



## Chapter 7



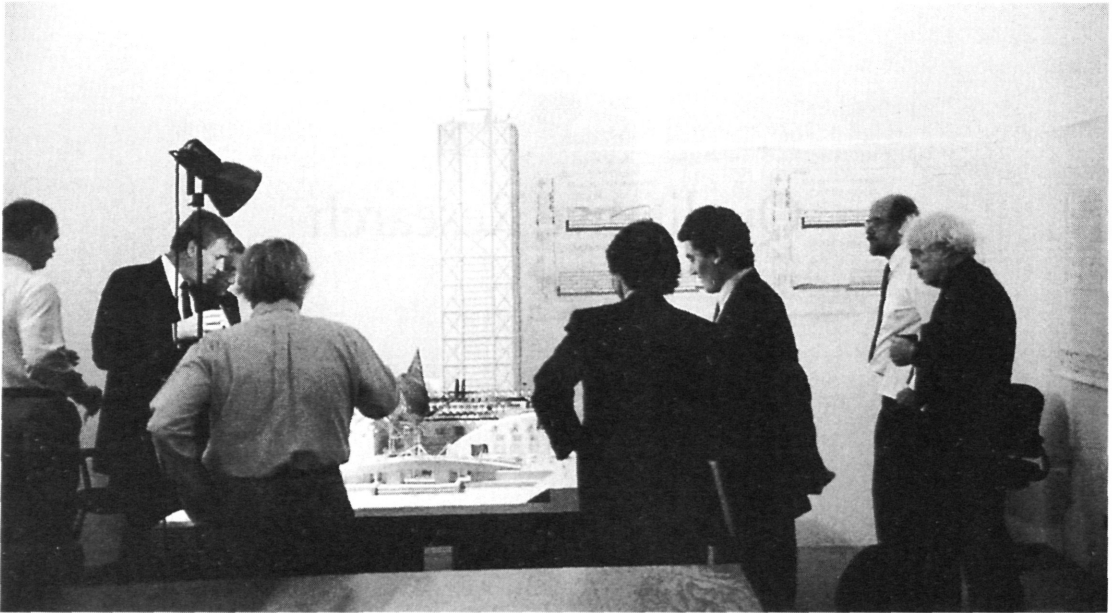
# Qualitative Research

## 7.1 INTRODUCTION

In her well-known book *Architecture: The Story of Practice*, Dana Cuff provides in-depth descriptions and analyses of architectural practice.<sup>1</sup> Throughout the book, she recounts in great detail the many interactions and processes that architects experience on a daily basis. With these observations as a foundation, she brings to light many of the underlying contradictions of the profession. These include, for example, the profession's tendency to celebrate the creative talent of the individual architect, even while most architects work in collaborative settings to bring to life complex building projects.

In introducing her study, Cuff describes in considerable detail how she went about her research. First and foremost, she persuaded three Bay Area firms to let her observe and participate in the life of each firm over a six-month period. In each setting, she observed meetings, interviewed firm members, participated in casual conversations, and took part in many informal social activities. Throughout these interactions, Cuff maintained two important principles: 1) that she should try to understand the dynamics of the profession from the point of view of the participants; and 2) that, at the same time, such insiders' perspectives had to be balanced by her "outsider's observations."<sup>2</sup> While Cuff insists on grounding her work in empirical reality, she also highlights the role of interpretation and meaning. As she puts it:

Philosophically, what I value . . . is [a] rejection of positivist notions of the social world, embracing interpretation, meaning in context, interaction, and the quality of the commonplace.<sup>3</sup>



**Figure 7.1** Meetings between architects, clients, and consultants are an essential aspect of the design process.

In another recent study, Linda Groat and Sherry Ahrentzen conducted a series of in-depth interviews with faculty women in architecture, the results of which were published in the *Journal of Architectural Education*.<sup>4</sup> The open-ended interview questions were developed to elicit the women's accounts of their professional careers, including: their initial motivations for entering the field; their experience of either discrimination or encouragement as faculty members; and their visions for the future of architectural education. Rather than selecting the women to be interviewed through random sampling, the authors' goal was to "maximize the variety and range of perspectives represented. . . . As consequence, our sample is heavily weighted to tenured women. . . . Yet because these are precisely the women who are most likely to exert influence within the academy, their perspectives merit serious consideration."<sup>5</sup>

Another key feature of their study was its inductive approach. The analysis of the in-depth interviews required a long, interactive process of identifying key themes, developing an elaborate coding scheme, and eventually synthesizing the results into the textual narrative for the article. The published article not only reports on the key themes culled from the "visions" section of the interview but also grounds these



**Figure 7.2** An increasing number of faculty in architecture are women, and their perspectives on architecture are often different from those of their male colleagues. Photograph courtesy of Washington State University Spokane.

themes through illustrative quotations from individual respondents. Only after the major themes were identified did the authors consider the remarkable parallel to the recommendations of the 1996 Carnegie Foundation study of architectural education.<sup>6</sup> To be specific, five of the seven themes Groat and Ahrentzen identified correspond to those from the Carnegie study: ideals of a liberal education, interdisciplinary connections, different modes of thought, communicative design studios, and caring for students. Groat and Ahrentzen conclude that “these recommendations constitute a consistent and powerful argument for the visions for architectural education that any number of individual faculty women have been valiantly advocating for many years.”<sup>7</sup>



## 7.2 THE STRATEGY OF QUALITATIVE RESEARCH: GENERAL CHARACTERISTICS

What the Cuff and the Groat/Ahrentzen studies have in common is that they can be categorized as qualitative research. Although this strategy can take many different forms, they typically have a number of important characteristics in common. Norman Denzin and Yvonne Lincoln, authors of a comprehensive three-volume handbook on qualitative research, offer the following “generic” definition:

Qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials.<sup>8</sup>

Within this definition four key components of qualitative research are identified. We will consider each of them in turn, using examples from architectural research to illustrate them.

### *7.2.1 An Emphasis on Natural Settings*

By natural settings is meant that the objects of inquiry are not removed from the venues that surround them in everyday life. Cuff’s primary material came from her in-depth observations and interactions at three architectural firms over a six-month period. In the Groat/Ahrentzen study, the value of the research is precisely due to its ability to highlight trends embedded in the context of the academic departments the subjects were a part of. In both these cases, the researchers used a variety of research tactics that placed themselves or their data collection tactics into the context being studied; the context did not have to be altered for the study to be conducted.

### *7.2.2 A Focus on Interpretation and Meaning*

In both the Cuff and the Groat and Ahrentzen studies, the authors not only ground their work in the empirical realities of their observations and interviews, but they also make clear that they, as researchers, play an important role in interpreting and making sense of that data. To reiterate one of Cuff’s points (quoted earlier), she intentionally employs methodological practices that embrace interpretation and meaning in context. Similarly, throughout the long process of interviewing the participants in their study, Groat and Ahrentzen routinely wrote and exchanged memos on their preliminary interpretations of the interviews, both to initiate the process of analysis and to guide the development of the remaining interviews. (See Section 7.3.1 and Figure 7.7 for details.)

