Relating Categories in Grounded Theory Analysis: Using a Conditional Relationship Guide and Reflective Coding Matrix

Karen Wilson Scott
University of Idaho, Idaho Falls, Idaho, USA

This paper describes the process for employing two principal instruments for relating the categories identifying the central phenomenon in grounded theory analysis. The Conditional Relationship Guide contextualizes the central phenomenon and relates structure with process. The second tool, the Reflective Coding Matrix, captures the higher level of abstraction necessary to bridge to the final phase of grounded theory analysis, selective coding and interpretation and ultimately to the theory generation. Examples of each instrument are provided and discussed. Key words: Grounded Theory, Grounded Theory Analysis, Analytic Coding, Analytic Categories, Conditional Relationship Guide, and Reflective Coding Matrix

Grounded theory research, often referred to as the constant comparative method (Glaser & Strauss, 1967), is a qualitative tradition built on compared concepts. Proponents of the constant comparative method suggest that similar data are grouped and conceptually labeled. Then concepts are categorized. Categories are linked and organized by relationship, conditions and dimensions are developed, and finally a theory emerges (Glaser, 1978; Glaser & Strauss, 1967; Strauss & Corbin, 1990). There is wide discussion of this method, and yet the process for carrying out the analysis has remained vague (Boeije, 2002). While a lack of specificity allows for creativity in the art and science of grounded theory research (Strauss & Corbin, 1998), it can mystify the novice (McCaslin & Scott, 2003). Separately, Boeije (2002), McCaslin and Scott (2003), and Scott (2002) suggest additional rigor in data analysis to increase systemization and traceability. All three reports focus on comparative questions. Strauss and Corbin (1998) suggest that grounded theory analysts work to "uncover relationships among categories … by answering the questions of who, when, why, how, and with what consequences … to relate structure with process" (p. 127), but do not specify how that is to be accomplished. This paper explicates a method for engaging those investigative questions to effectively form relational linkages that bridge from analysis to interpretation and theory generation in grounded theory research.

Strauss and Corbin (1998) claim, "Analysis is the interplay between the researcher and the data." (p. 13). A researcher espousing the Constructivist grounded theory paradigm addresses the participants' ecology (McCaslin & Scott, 2003) and the meanings participants confer on their realities (Charmaz, 2000). "The researcher constructs theory from the data. By starting with data from the lived experience of the research participants, the researchers can, from the beginning, attend to how they

construct their worlds. That lived experience shapes the researcher's approach to data collection and analysis" (Charmaz, 1994, p. 68). A Constructivist paradigm also finds a strong voice in adult education (Merriam & Caffarella, 1999) and learning theory (Mezirow, 1991), which is my own background and a view that also works well with Strauss and Corbin's (1998) relational investigative questions.

In considering a specific method for engaging relational questions in constant comparison, we will use my dissertation study as an example. I conducted a Constructivist grounded theory study toward increasing understanding of high self-efficacy in mid- to late life (Scott, 2002). The dual grand tour question was: what is the deep, rich, lived experience of persevering in new life pursuits for adults over age 50; and, what is the central theory that explains how high self-efficacy and perseverance are experienced by adults committed to new challenging life pursuits after age 50? My study involved a theoretical sampling of eight participants over age 50 purposefully selected for homogenous delimiting criteria. The pursuit had to be personally compelling, a self-selected endeavor, changing the individual's life direction, ongoing for a minimum of two years prior to entering the study, and to which the participant demonstrated commitment despite adversity.

