PART 1
FRAMING MIXED METHODS SOCIAL INQUIRY: PARADIGMS AND PARADOXES

Just what is being mixed in mixed methods inquiry? And what are the options for mixing? In Part One, the reader is introduced to the philosophical and conceptual issues of particular importance in the mixed method arena and to one viable framework for mixed methods inquiry. This framework is anchored in the concept of the
inquirer’s mental model, which includes not just philosophical assumptions but also disciplinary perspectives, theoretical lenses, methodological traditions, contextual dimensions, as well as personalized understandings and value commitments. Mixing methods then ideally involves the respectful mixing of multiple mental models, as this is viewed as the most generative of understanding and insight.

Part One also locates this argument in its historical context and in the more contemporary landscape of stances on the sensibility and significance of mixing at these multiple levels when conducting mixed methods social inquiry.
CHAPTER

MENTAL MODELS AND MIXED METHODS INQUIRY

HERE THE journey begins, with a portrait of social inquiry planning in practice and an introduction to the concept of mental models. A mental model is the particular constellation of assumptions, theoretical commitments, experiences, and values through which a social inquirer conducts his or her work. In this first part of the journey, the traveler—you, the reader—will get a glimpse of the mental models of other social inquirers and be encouraged to be reflective about your own.

Imagine . . . It is a sunny and breezy day in early summer. You are seated around a scarred and stained oak wooden table in the meeting room of a downtown youth center. The wobbly seats are also made of oak and offer little comfort for the several middle-aged bodies at the table, although the younger youth counselors don’t seem to be bothered. Pedro is in fact slouched way down in his chair as if it were a recliner. Robert is leaning far back in his chair, balancing it on the two back legs. And Latisha is sitting cross-legged on her chair, while you are struggling for space under the table just to cross your legs.
You have gathered here with these youth counselors, the director of the youth center, and several researchers from the local university to discuss plans for a study to be conducted in conjunction with an innovative mentoring program that will be implemented at the center beginning in the fall. (The mentoring program described in this constructed scenario is adapted from the actual TALKS Mentoring Program developed by the Reverend Harold Davis in Champaign-Urbana, Illinois [http://www.talksmentoring.org/champaign/index.htm]. In this program urban is a cultural term, rather than a term of population density, referring to the contemporary culture of urban African American youth, including hip-hop and rap music, particular fashion styles like oversized clothing for males, the contextual presence of drugs and associated crime, and at least some alienation from mainstream society. See also research on this program at http://www.talksmentoring.org/main_research.htm.)

This innovative mentoring program connects volunteer adult mentors with groups of three children or youth, all the same age (ranging from eight to sixteen) and gender, but differing in their developmental progress. One of the three children or youth is identified as generally “doing well” and one as generally “doing OK” across the developmentally important domains of academic achievement and school engagement, socioemotional relationships with peers and adults, athletic attainments and physical health, and behavioral adjustment and coping skills. The third child or young person is identified as “struggling” in one or more of these domains. The program is presented to the children and youth as an opportunity to develop their leadership potential. Mentors are expected to spend one hour a week with their group in the youth center during the after-school hours, following a well-developed curriculum. Mentors can spend additional time with their youth, but this is neither expected nor encouraged. This mentoring program is not about having fun but rather is focused on promoting positive youth development through high expectations, strong role modeling, and powerful peer relationships. Ideally, mentors continue with the same threesome for several years, or even until all the youth complete high school.

The program was originally developed for urban African American boys by a pastor in a nearby community. It was designed as an “in your face” program for boys lacking a strong male adult in their lives. After four years, the program was extended to African American girls, with a curriculum modified for their particular profile of assets and challenges. Now, another four years later, the curriculum has again been modified, this time for Latino boys and Latina girls, again in an urban culture. The city has recently experienced a sharp influx of working- and middle-class Latino families, both immigrants from Mexico and Central America and people choosing to resettle from a major city nearby into a smaller community. The new Hyundai automobile assembly factory built on the edge of the city is largely responsible for attracting these new workers to the community. And the population of children and youth served by the youth center has significantly diversified in recent years, although with little cross-group intermingling and even some racial tensions and incidents. The staff members hope that the mentoring program not only will support youth’s overall development,
but also could ease these tensions and promote healthy cross-group interactions, even though the mentoring takes place within same-race groups of children.

The mentoring program itself is not costly, as the mentors are all volunteers. Funds from the city, from the youth center’s regular budget, and from a local community foundation are supporting the operational costs of the program. The three-year study to be conducted in conjunction with the mentoring program is funded by the W.T. Grant Foundation, under a grant to the university faculty present at the meeting, in cooperation with the center staff. The study is intended to learn more about the processes and outcomes of this highly promising positive youth development initiative. The data collected to date on the mentoring program—though of modest scope—do support its positive potential. Again, the purpose of today’s meeting is to begin to plan the study.