### 7.2.3 *A Focus on How the Respondents Make Sense of Their Own Circumstances*

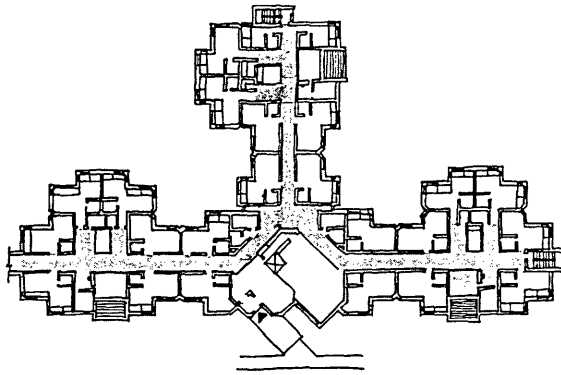
In the Cuff and Groat/Ahrentzen studies, it is clear that the researchers aim to present a holistic portrayal of the setting or phenomenon under study as the respondents themselves understand it. Cuff, for example, offers extensive and detailed descriptions of interactions among the multiple players in client meetings. For their part, Groat and Ahrentzen sought to understand how faculty women perceived three aspects of their experiences in architecture: their attraction to architecture as a career; their career experiences both in professional practice and in teaching; and their visions for architectural education.

Another good example of research that emphasizes how respondents make sense of their own experiences is Benjamin Schwarz's study of the design process in nursing home projects (discussed in Chapter 2).<sup>9</sup> In a series of case studies, Schwarz chronicles the dynamics of the design process from the distinct perspectives of individual stakeholders, each of whose point of view is well represented through extensive interview quotations. For example, in case No. 2, Schwarz describes the process as "a power struggle between the facility's development team and their architects, on one side, and the state regulators on the other."<sup>10</sup> One of the architects describes his severe frustration: "It's outrageous how much it costs to build a nursing home per square foot. . . . But you end up building in things that people don't even use. . . . An awful lot of regulations really do get in the way. [The reason for the regulation is] to limit the State's exposure in terms of how much money they're going to spend in the reimbursement system."<sup>11</sup>

For his part, the state regulator felt he represented the needs of the elderly residents: "The only reason that we set maximums was primarily to protect the people in the facility. Because we said that if there's limitation on reimbursement the applicants need to know that."<sup>12</sup> From the facility director's position, it seemed that state regulations forced a modification of the design that brought it closer to the more traditional nursing home, as indeed the design schemes in Figure 7.3 and 7.4 indicate. In the architect's opinion, the client had attempted to change state regulation through the design process, which "was not the right way to do it, but that's the way the client chose to do it."<sup>13</sup> Letting the various stakeholders speak for themselves and make sense of the process they experienced enabled Schwarz to clarify in a powerful way the "ideological contradiction" at the heart of the design process for long-term care settings.

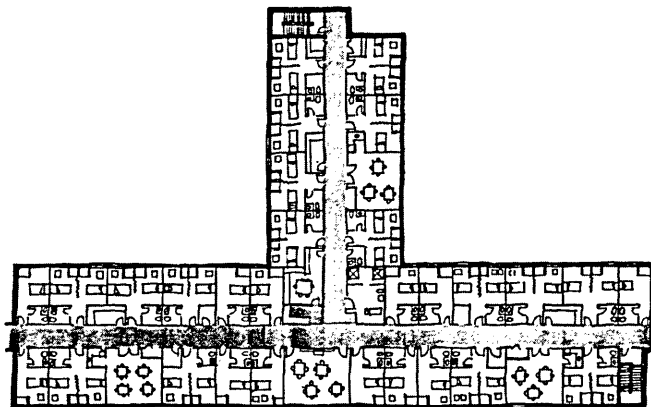
### 7.2.4 *The Use of Multiple Tactics*

Denzin and Lincoln refer to this characteristic of qualitative research as bricolage. A bricolage is "a pieced-together, close-knit set of practices that provide solutions to a problem in a concrete situation."<sup>14</sup> Although not all qualitative studies employ multiple tactics (e.g., the Groat and Ahrentzen study), a good example of a multitactic qualitative study may be seen in Sherry Ahrentzen's "A Place of Peace, Prospect and



**Figure 7.3** The floor plan for the initial cluster unit scheme, Schwarz, 1997. Drawing courtesy of Benjamin Schwarz.

. . . A.P.C.: The Home as Office.”<sup>15</sup> Ahrentzen researched 104 individuals who work out of offices in their homes to gain an understanding of the “socio-spatial consequences” of such an arrangement. Specifically, she sought to uncover how these individuals perceived their neighborhoods in light of their homes being also their places of work. She also studied their attitudes to housing layout, as well as to how they “phenomenologically” viewed their home office. Her tactics are an excellent illustration of the bricolage approach: “This report is . . . a cross-sectional survey design with self-administered questionnaire, face-to-face interview, a modified time diary, and photographs, sketches and a physical inventory of the home and workspace.” To be sure, not every one of these tactics is exclusively qualitative, but the overarching research questions and the dominant mode of the research design are qualitative.



**Figure 7.4** General floor plan of the first floor as built, Schwarz, 1997. Drawing courtesy of Benjamin Schwarz.

### 7.2.5 Other Aspects of Qualitative Research Strategy

To review, then, the strategy of qualitative research is one of first-hand encounters with a specific context. It involves gaining an understanding of how people in real-world situations “make sense” of their environment and themselves, and it achieves this by means of a variety of tactics. It acknowledges, rather than disavows, the role of interpretation in the collection and presentation of data.

Although the origins of qualitative research lie primarily in the social sciences, readers may already have remarked that this research design bears many similarities to the interpretive-historical method (see Chapter 6). Indeed, both strategies seek to describe or explain socio/physical phenomena within complex contexts, and both

**Holistic.** “The goal of qualitative research is to “gain a ‘holistic’ (systematic, encompassing, integrated) overview of the context under study.” (Miles and Huberman, 1994, p. 6).

**Prolonged Contact.** “Qualitative research is conducted through an intense and/or prolonged contact with a ‘field’ or life situation.” Hence, the emphasis in many studies on “fieldwork.” (Miles and Huberman, 1994, p. 6).

**Open Ended.** Qualitative research tends to be more open-ended in both theoretical conception and research design than other research strategies (e.g. experimental or correlational) because it typically eschews the notion of a knowable, objective reality (Creswell, 1994, p. 44).

**Researcher as Measurement Device.** Since there is relatively little use of standardized measures—such as survey questionnaires, the researcher is “essentially the main ‘measurement device’ in the study.” (Miles & Huberman, 1994, p. 7).

**Analysis Through Words.** Since an emphasis on descriptive numerical measures and inferential statistics is typically eschewed, the principal mode of analysis is through words, whether represented in visual displays or through narrative devices. (Miles and Huberman, 1994, p. 7).

**Personal Informal Writing Stance.** In contrast to the typical journal format of experimental or correlational studies, the writing style of qualitative work is typically offered in a “personal informal writing stance that lessens the distance between the writer and the reader.” (Creswell, 1994, p. 43).

**Figure 7.5** A summary of additional attributes of the qualitative research design. From J. Creswell, *Research Design: Qualitative & Quantitative Approaches* (Sage Publications, 1994); and Miles & Huberman, *Qualitative Data Analysis* (Sage Publications, 1994). Reprinted by permission of Sage Publications. © 1994 by Matthew B. Miles and A. Michael Huberman.

seek to consider the relevant phenomena in a holistic manner. Denzin and Lincoln's major collection of essays on qualitative research strategies includes a chapter by Gaye Tuchman titled "Historical Social Science,"<sup>16</sup> which argues that traditional distinctions between history and sociology have been largely abandoned. Tuchman concludes: "What remains in both fields is recognition that research is an interpretive enterprise."<sup>17</sup>

There are, however, major differences between the qualitative research design and the interpretive-historical strategy as defined here. The most obvious is temporal: whereas qualitative studies tend to focus on contemporary phenomena, interpretive-historical research has an historical focus. Data sources and collection techniques are likely to differ accordingly. Whereas qualitative researchers are more likely to be concerned with data collection involving people; historians typically rely on documents and other material artifacts.

