

Introduction

Thinking About Thinking

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LEARNING OBJECTIVES AND SUMMARY

- Your mind will reflect on what it means to “think qualitatively.”
- Your mind will distinguish between and, through later rehearsal (i.e., recall, repetition, long-term memory storage, transfer), remember key terms related to qualitative inquiry.



This chapter begins with a brief overview of methods of mind for inquiry. Major terms used throughout the book are defined and clarified, particularly those that tend to be used interchangeably in qualitative research (all bolded terms appear in the Glossary). The chapter closes with some thoughts on technology and thinking recommendations for reading this text. Sections in the Introduction include

- Thinking Qualitatively
- On Epistemology
- Terminology
- On Technology
- Closure
- Exercises for Thinking About Thinking

Thinking Qualitatively

Thinking in this book refers to your mind's ways of working—that is, the mental resources you draw upon to access, organize, and analyze information; make decisions; and solve problems. David Sousa (2011), a specialist in learning and the brain, explains that

the human brain . . . is an open, parallel-processing system continually interacting with the physical and social worlds outside. It analyzes, integrates, and synthesizes information and abstracts generalities from it. Each neuron is alive and altered by its experiences and its environment. As you read these words, neurons are interacting with each other, reforming and dissolving storage sites, and establishing different electrical patterns that correspond to your new learning. (p. 4)

If you are age thirty or younger, your brain is still maturing biologically and is not yet fully “installed” (Wolfe, 2010, pp. 84–85). But even after thirty and through middle age, the brain continues to evolve. Some cells do die off, and the brain shrinks by 2 percent every decade as we age in midlife; but myelin, the essential white matter that coats trillions of nerve fibers in your head, increases in the language region. Neuroscientists also believe that the middle-aged mind becomes more densely wired and less rigidly bifurcated, enabling more bilateral (two-hemisphere) functioning and creative thought (Strauch, 2010, pp. 51, 86, 98–99, 107).



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Figure 1.1. As you read these words, neurons are interacting with each other in your brain. (Sousa, 2011)

Virtually all of us share a comparable neurology, yet each one of us thinks differently. Our unique brains have been and continue to be custom-hardwired through our personal biology, learnings, experiences, memories, habits, health, environment, and other conditioning factors that we can and cannot control. The science of understanding how the brain works has rapidly accelerated over the past few decades, providing us with new ways of changing unproductive patterns of living and working (e.g., Duhigg, 2012; Goleman, 1995; Kahneman, 2011; Strauch, 2010) and helping us to develop more innovative ways of teaching and learning (e.g., Jensen, 2001; Sousa, 2011; Wolfe, 2010). Even the classic 1950s Benjamin Bloom taxonomy of six cumulative, hierarchical levels of human thought (knowledge, comprehension, application, analysis, synthesis, and evaluation) has been revised and reprioritized for 21st century thinking as

active cognitive processes that fluidly overlap: remember, understand, apply, analyze, evaluate, and create (Sousa, 2011, pp. 256–264).

Qualitative research is an inclusive term for a wide variety of approaches to and methods for the study of natural social life. The **qualitative data** collected and analyzed are primarily (but not exclusively) nonquantitative in form, consisting of textual materials (e.g., interview transcripts, field notes, documents) and visual materials (e.g., artifacts, photographs, video recordings, Internet sites) that document the human experiences of others or of oneself in social action and reflexive states (Saldaña, 2011b, pp. 3–4). Some of the most immediately recognized genres of qualitative research are ethnographies and case studies, but this category of research also includes a diverse range of methodological approaches such as grounded theory and poetic inquiry. Qualitative data analysis methods consist primarily of techniques and strategies for formatting, condensing, arraying, and constructing data, codes, categories, themes, assertions, narratives, and so on.

Thinking qualitatively means applying a particular set of thinking patterns and mental operations throughout the stages of qualitative inquiry. These thinking patterns can range from basic cognitive applications such as observation and memory to more advanced functions such as evaluation and creativity. These patterns include the canon of logical reasoning methods, such as inference-making and deduction, as well as more artistic constructions of life, such as symbolism and metaphor. There is no *one* way to think qualitatively; rather, it is a repertoire of different thinking methods, many of them consciously applied on an automatic or as-needed basis, and some of them working subconsciously and brought forward to consciousness in a serendipitous moment of connection, synthesis, or crystallization—a mental process labeled **consolidation** (discussed in Chapter 11).

Perhaps those first educated in quantitative methods and statistics have the most difficult time transitioning to thinking qualitatively. The process is comparable to learning a foreign language in adulthood when the brain is too “cemented” to think fluidly with new vocabulary and unfamiliar rules for grammar and syntax. Quantitative researchers have been trained to apply numbers, formulas, and a particular set of logical reasoning methods in collecting data, testing hypotheses, and drawing conclusions. The standardized, algorithmic, outcome-based functions of quantitative research methods indoctrinate its students into ways of thinking that are prescriptive, formulaic, and virtually nonnegotiable.

Qualitative inquiry, by nature, is a customized, inductive, emergent process that permits more of the researcher’s personal signature in study design, implementation, and write-up. Certainly there are recommendations and guidance for the conduct of the researcher, ranging from how to construct a **conceptual framework** to how to ask effective interview questions. There are hundreds of methods books on how to take substantive field notes or analyze qualitative data, and even books dedicated solely to the writing of reports ranging from the traditional to creative nonfiction presentations.