Briefly describing the eight participants, four had completed their challenging pursuits. Karen, age 59, had left her job, sold her house and investments, purchased a 36-foot boat, and circumnavigated the world solo. Nancy, age 58, had coalesced inner resources to move from a deficit income to a self-built international business focused on assisting employees affected in a corporate downsizing. Richard, age 68, began bicycle racing at age 60, and won two world championships. Patricia, age 70, retired at age 65 to pursue Masters research analyzing the revival of the ancient Cornish language, which she learned to speak during her study. Four participants were engaged in their challenging pursuits. Robert, age 68, a tenth-grade dropout with no engineering training, invested his life savings in patenting and testing his revolutionary construction framing invention. Lou, age 65, retired at age 62, out of shape and needing nine knee surgeries, is now a gold medallist in state competition, pursuing national cross-country events. Floyd, age 56, purchased a piano and course of instruction at age 50, and then left his job to dedicate full attention to learning to play, compose, and record improvisational jazz. RT, age 58, left his career as a federal drug-enforcement agent at age 56 to write, and now has short stories published in the most prestigious mystery magazines and is seeking publication of his first novel. Data were collected via audio-taped interviews, transcribed verbatim, and analyzed.

Data Analysis

Glaser and Strauss (1967) and Strauss and Corbin (1990) call for open coding as the initial phase of grounded theory analysis. In the self-efficacy study example the interview data were unraveled and sorted into 1,908 original categories, then rewoven into 54 elemental categories. It is during reflective (McCaslin & Scott, 2003) or traditionally called axial (Strauss & Corbin 1990, 1998) coding and selective coding where traditionally constant comparison is engaged. Constantly comparing categories helps the investigator understand the construction of their interrelationships. Boeije (2002) advances a five-step approach to constant comparison for his study of couples,

each a multiple sclerosis victim and spouse. The first two steps involve the comparison within a single interview, followed by a comparison between interviews, a process typical to grounded theory, but simplified by Boeije's questions. As his third, fourth, and fifth steps move beyond homogenous comparison, Boeije's study and my own track for the first two steps, then his method broadens and my own deepens. In Boeije's Step 2, he suggests it is "important to look for patterns or, in other words, for combinations of categories or codes" (p. 397). The remainder of this paper focuses on a creating a Conditional Relationship Guide, a method for discovering those patterns that contextualize a central phenomenon and the relationships among the categories from which those patterns are constructed. From the Guide, we can construct a Reflective Coding Matrix, as described by McCaslin (1993), leading us toward a story line and emergent theory, graphically depicted in a Conditional Matrix.

Conditional Relationship Guide

        When grounded theory analysts code reflectively, we are acting very much like investigative reporters, asking the questions, what, when, where, why, how, and with what result or consequence (Strauss & Corbin, 1998). Answering these questions weaves the loose array of concepts and categories we unraveled and sorted in open coding back together into a pattern. The constant comparative nature of the questions ensures that our patterns are not merely woven into two-dimensional pictures of reality, but rather woven into the much more complex, three-dimensional Constructivist ecology of the participant. Asking and answering these investigative questions also allows for a fourth dimension of time (ongoing process) to be included. Our tapestry is living, dynamic within its ecology. The participants of our example study carried threads and trends from childhood or other rich areas of their unique backgrounds through the years to weave them into the challenging life pursuits that emerged after age 50. Strauss and Corbin refer to that dynamic element as Process. Studying Process allows us to understand the involvement of the participants with their pursuits.
        Understanding those relationships is not intuitive. McCaslin (1993) suggested developing a Reflective Coding Matrix at this point in the research. While we recognize the art of grounded theory analysis (Strauss & Corbin, 1998), a more specific method for understanding the relationships among the categories seems necessary prior to construction of a Reflective Coding Matrix. In the example study, Strauss and Corbin's investigative questions were engaged to effectively understand the relational dynamics of the 54 primary categories, a matrix called a Conditional Relationship Guide was created, see Table 1.
        Beginning with the category, Ability to Adapt, notice that the format is designed to ask and answer each relational question about the category named in the far-left column.

- What is [the category]? (Using a participant's words helps avoid bias.)
- When does [the category] occur? (Using "during…" helps form the answer.)
- Where does [the category] occur? (Using "in…" helps form the answer.)
- Why does [the category] occur? (Using "because…" helps form the answer.)
- How does [the category] occur? (Using "by…" helps form the answer.)