Despite these differences, qualitative and interpretive-historical research remain closely related, demonstrating how permeable the boundaries of research strategies are. These two strategies are often combined, in fact, so that aspects of one can augment the characteristics of the other. For example, historical research may advantageously incorporate a focus on the social impact of particular buildings, styles, or city forms. Likewise, studies of contemporary environments may profit from analyses of historical archives and physical artifacts. This potential of combined strategies will be taken up in greater detail later in this book (see Chapter 12).

### 7.3 STRATEGY: THREE QUALITATIVE APPROACHES

In this section, we address three approaches to qualitative research: grounded theory, ethnography, and interpretivism. The last of these three should not be confused with the interpretive-historical strategy described in Chapter 6. Interpretivism is an approach that is strongly framed by the phenomenological perspective, whereas interpretive-historical research can accommodate many epistemological perspectives.

In each of the following sections we summarize the basic characteristics of each approach, including its strengths and weaknesses. We then present examples to show how the approach can be used in architectural inquiry.

#### 7.3.1 *Grounded Theory*

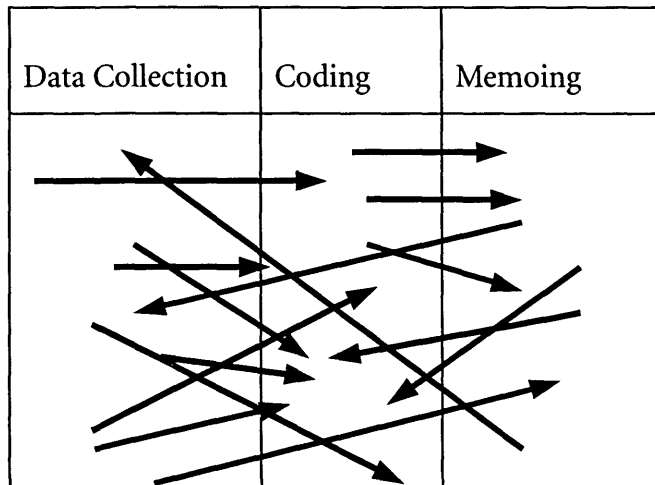
In grounded theory, the researcher seeks to enter a setting without preset opinions or notions, lets the goings-on of the setting determine the data, and then lets a theory emerge from that data. Once the theory is proposed, other similar settings can be studied to see if the emergent theory has explanatory power.

The term *grounded theory* is associated especially with the work of sociologists Barney Glaser and Anselm Strauss and their research colleagues.<sup>18</sup> Strauss has de-

scribed this approach to qualitative data analysis as “the development of theory, without any particular commitment to specific kinds of data, lines of research, or theoretical interests.”<sup>19</sup> More recently, Strauss and Corbin offered this definition:

In this method, data collection, analysis, and eventual theory stand in close relationship to one another. A researcher does not begin a project with a preconceived theory in mind (unless his or her purpose is to elaborate and extend existing theory). Rather, the researcher begins with an area of study and allows the theory to emerge from the data. . . . Grounded theories, because they are drawn from data, are likely to offer insight, enhance understanding, and provide a meaningful guide to action.<sup>20</sup>

An important, distinguishing feature of grounded theory is its use of an intensive, open-ended, and iterative process that simultaneously involves data collection, coding (data analysis), and “memoing” (theory building). Strauss’s diagram, shown in Figure 7.6, suggests all combinations of movement across these three tasks.<sup>21</sup> Strauss draws a distinction between grounded theory research and other qualitative research: “This reexamination of all data throughout the life of the research project is a procedure probably engaged in by most qualitative researchers. But they do not usually double back-and-forth between collecting data, coding them, memoing.”<sup>22</sup> In other words, in grounded theory research, it is assumed that the object of study



**Figure 7.6** Phases of research coding. A. Strauss, *Qualitative Analysis for Social Scientists*, (Cambridge University Press, 1987). Reprinted with the permission of Cambridge University Press.

cannot be fully explained “on the first take.” Instead, observation, data collection, and data structuring must take place in an iterative process before a theory can emerge.

The practice of “memoing” is a second distinguishing element of grounded theory. As Strauss describes it,

Theoretical ideas are kept track of, and continuously linked and built up by means of *theoretical memos* [author’s emphasis]. From time to time they are taken out of the file and examined and sorted, which results in new ideas, thus new memos. . . . *Sorting* [author’s emphasis] of memos (and codes) may occur at any phase of the research. Both examination and sorting produces memos of greater scope and conceptual density.<sup>23</sup>

Although a number of authors have characterized grounded research as an exclusively inductive process, Strauss says this is a misconception. All scientific theories, says Strauss, “require first of all that they be conceived, then elaborated, then checked out.”<sup>24</sup> Grounded theory research, he argues, requires both deduction (elaboration) and verification (checking out), equally as much induction (theory conception).

Groat and Ahrentzen’s study of women faculty followed the grounded theory model, albeit somewhat informally. Groat and Ahrentzen began their inquiry without a particular theory in mind; they used the memoing technique throughout the sequence of 40 interviews; and they only developed the comparative analysis with the Carnegie study recommendations after they had completed the interview coding and memoing process. (See Figure 7.7.)

### 7.3.2 Ethnography

Although it also emphasizes in-depth engagement with its subject, ethnographic research differs from grounded theory in that the researcher’s aim is not to create an explanatory theory that can be applied to many settings. Rather, ethnographic research culminates in a rich and full delineation of a particular setting that persuades a wide audience of its human validity.

Although ethnographic fieldwork was initially associated with anthropology, it has been adopted by a number of other disciplines, including sociology, human geography, organization studies, educational research, and cultural studies.<sup>25</sup> True to its anthropological roots, ethnography lays particular emphasis on the immersion of the researcher in a particular cultural context and on the attempt to ascertain how those living in that context interpret their situation. Although early ethnographic research reflected Western interest in non-Western societies, much ethnographic work in the twentieth century sought to investigate various sub-cultures within the West.

The overall characteristics of ethnographic work are fully consistent with the definition of qualitative research presented in this chapter. They include the holistic exploration of a setting using context-rich detail; a reliance on unstructured (i.e. not

**PERCEPTION THAT ARCHITECTURAL EDUCATION REFLECTS A NARROWING OF THE MIND.** A number of women discuss the narrow focus, perspective, or intellectual inquiry in architectural education. Could these complaints stem from women whose educational background (or part of) was outside standard architectural education, hence they were exposed to other fields (e.g. Urban Studies, Music) that were more multidisciplinary and inclusive? I also wonder if this complaint may be a particular issue for those women whose own education/training was more “transformational,” as discussed in the Aisenberg/ Harrington book and also discussed in Belenky et al’s *Women’s Ways of Knowing*.

SA to LG 10/14/92

**ATTRactions, REALITIES, AND MYTHS OF ARCHITECTURE.** The meaning for architecture for women. This is a version of the hypothesis I outlined earlier: whether women architecture students tend to be motivated by more idealistic, socially-oriented goals than their male counterparts. If this is the case, the actual realities of architectural education and practice might lead to higher frustration and disappointment, and ultimately to more attrition. Within the context of this study, this hypothesis cannot actually be tested, but it is possible at least to determine the extent to which our sample actually holds idealistically, socially-oriented goals for architecture; the extreme frustration and attrition phenomena can not be measured without an extensive sample of deflected women.

In Sherry’s discussion of the “narrowing of the field” concern expressed by many women, she speculated that this complaint might be more common among “women whose own education was more transformational.” I think this is a good line to follow up. I suspect it may be true and also related to the tendency for women to come to architecture when they are older, i.e. after a broader range of life experiences.