But thinking qualitatively is more than methods. It is learning how to work with textual and visual languages in such ways as to use primarily (but not exclusively) words rather than numbers as the media for analysis. It is, in some approaches to qualitative inquiry,

meticulously reviewing vast amounts of language-based text and condensing it into summative forms such as codes, categories, themes, concepts, assertions, and theoretical insights. In other approaches, it is creating evocative narratives that uniquely describe and comment on the facets of social life observed and studied. In still other approaches, it is using artistic modalities such as live theatre, visual art, dance, film, and music to represent the lived experiences of participants. And in other approaches, it is critically scrutinizing and critiquing the social injustices that exist in the world in hopes of generating positive change for human beings. Just as there are a panoply of thinking modalities, there are a panoply of qualitative research genres and styles.

Thinking qualitatively also means purposely adopting different lenses, filters, and angles as we view social life so as to discover new perceptions and cognitions about the facet of the world we're researching. If one of the primary goals of qualitative research is to discover what it means to be human, then we as researchers need to understand the rich diversity of human experience. It's one thing to be healthy; it's another to be a cancer survivor. It's one thing to grow up in an upper-middle-class suburb; it's another to grow up in poverty and homelessness. It's one thing to experience life as a White, heterosexual, 50-year-old male; it's another to experience life as a 25-year-old Latina lesbian. The more you can take the perspective of and empathize with your participants, the better you'll be able to understand their varied points of view.



Source: Photodisc/Photodisc/Thinkstock.

Figure 1.2. Each of us interprets social life through various lenses, filters, and angles.

Lenses, filters, and angles refer to more than just demographic attributes. Thinking qualitatively also means acknowledging that not everyone thinks the same way you do. Thus, one of our goals is to try as best we can to think about how others might think. The sociologist will see life differently than the psychologist. The information technology specialist will experience the workplace differently than the janitor. A kindergarten teacher in an inner city school will learn about human development—if not life itself—differently than a tenured professor of biology at an Ivy League university. Since filters consist partly of an individual's value, attitude, and belief systems, the researcher must try to set aside or **bracket** his or her own worldview in order to respect and understand another's. (We don't always need to accept another person's worldview, but we should try at the very least to understand it.)

Those who attempt to manipulate our thinking through subliminal, propagandistic, repetitive, or covertly coercive tactics might succeed in changing our perspectives, cognitive scripts, and habits of mind. Sociological theories such as *differential association* posit that people's values are influenced by the groups they interact with most intensively (Rubin & Rubin, 2012, p. 132). That may readily apply to a qualitative researcher immersed in a cultural setting that seems to shake the very foundation of his or her own values system. Such moments of **cognitive dissonance** can actually be a good thing, for they signal the unbalancing of a fixed way of thinking about the world and force the acknowledgment of and possible clarity about others' points of view.

Thinking qualitatively is heightened thinking—**metacognition**—about your own mind and how it works when analyzing data and reflecting on life. Metacognition is not just thinking but knowing how to think, and knowing how to know. It is hyperawareness within social environments for observing sensory details and interpreting subtexts from people's words and actions. Thinking qualitatively is pondering the nuances of your data even when you're "off the clock" from fieldwork and data analysis. Thoughts will occur to you at the most unexpected and inopportune times—while driving, in the shower, and so on. Thinking qualitatively is purposely attempting and pushing yourself to take your thinking one step further by reflecting on the study's interrelated connections to other concepts and their implications for big-picture ideas. Thinking qualitatively is a 24/7/365 job.

And thinking itself is hard work. The brain uses glucose and oxygen at 10 times the rate of the rest of the body. The brain constitutes only about 2 percent of a human's body weight yet consumes approximately 20 percent of the body's caloric intake (Sousa, 2011, p. 15; Wolfe, 2010, p. 5). Neuroscience is still uncovering the mysteries of how the complex brain functions, so it should not be perceived as defeat when qualitative researchers feel they haven't perfectly understood the lives of people they're studying. We can only, at best, approximate through our representations and presentations what it means to be another human. Words are not all we have to communicate our social insights, but they are the most frequent mode of informing others about what we've learned.

On Epistemology

Since thinking is central to this book, a brief discussion of epistemology is merited. **Epistemology**, broadly, is a theory of knowledge construction based on the researcher's worldview—that is, how his or her lens on the world and angled ways of knowing it focus and filter his or her perception and interpretation of it (Saldaña, 2011b, p. 22).