- With what Consequence does [the category] occur or is [the category] understood?

The first question was "What is Ability to Adapt"? The Ability to Adapt was defined by the participants as "shifting perception to discover and implement new alternatives" (Scott, 2002, p. 216). It works to either paraphrase the participants' collective definition or to use the words of a specific participant that seem to capture the collective intent of all participants who contributed to this category. For Ability to Adapt a collective definition was provided, however for most categories the words of a specific participant were used. In most cases the latter method is preferable to avoid drifting into the meaning of the researcher, possibly blending researcher meaning with that of the participants.

The second question was "When does Ability to Adapt occur"? (Notice that it helps to use the word "during" in the answer of "When.") The participants used their Ability to Adapt during times of Adversity or challenge, often during their Pursuits, when Age Factor was an issue, and when dealing with the Negativity of others. The relationships are categories (in italics) for the data provided by the participants and, via the study database, can easily be traced. The third question was "Where does the participant's Ability to Adapt occur"? (Using the word "in" helps to form the answer to "Where.") The participants employed their Ability to Adapt in their Backgrounds and in the Steps of their Pursuits. Notice that this process relies heavily on the judgment of the researcher. Another researcher might make slightly different decisions. For example, Ability to Adapt could also have been said to occur "during" the Steps of the Pursuit, answering the "When" question. While the decision was made to be specific in the answer to "When," the decision was also made to answer broadly, in the Steps of the Pursuit for "Where." Variability in protocol among researchers is inevitable; however, regardless of researcher protocol decisions, consistency is important to trustworthiness.

The fourth question asked was "Why does Ability to Adapt occur? (It helps to begin with "because" in answering this question.) The participants used their Ability to Adapt because they expected Obstacles to be Part of the Process; Business as Usual, Nothing Personal; and because Others Affect their Pursuits. Notice that the "When, Where, and Why" questions identify conditions and the structure or frame. The fifth question, asking "How," identifies actions and interactions among the categories, the idea of dynamic process over time. It is this latter question that provides the depth that leads us to the participants' mode of understanding the consequences. (Using the word "by" helps form the answer to this question.) The participants used their Ability to Adapt by shifting their Perception, remaining Open to Possibility and Open to Learning from any Source, by being willing to Risk, approaching situations with a Must-Be-A-Way attitude, by Focusing on What's Important, and by Doing Those Things That I Can Control.

The sixth and final investigative question on the guide asked "With what Consequence does Ability to Adapt occur or with what Consequence is Ability to Adapt understood"? The consequence in the example study was experience at the lived meaning level. It was the meaning the participant gets – in this case purposefully and sometimes at extreme expense through his or her own actions. The participants understood consequences of using their Ability to Adapt as Choice. Considering the importance of

the Consequence to the participants, Consequence categories in the Guide become key categories to investigate with regard to relationships and linkages to the other categories.

Using this process, a Conditional Relationship Guide relates structure to process. The consequences developed with the Guide, further contextualize the central phenomenon on the Reflective Coding Matrix; see Table 2. Those categories on the guide that are not consequences are likely to be dimensions of consequences, and become dimensions on a Reflective Coding Matrix. Again, it is important to mention the art of this process (Glaser & Strauss, 1967; Strauss & Corbin, 1998). Subjectivity is one reason for applying crystallized verification (Richardson, 2000) of the emergent relationships with data collected in various forms. It is also a reason for the highly recommended practice of memoing (Glaser, 1978; Glaser & Strauss, 1967) or journaling (Richardson, 1994). Memos during this particular time in the analysis are invaluable both during analysis and later in report writing.