LG to SA 11/2/92

**Figure 7.7** A memoing sequence. Groat and Ahrentzen, 1997. Courtesy of Linda Groat and Sherry Ahrentzen.

precoded) data; a focus on a single case or small number of cases; and data analysis that emphasizes “the meanings and functions of human action.”<sup>26</sup>

Perhaps the most distinctive aspect of ethnographic fieldwork is its reliance on “participant observation” as the primary mode of data collection. Although this term is frequently used to refer to a situation in which the researcher plays a naturally oc-



curing, established role in the situation under study, the researcher may abide by this model to varying degrees. For instance, the researcher's identity outside the setting might be known by few or many; or revealed in more or less detail. The researcher may play his/her apparent role to a greater or lesser degree; or s/he may take the stance of either an insider or an outsider. Thus, participant observation allows for enormous variation in how the researcher observes and participates in the phenomena being studied.

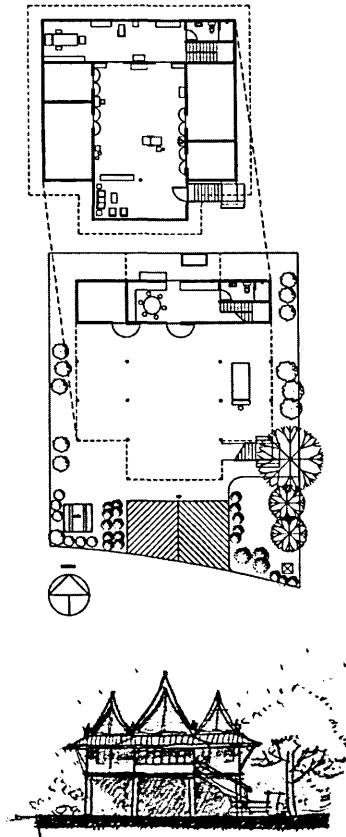
Cuff's study of architectural practice serves as a good example of the ethnographic approach. Not only does Cuff use participant observation, she describes her research as following these ethnographic principles:

[M]ost current ethnographic studies look at patterns of interpretation that members of a cultural group invoke as they go about their daily lives. Into the general knot of making sense of the world, an ethnography ties ideas about the group's knowledge, its beliefs, its social organization, how it reproduces itself, and the material world in which it exists.<sup>27</sup>

A recent doctoral dissertation in architecture offers another example of ethnographic research. In response to the intense modernization of her native Bangkok, Piyalada Devakula sought to identify the experiential qualities and meanings of the traditional Thai house, in both its original context and the present-day.<sup>28</sup>

With this goal in mind, Devakula chose four case study houses representing four distinct housing types: 1) a fully featured traditional house in its original form; 2) a lived-in and modernized traditional house; 3) a Western-style urban villa; and 4) a contemporary house designed to "capture" the traditional spirit. (See Figures 7.8. and 7.9.) Each case was studied using ethnographic field techniques such as participant observation and unstructured interviews. Devakula's identity as a researcher was known by the residents of the houses she observed. Although for the most part she simply observed the house's physical features and the activities of the family members within it, she also at times became involved in family and community activities. As an architect-researcher, Devakula was more concerned with the qualities of the physical environment and the way people living there experienced it than with other anthropological issues, such as family relations. Her description of her field work is informative:

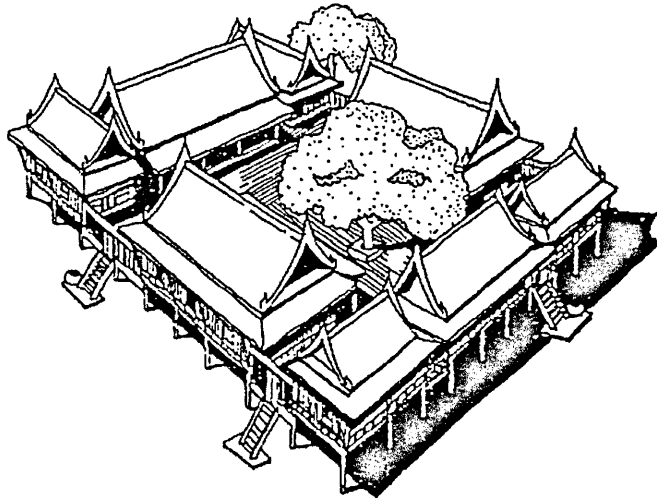
At each of the houses, I moved through the various little places in and around the houses, sat down once in a while, climbed up and down, looked at all the "things" that filled these houses. I also wrote field notes, did some sketches and took photographs. Many times, I "talked" to the people in the house, asked them about the house, or simply chatted away. Sometimes, I went to community events, and sometimes I simply played with the kids. Each time at the houses, something new and unexpected always came up. As the non-structured "interviews" and conver-



**Figure 7.8** Ban Song Kanong, the modernized traditional house studied by Devakula, 1999. Drawing courtesy of Piyalada Devakula.

sations revealed much more than I could have expected, the open modes of data gathering allowed me to fully explore these fascinating worlds filled with colorful casts of characters and welcome the unexpected as a fruitful part of the experiences.<sup>29</sup>

Devakula derives a set of five experiential patterns in traditional Thai houses. These are discussed in considerable detail in relation to each of the four cases. It is only in her concluding chapter that Devakula introduces several relevant theoretical models that illuminate her empirically derived patterns. In this regard, Devakula's research reflects a primarily inductive stance that is characteristic of much, perhaps the vast majority, of qualitative research.



**Figure 7.9** Tub Kwan, the traditional royal house studied by Devakula, 1999. Drawing courtesy of Piyalada Devakula.

### 7.3.3 Interpretivism

Interpretivism derives from the phenomenological tradition of the philosophers Edmund Husserl and Martin Heidegger and the work of scholars who have tried to adapt this tradition to the social sciences. A defining quality of this work, as described by Thomas Schwandt, is the shared “goal of understanding the complex world of lived experience from the point of view of those who live it.”<sup>30</sup> True to the principles of the phenomenological tradition, proponents of this model of research “celebrate the permanence and priority of the real world of first-person, subjective experience.”<sup>31</sup> Nevertheless, their approach is perpetually seeking to resolve the proverbial Cartesian split between subject and object, mind and matter. Or as Schwandt puts it: The interpretivist researcher must struggle with “[t]he paradox of how to develop an objective interpretive science of subjective human experience.”

One well-known proponent of this strain of qualitative research is the anthropologist Clifford Geertz, author of the now-famous mandate that the researcher provide a “thick description” of the context under study.<sup>32</sup> Consider the wink of an eye. A “thick” (i.e. rich and full) description is one that describes not only the wink, but also what that wink can mean within the semantic systems of the culture in which it happens (the wink can mean something romantic, some kind of signal for action, or simply a muscle tic). More important, at a broader epistemological level, Geertz operates from the assumption that social facts are not “out there” as an objective reality. Rather, as Schwandt puts it, “the inquirer constructs a reading of the meaning making process of the people he or she studies.”<sup>33</sup>



Figure 7.10 Attic window. Drawing by David Wang.

In blurring the distinction between science and literature, Geertz's stance is not unlike that of the historian Hayden White, who speaks of historical narrative as the process of "emplotment." (See Chapter 6 for a more complete discuss of White's perspective.) There is thus a powerful similarity between the interpretivist approach to qualitative research and the "literary" view of interpretive-historical research.

Cuff's study of architectural practice exhibits qualities of the interpretivist approach to research. For example, she insists on the value of interpretation both on the part of the respondents and on the part of the researcher. Moreover, Cuff also refers to Geertz's work, ethnomethodology (distinct from ethnography), and phenomenology—all orientations that are associated with interpretivism.