As qualitative researchers, we construct in our minds the natural experiences we observe and the analytic connections we make with our data. There is no "truth" external to us waiting to be discovered. But I do put forth that what we perceive and interpret about life is greatly influenced and affected by the lenses, filters, and angles—constructs similar to a camera—through which we view the world. A **lens** might refer to a significant attribute such as the researcher's gender, age, ethnicity, sexual orientation, economic class, or occupation. A lens might also consist of the

particular research methodology employed for a study (e.g., phenomenological, feminist, arts-based, ethnographic) or a disciplinary approach (e.g., sociological, psychological, anthropological). A **filter** could refer to your set of personal values, attitudes, and beliefs about the world, formed by your unique personal biography, learned experiences, and individual thinking patterns. Filters might also consist of particular theoretical perspectives or standpoints within a discipline, such as analysis of an interview narrative for its literary elements by one researcher and its psychological meanings by another researcher. An **angle** might function as a cultural landscape position you hold, such as insider versus outsider, intimate versus distant, emotionally invested versus objectively detached. Angles also refer to micro-, meso-, or macro-perceptions of social life—ranging from the perspectives of an individual participant to those of a national populace. These factors, in combination, contribute toward complex, multifaceted, multidimensional ways of constructing knowledge that both subconsciously and even intentionally and politically frame your observations of the world:

Women may adopt a feminist research epistemology to explore gender- and power-related issues. Lesbians, gays, and the transgendered may adopt the tenets of what is labeled *queer theory* in their study of gay culture, heterosexism, and homophobia. Researchers of color and their personal life experiences with prejudice and discrimination from the mainstream accumulate to develop a distinctive ethnic worldview. Thus, there are no such things as “neutral,” “bias-free,” or “objective” lenses for qualitative researchers. (Saldaña, 2011b, p. 23)

We openly and admittedly undertake the research enterprise as *interpretivists*—people who explain social life as they construct it in their own minds. That should not suggest an “anything goes” mentality in which your own opinions supersede rigorous investigation, however. There needs to be a balance between systematic examination of evidence and personal interpretation of what the data suggest. It is unlikely that any two qualitative researchers independently exploring the same phenomenon will arrive at the same conclusions. We bring our personal signature to the inquiry, from research design to write-up. The epistemology you use is uniquely your own, since you most likely think like no one else. Cuzzort and King (2002) go so far as to claim that

most of what we know about our social worlds is what we have been told, not what we have observed directly. At the very least, more than 90 percent of our social knowledge is what we have heard about or read about. (p. 9, emphasis in original)

Since research is an act of persuasion—the making of your case for readers—you must convince your audience that you’ve done your homework and carefully thought through all aspects of your study. How you think is how your signature epistemology works. Laying bare the lenses, filters, and angles you employed frames your reader for what’s to come, and allows all of us to assess the credibility and trustworthiness of your account (Lincoln & Guba, 1985). Several ways of thinking described throughout these chapters hopefully will help with that task, because you can’t apply what you don’t know. Therefore, a major objective of this book is to first bring *cognitive awareness* of different ways of looking at and thinking about the social world, and then to

stimulate *independent reflection* of these methods as well as *connection-making* between them and your own memories of experiences. After that, the ultimate objective is the *transfer and application* of these methods to your particular current and future research endeavors. For an extended discussion of epistemology (and ontology—the nature of being) in qualitative research, see *The Science of Qualitative Research* (Packer, 2011).

Terminology

There is no executive board or blue ribbon panel in the field of qualitative research mandating the standardized definitions of terms. The published literature has certainly established some commonly accepted meanings for approaches to inquiry such as grounded theory, case study, and ethnography. Some genres, however, such as phenomenology and narrative inquiry, seem open to methodological interpretation and procedural methods. As authoritative references, the dictionary and thesaurus guide us in our more precise use of terms, but even those resources can confound rather than clarify when you try to determine, for example, the difference between a *concept* and a *construct*. It is not my goal to propose any such standardization for the field in this book, but I do provide a glossary at the end of the text to offer how I conceive various terms used frequently in qualitative inquiry, purely for purposes of consistency in *Thinking Qualitatively*. In order for me to communicate with you clearly, we need to share a common understanding of the key vocabulary—the cognitive symbol systems—used in this book.

Let's review some of the most used and sometimes inconsistently interchanged terms in qualitative research. Not all of them are addressed below—just those that seem to call for a moment of clarity before we proceed further. Though I have relied on dictionaries to assist me, I have also accessed the qualitative research methods literature and my personal ways of working to synthesize these proposed meanings.

Inquiry, Research

Inquiry is a general term for, and refers broadly to, the act of investigation. **Research** is systematic exploration, usually connected with a specific study's purpose and goals. *Qualitative inquiry* and *qualitative research* will be used interchangeably throughout this book.

Thinking, Reflection, Reflexivity, Refraction

All of these terms refer to mental processes, *thinking* being the umbrella term. Many within qualitative inquiry perceive writing as thinking. And, even as you're reading this book, you're thinking. When are you *not* thinking? Even during sleep, your brain is involved in sophisticated neural activity as it dreams, including the fixing of memories and the connecting of disparate

bits of information. Thinking is a given of everyday life. Thinking *in a focused manner* is a necessity for all researchers. Concentration is not cognitive—it's affective, meaning, you must feel self-motivated to think and willingly want to concentrate.