Table 1. **Example of High Self-Efficacy Conditional Relationship Guide (Scott, 2002).**

Category	What	When	Where	Why	How	Consequence
Ability to Adapt	Shifting Perception to discover & implement new alternatives	During times of Adversity Often, when Age Factor is an issue Dealing with the Negativity of others	In participant's Background In Steps of Pursuit	Obstacles Part of Process Business as Usual, Nothing Personal Others Affect Pursuit	Shift Perception Open to Possibility Open to Learning from Any Source Risk Must be a Way Focus on What's Important	Choice
Adversity	Obstacles, illness, injury, rejection of others, negativity, lack of resources, & fundamental to growth	Throughout life During Pursuit	In Background In Steps of Pursuit	Others Affect Pursuit Risk Age Factor Obstacles Part of Process Business as Usual	Perceptions of: Negativity Lack of Knowledge Differences Between US & Other Countries	Perception
Age Factor	In late life, age affects view of ability, not limiting if have health, provides sense of urgency	Mid- to late-life (56 – 70 in this study)	Extraordinary Involvement in Pursuits	Physical/ Health Limitations Others Affect Pursuit	Age diminishes endurance Expressions of age-related Negativity in pursuit	Perception
Background	Expressed areas of Participants' history & philosophy	Throughout life	Venues of life & Pursuit	Belief	Others Affect Pursuit Support & Belief of Others	Belief Self-Belief/Efficacy

Table 2. **Example High Self-Efficacy Reflective Coding Matrix (Scott, 2002).**

Reflective Coding Matrix					
Core Category	Commitment to Extraordinary Involvement				
Properties	Process	Position	Perception	Product	Purpose
Processes	Choice	Conviction	Belief	Achievement	Development
Dimensions	• Follow Direction That Inspires Me • Ability to Adapt • Focus on What's Important • Doing Things Can Control • Must be a Way • Obstacles Part of Process • Business as Usual, Nothing Personal • Choice Toward is Also Away From • Open to Possibility	• Pursue What's Right for Me • Sense of Autonomy • Risk • Epiphany • Others Affect Pursuit • Negativity • Trends & Patterns in Life • Difference Between US & Other Countries	• Age Factor • Sense of Urgency • Mature Perspective Allows Greater Freedom • Adversity • Perseverance • Can't is Suicide • Faith • Who I am • I Don't Know What I Can't Do • Knowledge Authority	• Sense of Accomplishing • Success Achievement Requires Plan • Keep Moving Forward • Pursuit Evolved • Strategies • Competing • Steps of Pursuit • Learning the Craft • Can Achieve Any Goal if Work Hard • Learning from Any Source	• Personal Expression • Pursuit Exceeded Expectations • Sense of Self-Worth • Communicating Perspective • Compelling Passion • Creative Energy
Contexts	Challenge	Personal Criteria	Identity	Personal Goal	Personal Meaning in Goal
Modes for Understanding the Consequences	Momentum in a Direction	Sacrificing Ordinary for Extraordinary	Self-Efficacy	Progressive Realization of Worthwhile Goals	Maximizing Personal Potential Creates Positive Force in the Universe

Reflective Coding Matrix

The Conditional Relationship Guide identifies the relationships and interactions of the categories one with the others, and also describes how the consequences of each category are understood. It is on this latter group that we primarily focus during this phase of the analysis. The emergence of these key properties and modes of understanding the consequences is an indicator that we are reaching theoretical saturation (Glaser, 1978). Table 2, an example Reflective Coding Matrix from the self-efficacy study, is our loom for weaving a story line of the many patterns discovered in the Conditional Relationship Guide.

A primary objective of constructing a Reflective Coding Matrix as a relational hierarchy is to contextualize the Core Category, the central phenomenon about which all other major and minor categories relate. Once a Core Category is determined, all other categories become sub-categories. The sub-categories in the relational hierarchy become the Core Category descriptors: the properties, processes, dimensions, contexts, and modes for understanding the consequences. The method for identifying the Reflective Coding Matrix descriptors begins and is contingent upon the relationships established by the Conditional Relationship Guide.

