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Qualitative Research

Defining and Designing

The qualitative research methods introduced in this book are often employed to answer the *whys* and *hows* of human behavior, opinion, and experience—information that is difficult to obtain through more quantitatively-oriented methods of data collection. Researchers and practitioners in fields as diverse as anthropology, education, nursing, psychology, sociology, and marketing regularly use qualitative methods to address questions about people's ways of organizing, relating to, and interacting with the world. Despite the interdisciplinary recognition of the value of "qualitative research" (or perhaps because of it), qualitative research is not a unified field of theory and practice. On the contrary, a plethora of viewpoints, sometimes diametrically opposed to one another, exist on the subject. Scholars regularly debate about what qualitative research is, how and why it should be conducted, how it should be analyzed, and in what form it should be presented. In fact, fundamental and often heated disagreements about philosophical assumptions and the nature of data exist among qualitative researchers. We don't pretend to be able to solve any of these controversies. Nor do we suggest one approach or viewpoint is superior to another in the grand scheme of things. How one approaches qualitative research, and research in general, depends on a variety of personal, professional, political, and contextual factors. Ultimately, there is no right or wrong way of conducting a qualitative research project. Nevertheless, some approaches and methods are more conducive to certain types of qualitative inquiry than are others. A key distinction in this regard is the difference between *pure* and *applied* research. It is the latter of these—applied research—for which the contents of this book will be most (though certainly not exclusively) relevant.

Applied research "strives to improve our understanding of a problem, with the intent of contributing to the solution of that problem" (Bickman & Rog, 2009, p. x). It is generally grounded in systematic and scientific methodology and is highly pragmatic in nature. Applied research can, and often does, generate new knowledge and contribute to theory, but its primary focus is on collecting and generating data to further our understanding of real-world problems. It is through this lens that this book is written, with the intent of providing researchers with practical procedures and tools to collect and manage qualitative data in a rigorous and transparent manner.

We begin this chapter by providing a definition of qualitative research that serves to frame the content and scope of the chapters that follow. We then provide a brief overview of one of the main epistemological debates in the field—that between positivist and interpretivist perspectives. Despite the practical timbre of this book, we feel it would be a disservice to readers if we omitted this discussion.

We then discuss some of the prevailing traditions in qualitative inquiry—phenomenology, ethnography, inductive thematic analysis and grounded theory, case study approaches, discourse-conversation analysis, and narrative analysis—as they relate to qualitative data collection. We cover these because they are related to data collection efforts and analytic strategies, both of which are key factors in research design.

The second half of the chapter addresses qualitative research design. In this section, we provide guidance on when to use and, equally importantly, when not to use qualitative methods. Following this, we break the research design process down into smaller components to help readers consider more thoughtfully the parameters of a research project, such as units of analysis, research scope, and the degree of structure in research design and data collection methods and instruments.

WHAT IS QUALITATIVE RESEARCH?

There are about as many definitions of qualitative research as there are books on the subject. Some authors highlight the research purpose and focus:

> Qualitative researchers are interested in understanding the meaning people have constructed, that is, how people make sense of their world and the experiences they have in the world. (Merriam, 2009, p. 13)

Others emphasize an epistemological stance:

> [Qualitative research is] research using methods such as participant observation or case studies which result in a narrative, descriptive account of a setting or practice. Sociologists using these methods typically reject positivism and adopt a form of interpretive sociology. (Parkinson & Drislane, 2011)

Still other definitions focus on the process and context of data collection:

> Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that makes the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them. (Denzin & Lincoln, 2005, p. 3)

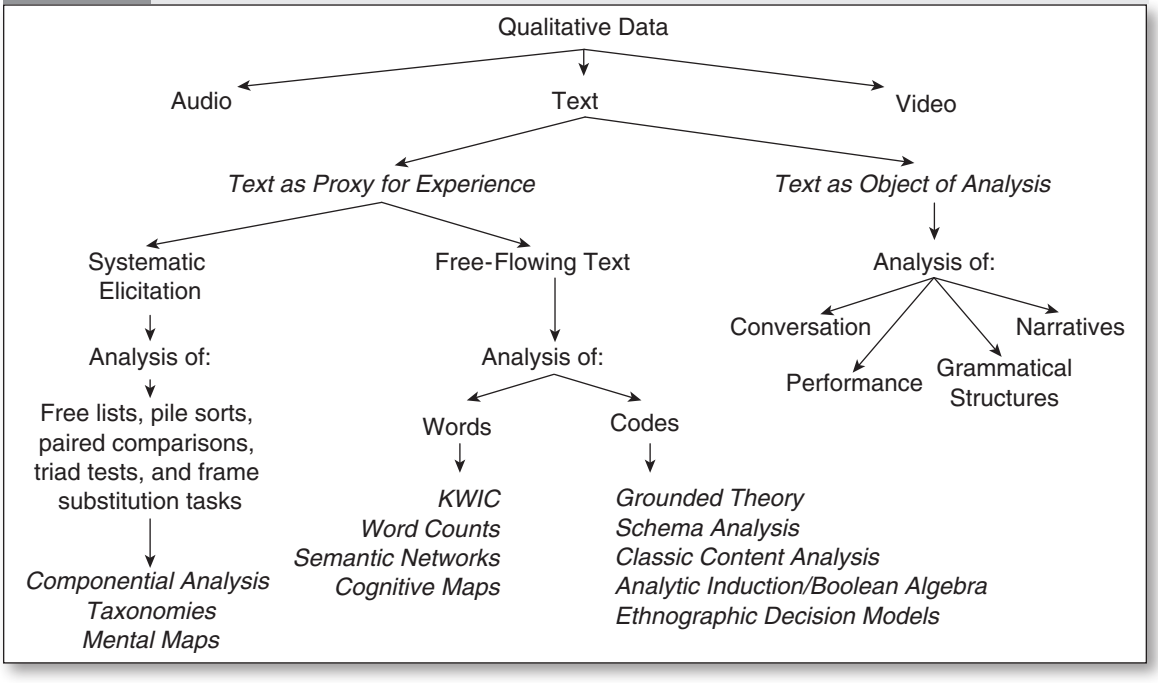
While we don't disagree with the above definitions, we don't find them particularly useful in an applied research context. We prefer the simpler and more functional definition offered by Nkwi, Nyamongo, and Ryan (2001, p. 1): "Qualitative research involves any research that uses data that do not indicate ordinal values." For these authors, the defining criterion is the type of data generated and/or used. In short, qualitative research involves collecting and/or working with text, images, or sounds. An outcome-oriented definition such as that proposed by Nkwi et al. avoids (typically inaccurate) generalizations and the unnecessary (and, for the most part, inaccurate) dichotomous positioning of qualitative research with respect to its quantitative counterpart. It allows for the inclusion of many different kinds of data collection and analysis techniques, as well as the diversity of theoretical and epistemological frameworks that are associated with qualitative research.

Qualitative Data Types

Given our working definition of qualitative research, you can begin to imagine the range of possible data types that qualitative research might generate. At one extreme, we may have a single-word answer in response to an open-ended question on a survey (e.g., In what city were you born? _____). At the other end of the spectrum, a researcher could be dealing with a 50-page narrative of a participant's life history, produced from an in-depth interview. In order to narrow the range of data types for this book's focus, we look to Ryan and Bernard's (2000) typology of qualitative research that divides qualitative data into its three main forms—text, images, and sounds (Figure 1.1). Analysis of text is further subdivided into two primary components—text as an object of analysis (e.g., linguistic type approaches, such as structural linguistics) and text as a proxy for experience.

This book focuses mainly on data collection methods that produce textual and visual data as a proxy for experience and as a means to understand the social, cultural,

Figure 1.1 Typology of Qualitative Research



Source: Ryan and Bernard (2000).

and physical context in which behavior occurs. The methods covered here—participant observation, in-depth interviews, and focus groups—are the most commonly used methods in applied qualitative inquiry. We do, however, cover other methods such as systematic elicitation and document analysis in Chapter 6, since these are also important, often-used methods in applied qualitative inquiry.

A common thread throughout almost all forms of qualitative research is an inductive and flexible nature. Though there are certainly a few qualitative data collection and analysis techniques that are more structured and deductively oriented than others (e.g., content analysis), most research initiatives in the qualitative vein take an iterative approach. Flexibility can be built into the research design itself by employing a theoretical sampling strategy in which a researcher adjusts the sampling procedures during the data collection process based on incoming data (see Chapter 2).

Another defining attribute of qualitative research is the open-ended and inductive style of questioning and observation. The quintessential feature of both in-depth interviews and focus groups is the use of open-ended (though not necessarily unscripted) questions, which are followed up with probes in response to participants' answers. In fact, inductive probing is the sine qua non of these methods and is why we devote a significant amount of attention to it in Chapters 4 and 5. Likewise, participant observation is much

more inductive and flexible compared to its quantitative cousin, direct observation. While participant observation can benefit from semi-structured data collection templates and other types of tools for focusing attention (covered in Chapter 3), in applied research, it is almost always used in an exploratory capacity, to help develop research focus and set the parameters for subsequent data collection activities.