Cognitive tasks range in complexity from simple recall of information (remembering) to sense-making (understanding) to problem solving (applying), some of which may involve values systems integration. Also, the associations we make with any number of words or ideas are based on our personal experiences and memories. Add to that the emotional dimensions of memory and processing (with positive emotions enhancing engagement and negative emotions often interfering with task completion), and it becomes clear that basic mental processes and critical and creative thinking skills are unique to each individual. Analysis may seem like the ultimate thinking task, but the abilities to *evaluate* and *create* are considered higher-level modes of thought, requiring judgment and the new formulation of ideas (Sousa, 2011, pp. 256–257). Thinking is multimodal and multidimensional; there is not just one way to think, but varying levels of thinking from basic to complex. The exclusive divisions of left-brain (i.e., analytical) and right-brain (i.e., creative) functions are outdated, for both work together bilaterally to process information and generate ideas. But there are thinking “specialties” in each hemisphere, with the left handling primarily logic, sequence, and analysis and the right handling primarily synthesis, context, and the “big picture” (Pink, 2006, p. 25).

Reflection and refraction are processes related to concentrated thinking about the study at hand. **Reflection**, whether it consists of thought directed to oneself, discussed with another, or privately written, is the act of pondering various components of the research project to make sense of and gain personal understanding about their meanings. It is making sense of that which may be puzzling or confusing, and understanding the purpose or significance of something. Reflection employs your brain's “default area”—the region where internal monologues and day-dreams occur (Strauch, 2010, p. 78). Talking aloud about something problematic or writing a journal entry for oneself is a way of thinking or figuring out what's going on. It is an internal, reverberative process of question-answer-question-answer-question-answer for generating better awareness and clarity. O'Dwyer and Bernauer (2014) add that **reflexivity** is researchers' “conscious awareness of . . . cognitive and emotional filters comprising their experiences, world-views, and biases that may influence their interpretation of participants' perceptions” (p. 11).

Refraction, a recently evolved perspective, suggests tactical reflection for the purpose of deliberately making things problematic or troubling. Some use the metaphor of a broken or fun house mirror to describe refraction, which distorts an image's true appearance. Refraction is a mental implosion of sorts that prevents acceptance of the first or easiest answer. It entails relishing the complexity of an issue and diverging into multiple mental pathways to account for and ponder various alternatives and possibilities. Poverty, for example, is a phenomenon that needs to extend beyond “the poor versus the rich” in discussion and analysis. Refraction considers how multiple factors such as family history, education, race/ethnicity, gender, religion, language, culture, urbanization, socialization, community, geography, crime, employment, government, politics, social services, personal identity, individual agency, corporate power, human greed, and other factors as well as economics influence and affect the impoverished conditions of so many.

A few scholars in qualitative inquiry seem to fixate on refraction and purposely present, as their research report, summaries of unanswered questions, ambiguities, and inconclusive findings as a way of emphasizing the messiness and uncertainty of contemporary social life. I offer that this is novel postmodern scholarship, yet more of a fad for these times. I myself proclaim (through my masculinist lens, pragmatic filter, and marginalized yet assertive angle) that the purpose and outcome of research is to find answers in order to make a better world. Unanswered questions usually remain unanswered, serving no one and contributing unproductively to the social improvement goals of research. Unanswered questions in print may motivate a few selected readers to reflect. But what runs through my own mind is, “Why are you asking *me* this? Don’t *you* know?”

Algorithm, Heuristic

An **algorithm**, usually connected with quantitative inquiry, is a formulaic approach to solving a problem. A **heuristic** is an open-ended method of discovery, a way of figuring out how to figure something out. As an example, consider the following equation:

$$2 + 2 = ?$$

The algorithm (formula) is *the mathematical function of addition*; the heuristics (open-ended methods of discovery) are simple *counting* and basic *logic* (if 2 is 1 and 1, then 1 and 1 and 1 and 1 is 4).

As a more complex example, how would you determine how another person is feeling? Perhaps an algorithmic solution would be to photograph the person as he or she is experiencing the emotion, then process the digital image through a sophisticated facial recognition software program installed on a computer, which might produce an answer specifying the subject’s most likely emotional state as suggested by the visual data input and the calculations performed by the software. Conversely, heuristics for solving this problem might include asking the person, “How are you feeling?” and assessing the honesty of the answer you get; making inferences about the person’s feelings through your interpretations of his or her facial and body language and tone of voice; accessing your own memories of comparable emotional states from your personal life experiences (generally referred to as **intuition**) and exercising your capacity for empathy so as to possibly feel as the other person does; and striking up a general conversation with the person and inductively, abductively, and deductively (explained later) concluding which state might be present based on the information and cues you receive and your own capacities for **emotional intelligence** and **social intelligence** (Goleman, 1995, 2006). Heuristics, in this case, are not only more time efficient but even more varied and reliable than algorithms.

Qualitative inquiry places great stock in heuristics. Certainly there is an evolved, published canon of recommended guidelines for participant observation, interviewing, and even data

analysis, but the content- and context-specific nature of each particular qualitative research study calls for unique solutions to unique problems. There are virtually no algorithms or formulas to follow for this type of inquiry. We must rely on recommendations rather than requirements; on fluid boundaries rather than tightly defined borders; and on figuring it out as we go along rather than knowing from the beginning exactly how things must proceed. Thinking qualitatively is thinking heuristically.

Method, Methodology

A **method** is *how* you go about doing something. A **methodology** is *why* you're going about it in a particular way. Data collection might consist of methods such as interviews (and their transcription), participant observation (and the taking of field notes), and artifact review (with its digital photographing and analytic memoing). But why would you employ these particular methods? Let's take interviewing as an example.