## BOX 7.1

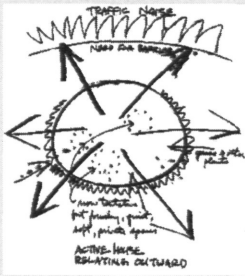
### Qualitative Research: An Interpretivist Approach to Research Design

**C**lare Cooper Marcus's study of people's attachments to their homes, *House as Mirror of Self*, is a good example of what one might call applied phenomenology.\* This book builds on work that she began many years ago with the publication of a now classic article entitled "The House as a Symbol of the Self."\*\*\* Her approach to this material is particularly attractive in that she finds ways to access the phenomenological unity between a subject and her home—and can write about it—without using much of the jargon typically found in phenomenological writings. The following citation from the introduction to her book is useful in unveiling the phenomenological moorings of her methodology:

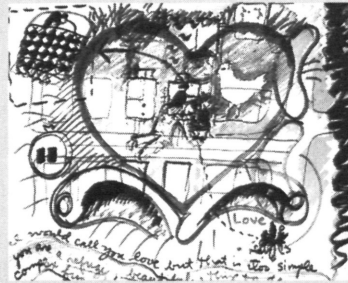
So far as I was able, I attempted to approach this material via what philosopher Martin Heidegger called "prelogical thought." This is not "illogical" or "irrational," but rather a mode of approaching being-in-the-world that permeated early Greek thinkers at a time before the categorization of our world into mind and matter, cause and effect, in-here and out-there had gripped . . . the Western mind. I firmly believe that a deeper level of person/environment interaction can be approached only by means of a thought process that attempts to eliminate observer and object.†

Marcus was dissatisfied early in her research because her work had dealt primarily with house, but not home. It was not until a friend of hers "talked to the desert" that she discovered a way by which the precognitive realities of the "house-self dynamic" could be unearthed. She then developed tactics that involved asking a subject to talk to her house, and then to have the house "talk" back to her, supplemented by her respondents' attempts to capture the feelings in graphic form.

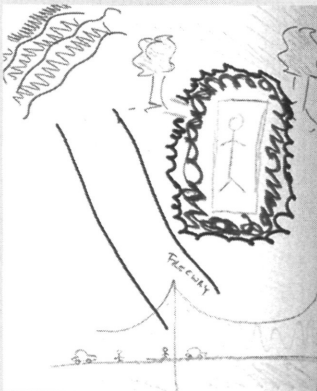
When Cooper Marcus turned to graphic exercises, as well as “talking to,” rather than “talking about,” environments of attachment, a phenomenological world opened up. For example, one individual, Bill, chafed at her suggestion that his love for remodeling was a “hobby.” Bill’s response: “The word hobby is an annoying word to me . . . this is not a hobby . . . this is a fundamental part of our existence.”†† His insistence that the work of his hands is a “fundamental part of our existence” is profound in its conveyance of a sense of ontological unity between himself and his environment. In studies of a phenomenological nature, such use of words may also be data.



**Figure 7.11** The sketch from someone who did not feel at home in his house. Excerpt from *House as a Mirror of Self* by Clare Cooper Marcus, copyright © 1995 by Clare Cooper Marcus, by permission of Conari Press.



**Figure 7.12** A sketch of the house shared with a partner. Excerpt from *House as a Mirror of Self* by Clare Cooper Marcus, copyright © 1995 by Clare Cooper Marcus, by permission of Conari Press.



**Figure 7.13** A sketch of a disliked suburban apartment and the route to visit friends in the city. Excerpt from *House as a Mirror of Self* by Clare Cooper Marcus, copyright © 1995 by Clare Cooper Marcus, by permission of Conari Press.

\*Clare Cooper Marcus, *House as a Mirror of Self* (Berkeley, Calif.: Conari Press, 1995).

\*\*Clare Cooper Marcus, “House as a Symbol of Self,” in *Designing for Human Behavior: Architecture and the Behavioral Sciences*, ed. J. Land (Stroudsburg, Penn.: Dowden, Hutchinson & Ross, 1974).

†Clare Cooper Marcus, *House as a Mirror of Self*, 13.

††Ibid., 61.

**BOX 7.2****Qualitative Research: An Interpretivist Approach to Studio**

According to architect Botund Bogнар, a phenomenological approach in the studio can reverse the tendency of “rational” design, an attitude that reduces architecture “to measurable effects and results . . . which seriously limits architecture’s primary grounding in human experience.”\* Bogнар guided his students through several projects that entailed the following:

1. Recalling a place from memory and writing on how “sense of place” was achieved in that instance.
2. After being provided with a map of an actual locale, “picturing” the place’s character, and then designing an appropriate intervention for it.
3. Getting to know a designated urban locale by walking in it, eating in it, riding a bus through it; and then mapping the boundaries, centers, zones, etc., of the location in a way that interprets its “character.”
4. Identifying physical venues that felt “out of tune” and designing interventions to increase their sense of place.

These exercises emphasize direct experience between student and context and attempt to sidestep the reductivist tendency to design according to predetermined abstract concepts. They seek to recover the primordial unity between the experiencing subject and the context experienced, and make that unity a the source of design activity.



**Figure 7.14** Students in a design studio. Here students are putting on paper design ideas for an urban park, having returned from a site visit. Photograph courtesy of Washington State University Spokane.

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\*Botund Bogнар, “A Phenomenological Approach to Architecture and Its Teaching in the Design Studio,” in David Seamon and Robert Mugurauer, eds. *Dwelling, Place, and Environment: Towards a Phenomenology of Person and World* (Malabar, Florida: Krieger Publishing Company, 2000), 185.

In the realm of architectural phenomenology, Gaston Bachelard's book *The Poetics of Space* is a classic work.<sup>34</sup> Bachelard uses vignettes from literature and poetry to weave an interpretive analysis of the significance of dwellings. In analyzing Bachelard's foundational work, Perla Kerosec-Serfaty observes that Bachelard "wants to show that the house is one of the strongest powers of integration for the thoughts, the memories and the dreams of men [sic],"<sup>35</sup> She then takes Gaston Bachelard's claim that the dwelling experience is a "total one" as a starting point for her own research study and conducts semidirected interviews of 96 homeowners on their feelings about their cellars and attics. From the results of these interviews she is able to identify eight qualitative categories that, in effect, parse Bachelard's original hypothesis of the total nature of the dwelling into an accessible conceptual framework. These categories are: appropriation, affluence and security, secrecy, keeping/throwing away, value, order and cleanliness, and continuity of generations.<sup>36</sup>

## 7.4 TACTICS: AN OVERVIEW OF DATA COLLECTION, ANALYSIS, AND INTERPRETATION

The exemplar studies described in the above discussions of grounded theory, ethnographic research, and interpretivism represent the diverse range of processes and tactics typical of qualitative research.

### 7.4.1 *The Process*

In their classic book *Qualitative Data Analysis*, Miles and Huberman describe the interactive relationship between data collection, data reduction, data display, and conclusion drawing/verifying this way:

In this view the three types of analysis activity and the activity of data collection itself form an interactive, cyclical process. The researcher moves among these four "nodes" during data collection and then shuttles among reduction, display, and conclusion drawing/verifying for the remainder of the study.<sup>37</sup>

Strauss has described the interactive process entailed in the grounded theory approach. Figure 7.6 represents the back-and-forth cycles between data collection, coding and memoing.

### 7.4.2 *Data Collection*

Three of the exemplar studies discussed so far represent a diverse range of data collection processes. The Groat and Ahrentzen study of faculty women in architecture made use of in-depth interviews lasting up to three hours.<sup>38</sup> The Devakula study of



Thai houses involved several months of participant observation at four case study houses.<sup>39</sup> And Cooper Marcus's study of people's phenomenological experiences of their houses involved in-depth interviews in which people role-played a conversation with their home, as well as graphic sketches whereby the respondents sought to express their deeply held feelings. These data collection tactics and others are outlined in Figure 7.15.