EPISTEMOLOGICAL PERSPECTIVES

The epistemological landscape in qualitative research is as diverse and complex as the various disciplines that employ qualitative methods. We don't attempt to recreate it here. Given the practical orientation of the book, we focus mostly on methodological procedures and offer actionable suggestions for carrying out qualitative research in a rigorous manner. At the same time, we feel that researchers (and future researchers) need at least to be aware of the ongoing debates in social and behavioral science pertaining to the philosophy of knowledge and the scientific method. Below, we briefly address the two most commonly referred to approaches—interpretivism and positivism or post-positivism. We briefly touch upon a relatively new epistemological viewpoint that has emerged from theoretical physics—model-dependent realism—which, in our view, may provide a useful philosophical framework for qualitative research and the social and behavioral sciences in general.

Interpretivism

Though there are various definitions of *interpretivism*, for brevity we like Walsham's (1993) description, which posits that

> interpretive methods of research start from the position that our knowledge of reality, including the domain of human action, is a social construction by human actors and that this applies equally to researchers. Thus there is no objective reality which can be discovered by researchers and replicated by others, in contrast to the assumptions of positivist science. (p. 5)

Proponents of the interpretive school, popularized by scholars such as Clifford Geertz (1973), argue that the scientific method is reductionist and often misses the point of qualitative research. Instead, this approach, stemming from a hermeneutic tradition,[1] is more interested in interpreting deeper meaning in discourse that is represented in a collection of personal narratives or observed behaviors and activities. As Geertz (1973, p. 29) explains,

[1]Hermenuetics was originally the practice of interpreting meaning within biblical text. Usage of the term has expanded to include interpretation of nonreligious texts as well, in search of underlying sociopolitical meaning.

> To look at the symbolic dimensions of social action—art, religion, ideology, science, law, morality, common sense—is not to turn away from the existential dilemmas of life for some empyrean realm of deemotionalized forms; it is to plunge into the midst of them. The essential vocation of interpretive anthropology is not to answer our deepest questions, but to make available to us answers that others, guarding other sheep in other valleys, have given, and thus to include them in the consultable record of what man has said.

As such, an interpretive perspective is based on the idea that qualitative research efforts should be concerned with revealing multiple realities as opposed to searching for one *objective* reality. In Denzin's words, "Objective reality will never be captured. In depth understanding, the use of multiple validities, not a single validity, a commitment to dialogue is sought in any interpretive study" (Denzin, 2010, p. 271).

We recognize that the interpretive field is much more diverse than we portray here and includes different perspectives such as post-structuralism, experimentalism (not to be confused with experimental design), and critical theory. For readers who wish to read more about these perspectives and the ongoing epistemological debates, we suggest looking at Denzin and Lincoln (2011) and Alvesson and Skoldberg (2009).

Positivism, Post-Positivism and Model-Dependent Realism

Positivism, at least within social and behavioral science, views knowledge differently from interpretivism. Traditional positivism as envisioned by Compte (i.e., "logical" or "rigid" positivism) assumes that there is an objective reality independent of the observer and that, given the right methods and research design, one can accurately capture that reality. Nowadays, there are few supporters of rigid or logical positivism in the social sciences. Rather, as Patton asserts, most contemporary social scientists who adhere to the scientific method are really post-positivists (Patton, 2002, pp. 91–96), and

> are prepared to admit and deal with imperfections in a phenomenologically messy and methodologically imperfect world, but [sic] still believe that objectivity is worth striving for. (Patton, 2002, p. 93)

A post-positivist approach is based on the fundamental ideas that (a) interpretations should be derived directly from data observed and (b) data collection and analysis methods should, in some way, be systematic and transparent. Post-positivism is, therefore, closely associated with the scientific method. It distances itself, however, from the strict epistemological position that a truly objective reality can be assessed and represented.

Indeed, from a theoretical and philosophical perspective, the notion of being able to observe and document one true objective reality is a dubious concept, particularly for social and behavioral phenomena, which are extremely complex,

dynamic, and unbounded entities. Compounding this is the fact that every part of any research process is influenced by, and filtered through, the researchers' own cognitive predilections. Identifying and operationalizing the research question, data collection and analysis, and report writing are all subject to decisions a researcher or research team make. Post-positivism recognizes these limitations.

Post-positivists accept the premise that a completely objective reality is impossible to apprehend but assume that research accounts can approximate, or at least attempt to approximate, an objective truth. As Denzin and Lincoln (2005, p. 27) observe, "post-positivism holds that only partially objective accounts of the world can be produced, for all methods examining such accounts are flawed." Post-positivists still rely on scientific methods to gather and interpret data but view their findings as evidence-based probabilities rather than absolute truths. The end goal is to generate a reasonable *approximation* of reality that is tied closely to what is observed (e.g., participants' responses, observations).

The interpretive–positivist debate affects the data analysis process more so than the data collection process, but the epistemological approach a researcher holds still influences how she goes about data collection. For a post-positivist, standard data collection procedures are systematic (in as much as they can be in qualitative inquiry) and transparent. Interpretations are grounded in the data collected and are intended to be as accurate a representation of the subject as possible. In contrast, from an interpretive view, the focus is more on depth of inquiry—particularly personal and shared meaning—and more leeway is given for how data are interpreted and presented.

A good number of the world's scientists, across many fields of research, agree with the philosophical tenet that an observer-independent view of the world is an unachievable goal. Two of the world's most notable physicists, Stephen Hawking and Leonard Mlodinow, argue that "[t]here is no picture- or theory-independent concept of reality." Hawking and Mlodinow (2010) adopt a position they call model-dependent realism. In their words,

> Model-dependent realism is based on the idea that our brains interpret the input from our sensory organs by making a model of the world. When such a model is successful at explaining events, we tend to attribute to it, and to the elements and concepts that constitute it, the quality of reality or absolute truth (p. 7). . . . According to model-dependent realism, it is pointless to ask whether a model is real, only whether it agrees with observation. If there are two models that both agree with observation . . . then one cannot say that one is more real than another. (p. 46)

While model-dependent realism is new and has not yet been adopted in the behavioral and social sciences, the concept is certainly applicable and compatible with a post-positivist approach. Both perspectives emphasize data (observations) and the degree to which they can explain one's assertions and interpretations of the world (models). Both approaches strive to support interpretations of the world we present with the best supporting data possible. In our view, this is what applied research is all about.

Most applied research is founded on a post-positivist approach (and perhaps in the future, model-dependent realism). One reason has to do with the purpose of applied research, which is to understand and provide recommendations for real-world issues and problems. As Miles and Huberman (1994) note, a well-told story can still be wrong. Applied researchers can't afford to get the story wrong. And although most would readily admit that it's impossible to convey a complete and entirely accurate account of things, their goal is to try to tell the most accurate and comprehensive story their data and research constraints permit. It is this perspective that forms the epistemological foundation of this book.

BASIC APPROACHES IN QUALITATIVE RESEARCH

In this section, we briefly describe some of the more common approaches to collecting and using qualitative data. There is certainly overlap between them; the distinctions are not always readily evident. To help make sense of the complexity, we include a summary of each approach and the implications they have for data collection in Table 1.1 below. For those interested in reading more on these approaches, we provide references in the Additional Reading section.

Table 1.1 Research Approaches and Implications for Data Collection

Type of Approach	Defining Features	Data Collection Implications
Phenomenology	• Focuses on individual experiences, beliefs, and perceptions. • Text used as a proxy for human experience.	• Questions and observations are aimed at drawing out individual experiences and perceptions. • In focus groups, group experiences and normative perceptions are typically sought out. • In-depth interviews and focus groups are ideal methods for collecting phenomenological data.
Ethnography	• Oriented toward studying shared meanings and practices (i.e., culture).	• Questions and observations are generally related to social and cultural processes and shared meanings within a given group of people.

Type of Approach	Defining Features	Data Collection Implications
	• Emphasizes the emic perspective. • Can have a contemporary or historical focus.	• Traditionally, it is associated with long-term fieldwork, but some aspects are employed in applied settings. • Participant observation is well suited to ethnographic inquiry.
Inductive Thematic Analysis	• Draws on inductive analytic methods (this would be same for Grounded Theory below as well). • Involves identifying and coding emergent themes within data. • Most common analytic approach used in qualitative inquiry.	• ITA requires generation of free-flowing data. • In-depth interviews and focus groups are the most common data collection techniques associated with ITA. • Notes from participant observation activities can be analyzed using ITA, but interview/focus group data are better.
Grounded Theory	• Inductive data collection and analytic methods. • Uses systematic and exhaustive comparison of text segments to build thematic structure and theory from a body of text. • Common analytic approach in qualitative studies.	• As above, in-depth interviews and focus groups are the most common data collection techniques associated with GT. • Sample sizes for grounded theory are more limited than for ITA because the analytic process is more intensive and time consuming. **Note:** Many researchers incorrectly label all inductive thematic analyses "grounded theory," as a default. Technically, they are not the same thing.
Case Study	• Analysis of one to several cases that are unique with respect to the research topic • Analysis primarily focused on exploring the unique quality.	• Cases are selected based on a unique (often rarely observed) quality. • Questions and observations should focus on, and delve deeply into, the unique feature of interest.