Kvale and Brinkmann (2009) posit quite sensibly, "If you want to know how people understand their world and their lives, why not talk with them?" (p. xvii). We can infer and deduce only so much about our participants when we simply observe them as they go about their daily lives or when we examine the products they own and create. Interviewing, a purposeful conversation, enables us to ask them questions directly relevant to the research study's goals. Assuming our participants are verbally fluent and truthful, they can provide us with rich answers and insights. The *why* of interviewing *methodology* is to obtain first-person accounts that potentially provide more credible and trustworthy evidence of social meanings to support our assertions about the phenomena we're investigating. But what if our participants have difficulty articulating their perceptions? Then the *how* of interview *methods* comes into play through our strategic use of probing questions, guided conversation, elicitation techniques, and other tactics.

Methodologies also refer to particular qualitative research approaches or genres such as phenomenology, grounded theory, case study, ethnography, narrative inquiry, and so on. The reason why we may choose one genre over the others in our initial research design is because the methodology fits with and accommodates the study's goals or questions. If we are interested in documenting and describing the culture of a group of people, then **ethnography** as a methodology, with its accompanying ethnographic methods, is perhaps the most appropriate choice. If we find a particular individual an intriguing person worth investigating and writing about in depth, then **case study** methodology and compatible methods are likely the most suitable for the enterprise.

Methodology and methods are two separate yet interrelated constructs that are part of your initial research design decisions and conceptual framework development (Maxwell, 2013; Ravitch & Riggan, 2012). Several research methodologies conventionally assume that particular methods will be employed for the investigation (e.g., grounded theory methodology uses a canon of particular coding methods, but different narrative inquiry methodologists recommend their own unique data analysis and write-up methods). Ensure that your methodology and methods harmonize with each other as you plan the study, but also be prepared to change

those initial choices as fieldwork proceeds and you discover that another methodology or other methods may be more appropriate to secure the data and answers you need.

Action, Reaction, Interaction

An **action** is a micro-unit of human activity consisting of a purposeful and meaningful behavior; speaking and mental activity, not just physical motion, are considered actions. **Reaction** is an individual's response to an action—either action from another person or thing or one's own action. **Interaction** is the collective back-and-forth sequences of action and reaction between individuals or between an individual and something else. All three are different yet tightly interconnected processes for observation and analysis. For example, in a classroom, a teacher may initiate an action by asking students a question. Some students react by raising their hands to answer; others react by looking puzzled and not raising their hands. A teacher calls on a student by name, and they have a brief dialogic exchange or interaction as the question is answered and the teacher verbally praises the child for the correct response. These **moments**, whether mundane, routine, conflict-laden, or impacting, are key points of interest for researchers.

Qualitative research encourages fieldworkers to pay careful attention to specific human actions and social interaction in general, yet sometimes neglects to advise attention to reactions. Stage and media actors have an adage: "Acting is reacting." This means that performance is not just a series of one actor's line followed by another actor's line, but a strategic series of give-take-give again-take again exchanges. Performers also know that a character's actions in a script are driven not just by what a character wants but by what a character wants other characters to do. Good actors do on stage what humans do in everyday life: we act and react in order to interact. And good researchers pay close attention not just to how humans act and interact, but how they react to the social conditions around them that influence and affect their daily and long-term lives. To quote a folk adage: "Life is 20 percent what happens to you and 80 percent how you react to it."

Code, Pattern, Category, Theme

For traditional approaches to qualitative data analysis, there are four interrelated but not interchangeable terms that require explanation, since these will be used throughout the book. Interestingly, these four aspects of analysis have parallels to the ways our minds work. We synthesize vast amounts of information into symbolic summary (code); we make sense of the world by noticing repetition and formulating regularity through cognitive schemata and scripts (pattern); we cluster similar things together through comparison and contrast to formulate bins of stored knowledge (category); and we imprint key learnings from extended experiences by creating proverblike narrative memories (theme).

First, a **code** is a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute to a portion of language-based or visual data

(Saldaña, 2013, p. 3). Coding is just *one* way, not *the* way, of initially analyzing qualitative data, yet it is one of the most frequently used methods, particularly for those undertaking **grounded theory** studies. There are multiple forms of coding available, but below is just one brief example. Imagine that a male adolescent (P for Participant) is being interviewed about bullying at his school. He offers the following to the adult female interviewer (I):

P: Yeah, it's kind of hard. There's this one guy who follows me whenever he sees me in the hallway in between classes and he, he holds up his arm with a limp wrist and calls out my name in this girly way. He's a jock, so he thinks that being gay is funny, weird.

I: What do you do or say to him when that happens?

P: Nothing, I just keep walking. Otherwise it'll just get him pissed off.

The interviewer working with this transcribed data codes according to the purpose of the study and its research questions. In this case, the researcher is interviewing many young people about their experiences with bullying and needs an inventory of what kinds of bullying students encounter at one particular school, plus their strategies for dealing with it. Thus, the researcher might code her data in particular ways to serve and expedite the analysis. The codes for the above conversation are listed below in the right-hand column in capital letters; in each instance, the superscript number indicates the specific datum (*datum* is the singular form of *data*) to which the code bearing that number is assigned. The first code represents the type of bullying that occurred, and the second code represents the participant's coping strategy or tactic:

P: Yeah, it's kind of hard. ¹ There's this one guy who follows me ¹ HOMOPHOBIC
whenever he sees me in the hallway in between classes and he, he ¹ TAUNT
holds up his arm with a limp wrist and calls out my name in this
girly way. He's a jock, so he thinks that being gay is funny, weird.