First, the Conditional Relationship Guide identified the Consequences as the key categories about which all other categories are focused. Therefore, in order to work with the Consequences, all categories that did not appear as consequences or appeared only once are temporarily set aside. (In doing so, the set-aside categories are predicted to eventually become dimensions in the Reflective Coding Matrix.) In the example self-efficacy study removing the set-aside categories left 15 Consequence categories: Choice, Perception, Belief, Self-Belief/Efficacy, Commitment, Extraordinary Involvement, Sense of Autonomy, Ability to Adapt, Sense of Accomplishing, Success Achievement, Personal Meaning of the Goal, Progressive Realization of Worthwhile Goals, Sense of Accomplishing, Identity, and Sacrifice Ordinary for Extraordinary. These categories became the descriptors of the Reflective Coding Matrix.

The Reflective Coding Matrix is designed to develop a Core Category and define and describe it in a manner sufficient to account for the study data as a whole. The Core Category is intended to name the Central Phenomenon of the study. The descriptors on the Reflective Coding Matrix that define and contextualize the Core Category are the properties, processes, dimensions, contexts, and modes for understanding the consequences. There are many possible approaches to developing the Core Category. The approach in the example study was to begin by stepping back to gain a more holistic Constructivist perspective.

At this point in the example study, another tool was employed to verify the relationships established in the Conditional Relationship Guide among the 54 elemental categories to separately identify and relate the Consequences. A three-dimensional model was constructed using index cards, thread, paper clips, and scaffolding of one-inch diameter plastic piping. First, I labeled each card with the name of one of the 54 categories and both upward and downward links. For example, Ability to Adapt had an upward link to Choice and three downward links to Must Be a Way, Open to Possibility, and Obstacles are Part of the Process. In a hierarchical fashion, the cards were fastened to each other and suspended from the scaffolding.

Several linkages were complicated and the model demonstrated the neural network nature of those interconnections. This redundant tool in the example study, graphically demonstrated the relationships established via the Conditional Relationship Guide.

During this process, certain "low-hanging fruit" are likely to be identified for the Reflective Coding Matrix and may be placed in those descriptor features on the Matrix that just seem to make sense. For example, the sub-categories earlier set aside are likely continued to be predicted to become dimensions, though it may not yet know in which columns specifically they will finally reside. Next, the blocks for another descriptor on the Matrix, processes, will be identified among the major (Consequence) categories. In the example self-efficacy study eight categories were identified as possible processes: Choice, Perception, Belief, Commitment, Extraordinary Involvement, Success Achievement, Progressive Realization of Worthwhile Goals, and Sacrificing Ordinary for Extraordinary. Identifying the Reflective Coding Matrix descriptors is rather like putting a jigsaw puzzle together, trying a piece at a time until it all fits and makes sense. In the example study five processes are eventually identified: Choice, Conviction, Belief, Achievement, and [self] Development. After identifying processes, we want to determine contexts among the same major categories. In the example study it seemed that without identifying a temporary Core Category, there could be an argument made for any of the 15 Consequence categories being contexts. Therefore, once groupings have been completed it is time to identify a temporary Core Category.

Next we choose to identify which of the major categories are the modes for understanding the consequences of a Core Category. Again some selected categories may be the same as those identified as another descriptor. Finally, the properties will be identified last as they should be over-arching and more abstract than the categories themselves. In the example study, stepping back and reflecting on the entire study, the question was asked "What might be some possible properties"? Success Achievement was abstracted to Product. Choice and our other processes were to be abstracted to Process. (Again, it is useful to pick the "low-hanging fruit" first.) Belief, Sense of Autonomy, Sense of Achieving, and Perception were abstracted to Perception. As Perception was one of the example study categories, it made sense to locate it on the Reflective Coding Matrix in one of the Properties descriptor blocks.