Discourse/ Conversation Analysis	• Study of "naturally occurring" discourse
	  ○ Can range from conversation to public events to existing documents.
	  ○ Text and structures within discourse used as objects of analysis.
		• These linguistically focused methods often use existing documents as data.
		• Conversations between individuals that spontaneously emerge within group interviews or focus groups may be studied but are not preferred.
		• Participant observation is conducive to discourse analysis if narratives from public events can be recorded.

(Continued)

Table 1.1 (Continued)

Type of Approach	Defining Features	Data Collection Implications
Narrative Analysis	• Narratives (storytelling) used as source of data. • Narratives from one or more sources (e.g., interviews, literature, letters, diaries).	• If generating narratives (through in-depth interviews), then questions/tasks need to be aimed at eliciting stories and the importance those stories, hold for participants, as well as larger cultural meaning.
Mixed Methods	• Defined as integrating quantitative and qualitative research methods in one study. • Two most common designs are sequential and concurrent.	• Collection of qualitative data in a mixed methods study can be informed from a wide range of theoretical perspectives and analytic approaches. • Researchers must specify up front, and in detail, how, when, and why qualitative and quantitative datasets will be integrated.

Phenomenology

Phenomenology, the study of conscious experience, can be traced back to early 20th-century philosophers such as Husserl, Sartre, and Merleau-Ponty. Many of the ideas embodied in the works of these early phenomenologists were later adopted in the behavioral and social sciences by notable scholars such as psychologist Amedeo Giorgi (1970) and social scientist Alfred Schütz, (1967). In contemporary social science, the term is used more broadly to denote the study of individuals' perceptions, feelings, and lived experiences. Smith, Flowers, and Larkin (2009), for example, define *phenomenology* as

> a philosophical approach to the study of experience . . . [that] shares a particular interest in thinking about what the experience of being human is *like,* in all of its various aspects, but especially in terms of the things that matter to us, and which constitute our lived world. (p. 11)

Phenomenology is a commonly employed approach in clinical psychology, and in this context it is associated with a unique set of methods and procedures (Moustakas, 1994).

Many of the ideas within the phenomenological field are embedded within qualitative inquiry in general; much qualitative research is phenomenological in

nature in that it attempts to understand individuals' lived experiences and the behavioral, emotive, and social meanings that these experiences have for them. For instance, the notion of open-ended questions and conversational inquiry, so typical in qualitative research, allows research participants to talk about a topic in their own words, free of the constraints imposed by fixed-response questions that are generally seen in quantitative studies. Similarly, market researchers don't test products, they test peoples' *experiences* of products.

Of course not all qualitative research has phenomenological underpinnings. In some cases, the topic of study might be social structures or cultural processes that transcend individual experience, such as we might find in ethnographic research. But even so, data on such topics are often collected through interviews with individuals and hence through their experiential lens.

Ethnography

Ethnography literally means "to write about a group of people." Its roots are grounded in the field of anthropology and the practice of in situ research, where a researcher is immersed within the community he/she is studying for extended periods of time. Early 20th-century anthropologists such as Bronislaw Malinowksi and Franz Boas pioneered traditional ethnography, which historically has focused on the cultural dimensions of life and behavior, such as shared practices and belief systems. A hallmark feature of the ethnographic approach is a holistic perspective, based on the premise that human behavior and culture are complicated phenomena and are composed of, and influenced by, a multitude of factors. These might include historical precedents, the physical context in which people live and work, the social structures in which individuals are embedded, and the symbolic environment in which they act (e.g., language, shared meanings).

Traditionally, ethnographic research has involved a researcher's total and prolonged immersion within a study community, often for a year or longer. With the luxury of time, proximity to the field site, and the ability to coordinate data collection in an integrated and inductive manner, research can be more fluid.

Another strength of the ethnographic approach is the naturalistic, in situ manner in which it is carried out and its emphasis on understanding the *emic* (insider/local) perspective. Observing individual and group behavior in its natural context and participating in that context can generate insights that other forms of research cannot. Not surprisingly, participant observation has historically been an integral component of ethnographic inquiry.

Ethnography has evolved significantly since its formal emergence in the early 20th century. Many disciplines outside of anthropology now utilize an ethnographic approach, and its adoption in applied research has grown as well. But commensurate with these changes is a dilution of the method. Contemporary use of ethnography

outside of anthropology, particularly in applied research, is generally not as immersive as traditional ethnography. Most researchers cannot afford—in time or funds—to spend a year or more in the field. Extended fieldwork is still considered by many anthropology departments a rite of passage for doctoral students, but outside of this context, modern ethnography is much shorter in duration than its traditional predecessor.[2]

Another change, at least in applied research fields, is the move toward team research. Ethnography used to be a lonely enterprise. An ethnographer would travel by himself or herself to some exotic and remote place and live with the local people for a year or more. In such a research context, the entire research process—design, data collection, analysis, and write-up—was embodied within one individual. Nowadays, field research is often a collaborative enterprise, with teams consisting of multiple members from professional disciplines who represent various organizations. We provide key references on ethnography in the Additional Readings section for those with an interest in delving deeper into the method and its history.

Clarifying Terms

In our day-to-day interactions with colleagues, funders, and clients, we regularly encounter incorrect usage of research terms when discussing qualitative inquiry. One of the more common transgressions is the use of inappropriate terms as synonyms for qualitative research. So for the record:

Ethnography—Ethnography stems from the Greek root *ethnos,* meaning "an ethnic group," and *graphy,* denoting "a form of writing, drawing or representation." Ethnography can involve all types of data collection methods, including structured quantitative approaches, so it is therefore not interchangeable with qualitative research.

Formative Research—Formative research refers to research that precedes and informs a larger research component. While in many cases qualitative methods are used in such a capacity, they are just as often employed as independent methods in and of themselves. Further, quantitative methods can also have a formative purpose. In other words, formative research may or may not be qualitative, and qualitative research may or may not be formative.

[2]Professional anthropologists tend to compensate for this by doing fieldwork during summer breaks and sabbaticals, or, by getting research grants to cover their salaries in place of teaching commitments.

Inductive Thematic Analysis and Grounded Theory

Inductive thematic analysis is probably the most common qualitative data analysis method employed in the social, behavioral, and health sciences. The process consists of reading through textual data, identifying themes in the data, coding those themes, and then interpreting the structure and content of the themes (see Guest, MacQueen, & Namey, 2012).

Grounded theory is a type of inductive thematic analysis. Developed by Glaser and Strauss (1967), grounded theory is a set of iterative techniques designed to identify categories and concepts within text that are then linked into formal theoretical models (Corbin & Strauss, 2008). Charmaz (2006, p. 2) describes grounded theory as a set of methods that "consist of systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories 'grounded' in the data themselves." The process entails systematically reviewing units of text (often line-by-line, but units can be words, paragraphs, or larger units of text) as they are collected, creating emergent codes for those units, and writing memos that expand on created codes and the relationships between codes. This process is repeated until data collection is completed.

A defining feature of grounded theory is the "constant comparison method." Done properly, grounded theory requires that all segments of text are systematically compared and contrasted with each other. Theoretical models are created and continuously revised as data are progressively collected and analyzed. The exhaustive comparison between small units of text, such as lines or words, is often not a part of many applied inductive thematic analyses because it is extremely time consuming, especially for larger datasets. Guest and colleagues characterize applied inductive thematic analysis as:

> a rigorous, yet inductive, set of procedures designed to identify and examine themes from textual data in a way that is transparent and credible. Our method draws from a broad range of several theoretical and methodological perspectives, but in the end, its primary concern is with presenting the stories and experiences voiced by study participants as accurately and comprehensively as possible. (Guest et al., 2012, p. 15–16)

Another difference is that the output of an applied thematic analysis is not necessarily a theoretical model but often recommendations for program and policy. In terms of data collection, one of the primary distinctions between general inductive thematic analyses and grounded theory is that the latter *requires* an iterative research design in which data collection and analysis are merged and sample sizes are not predetermined. Sampling and data collection procedures in an applied thematic analysis context can be iterative, but these can also be predetermined and temporally separate from analysis.

Case Study Approaches

A qualitative case study examines a phenomenon within its real-life context. Data are collected on or about a single individual, group, or event. In some cases, several cases or events may be studied. The primary purpose of a case study is to understand something that is unique to the case(s). Knowledge from the study is then used to apply to other cases and contexts. Qualitative case study methods often involve several in-depth interviews over a period of time with each case. Interviews explore the unique aspects of the case in great detail, more so than would be typical for a phenomenological interview. Implications of a case study approach for qualitative data collection and analysis are several. First, participants and/or cases, by definition, should be selected for their unique properties. Because it is the case's special attributes that are of interest, sample sizes are generally small, usually one to several cases. Inquiry in these types of studies focuses largely on their defining case features and the differences they exhibit from other individuals/events in the larger population. The overall idea is to tease out what makes them so different and why. Often, knowledge gained from case studies is applied to a larger population.