I: What do you do or say to him when that happens?

P: ² Nothing, I just keep walking. Otherwise it'll just get him pissed off. ² TACTIC: IGNORE

The researcher then looks for patterns of recurring, comparable codes to determine the frequency of HOMOPHOBIC TAUNTS encountered by youth. She will also cluster together the TACTIC codes to determine from their subcodes how young people deal with bullying—e.g., IGNORE, CONFRONT, NAME-CALL, TELL AN ADULT, and so on. Coding is the first step toward other analytic processes—constructing patterns, categories, and themes.

A **pattern** is repetitive, regular, or consistent occurrences of comparable actions or data. As qualitative researchers, we seek patterns as somewhat stable indicators of humans' ways of living and working in the world. They become more trustworthy as evidence for our findings, since

patterns demonstrate habits and salience in people's daily lives. They help confirm our descriptions of people's "five r's": routines, rules, rituals, roles, and relationships. Discerning these trends is a way of solidifying our observations into concrete instances of meaning for further analysis. Consider the study on bullying. One of the patterns detected from coding was how prominent forms of TRASH-TALKING were among adolescent girls, and another was how infrequently TELL AN ADULT was used as a coping strategy by the teenagers.

Patterning helps transform similarly grouped codes into more subsumed categories. A **category** is a word or phrase labeling a grouped pattern of comparable codes and coded data. Categorizing becomes a way of mentally condensing and grasping larger units of social action and phenomena, again for further analytic reflection. One of the categories constructed by the researcher from the bullying study was SEXUALITY-RELATED SLURS. This category was formed by noticing how a selected pool of verbal taunts ("fag," "whore," "slut," "skank," etc.) were directed toward a teenager's sexual orientation and mannerisms, developing physical body features, or dress, makeup, and grooming styles, whether they were based on students' own observations or, as another category suggested, on RUMOR BUY-IN.

A **theme**—a term often mistakenly used to signify a code or category—is an extended phrase or sentence that identifies and functions as a way to categorize a set of data into "an implicit topic that organizes a group of repeating ideas" (Auerbach & Silverstein, 2003, p. 38). For example, a few themes that emerged from the bullying study read:

- Rumors are "confidential" forms of bullying.
- Some adolescents don't realize their actions are bullying.
- Ignoring bullying is rooted in a fear of further violence.

Themes are topic sentences, if you will, for a more extended narrative that unpacks the statement and describes or explains its constituent elements. Themes can derive from initial analytic work with codes and categories, or they may be independently constructed from a holistic review of the **data corpus** for patterns alone.

Again, the terms *code*, *pattern*, *category*, and *theme* are not interchangeable. Each one should be used deliberately and purposely during qualitative data analysis and the study's write-up. They will be discussed further in Chapter 2.

Assertion, Proposition, Hypothesis, Theory

In this book, an **assertion** is a statement of summative synthesis, supported by confirming evidence from the data corpus (Erickson, 1986). It is a way of stating interpretive observations and low- and high-level inferences about social life. Examples of assertions are: "The customers waiting farthest in line appeared frustrated at the novice employee engaging in small talk with each person at the cash register" and "The term *fast food* implies 'quick service,' yet average customer wait times and body language suggest otherwise."

A **proposition** is an evidence-based statement that puts forth a conditional event (if/then, when/then, since/that's why, etc.) of local and particular contexts. It is somewhat comparable to an assertion, but explanation or causation is purposely embedded in it. Some examples of propositions are: "When fast-food restaurant customers wait over three minutes for initial service, they will tend to speak and interact somewhat tersely with cashiers when they reach the register to order" and "To increase customers and thus sales, several fast-food restaurants often feature 'dollar menus.'"

In distinguishing the two terms, it is helpful to remember that all propositions are assertions, but not all assertions are propositions.

A **hypothesis**, used primarily in empirical research, is a predictive statement that is field-tested or put through field experimentation to assess its reliability and validity. Some examples of hypotheses are: "More than 75% of customers will decline a cashier's offer to 'upgrade' their initial fast-food order to a larger portion" and "Indifferent attitudes by cashiers toward customers result in 'business-only' interactions with virtually no small-talk exchanges." Hypotheses may be formulated by qualitative researchers after initial observations to test the credibility and trustworthiness of their assertions, propositions, and theories in progress.

A **theory** (as it is traditionally conceived in research) is a generalizable statement with an accompanying explanatory narrative that

- predicts and controls action through an if/then logic,
- explains how and/or why something happens by stating its cause(s), and
- provides insights and guidance for improving social life.

Gobo (2008) proposes that a theory consists of a series of hypotheses that have been tested by the researcher (p. 242), but assertions and propositions can also serve as preparatory groundwork for theory development.