At this stage of analysis, it is time to make an educated guess at what the Core Category might be. In the example study I began with Extraordinary Involvement and returned to the data to ask, "What do we know about Extraordinary Involvement from the participants in this study"? First, Personal Criteria have to be met for Commitment to Extraordinary Involvement. If Personal Criteria are met, Perseverance is not an issue, because the Pursuit is a "pull," not a "push." (Lou said, "I'm not one of these people you have to push." Identity is also involved. Choosing to Persevere/Commit/Accomplish is "who I am." (Patricia and others told us that.) Epiphany brings personal Meaning in the Goal into focus and serves as a catalyst for making Choices to Commit, to Sacrifice, to Risk. (Karen told us she was more afraid of not having the chance to sail around the world than of any risks in her choice.) Commitment raises the level of priority and Meaning in the Goal, compelling the participant to Sacrifice Ordinary life for all that extraordinary life might hold. (Floyd helped us understand that.) It is a bet-on-the-win view of life. The participants are each

pursuing what is Right for Me, because enough Personal Criteria are met to cause the Pursuit to be at the Identity level and valued in the participants' Belief systems. (Nancy walked us carefully through an understanding of those concepts.) And central to Committing to an Extraordinary Involvement is Identity. If, due to the coalescing of Personal Criteria, Committing to Extraordinary Involvement is "who I am," then I am making my Choice to be me. In the example study I was satisfied that Extraordinary Involvement could be the Core Category, and placed it in the appropriate block on the Reflective Coding Matrix.

With the Core Category block filled, we can fill in other blocks with categories we have reason to believe might work and verify that each sufficiently supports the Core Category and that the whole fits the data. This iterative process weaves continually back to the open coding and back further to the data and the literature to sort and verify relevance and fit.

Return again to Table 2 and notice that the Core Category of the example study eventually became a more refined Commitment to Extraordinary Involvement. With the exception of Perception, the properties descriptors are all terms abstracted to a level higher than the processes named. Momentum in a Direction, which described the mode by which the participants understand the consequences of Choice, was particularly difficult to develop. All participants recognized the sense of movement. However, the concept "progress" connotes steady forward movement, and they were adamant that "the wind can blow you back," (Participant Karen) so while there was a solution, it may have been necessary to back up several steps or "step it sideways" (Participants RT & Floyd) in order to move forward again. Nonetheless, some movement was always occurring, hence, Momentum in a Direction.

Our analytical momentum has moved us toward the next and final phase in the grounded theory analytical process, selective coding, the process of integrating, interpreting, and refining the theory (McCaslin & Scott, 2003; Strauss & Corbin, 1998). During the selective coding phase we develop the story line and interpret the emerging theory.

Interpretation and Theory

Selective coding, the final coding phase, integrates all the interpretive work of analysis. It is similar to reflective coding, but conducted at yet higher levels of abstraction (Strauss & Corbin, 1990). The principal objective of selective coding is to explain the story line. In the example study the objective was to develop a story line that defined the central phenomenon, Commitment to Extraordinary Involvement. Questions of the data and the researcher are asked to describe the central phenomenon structure and to discuss its process as it exists dynamically in its ecology. For instance, in the example study I asked, "What is the central phenomenon describing the nature of high self-efficacy beliefs in adults over age 50 persevering in challenging life pursuits"? That question became, "What is the nature of Commitment to Extraordinary Involvement in adults over age 50"? And further, "How does this phenomenon proceed, with what variability and what effects in both micro and macro environments from the participants' perspectives"? This process involves writing a general descriptive overview, or story line, and verifying it with the participants. As we will

