no doubt they approach this task from very different perspectives. Data analysis, especially coding, is both the potency of the method and the substance of difference, difference that, for some, is quite relevant and, for others, only an interesting bump on the evolutionary road. In

the discussion section of this article, we have approached the issue of Glaser versus Strauss through a close examination of the data analysis process, a comparison of the differences in how data analysis is accomplished using both coding procedures, and concluding in a brief commentary discussing the scope and merit of these differences.

It is our perspective that reflection on the issues inherent in the grounded theory debate is time well spent. Perhaps it is not the positions Glaser and Strauss hold that offer us insight but the thinking and assumptions that underlie these positions. Being knowledgeable about these might help us be more explicit in our methods of analysis and better able to assess how the issues of emergence and verification unfold throughout the process.

In the final analysis, under the shade of these differences, it has been said, "Analysis is the interplay between researchers and data. It is both science and art" (Strauss & Corbin, 1998, p. 13). Perhaps, it is simply more a science with Strauss and more an art with Glaser. Again, it is not the differences that matter so much as the understanding of these differences and the making of informed and knowledgeable choices about what one will do in their research. Perhaps it is more about the researcher and less about the method. The value of this discussion might not reside in picking sides but exist in the discourse itself.

NOTE

1. Where we have not supplied specific in-text citations, we are referring to the general bodies of Glaser's (1978, 1992, 2001) and Strauss's (Corbin & Strauss, 1990; Strauss, 1987; Strauss & Corbin, 1990; 1994, 1998) work.

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