<b>Tactics</b>	<b>Interactive</b>	<b>Noninteractive</b>
Interviews	In-depth interviews Key informants interviews Career histories	
Focus groups	Discussions guided to test in small groups Participants help construct the right questions	
Surveys	Multiple sorting Projective surveys (games)	
Observation	Participant observation	Nonparticipant observation stream of behavior  Chronicles  Field notes
Artifacts and buildings		Artifactual interpretation
Archival documents		Archival interpretation

**Figure 7.15** The variety of data sources for qualitative research.

### 7.4.3 Data Reduction/Coding

Because qualitative research typically results in a vast amount of data (e.g., long interview transcripts, many pages of observation notes, graphic sketches or photographs), a major task in data analysis is to reduce the volume of data into manageable “chunks.” Although there is no one way to begin, a common device is to code the “chunks” into various themes, often by making notes in the margins of transcripts or documents. In order to retain mindfulness in coding, it is often necessary to make use of a coding scheme that is clearly documented in some way, both for your ongoing use and for your records. Figure 7.16 reproduces a segment of interview transcript coding in Groat and Ahrentzen’s study. As Miles and Huberman put it: “[I]f you are being alert about what you are doing, ideas and reactions to the meaning of what you are seeing will well up steadily.”<sup>40</sup>

A I think it's exciting to be in a discipline where, first of all it's a formulating--it's a forming discipline. And, so the practices, the teaching practices and everything, are always open for discussion. And very much the subject of teaching. And I really like that about it. And I'm excited to be in a discipline where, where it's really exploratory, and you are constantly learning. And that's part--the interest in the process of learning is what interests me. Some of the most negative asp--do want me to just wait?

pos.  
3.1 A 1. c.  
"  
A 1. c.

A The negative aspects are--I think it's the negative that it is a critical process. At the same time, it has some positive sides to it. But the system of criticism, as it is presently structured, is negative. I think the long hours are ridiculous. I think hazing--the hazing mentality--as a way of instructing students, is, is just really unconscionable. And I think that there's a problem with the male values that permeate the profession, educational system.

mf  
3.1 A B, b  
A 2 a.  
A 3 b.  
A 3 c.  
3.1 A 1. b.

Q Mm-hmm. You want to elaborate that a little bit?

**Figure 7.16** Coding of interview transcripts. Groat and Ahrentzen, 1997. Courtesy of Linda Groat and Sherry Ahrentzen.

7.4.4 Data Display

Most qualitative research studies make use of data displays, whether in the form of charts, graphs, or tables. Depending on the eventual publication format and readership, there is considerable variation in how extensively the study’s analytical processes are represented by such data displays. Journal articles are likely to provide fewer, while books, dissertations, and professional reports and reports are likely to provide more, although many displays are likely to appear in appendixes. Figure 7.17 represents what Miles and Huberman label a “checklist matrix” which Devakula produced as she moved from raw fieldnotes to drawing her conclusions. Here Devakula is beginning to compare features of interest across all four of the houses in her study.

7.4.5 Drawing Conclusions and Verifying

Once the data has been coded, reduced, and displayed, the researcher gradually moves toward identifying patterns, providing explanations, and evaluating the findings. This is no small task, and a full discussion of the tactics involved is beyond the scope of this

	Tub Kwan	Songkanong	Chaipranin	101/1
<p>• THE DWELLING</p> <p>The dwelling experience: what is it like to “live” in this house?</p> <p>See the roofs?</p> <p>Living off the ground or on the ground?</p>	-/a.	<p>-the family spends most of the time home ‘outside’ the house.. either in the TaiToon, or out and around in the neighborhood.. walking around talking to friends and relatives.</p> <p>-no strong feeling of ‘living in a traditional Thai house’.. “it’s just another ordinary house,” the daughter said.</p> <p>-the house was so transformed and the roofs joined together.. they don’t see their eaves that much.</p>	<p>-the “living-on-the-second-floor” excitement (K.Nin).. light and airy, with nice panoramic view.. they just love it.</p> <p>-see each other a lot.. as every room looks down/out into the central Chaan.. also a sense of control and security.</p> <p>-see the roofs everyday..</p> <p>-so in touch w/ the wind and the rain.. they hear the rain.. and they could sit down and watch it falling down the eaves... so close within their reach.</p>	<p>-very much living ‘inside’ the house.. which is very solid and ground bound.</p> <p>-little contact w/ the outside.. and it’s hot to be upstairs in the afternoon; the floors however, especially that of the lower level, are nice and cool though.</p> <p>-there’s hardly a chance to see the roof unless you really try looking up for it...too far out of reach.</p> <p>-it’s hard to find a cozy spot to sit down and read a book, or relax, or even watch TV... no back bone!</p>
<p>View: Food for the eyes</p> <p>-relationship w/ living spaces</p>	<p>-living spaces look out into the Chaan.. with the old Chand tree</p> <p>-looking from a protected shaded space into a bright open area.</p> <p>-not much scenery of the surroundings.. just the Chaan, tree tops, and the sky.</p>	<p>-the upstairs living space doesn’t really have a view; yet the TaiToon and the Sala have strong visual connection with the alley.. and hence the people walking by.</p> <p>-from the TaiToon sitting area.. one also looks out to the various trees and flowers in the little front lawn.</p>	<p>-the living space here has an enormous void that connects it w/ the Chaan; the furniture in it was arranged to enhance that view.</p> <p>-the very urban surroundings (lots of high rise condos, etc.) were screened out by all the big trees and greenery in and by the Chaan.. the house is its own little world.</p>	<p>-the living space here is rather dark.. and cut off from the outside (all the windows and curtains closed!).</p> <p>-the windows were rather high off the floor, where the family spends their time.</p> <p>-the formal guest receiving area is in a higher level.. and hence, with slightly better views...yet never in use.</p> <p>-the best look-out spot = day bed.</p>
<p>Light: How? Any hierarchy?</p>	<p>-very hierarchical—the very bright Chaan, the shaded Rabiang, and the dark inner room.</p> <p>-special, wonderful dance of light filtered through the layers of green leaves of the old Chand tree.</p>	<p>-not very hierarchical.. the added roof over the central hall made the whole interior space rather dim.. despite a few spots of skylights.</p> <p>-uniform fluorescent lamps all over.</p>	<p>-there’s an effect of being in a shade looking out to the bright Chaan.. but no true hierarchy.</p> <p>-the TaiToon is rather dark.. although the lighting effect at the tree well.. a mysterious and austere kind of effect .. is rather captivating.</p> <p>-the use of warm spot lights (and candles in the Chaan) helps generating a cozy feeling.</p>	<p>-dark interior and bright exterior.. but no strong connection—one is well-contained both when in the dim space (w/ perhaps the help of a uniform fluorescent light), and when out in the glaring sun.</p> <p>-the flat, uniform fluorescents at night don’t help making the flat.. overflowing space any better.</p>

Figure 7.17 Data display: checklist matrix. Devakula, 1999. Courtesy of Piyalada Devakula.

chapter. Figures 7.18 and 7.19 summarize the major considerations presented by Miles and Huberman in their chapter on the topic.<sup>41</sup> They remind us that “we keep the world consistent and predictable by organizing it and interpreting it. The critical question is whether the meanings you find in qualitative data are valid, repeatable, and right.”<sup>42</sup>

#### 7.4.6 Tactics in Exemplar Studies

Earlier in this chapter we described Ahrentzen’s study of home offices as an excellent example of the multitactic approach typical of qualitative research.<sup>43</sup> Here we will explore the study in greater depth. The data sources that Ahrentzen employed included a self-administered questionnaire, face-to-face interviews, a modified time diary, photographs, sketches, and a physical inventory of the home and workplace. Among these, the self-administered questionnaire, in which respondents used rating scales, is more often associated with correlational design (see Chapter 8). The combination of photographs, sketches, and physical inventory provided a holistic picture of each homeworker’s physical setting; the time diary yielded a robust picture of the worker’s daily routines and activities; and the face-to-face interview of more than an hour’s

Descriptive	Noting patterns, themes
	Seeing plausibility
	Clustering
	Making metaphors
	Counting
Analytical	Making contrasts/comparisons
	Partitioning variables
	Subsuming particulars into the general
	Factoring
	Noting relations between variables
	Finding interviewing variables
Explanatory	Building a logical chain of evidence
	Making conceptual/theoretical coherence

**Figure 7.18** Tactics for generating meaning. From Miles & Huberman, *Qualitative Data Analysis* (Sage Publications, 1994), pp. 245–246. Reprinted by permission of Sage Publications. © 1994 by Matthew B. Miles and A. Michael Huberman.