see, in the example self-efficacy study the Reflective Coding Matrix, Table 2, can be read left to right, revealing the story line.
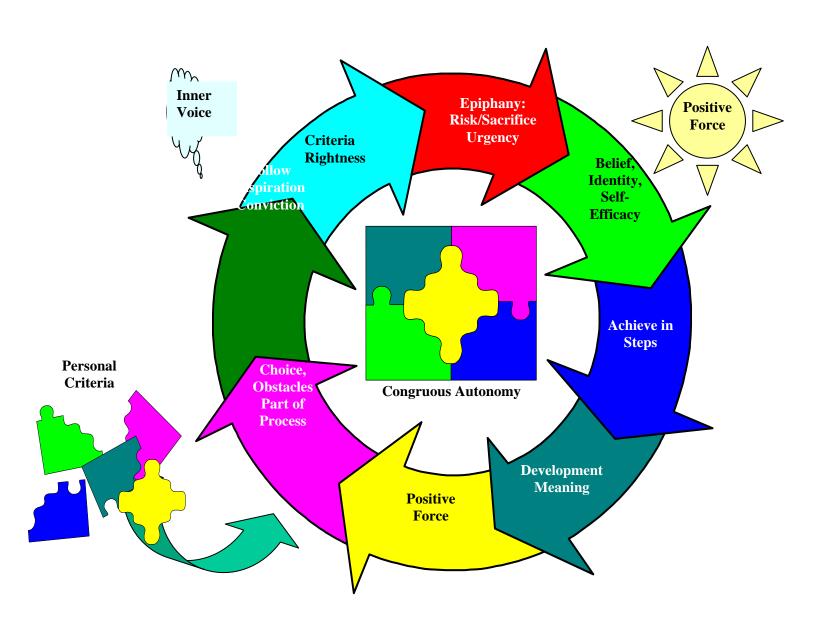
Development of Story Line

The remainder of the selective coding process entails relating salient phenomena to the Core Category or central phenomenon, always maintaining the central phenomenon at the heart, as an ever widening tapestry as the threads of lesser phenomena are tied to and woven around it. The properties and dimensions of the Core Category are more fully developed at this time and the threads of the properties and dimensions of related phenomena, categories, and concepts are interlaced and woven tightly together via the Reflective Coding Matrix developed in reflective coding. The example self-efficacy story line has five basic processes by which the participants support their Commitment to Extraordinary Involvement: Choice, Conviction, Belief, Achievement, and [self]-Development. Beginning with the process on the far left (Choice)*,* including the context (Challenge) in which the process occurs, the mode for understanding the consequences (Momentum in a Direction), and the its dimensions, moving left to right process to process on the Reflective Coding Matrix, Table 2, the features of the story line can be described and a Conditional Matrix (see Figure 1) developed. In the example story line, participants each made a choice to undertake a challenging pursuit. Each held a view that obstacles are part of the process, business as usual; adapting to meet the needs of each challenge, to focus on what's important; and to recognize a momentum in a direction. Each participant held a conviction that came from listening to his or her own inner voice, following a personal inspiration understood as "right for me," with a sense of autonomy (bracketing negativity), catalyzed by a personal epiphany: that the greater risk and sacrifice would be "not being me." That conviction was foundational to commitment to their pursuit. Individual belief systems were foundational to identity and kept each open to possibility. Maturity gave them freedom in their commitment, yet their age gave them a sense of urgency. Together, high self-efficacy with a strong sense of identity committed each to "be who I am." Achievement of personal goals was understood as progressive realization. The participants were intrinsically motivated by their individual commitment to personal development, "my expression of who I am." They recognized that creating a positive force in the universe through their self expressions is important, but in their view that is secondary, because it cannot happen without personal development. Developing their highest potential was their primary meaning.

Using the story line as a guide, we step back again to weave a version of the story at a higher level of abstraction, integrating structure and process in a single statement. Thus, the theory emerges. The example self-efficacy study advanced a theoretical position of congruous autonomy as an enduring, self-efficacious belief in personal capability and compelling rightness and identity, inspiring commitment to extraordinary involvement in a pursuit (rich in lifetime patterns and trends), despite sacrifice and risk, to develop one's highest potential.

Finally, we look for patterns, repeated relationships, and we group the data accordingly to give the emerging theory specificity. In the example study specificity yielded specific conditions under which high self-efficacy occurred in a manner that demonstrated transferability. Through providing credibility, transferability, and

dependability of the data across all participants and the literature trustworthiness of the story line and emerging theory is greatly accomplished.

Figure 1. Example Conditional Matrix Representing the Theoretical Position of Congruous Autonomy.