An example of a theory is: "A restaurant's decor and physical-aural environment subliminally influence and affect a customers' perceptions of service and food quality." The accompanying explanatory narrative of this theory might elaborate on the prediction-control criterion by describing how particular aspects of certain restaurant environments (e.g., warm colors, moderate amounts of open space, seating comfort, and so on) may lead to more strategic choices by architects and interior designers. Explanation of how and/or why a customer's perceptions are influenced and affected might cover such aspects as memory triggers and associations (e.g., the advisability of using wood materials and furnishings, rather than plastics and metals, to accompany a "homemade food" menu). And the insights and guidance portion of the theory can provide restaurant managers with specific recommendations for employee training and facilities maintenance to create a more pleasant customer dining experience and keep the business profitable and afloat.

The terms *assertion*, *proposition*, *hypothesis*, and *theory* are not interchangeable. Each one should be used deliberately and purposely during the course of a qualitative research study to

meet the researcher's particular goals. These four analytic, summative methods will be discussed further in Chapter 8.

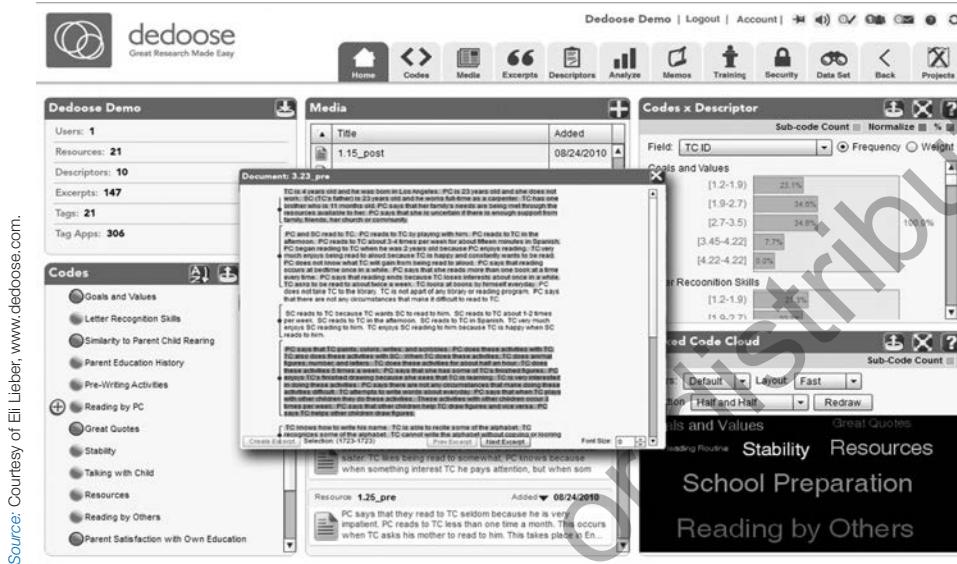
There are other terms that tend to get used interchangeably in the literature, such as *concept*, *construct*, *abstraction*, and *phenomenon*, but these will be discussed separately in later chapters. I could also spend some time defining the differences between such related items as *method*, *mode*, and *technique*; *application* and *approach*; and *strategy* and *tactic*; but these sets of terms are so similar in intent that distinguishing them does not merit an extended discussion here. (These terms might, however, informally prompt some thinking and research on your part to discern whether there are indeed any notable differences between them.)

On Technology

A current development in qualitative inquiry is the incorporation of technology and specialized software. Yet writers of CAQDAS (computer-assisted qualitative data analysis software) manuals and textbooks all posit that the software does not actually analyze the data or think for the researcher. Researchers themselves must still make sense of data arrays and outputs produced by such programs as NVivo, ATLAS.ti, Dedoose, and MAXQDA. It is the inquirer's mind, not the hardware, software, or data themselves, that formulates summaries, codes, categories, themes, assertions, theories, and the like. Nevertheless, CAQDAS programs are indispensable for extensive data storage, organization, and management. Some programs' functions and features also display your analyses as remarkable visual representations for further reflection.

If we subscribe to biosocial theory, which suggests that everything humans create is an extension of our bodies (e.g., scissors are teeth, a comb is fingers, carpeting is skin and hair, a chair is a lap with legs, a poetic iamb is a heartbeat), then the computer is a brain and the software its cell-like memory store, cognitive scripts, synapses, and other mental operations and processes. But until this technology becomes sentient, humans must still write programs and physically manipulate the hardware to make them function smoothly. (Even human brains have malfunctions equivalent to computer glitches, blue screens, and crashes.)

Technology provides some useful and fascinating apps for qualitative research projects that help with everything from memoing to recording to drawing (see Paulus, Lester, & Dempster, 2014, and <http://www.nova.edu/ssss/QR/apps.html>). But there is still no magic "Analyze" button we can mouse-click that produces a reliable and valid series of qualitatively formulated themes or assertions, much less a theory, from our data input. Technology supplies us with remarkable digital tools that assist us with our data collection, storage, calculations, and "noodling around." But don't let the bells and whistles of software deceive you. You, not a computer, must still feel and think.



Source: Courtesy of Eli Lieber, www.dedoose.com.

Figure 1.3. This screen shot from Dedoose CAQDAS software demonstrates its multiple features.