A poignant case study example can be found in the education literature, in which the educational experience of a gifted African American boy living in an impoverished community is described (Hebert & Beardsley, 2001). Combining interviews with the young boy, a university researcher, and a classroom teacher, the authors document the boy's struggles within the educational system and beyond. As a result of the study, the authors provide recommendations for identifying and addressing the educational needs of gifted children in impoverished communities.

Discourse and Conversation Analysis

Both discourse and conversation analysis approaches stem from the ethnomethodological tradition (e.g., Garfinkel 1967, 2002), which is the study of the ways in which people produce recognizable social orders and processes. Thus, ethnomethodology and its subgenres view text as a window into broader social and cultural processes. Referring back to Ryan and Bernard's typology (Figure 1.1), both of these approaches tend to examine text as an "object of analysis." Analysis can be quite detailed, looking at the specific structure of discourse and interaction between two or more speakers to understand how shared meanings are socially constructed.

Both approaches study (usually recorded) "naturally" occurring language, as opposed to text resulting from more "artificial" contexts, such as formal interviews, and aim to extract social and cultural meanings and phenomena from the discourse studied. An illustrative example of discourse analysis from the anthropological literature is found in Edwin Hutchin's *Culture and Inference* (1980). Hutchins employed discourse analysis to study the indigenous land tenure system in the Trobriand Islands. Using recorded text from local land tenure disputes presented at village courts as a

basis, Hutchins went through the transcripts, line by line, and examined patterns of reasoning. What he found—and contrary to the prevailing views at the time—was that the Trobriand Islanders exhibited a rational system of reasoning, but for an outsider to understand this system, they would first have to know the basic tenets upon which the Trobriand land tenure system is based (which most outsiders did not).

While conversation and discourse analysis are similar in a number of ways, there are some key differences. Discourse analysis (DA) is generally broader in what it studies, utilizing pretty much any naturally occurring text, including (existing) written texts, lectures, documents, and so forth. Conversation analysis (CA) is a subset of discourse analysis. Its scope is narrower and confined to natural conversations between two or more people. Another difference is that discourse analysis emphasizes how humans construct meaning through speech and text, and its object of analysis typically goes beyond individual sentences. Conversation analysis, on the other hand, tends to be more granular, looking at elements such as grammatical structures and concentrating on smaller units of text, such as phrases and sentences.

The implications of discourse and conversation analyses for data collection and sampling are twofold. The first pertains to sample sizes and the amount of time and effort that go into text analysis at such a fine level of detail, relative to a thematic analysis. In a standard thematic analysis, the item of analysis may be a few sentences of text, and the analytic action would be to identify themes within that text segment. In contrast, linguistic-oriented approaches, such as conversation and discourse analysis, require intricate dissection of words, phrases, sentences, and interaction among speakers. In some cases, tonal inflection is included in the analysis. In short, linguistic types of analysis require much more analytic time and effort per page of text, so sample sizes are on the smaller end of the spectrum.

Another consideration is the source of data. Since both DA and CA are most interested with naturally occurring language, in-depth interviews and focus groups are not ideal data collection methods for these types of analyses. One exception to this might be conversation between individuals in the context of group interviews and focus groups (as opposed to responses aimed at the interviewer), but purists would still argue that both the environment and group dynamic in a focus group context are artificial, thereby, contaminating the purity of the discourse.

Existing documents are an excellent source of public discourse for DA or CA. In terms of field research, participant observation is ideal for capturing "naturally occurring" discourse, as Hutchins did in the Trobriands. Many meetings, public events, and public discourses are easily recorded. During participant observation, one can also record naturally occurring conversations between individuals within the study population—for example, two fishermen deciding where to set a net, a husband and wife discussing contraceptive options, or three government officials talking about a civic policy. Note, however, if the event is not clearly in the public domain (and the above three cases are clearly not) informed consent and explicit permission to record need to be obtained (see Chapter 8 for more on research ethics).

Narrative Analysis

As with all of the above techniques, narrative analysis is based on the study of discourse and the textual representation of discourse. What distinguishes it from CA or DA is the *type* of discourse or text it deals with—narratives. Narratives, in this context, refer to stories that represent a sequence of events. They can be generated during the data collection process, such as through in-depth interviews or focus groups; they can be incidentally captured during participant observation; or, they can be embedded in written forms, including diaries, letters, the Internet, or literary works. Narratives are analyzed in numerous ways and narrative analysis itself is represented within a broad range of academic traditions—sociology, anthropology, literature, psychology, health sciences, and cultural studies. Narrative analysis can be used for a wide range of purposes. Some of the more common include formative research for a subsequent study, comparative analysis between groups, understanding social or historical phenomena, or diagnosing psychological or medical conditions. The underlying principle of a narrative inquiry is that narratives are the source of data used, and their analysis opens a gateway to better understanding of a given research topic. Researchers used narrative analysis, for example, in a study on tuberculosis (TB) in Delhi slums (Khan, 2012). Using data from personal narratives of women living with TB, the authors examined the "genderization" of TB and the related consequences for women. Their findings indicate how gender, in conjunction with other social forces, influences disease outcomes and stigmatizes women, as well as how women strategize to reduce such burdens.

Mixed Methods Approaches

Research studies are becoming increasingly diverse and inclusive of both qualitative and quantitative methods—that is, they are mixing methods to address specific objectives. The basic premise behind using a mixed methods research design is that the combination of both approaches provides a better understanding of a research problem than either approach could alone. Creswell and Plano Clark (2011) argue that integrating methodological approaches strengthens the overall research design, as the strengths of one approach offset the weaknesses of the other, and can provide more comprehensive and convincing evidence than mono-method studies. Another more practical benefit is that mixed method research can encourage interdisciplinary collaboration and the use of multiple paradigms.

The overarching premise is that the integration of two or more approaches should provide some added benefit with regard to research objectives that a single approach could not offer. Note that many research questions can be adequately answered with a mono-method approach. In such cases, creating a larger and more complicated design is not justified. The decision of whether or not to integrate

multiple approaches depends on a combination of the research objectives, the resources and time available, and the audience for the study's findings.

There are more than a dozen (constantly evolving) mixed methods research typologies in the literature, each emphasizing different aspects of methodological integration and looking at the research process from different angles. For the most part, however, typologies include at the very least two basic dimensions—timing of data integration and purpose of integration (see Guest et al., 2012, chap. 8). Timing of integration refers to how qualitative and quantitative datasets are used chronologically and analytically with respect to each other. The two most commonly used terms in this regard are *sequential* and *concurrent* designs (Creswell & Plano Clark, 2007; Morgan, 1998; Morse, 1991). Sequential designs are those in which integration occurs across chronological phases of a study and where data analysis procedures for one dataset type inform another type of dataset. In a sequential design, for example, qualitative data can be used either to inform a subsequent quantitative dataset or data collection procedure, or to explain and provide further insight to findings generated from quantitative inquiry. In contrast, in a concurrent design, datasets are not dependent on one another and are integrated at the same time within an analysis. In concurrent designs, the idea is to compare qualitative and quantitative datasets *during* data analysis and determine whether findings between the datasets converge, diverge, or are contradictory. If you are thinking about using a mixed methods research design, we offer the following two suggestions:

- Try to explicitly justify why you're using a mixed methods design and why each component is necessary. If you can't come up with some good reasons, then a mixed methods study is probably not necessary.
- If you're convinced that an integrated design is best (and have the resources to carry one out), plan in detail how and when datasets will be integrated. For each methodological component of the study, think about how, specifically, each dataset will be analyzed and subsequently linked to other datasets. Draw a schematic of your study, depicting how and when each component is related to all the others.

FINDING YOUR FOCUS: RESEARCH DESIGN CONSIDERATIONS

The intent of this section is not to explain in detail how to develop a research question, since that process can vary substantially from one field to the next and from one context to another. In academic settings, for example, the primary source of research questions is either a gap in the literature and/or a need to build and develop theory. In business, the topic of research is often determined by one's boss or a client. In nonprofit settings,

it can derive from a real-world problem that needs to be better understood, any of the aforementioned sources, or some variant combination thereof. Moreover, the source of a research question may vary from one project to the next within the same working environment. Because of this variability, we recommend that readers who are interested in learning more about how to develop effective research questions consult the literature relevant to their particular field and circumstance. What we have done instead is identify and discuss below certain research parameters that any researcher needs to think about and decide upon in order to properly operationalize and carry out a qualitative research initiative.

Establishing Research Objectives

Everything begins with the research objectives. A study's objectives, if properly conceptualized and documented, determine everything that follows, including selection of data collection methods, sampling approach(es), instrument development, analysis, and dissemination format and strategy. While establishing objectives is probably the hardest part of a research initiative, the process is critical to ensuring data are collected in such a way as to be useful. Use Table 1.2 below as a jumping off point from which to begin building your research strategy.