Summary

Relating the categories in grounded theory analysis weaves together all of the unraveled threads of data created during open coding, with the objective of identifying and naming the core category or central phenomenon of the study. This second analytical phase is set at a higher level of abstraction in order to view the data as a whole and calls for developing relationships with the color and detail of properties and dimensions. We walked through the process for employing two principal instruments for developing those relationships, explained via the example self-efficacy study. The Conditional Relationship Guide provides the researcher with an understanding of relationships among the categories necessary to complete the second tool, the Reflective Coding Matrix. The Conditional Relationship Guide contextualizes the central phenomenon and related the structure with the process by answering the investigative questions "What, When, Where, Why, How, and with what Consequence." In the example study a physical model of those relationships was constructed to verify the relationships, and to begin developing the Reflective Coding Matrix. The Reflective Coding Matrix captures the higher level of abstraction necessary to move to the final phase of grounded theory analysis, selective coding and interpretation of the theory in a story line and a graphic representation of the story line, a conditional matrix. In the example self-efficacy study, the conditional matrix depicted the dynamic qualities of the emergent theoretical position of congruous autonomy. Together, the Conditional Relationship Guide and the Reflective Coding Matrix provide a bridge from analysis to interpretation and ultimately to the theory generation.

References

Boeije, H. (2002). A purposeful approach to the constant comparative method in the analysis of qualitative interviews. *Quality and Quantity, 36*, 391-409.

Charmaz, K. (1994). 'Discovering' chronic illness: Using grounded theory. In B. G. Glaser, (Ed.), *More grounded theory methodology: A reader* (pp. 65-94). Mill Valley, CA: Sociology Press.

Charmaz, K. (2000). Grounded theory: Objectivist and constructivist methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed.) (pp. 509-536). Thousand Oaks, CA: Sage.

Glaser, B. G. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory.* Mill Valley, CA: Sociological Press.

Glaser, B. G., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Chicago: Aldine.

McCaslin, M. L. (1993). *Leadership in rural communities: A grounded theory study.* Unpublished doctoral dissertation, University of Nebraska, Lincoln.

McCaslin, M. L., & Scott, K. W. (2003). Method for studying a human ecology: An adaptation of the grounded theory tradition. *The Researcher, 17*(1), 26-32.

Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adulthood: A comprehensive guide* (2nd ed.). San Francisco: Jossey-Bass.

Mezirow, J. (1991). *Transformational dimensions of adult learning*. San Francisco: Jossey-Bass.

Richardson, L. (1994). Writing: A method of inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 516-529). Thousand Oaks, CA: Sage.

Richardson, L. (2000). Writing: A method of inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 923-948). Thousand Oaks, CA: Sage.

Scott, K. W. (2002). High self-efficacy and perseverance in adults committed to new challenging life pursuits after age 50: A grounded theory study. *Dissertations Abstract International, 63*(04), 2101B. (UMI No. 3050223)

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Newbury Park, CA: Sage.

Author's Note

Karen Wilson Scott, Ph.D. is currently a Visiting Assistant Professor for the University of Idaho in the Division of Adult Counseling, Technology, and Education, who joined the Idaho Falls Center from the Idaho National Engineering and Environmental Laboratory with a background of 25 years in corporate communications and education. Her research emphases include: high self-efficacy and congruous autonomy, adult learning, interpersonal communications, group dynamics, and development of qualitative research methods. Correspondence regarding this article should be addressed to Dr. Scott at the University of Idaho, 1776 Science Center Drive, Idaho Falls, ID 83402; Telephone: 208-282-7967; E-mail: Karen@if.uidaho.edu.

Author's Citation

Scott, K. W. (2004). Relating categories in grounded theory analysis: Using a conditional relationship guide and reflective coding matrix. *The Qualitative Report, 9*(1), 113-126. Retrieved [Insert date], from http://www.nova.edu/ssss/QR/QR9-1/wilsonscott.pdf