Data quality	Checking for representativeness
	Checking for researcher effects
	Triangulation
	Weighting the evidence
Looking at unpatterns	Checking the meanings of outliers
	Using extreme cases
	Following up surprises
	Looking for negative evidence
Testing explanations	Making if-then tests
	Ruling out spurious relations
	Replicating a finding
	Checking out rival explanations
Testing with feedback	Getting feedback from informants

**Figure 7.19** Tactics for testing or confirming findings. From Miles & Huberman, *Qualitative Data Analysis* (Sage Publications, 1994), p. 263. Reprinted by permission of Sage Publications. © 1994 by Matthew B. Miles and A. Michael Huberman.

length enabled Ahrentzen both to understand how each worker made sense of his/her experience and to verify or go into greater depth on issues that emerged from the other data sources.

One particularly useful line of inquiry involved a question posed to the respondents during the interview. If they could design an ideal home workspace from scratch, what would it be like? What would the layout be like? What rooms would be close by and what rooms distant? Another set of questions explored whether the meaning of home had changed for them as a result of telecommuting. Ahrentzen summarizes the responses this way: “Although for some home remained a positive refuge, for others that refuge quality was transformed into potential isolation and entrapment.”<sup>44</sup>

The array of tactics found in this study certainly make it fit with what Denzin and Lincoln call a multimethod approach; the study also conforms to the other three components of Denzin and Lincoln’s definition of qualitative research.<sup>45</sup> Ahrentzen’s study has: 1) taken a naturalistic approach to the subject of the home office; 2) studied the experience of telecommuting in situ; and 3) attempted to understand the dynamics of an experience in terms of the meanings people bring to it.

**BOX 7.3****Qualitative Research: Tactics for Practice**

**A**mong the best-known architects who have used qualitative research tactics to actively engage their clients are Charles Moore and Christopher Alexander. Moore's design process for St. Matthews Church is discussed in Chapter 5. Alexander's approach to design involves a robust combination of client participation, indigenous construction methods and materials, and primordial "patterns" that, he claims, usher positive emotion into built form. Although Alexander may not practice participant observation or conduct client interviews the way a scholar would, his design process engages people in informal versions of these qualitative methods.

Consider the Julian Street Inn in San Jose, California, a center that offers shelter for the homeless. As is typical of his approach, Alexander used collaborative tactics in the design and construction of this center. According to a documentary film on Alexander's work, his projects often do not

employ a conventional "design-bid-build" process; rather, sketches derived from owner, builder and designer inputs are integrated into the process as construction moves along. Shown here is the dining room of the Julian Street Inn; the trusses were sketched after construction began. The current director states that this space energizes the life of the center.



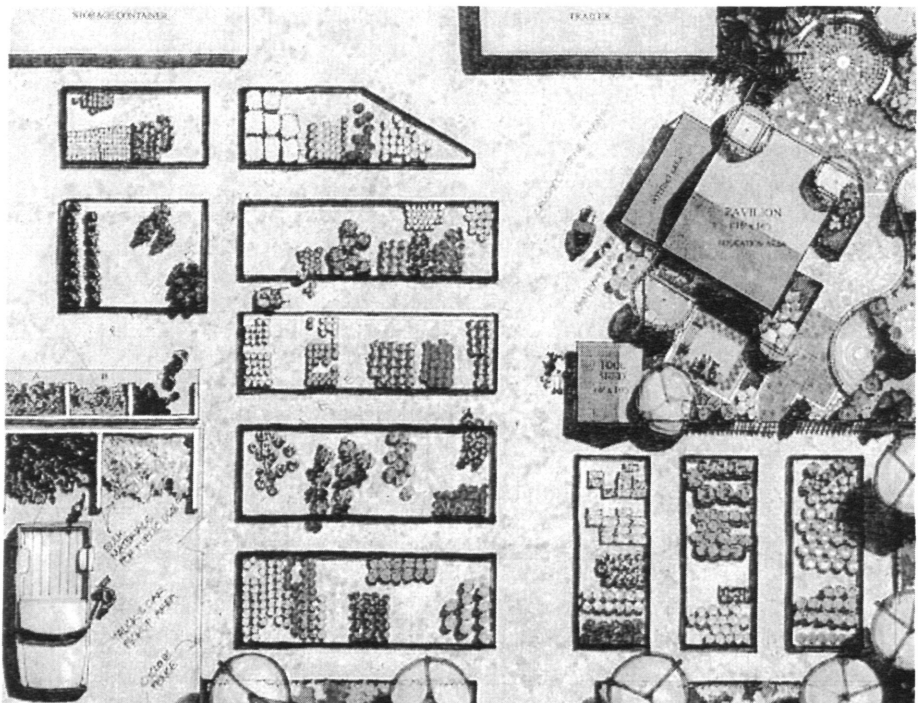
**Figure 7.20** Dining room in the Julian Street Inn, by Christopher Alexander. Drawing by Dave Wang.

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*\*Places for the Soul: The Architecture of Christopher Alexander* (Videotape, 29 minutes). Berkeley, Calif.: University of California Extension Center for Media and Independent Learning, #37991 (609-642-0460).

Collaborative community design is another area of practice that involves people making sense of their own surroundings. It often displays resonant connections to the principles of qualitative research discussed in this chapter. Of course there are many varieties of collaborative design; we have in mind here the kind that involves the local citizenry in the making of architecture. Typically, designers enter into these projects with more of an open attitude; the very desire to have community input necessitates letting go of preset biases about what the final design form ought to be. One such example is the New Kensington Garden Center, realized through the efforts of a volunteer Philadelphia design organization called the Community Design Collaborative. The center's program director, Susan Frankel, wrote this about the project:

The Center is located in the New Kensington neighborhood of eastern North Philadelphia along the Delaware River. . . . Landscape architect and Collaborative volunteer Michael LoFurno worked . . . with the New Kensington CDC, neighborhood residents, and Philadelphia Green. Michael took the group's ideas and turned them into a conceptual design for the garden center, which a cadre of



**Figure 7.21** Presentation panel from the New Kensington Garden Center project. Courtesy of Community Design Collaborative of AIA Philadelphia.

Americorp volunteers would later build over an intense six-week period. . . . In a very short time the large, debris-strewn lot, no different from thousands dotting Philadelphia's landscape, was transformed into a local source for soil, compost, wood chips, and other basic gardening materials in large part thanks to volunteer efforts.<sup>46</sup>

## 7.5 CONCLUSION: STRENGTHS AND WEAKNESSES

The major strengths of qualitative research follow from its capacity to take in the rich qualities of real-life circumstances and settings. It is also flexible in its design and procedures, allowing for adjustments to be made as the research proceeds. As such it is especially appropriate for understanding the meanings and processes of people's activities and artifacts.