Table 1.2 Some Basic Research Design Considerations

Decision Point	Some Options (options are not mutually exclusive)	Some Considerations
Primary Purpose of Study	**Understand a Real-World Problem.** Research that is *primarily* guided by the need to understand or help resolve problems in the real world; these research problems may be investigator driven or passed on to researchers by funders, clients, and other stakeholders.	Findings should lead to actionable and evidence-based recommendations.
	Build Knowledge/Theory. Research that is *primarily* guided by existing theories and literature.	Findings should inform existing theories and bodies of literature.
	Develop Intervention/Program. Research intended to inform the development of a program, product, or intervention.	Findings should directly inform the development and/or proof of concept of an intervention or program.

Decision Point	Some Options (options are not mutually exclusive)	Some Considerations
	Evaluate something. Research intended to evaluate a program, product, or intervention. **Inform a Larger Study.** Research whose primary purpose is to provide information for the conduct of a larger study; the smaller component could be considered a formative study to, or an embedded component of, a larger study.	Study is highly focused. Study results comprise the evaluation. Study is highly focused. Findings should directly inform another study component or feed into the overall study findings.
Primary Audience of the Findings	Scholars Researchers Academicians Funders Clients Community Stakeholders Dissertation Committee	Appraisal criteria often vary by the audience/end user of study findings. Be sure to know what those criteria are BEFORE you begin collecting data.
What Is Already Known About Topic	• Nothing documented on topic • Some qualitative research has been done on the topic but not among study population • Some qualitative research has been done on the topic and among your study population • A good deal of qualitative and quantitative research has been carried out on your topic with the target population for your study	The less that is known about a topic, the more exploratory (and typically qualitative) research is generally required. Always start with existing secondary data (if available) and work forward from there. If a lot of good data (QL and QT) already exist for a topic and within the context of your study population, your study should be very precise and important in scope to warrant moving forward.
Study's Focus	• Deep understanding of the topic • Somewhat deep—but also want an idea of range of perspectives • Broad—variation exhibited across study population	The deeper you wish to delve into a topic, the fewer resources you will have to explore its breadth. You can have some sort of mix, but unless you have unlimited time and resources available, you will need to moderate one aspect for the other. Generally speaking, depth of topic is best served with qualitative methods and breadth of topic with quantitative.

(Continued)

Table 1.2 (Continued)

Decision Point	Some Options (options are not mutually exclusive)	Some Considerations
Study Objective(s)	• Identify • Explore • Describe • Explain • Assess/Evaluate	Although there is considerable overlap among these objectives, subtle differences exist. Your interview/focus group questions and framing of observations will vary by objective. Choose other verbs that make the most sense for your study, but make sure that your objectives are appropriate for qualitative inquiry. If they include words and phrases such as "measure," "test," or "how many," you're headed in a quantitative direction (which is not a bad thing—it just means you have to change your objectives or your data collection methods).
Time Parameters	• Immediate need for data • Reasonable deadline • No deadline	Time available invariably determines the size and scope of a study. The faster data are needed, the smaller and more refined the research should be. Longitudinal studies, by their very nature, require more time.
Resources Available	• Solo effort • Small team • Large team • Infrastructure at Data Collection Site(s)	As with time, human resources play a big role in the scope of study that can be achieved. The more colleagues that are available to collect and analyze data, the faster you can get a research study done. However, working in teams requires additional procedures to enhance consistency of data collection and analysis activities. Roads, communication, electricity, and other types of infrastructure in some areas of the world are not always reliably available. Be sure to become familiar with infrastructural conditions on the ground prior to finalizing your research design. And always have a Plan B in your pocket.

From here, think about formulating your research objectives. When we conduct research design trainings, we encourage students to use the word *to*, followed by a verb. The verb you choose is extremely important. It defines not only what it is you're actually trying to do, but also it defines whether or not your objectives are best served by qualitative methods, quantitative methods, or a combination of both. Some of the more commonly used verbs when describing qualitative research objectives are identify, explore, describe, understand, and explain. If you're thinking of using words like *test* or *measure* or *compare* in your objectives, you should be thinking about quantitative methods, as they are better suited to these types of aims. Some verbs, such as *evaluate*, fall somewhere in the middle and can be construed as being qualitative or quantitative. Note, though, that one study can have multiple objectives that may require both qualitative and quantitative approaches.

When to Use Qualitative Methods

The inductive and flexible nature of qualitative data collection methods offers unique advantages in relation to quantitative inquiry. Probably the biggest advantage is the ability to probe into responses or observations as needed and obtain more detailed descriptions and explanations of experiences, behaviors, and beliefs—this is how we answer the *why* and *how* questions mentioned at the beginning of this chapter. If, for example, we wanted to describe readers' assessments of this book, we might ask them an opening question, such as "What is your overall impression of this book?" Less verbose readers might offer a two-word answer, such as "It's great" or "It's boring." In qualitative inquiry we have the ability to follow up with a subsequent probe, perhaps, "Why do you think so?" or "What in particular did you [not] like?" As we proceed with our line of questioning, we can obtain more and more details about the readers' perceptions of the book and delve further into specifics such as particularly helpful or problematic chapters, perceptions of writing style, and so on. In collaboration with the participant, the interviewer helps create a narrative that is rich, has depth, and informs the overall study objective. Contrast this with a set of survey questions in which response categories are fixed (e.g., check the box) and interval (e.g., fill in the number) and probing is absent. Surveys will yield useful information regarding prevalence and variation of certain variables within a population, but they are not well suited to building a deep, more personal knowledge of a given topic.

Another advantage of using open-ended questions is that one can get information not anticipated by the researcher. How many times have you encountered a question on a structured survey that does not list your answer as a response choice? Researchers can provide only fixed responses based on their own perspective and experience with a particular topic. Any response that falls outside of this range is either lost, or it falls into the "Other" category. The former does not provide useful information beyond how valid (or not) the response categories are. The latter

transforms the response into a qualitative format, which can be coded, but the response is typically so brief that any potential depth and richness is lost.

Qualitative research can also directly document causal relationships. Everyone knows from Statistics 101 that "correlation does not equal causation." We've been to many presentations and have read countless articles in which a researcher presents quantitative findings from a correlational analysis with an excitingly low p value, which then leads into a speculative discussion about what the correlation means. A qualitative researcher may be equally fascinated with the correlation but would look for, or plan to collect, qualitative data to *explain* the association. We may know from certain metrics, for example, that a particular intervention, program, or advertisement is effective (i.e., it elicits the desired outcome), but without qualitative data, we won't know what particular aspect(s) of the intervention was effective, or why.

The process of collecting qualitative data provides an additional advantage when it comes to face validity. For one, a researcher isn't artificially constraining the responses and trying to fit them into predetermined buckets. Survey questioning is almost always an immutable scripted process, in which data collectors are explicitly instructed to repeat the question verbatim if a participant does not understand it, to ensure reliability across interviewers. Qualitative questioning allows for more flexibility, and an interviewer is typically permitted to ask questions in a different way, to make sure the participant has understood it well. In fact, in a less structured in-depth interview, specific questions may not even be formulated. Such a lack of structure decreases reliability, at least as it is traditionally defined, but it does enhance overall face validity.

Related to the issue of validity is the nature of the data generated. Questioning in qualitative inquiry is open-ended, so responses are provided in the participants' own vernacular. This is helpful if the goal of a research study is to develop some form of communication plan or messaging strategy; you can do so in a way that is salient for, and will resonate with, your target population.

With the above in mind, one can see how qualitative research is better suited for some objectives rather than others. Below, we examine three general (and conceptually overlapping) types of qualitatively-oriented objectives—identifying and exploring, describing, and explaining. Note, however, that these are by no means exhaustive, or exclusive of quantitative forms of inquiry.

Identifying and Exploring

Identifying items in a conceptual domain is probably one of the most basic, yet important, elements of research. If, for example, we want to know what the water-related issues are in a particular community, we must begin by generating some type of "issues" list. In marketing, we might want to know all of the features of a

product that consumers view positively, versus those they don't like. Similarly, if we're trying, for example, to get more men to undergo vasectomy, we might start by having participants identify all of the perceived barriers and facilitators to having the procedure. This process is about establishing range. Various methods can be used in this capacity, but regardless of the method, identification of the range of items in a conceptual domain is often the first stage of establishing inquiry validity. The open-ended nature of qualitative questioning is ideal for such a purpose.

Related to the process of identifying is "exploring." It can involve generating lists of items, but it is not limited to just this task, and may go beyond simple list creation. A research initiative can explore water issues in a community, for example, to find out how problematic or fixable each might be. A marketing team may be interested in exploring *why* certain product features are desired whereas others are not. Exploring might also entail investigating topics or issues among the study population that are investigator (rather than population) initiated. A key feature of exploration is the degree of flexibility it connotes, which is why it is a common objective in qualitative inquiry. Qualitative research is very much inductively oriented and is conducive to achieving an exploratory goal.