CLOSURE

I could have made this book easy or hard, but I chose to write halfway between the two extremes. It's how I prefer to think and thus how I prefer to communicate. Every profile in the forthcoming chapters may not offer you specific “how-to” methods for research, but they will all offer you cognitive awareness and guidance for thinking about inquiry. Sometimes the goal is simply to make you aware of things you may not have thought of before. At other times the goal is to “retrain your brain” to think about things differently through new lenses, filters, and angles. Just reading this book itself (or any book, for that matter) will consume up to 50 percent of your body's oxygen allotment for mental activity (Strauch, 2010, p. 149) and literally change your brain's neural structure. Reflection on its contents will further activate your brain's neuroplasticity (i.e., changes in neural pathways and synaptic connections) (Dubinsky, Roehrig, & Varma, 2013).

Every twenty minutes, your brain needs to be reenergized to maintain its efficiency. Take a few minutes away from this book for a brief, refreshing break; physically move or exercise to get your blood oxygenated so that your brain functions more effectively. Drink some water to hydrate your body and, if possible, eat some fresh fruit for glucose to fuel the brain (Sousa, 2011, p. 39)—although there is still inconclusive evidence about the benefits of specific foods to enhance mental activity and brain maintenance. Research suggests that frequent aerobic exercise is the better option for birthing new neurons and enhancing your cognitive reserves (Strauch, 2010, pp. 126, 128–129).

As a teacher, I find it extremely difficult these days to meet everyone's individual needs simultaneously. What is exciting to one person may be boring to another. What is new to an undergraduate student may be old hat for a doctoral student. And what is fresh and innovative to one reader may be common sense or useless to another. “I can't read your mind” is a common rejoinder when we're frustrated with someone who believes we should know what he or she is thinking. I can't read your mind, but you can read this book. Your thinking can change from its old habits to new ones, but this requires your belief that you yourself can actively change them (Duhigg, 2012). So, keep an open mind and think for yourself. I offer various profiles in the forthcoming chapters that I hope serve as new information for you and provocative ways of looking at social life. There is no possible way to implement all of them for one particular qualitative study. They are provided here as heuristics, or methods of problem-solving and self-discovery.

EXERCISES FOR THINKING ABOUT THINKING

1. Compose a brief, one-page paper that describes the conditions necessary for you to be at your personal mental and analytic best for thinking, reflecting, and writing. Include aspects such as best time(s) of the day or night, preferred location/space/environment, necessary materials and equipment, and other motivational conditions and devices (e.g., hot coffee/tea, light

snacks, no TV/music in the background). Also discuss what distracts you from thinking and working optimally (e.g., Internet surfing, household chores, looming deadlines, personal stress, lack of sleep) and what strategies you might employ to lessen or eliminate them.

2. Generate a list of one to three people you consider to be exceptionally talented or gifted, and one to three people you consider to be geniuses. (These people do not have to be celebrities or internationally renowned; they can be people you personally know.) Write about or discuss with a peer what you believe makes these people talented, gifted, or geniuses, and what similar qualities or characteristics they may all share.
3. Access and view clips or episodes from the television program *Brain Games* on the National Geographic Channel website: <http://braingames.nationalgeographic.com>. Also explore the website's interactive features for additional information on topics such as perception and memory.
4. Figure 1.4 is an outline of a human brain. Trace it onto your own sheet of paper and use colored pencils, crayons, or markers to creatively draw a representation of what's inside your mind. You can use both words and illustrations, but preferably more of the latter. The contents might consist of significant elements of your identity, key memories, general emotional states or moods, important people in your life, personal values, and so on. Share your drawing with a partner who has also drawn the inside of his or her own brain, and discuss the inferences and meanings of both drawings. Also reflect on, write about, or discuss your level of ease or difficulty with representing your mind visually. (If you complete this activity, save your brain drawing for a comparative exercise described at the end of Chapter 11.)

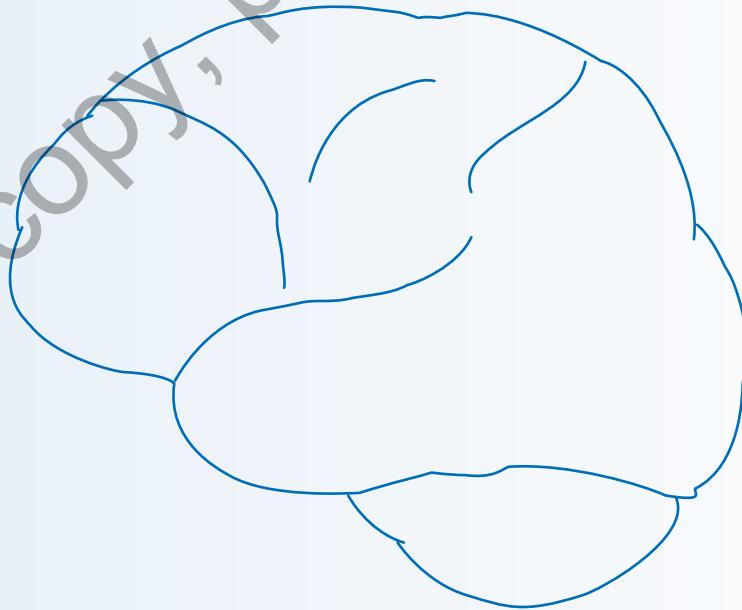


Figure 1.4. Use this outline of a human brain to complete Exercise 4.