On the other hand, these very significant advantages come with some costs. Researchers wishing to employ a qualitative research design will find relatively few "road maps" or step-by-step guidelines in the literature; the researcher is thus obliged to exercise extra care and thoughtfulness throughout the research study. Another major challenge concerns the vast amount of unstructured data that must be coded and analyzed, a task that is enormously time consuming. It is no exaggeration to say that many researchers spend years working through the many facets of their qualitative data. Also, for researchers working in fields where a more rationalistic paradigm holds sway, the "trustworthiness" of qualitative data may remain suspect, despite the efforts of qualitative methodologists to show that such research can be systematic.

In the end, however, in fields such as architecture, the peer review processes of scholarly journals and conference groups tend to give credence to qualitative research, suggesting that it will remain an important model for some time to come.

Strengths	Weaknesses
Capacity to take in rich and holistic qualities of real life circumstances	Challenge of dealing with vast quantities of data
Flexibility in design and procedures allowing adjustments in process	Few guidelines or step-by-step procedures established
Sensitivity to meanings and processes of artifacts and people's activities	The credibility of qualitative data can be seen as suspect with the postpositivist paradigm

**Figure 7.22** Strengths and weaknesses of qualitative research.



## 7.6 RECOMMENDED READING

Readers seeking introductory and readable texts on qualitative research may want to read one or both of the following: The chapter “Qualitative Methods” in Donna Mertens, *Research Methods in Education and Psychology* (Thousand Oaks, Calif.: Sage Publications, 1998), 158–190; The chapter “A Qualitative Procedure” in John Creswell, *Research Design: Qualitative and Quantitative Approaches* (Thousand Oaks, Calif.: Sage Publications, 1994): 145–170.

Readers seeking a more advanced and comprehensive review of qualitative research should consult Norman Denzin and Yvonna Lincoln’s three-volume handbook, which includes: *The Landscape of Qualitative Research: Theories and Issues; Strategies of Qualitative Inquiry*; and *Collecting and Interpreting Qualitative Materials* (Thousand Oaks, Calif.: Sage Publications, 1998).

For more information on the grounded theory approach, there are several seminal texts: Barney Glaser and Anselm Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Chicago: Aldine, 1967); Anselm Strauss, *Qualitative Analysis for Social Scientists* (New York: Cambridge University Press, 1987); and Anselm Strauss and Juliette Corbin, “Grounded Theory Methodology: An Overview,” in *Strategies of Qualitative Inquiry*, eds. Norman Denzin and Yvonne Lincoln (Thousand Oaks, Calif.: Sage Publications, 1998): 158–183.

For more information on ethnography, readers may want to consult the following: Paul Atkinson and Martyn Hammersley, “Ethnography and Participant Observation,” in *Strategies of Qualitative Inquiry*, ed. Norman Denzin and Yvonna Lincoln (Thousand Oaks, Calif.: Sage Publications, 1998), 110–136; James Clifford and George E. Marcus, *Writing Culture: The Poetics and Politics of Ethnography* (Berkeley, Calif.: University of California Press, 1986).

For more information on the interpretivist approach to qualitative research, readers may consult the following: James Holstein and Jaber F. Gubrium, “Phenomenology, Ethnomethodology, and Interpretive Practice,” in *Strategies of Qualitative Inquiry*, ed. Norman Denzin and Yvonna Lincoln (Thousand Oaks, Calif.: Sage Publications, 1998): 137–157; Clifford Geertz, *Local Knowledge: Further Essays in Interpretive Anthropology* (New York: Basic Book, 1983); Alfred Schutz, *The Phenomenology of the Social World* (Evanston, Ill.: Northwestern University Press, 1967).

Readers interested in specific exemplar works may want to consult: Dana Cuff, *Architecture: The Story of Practice* (Cambridge, Mass.: MIT Press, 1991); Clare Cooper Marcus, *House as Mirror of Self* (Berkeley, Calif.: Conari Press, 1995).

## NOTES

1. Dana Cuff, *Architecture: The Story of Practice* (Cambridge, Mass.: MIT Press, 1991).
2. *Ibid.*, 7.

3. Ibid., 6.
4. Linda N. Groat and Sherry Ahrentzen, "Voices for Change in Architectural Education: Seven Facets of Transformation from the Perspectives of Faculty Women," *Journal of Architectural Education* 50, no. 4 (1997): 271–285.
5. Ibid., 273.
6. Ernest Boyer and Lee Mitgang, *Building Community: A New Future for Architecture Education and Practice* (Princeton, N.J.: Carnegie Foundation for the Advancement of Teaching, 1996).
7. Groat and Ahrentzen, "Voices for Change," 273.
8. Norman Denzin and Yvonna Lincoln, *Strategies for Qualitative Inquiry* (Thousand Oaks, Calif.: Sage Publications, 1998), 3.
9. Benyamin Schwarz, "Nursing Home Design: A Misguided Architectural Model," *Journal of Architectural and Planning Research* 14, no. 4 (1997): 343–359.
10. Ibid., 349.
11. Ibid., 350.
12. Ibid., 349.
13. Ibid., 351.
14. Denzin and Lincoln, *Strategies for Qualitative Inquiry*, 3.
15. Sherry Ahrentzen, "A Place of Peace, Prospect, and a P.C.: The Home as Office," *Journal of Architectural and Planning Research* 7, no. 4 (1989): 271–288.
16. Gaye Tuchman, "Historical Social Sciences: Methodologies, Methods, and Meanings," in *Strategies of Qualitative Inquiry*, ed. N. Denzin and Y. Lincoln (Thousand Oaks, Calif.: Sage Publications, 1998), 225–260.
17. Ibid., 249.
18. Barney Glaser and Anselm Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Chicago: Aldine, 1967); Barney Glaser and Anselm Strauss, *Time for Dying* (Chicago: Aldine, 1968).
19. Anselm Strauss, *Qualitative Analysis for Social Scientists* (New York: Cambridge University Press, 1987).
20. Anselm Strauss and Juliette Corbin, *Strategies of Qualitative Inquiry* (1998): 12.
21. Anselm Strauss, *Qualitative Analysis for Social Scientists*, 19.
22. Ibid., 19.
23. Ibid., 18.
24. Ibid., 11.
25. Paul Atkinson and Martyn Hammersley, "Ethnography and Participant Observation," in *Strategies of Qualitative Inquiry*, ed. N. Denzin and Y. Lincoln (Thousand Oaks, Calif.: Sage Publications, 1998), 110–136.
26. Ibid., 111.
27. Cuff, 5.
28. Piyalada Devakula, "Experiential Characteristics and Meanings of the Traditional Thai House" (Ph.D. diss., University of Michigan, 1999).

29. Ibid., 43.
30. Thomas Schwandt, *Qualitative Inquiry: A Dictionary of Terms* (Thousand Oaks, Calif.: Sage Publications, 1998), 221.
31. Ibid., 223.
32. Clifford Geertz, *The Interpretation of Cultures: Selected Essays* (New York: Basic Books, 1973).
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36. Ibid., 309–311
37. Matthew B. Miles and A. Michael Huberman, *Qualitative Data Analysis*, 2nd edition (Thousand Oaks, Calif.: Sage Publications, 1994), 12.
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39. Devakula, *The Traditional Thai House*.
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41. Ibid.
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43. Ahrentzen, "A Place of Peace."
44. Ibid, 284.
45. Denzin and Lincoln, *Strategies for Qualitative Inquiry*, 3.
46. Frankel, <http://www.cdesignc.org/articles.html>.