Describing

Having lists can be quite useful, and the process of exploration allows a researcher to probe into topical areas that researchers might otherwise have missed, again enhancing inquiry validity. But once you have a good sense of the range of issues and perspectives surrounding a particular topic within a given population, you will likely want to know more about each item or thing. Often, the next logical step in qualitative research is to describe these items in as much depth as possible. Once the list of vasectomy barriers has been generated, for example, we can ask participants to describe each in detail (the who, what, where, why, and how), and to discuss possible ways to overcome them. Within this description, we would likely try to capture various dimensions associated with each barrier—psychological, familial, political-economic, cultural, and so forth—to provide a more holistic perspective on vasectomy acceptance.

Qualitative methods are especially effective at describing complex processes. Whether the process is planting maize, buying a car, or deciding whether or not to get vaccinated, the open-ended and inductive style of questioning that is a hallmark of qualitative research can readily capture the inherent complexity of process. It may take as few as a handful of knowledgeable individuals or may require a somewhat larger sample—depending on the individual variability exhibited with respect to experiencing the process (see Chapter 2)—but the end result either way will be a pretty good understanding of the process in question.

Explaining

Social and behavioral researchers are often interested in explaining why or how individuals do (or don't do) certain things, how social systems function, or the relationship between two or more processes. The inductive and flexible nature of qualitative data collection is particularly useful for delving deep into internal psychological processes such as motives, values, and causes of behavior. Refer back to our vasectomy example. The list of reasons for not getting the procedure might include things such as fear of physical pain or of being emasculated. We could dig deeper into these reasons to see precisely how they affect motivation to undergo the procedure. It may be that men are intimidated by the thought of a needle or scalpel in the nether regions, as opposed to the primary procedure of severing the *vasa deferentia.* This is, in fact, what many studies have found, and in most developed countries, no-needle and no-scalpel vasectomies are now available.

Through qualitative inquiry, a researcher can more directly document why individuals behave in a certain way, because the participants themselves can make that causal connection explicit. A simple example is why people choose one ice cream flavor over another. We can just simply ask, "Why do you prefer this flavor?", and then probe inductively. We can explore deeper into why a particular flavor tastes good. If the answer is something like, "This flavor reminds me of my childhood", then we know that nostalgia enters into the equation and can probe as to why and how the chosen flavor triggers this sentimental feeling, and so on. In contrast, young children often choose ice cream based solely on color, another easily documented relationship. The bottom line is if nine out of your 10 in-depth interviewees tell you they did X because of Y, that's a fairly good indicator of causation that you can then examine in more detail.

Evaluating/Assessing

You can certainly use quantitative methods and experimental or quasi-experimental designs to evaluate a product, intervention, or program. In many cases, these highly structured approaches are justified, and the resources to carry them out are available. But generating quantitative data or implementing randomized controlled trials (RCT) is not always necessary or the only approach to evaluation (see Smith & Pell [2003] for a humorous take on the use of RCTs). As Patton (2002) observes, "[e]valuative research, quite broadly, can include any effort to judge or enhance human effectiveness through systematic data-based inquiry" (p. 10). Qualitative methods are an important part of evaluative efforts because "they tell the *program's story* by capturing and communicating the *participants' stories*" (p. 10, italics in original). It's no accident that focus groups are so widely used in product design research. They can provide detailed insights into preferences and thought processes of potential consumers. The same can be said for program evaluation. Qualitative assessments are

directed at understanding participants' experiences of being part of a program and their perceptions of what worked and what did not. Qualitative evaluation research usually comprises one or more of the aforementioned objectives—to identify (e.g., problems), explore (e.g., likes/dislikes), and explain (e.g., decisions)—but its overarching goal of evaluating a specific entity is what makes it unique.

When Not to Use Qualitative Methods

The benefits and advantages of qualitative research are many, and we've discussed many of them above. We'd be remiss, however, if we did not also discuss some of the weaknesses and disadvantages associated with qualitative methodology. One limitation is that proper analysis of text is time consuming. It involves not only collecting the data but also transcribing, coding, and interpreting the data. If research is done in a foreign language, add the extra step of translation to the analysis process. All of these processes take time. For an average hour-long in-depth interview, it will take a minimum of 4 hours just to transcribe from the audio (if recording the event), another couple of hours to read through the text and make notes, several days to create an initial codebook, and then at least another hour to actually code the one transcript. Coding then needs to be summarized somehow and interpreted for the intended audience. Because free-flowing text for any given study can reach into the thousands of pages, much consideration must be given to how much time and resources can be allocated to the analysis. The good news is that in most cases, large samples are not needed for qualitative inquiry. In fact, carrying out a large number of data collection events is often an exercise in diminishing returns (more on this in Chapter 2). And not all qualitative analyses need to be so rigorously executed. In some cases, a "quick and targeted" analysis (Guest et al., 2012) is all that is warranted or possible within exigent time constraints.

Because samples in qualitative research are usually (though not always) small and non-probabilistic, the ability to claim a representative sample is often diminished, and statistical generalization is impossible. Related to this is the inability to *measure* variation of responses in any meaningful way. True, we can talk about how half of our study sample mentioned X theme, but this is only a very crude indicator of prevalence. If your main objective is to describe variation across a population, you should be thinking about a structured instrument and a probabilistic sample. In this situation, qualitative methods are not your best option. They can indeed identify the range of responses and help inform a structured instrument but are not suited to measuring variability.

Because qualitative questioning is open-ended and inductive, it is also not an ideal choice for reliably comparing groups. This includes objectives that involve the verb *test*, since testing usually involves some form of direct comparison (pre-post,

control-intervention). Some forms of quantitatively-oriented content analysis are more amenable to systematic comparison, but inductive thematic approaches are less so. And while comparison of thematic expression across groups can and does take place, it's an underdeveloped field, and extra care must be taken to maximize the ability to meaningfully compare. We refer interested readers to Chapter 7 of Guest et al. (2012), which is dedicated to analytically comparing thematic data.

What Aspect(s) of Human Experience Do I Wish to Examine?

To help operationalize data collection procedures and tools, it's necessary to establish which dimension(s) of the human experience will comprise the core element(s) of your research problem. As you can imagine, each of these elements requires different approaches and procedures. It is important, therefore, to clarify in the early stages of designing your research which aspect(s) you are most interested in examining. In many studies, it is often a combination of two or more of the following:

- Behaviors
- Attitudes/Opinions/Perceptions
- Knowledge
- Emotions and Values
- Culturally Shared Meaning
- Social Structures and Relationships
- Processes and Systems
- Environmental Context

A second dimension to this question is temporal. Are you interested in looking at something at one point in time (i.e., a cross-sectional design), or does your research topic have a time dimension that you wish to explore (i.e., a longitudinal study)? If the latter, then deciding upon the duration of data collection activities and the number of data collection points within that period is a key step in the process, as is determining how you will sample over time. Will you include the same participants each time (i.e., a cohort study), or will you choose different samples from the same population? If the former, how will you keep track of participants and minimize attrition? How many time points will you include in your study? All of these questions, among others, need to be considered when choosing a longitudinal design.

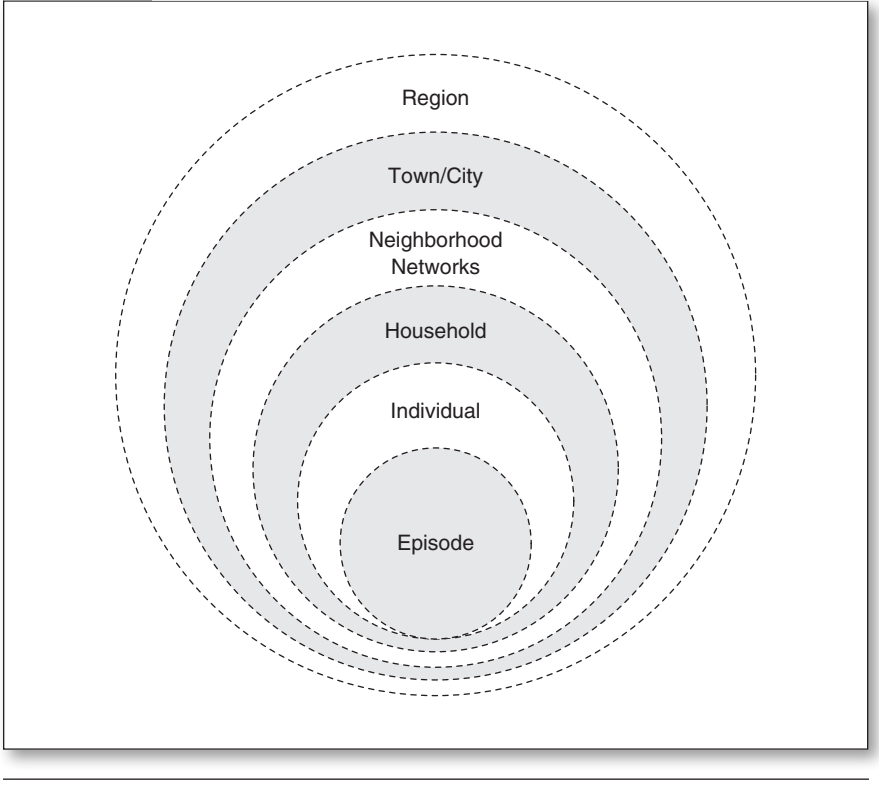
What Is My Unit of Analysis?

The unit of analysis in a study is the level of abstraction at which you look for variability. The most commonly used unit in social-behavioral research is the individual. This is the level at which we often synthesize and compare data. That said, analysis of qualitative data can be carried out at higher levels of abstraction, such as

groups (as is the case with focus groups), households, or even communities. A classic example of the latter is Edmund Leech's (1954) ethnography of the Kachin people of Burma (Myanmar), in which he compares political systems among three different ethnic groups.

In some cases, the unit can be an event, such as we might see in participant observation or in an interview designed to generate data about events. Bernard and Ryan (2010, p. 129) created a simple but useful diagram depicting levels of analysis (Figure 1.2). Theoretically, a study can collect and compare data at a level ranging from a specific isolated behavior (episode) to an entire country and its attributes. In real life, of course, levels of abstraction are not always as neatly defined as depicted in the graphic. There are many levels at which you can collect and organize data that are not represented (e.g., dyadic, institutional, etc.).

Figure 1.2 Levels of Analysis



Source: Bernard and Ryan (2010, p. 129).

Note that the unit of analysis is not the same thing as the unit of observation. The former refers to the level at which data will be analyzed, the latter at which it is collected. They are often, but not always, the same thing. For example, a study may have a unit of observation at the individual level but may have the unit of analysis at the community level, comparing data across two or more communities, as in Leech's ethnographic study.

For in-depth interviews, the unit of observation is always the individual. In focus groups, the observational unit is both the individual and the interactions among individuals within the group. For participant observation, units of observation vary with the research context and can include individual or group behavior, specific events or activities, or contextual factors such as physical environments.

We can also turn the diagram on its head and examine how all of these factors (which Bernard and Ryan collectively call "context") influence individual behavior, thoughts, and experiences. How does the town in which one lives constrain or enable certain choices? How are household dynamics involved in individual decision making? How do one's peers determine an individual's experiences or behaviors?

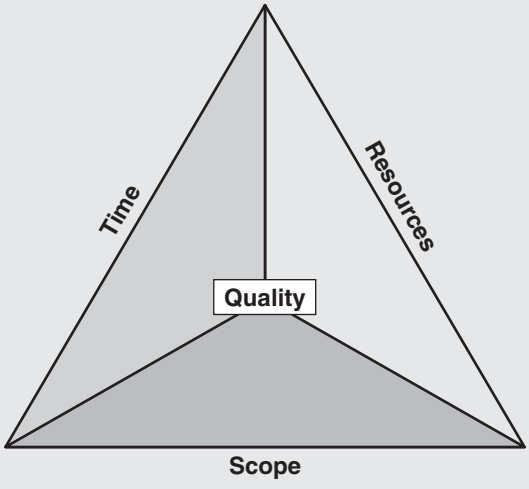
What Is the Scope of My Research Topic?

Research design in general is typically funnel shaped, as are most qualitative data collection events. Inquiry begins with a relatively broad topical scope and narrows as data collection continues. The primary reason for this narrowing breadth is to enhance inquiry validity. We want to make sure that we're asking questions that make sense and are relevant to our participants and overall study objectives. It is easy to gain momentum on a track of inquiry, only to find out near the end of the line that the track is destined for, or has already ended at, a dead end.

A focus group experience of one of the authors exemplifies this propensity and how it might be dealt with during the data collection process. Mitchell was hired by a copper mining company to conduct focus groups among employees to document their perceptions about the company's 401(k) plan. As per standard qualitative research practice, she opened with a general question, to set the tone and get the participants warmed up. She asked the seemingly innocuous question, "What's it like working here?" In unison, the group answered, "It sucks!" She couldn't very well proceed with questions about the 401(k) plan until she probed into what were much larger issues, at least from the participants' perspective. The 401(k) plan had very little salience (i.e., inquiry validity) for the employees, despite the importance it held for the employer. We see this time and time again, when clients or researchers think they know what the salient issues are, only to be surprised by incoming data. This is not to say that all research needs to be exploratory and broad in scope, but one should have at least some knowledge of the topic and study population's perspective as a basis for formulating a research plan and subsequent data collection procedures.

Balancing Research Scope, Time, and Resources

We all want to do the perfect study. Clients and funders do too, but they additionally want it done quickly and cheaply. The triangle below is a useful graphic to conceptualize the balance between research scope with time and resources. Increasing one element almost always means that you'll have to adjust at least one other element.



To strike a balance, the element of time must be carefully calculated and captured in a realistic schedule. Resources—financial, human, and material—must be identified. Scope is reflected in your research objectives, and it is the most ambiguous of the three elements. The larger the scope, the more time and resources (labor and cost) it will require to execute.

Let's say you are planning to conduct a study with in-depth interviews and have one month for data collection. Based on your budget, you've calculated that you are able to conduct 30 interviews within a 1-month period using two interviewers. Your client, funder, and/or boss, however, tells you that they want 45 in-depth interviews in the same amount of time. To accommodate this, and generate the same quality of data, you'll either need more time or have to hire an additional interviewer.

If funders and/or clients expect too much for too little, it's up to the researcher to educate them on the effects such demands will have on the quality of the end product. Provide them with outcome scenarios based on different decision routes. Easier said than done, but it's still easier than explaining, ex post facto, why your data are substandard, why the project is behind schedule, or why you went over budget.

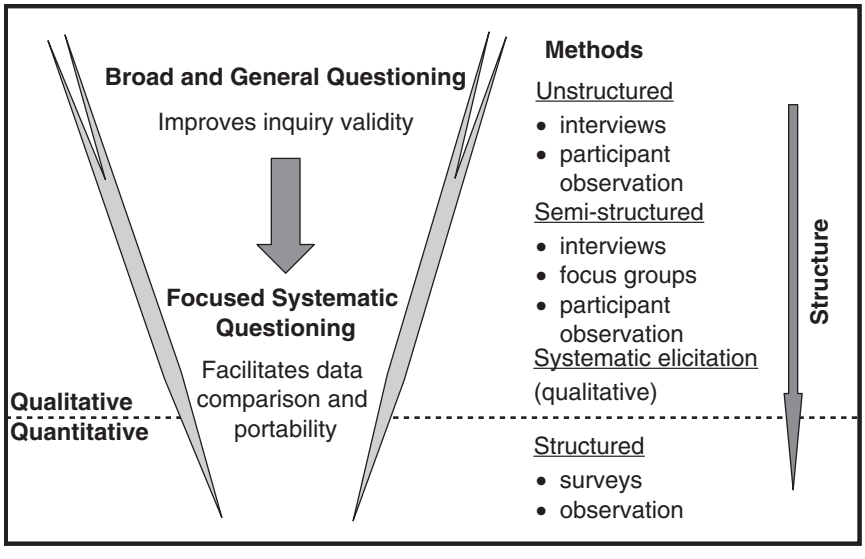
Another dimension of scope pertains to how widely shared the knowledge, beliefs, and/or behaviors of interest are across a population. Ask yourself, How widely shared and variable are responses and behaviors likely to be within my study population vis-à-vis my topic? Topics at a more general level include shared cultural knowledge: e.g., what time the market opens, activities and rituals involved in a local wedding, how many types of goats are raised in the village, or the local voting process. We would expect minimal variation in responses and outcomes on such widely shared topics. Contrast these with more specific and personal topics of inquiry such as unique events (e.g., a meeting a few people attended), individual experiences (an individual's personal bankruptcy), or personal opinions about, say, the government. Domains of inquiry like these are likely to exhibit a greater degree of variability than those more widely shared and experienced (we revisit this topic in Chapter 2).

Research scope, unfortunately, is often determined by time constraints and the resources available—that is, people and money. You can certainly conduct a lot more interviews or focus groups with $50,000 than you can with $5,000. Likewise, the more funds and time you have at your disposal, the greater number of perspectives (i.e., subpopulations) and the greater geographic diversity (i.e., research sites) you can incorporate into your study. The same can be said for the number of research methods you are able employ. Granted, not all research objectives warrant large samples, inclusion of multiple groups and sites, or mixed methods designs, but knowing your budget and deadlines (if any) up front will help you negotiate and balance the scope triangle in the above text box titled "Balancing Research Scope, Time, and Resources."

How Much Structure Do I Need?

The degree of structure in a research project overall, and in data collection processes more specifically, are probably two of the most important decisions that a qualitative researcher will have to make. In an ideal world, the process of scientific inquiry follows a funnel pattern, starting off with broader and more general types of questioning and moving to more specific and structured types of inquiry as more about a topic is learned (Figure 1.3). As such, the early stages of research are likely to be exploratory, and the selection of data collection methods and development of instruments should reflect this. The early stages in the overall research process are where qualitative methods are often (though not always!) employed. As discussed earlier, the primary reason for using less structured forms of inquiry in the incipient stages of research is to improve inquiry validity—that is, to make sure that we're asking the right questions and in the right way.

Figure 1.3 The Research Process and Degree of Structure



Not surprisingly, the advantages of a less structured approach come with some trade-offs. More general and unstructured forms of inquiry are great at generating valid data, identifying locally relevant issues, and gaining a deeper understanding of a given research topic. They are not, however, as well suited to comparative analyses. The less structure one incorporates into the research process—whether it be at the instrument level (structured vs. semi-structured vs. unstructured) or the degree of topical specificity (shared cultural processes vs. individual experiences)—the lesser is one's ability to carry out a valid comparative analysis. It is, for example, difficult to meaningfully compare responses between participants if using an unstructured form of questioning during in-depth interviews. There is no way to tell if differences observed between participants' responses are due to actual variability in how participants feel and think or if they are due to the fact that participants are responding to different questions, or, different variations of a question. It's the proverbial apples versus oranges scenario. Structured and semi-structured forms of inquiry help minimize this problem and are much better suited to comparative analyses. The next text box, Structure and Selection of Methods, provides some basic guidance in this regard.

Structure and Selection of Methods

If topic of interest isn't established . . .

NOT enough focus yet for fieldwork. Instead:

- Review more literature and/or secondary data
- Talk to client, funder, colleagues, local experts/stakeholders

If topic is established but question topics/domains are not . . .

NOT enough structure for focus groups or semi-structured interviews. Instead:

- Engage in (more) participant observation, and/or
- Review more literature and/or secondary data

If question topics/domains are established . . .

- Your study is ready for focus groups or semi-structured in-depth interviews

If leaning toward fixed-response categories . . .

Too structured. NOT appropriate for general qualitative inquiry. Instead:

- Create and implement a survey, and/or
- Employ systematic qualitative elicitation techniques (e.g., free lists, pile sorts)

The bottom line is that if you're planning to do some sort of comparative analysis and still wish to base it on qualitative data, we suggest adding a certain amount of structure to the inquiry process. Ask participants the same verbatim questions (though still open-ended and followed by inductive probing), use some sort of semi-structured template to focus observation activities, or employ more systematic elicitation methods described in Chapter 6. If a team project, make sure that all data collectors are conceptually on the same page and doing things in a similar way. We cover these topics in more detail in the chapters that follow.

We should note here that it is common for many topics to already have a good deal of existing research. Depending on the extent of existing data specific to your context, qualitative research may not even be needed. Nothing prevents a researcher from entering the research process at the narrower end of the funnel, so long as enough data and knowledge exist to justify forgoing more exploratory research. This is a judgment call that requires a sound knowledge of the research topic and study population. This doesn't mean that all researchers make the right call. We've observed and experienced numerous situations in which the researcher thought he or she knew what the issues and range of responses were for a particular topic and group of people and decided to skip doing qualitative research, only to find out the resulting data were not very valid or meaningful. If in doubt, err on the side of caution, and do some exploratory data collection to get it right.

SUMMING UP

In this chapter, we covered the basic principles of research design, with the exception of sampling, which is the topic of the following chapter. We presented questions for consideration and suggestions to help provide guidance with respect to making decisions about research design and data collection methods (additional information about how and why specific qualitative data collection methods are used can be found in Chapters 3 through 6). To help organize this abundance of information, we've condensed and summarized most of the key decision points in research design in Table 1.3. We have written the steps in a rough chronological order—that is, the order in which they are often considered during research design. But this order is by no means based on any fixed or immutable rules. Research design is a messy, iterative process and often involves considering multiple factors simultaneously and constant adjusting and revising of components (note the last step!). The same caveats apply to the options and considerations presented in Table 1.3. Despite the authors' best efforts, these are not exhaustive lists of options. The options are also not mutually exclusive. Any one study can embody, for example, multiple objectives, populations, sampling strategies, data collection methods, and so on. And these elements can be combined in countless numbers of ways. Table 1.3 is intended as an organizational and didactic tool, not as a fixed procedural map to a successful research design.

Table 1.3 Research Design Steps and Options

Step	Options/Considerations
Determine Study's Primary Purpose	• Understand a Real-World Problem • Build Knowledge/Theory • Develop an Intervention/Program • Evaluate Something • Inform a Larger Study
Determine Study's Primary Audience	• Scholars, Researchers, Academicians, Funders, Clients, Stakeholders, Dissertation Committee
Define the Study Population(s) and Geographic Parameters	• Number of Sites • Study Population(s) Boundaries and Eligibility Criteria
Decide if and What Comparative Elements to Include (See Chapter 2)	• Between Groups Comparison • Within Groups Comparison
Determine Temporal Orientation of Design	• Cross-Section vs. Longitudinal
Choose Your Research Objective Verb(s)	• Identify, Explore, Describe, Explain, Evaluate, Other

(Continued)

Table 1.3 (Continued)

Step	Options/Considerations
Choose Your Qualitative Approach(es)	• Phenomenology • Ethnography • Inductive Thematic Analysis • Grounded Theory • Case Study • Discourse/Conversation Analysis • Narrative Analysis • Mixed Methods
Select Attribute(s) of Human Experience to Examine (for EACH population in your study)	• Behavior • Attitudes/Opinions/Perceptions • Values and Emotions • Knowledge • Culturally Shared Meaning • Social Structure and Relationships • Processes and Systems • Environmental Context
Select Data Collection Methods (for EACH population in your study)	• Participant Observation (Ch 3) • In-Depth Interviews (Ch 4) • Focus Groups (Ch 5) • Document Analysis (Ch 6)
Determine If/How Additional Activities/ Procedures Will Inform Study (Chapter 6)	• Listing • Categorizing • Timelines • Drawing/Mapping • Visual Elicitation (projective) • Rating/Ranking • Post-Event Reflection • Delphi Technique • Collages • Building a Campaign • Laddering • Ethnographic Decision Modeling
Establish Sampling Procedures (Chapter 2) (for EACH population and data collection method in your study) *Determine Sampling Flexibility*	• Inductive versus A Priori Sampling

Step	Options/Considerations
Determine Sampling Strategy(ies) *Determine/Estimate Sample Size(s)*	• Census • Purposive (choose type. Table 2.1) • Quota • Convenience • Simple random • Systematic • Other
Determine Recruitment Method(s) (for EACH population and data collection method in your study). See Table 2.2.	• Media-Based • Investigator Initiated • Socially Based • Panel/List-Based
Time and Resource Constraints	• Consider what, if any, the scheduling expectations are for the study. • Know what your budget's bottom line is. • Balance the research scope with the time and budget parameters. • Manage client/funder/stakeholder expectations as required.
Review, Revise, and Repeat	Include collaborators (client, funder, stakeholders) and colleagues in review process.

About This Book

Although we have written this book as a compendium, with each chapter logically connected to the others, the chapters are intended to stand on their own. In each of the eight chapters, we incorporate examples, as well as practical tools such as checklists, templates, and actionable tips (learned through trial and error), to help data collectors efficiently go about their job. This book is, therefore, written primarily for the practitioner of qualitative research, in both applied and academic settings and across a wide range of disciplines. As a consequence, we have incorporated a broad range of examples, from a diversity of research fields such as marketing, public health, and anthropology. The connecting thread throughout is the "how to" instructional focus. As the book's title suggests,

it is intended as a manual that data collectors can use prior to, during, and after conducting field research, to build and enhance qualitative data collection skills and practices.

We would also like to explicitly point out what this book does *not* cover, so as to not raise false expectations. To start, we do not discuss participatory or participatory action research (PAR), which is an exciting trend in field research. Based in a democratic philosophy toward research, PAR makes concerted efforts to include local communities in various (and often all) stages of the research process. While PAR often uses the same qualitative methods we cover in this book, the political and social processes involved in designing and implementing data collection and analysis are quite unique. We recommend that those researchers specifically interested in PAR consult books devoted to the topic (e.g., McIntyre, 2008; Pillsbury-Pavlish & Dexheimer-Pharris, 2011). Our book should be seen as complementary to PAR, as an instructional manual that research managers can use to train others, such as lay community members, novice researchers, or anyone involved in research design and data collection activities.

We also do not cover data analysis, for two primary reasons. Other books cover the topic of qualitative data analysis well and in detail (e.g., Bernard & Ryan, 2010; Charmaz, 2006; Grbich, 2007; Guest et al., 2012; Miles & Huberman, 1994). To include a thorough description of data analysis, in our opinion, would be to create a tome that would be counter-productive to the intended use of this book—a portable field manual for qualitative data collection. We recognize that designing research and carrying out data collection requires analytic forethought, which is why we include descriptions of the analytic traditions in this chapter. It would require at least another entire book to do justice to the diversity and complexity involved in the various analytic traditions described above.

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