GROUP DISCUSSION

As moderator of the group, you suggest that the eight people present (the center director, three youth counselors, and four university researchers—representing the fields of child and adolescent development, intergroup relationships, and program evaluation) pair up and begin to discuss (1) key foci and questions for the study and (2) initial ideas for the study’s design and methods. Each pair should include one person from the center and one from the university. A discussion time of forty minutes is allotted, after which each pair will report out to the whole group. A summarized version of each pair’s thinking is offered here, first for the priority study questions and then for the study design and methods.

What should this study focus on, what are some possible key inquiry questions, and why are these important to you?

The four pairs’ ideas about priorities for empirical study follow.

Group 1—Youth Counselor Pedro and Developmental Psychologist Anne

“We think the study should concentrate on assessing important developmental markers across multiple domains,” says Anne, “with special attention to school achievement and motivation, to behavior, and to the quality of the youth’s relationships with their mentors and with their families. Contemporary developmental theory suggests that the presence of a strong, caring relationship with at least one adult is vitally important for positive youth development, so that is why we want to focus on mentor-mentee relationships.”

Pedro adds, “And I know from my own life experience that la familia is really important for Latinos, and I think it is for African Americans, too. So this study should include
taking a close look at how these kids get along with their families. It’s also real important to Latino families that their kids do well in school, because we know that you can’t have much of a life in this society without getting a good education.”

Anne agrees and elaborates, “Also, the major ‘work’ of children and youth during middle childhood and early adolescence is indeed going to school and learning how to adapt one’s behavior to the rules and norms of given contexts, so in addition to family relationships, we think achievement and behavior are high-priority parts of kids’ lives to track over time.”

Group 3—Youth Counselor Latisha and Developmental Psychologist Gloria

“Our thinking is somewhat similar to what the first two groups have said,” says Gloria. “We think it is really important to pay attention to the developmental progress of the children and youth in the mentoring program. And we would like to include all important domains of development—school achievement, behavior, peer and adult relationships, as well as physical health and well-being.”
At this point in the conversation, please observe the various influences on these different ideas about priority concerns and questions for the mentoring program study. A sampling of these influences includes:

- Contemporary developmental theory (“Contemporary developmental theory suggests that the presence of a strong, caring relationship with at least one adult is vitally important for positive youth development”—Anne)

- Theory about intergroup relationships (“We both think that the most important aspects of the mentoring program to study are the relationships the mentees have with their peers”—Frederick)
Next, the pairs’ ideas about study design and methods are briefly summarized.

**Group 1—Youth Counselor Pedro and Developmental Psychologist Anne**

“The most important thing to study,” begins Pedro, “is what difference the mentoring program makes for the kids involved. Anne has some fancy language to describe this kind of study.”

Anne continues, “The ideal study, of course, is a randomized experiment. That would answer the priority question of what important outcomes are impacted by the mentoring program. But that won’t be possible here, as the center wants to include as many youth as
possible in the mentoring program, and do so without delay, thus ruling out a delayed control group that starts the program next year. The complex mix of three kids in each group also makes random selection and assignment problematic. So we think some kind of matched control group needs to be identified and tracked on key developmental markers along with the children and youth participating in the program.

“There is some interesting work coming out of Northwestern University on matched control groups that may be very relevant to this context. Ideally we could also get some process measures that help identify influential program mediators, but we may not have sufficient resources for this. More important than the process measures is establishing causal connections between the mentoring program and important outcomes, best studied with some kind of quasi-experimental design.”

Group 2—Youth Counselor Robert and Intergroup Relationship Specialist Frederick

“As you all may recall, our inquiry priorities focused on the mentees’ peer relationships. These are awfully difficult to study,” notes Frederick. “I know because I have been trying to refine methods for studying peer relationships for years.”

Robert continues, “We have two ideas for studying peer relationships. One is to use what Frederick said is a participatory methodology, involving the kids themselves as researchers in the study—collecting data and analyzing and interpreting it. Kids are more likely to be honest and authentic with other kids than they are with most adults. And it could be a really great experience for some of these kids to have this kind of responsibility for research. We also value the commitments of participation.”

Frederick adds, “And there is some wonderful recent research on participatory inquiry with children and youth that could be very helpful to us. Our other idea is basically to use some kind of case study methodology, focusing intensively on just a few kids. I learned a lot about case studies from my own mentor and believe that they can offer rich insights not attainable with other methodologies.”

Group 3—Youth Counselor Latisha and Developmental Psychologist Gloria

“Our design relies mostly on existing data plus a carefully designed survey, to be administered once or twice a year to all participating children and youth, and maybe another survey or perhaps some interviews with the mentors,” says Gloria. “The existing data include school information like test scores, grades, absences and truancies, and
suspensions and other behavioral infractions. For the older youth, there are also juvenile crime data available from the city. And if we do decide to include physical health and well-being, there are lots of health department data we can use. It just makes practical sense to use existing data whenever possible. The survey then would measure all other important developmental variables, plus culturally adjusted markers of development, as relevant.”

Latisha observes, “Even though kids have to do a lot of surveys, I think we could make this one interesting and even fun to fill out. Maybe we could even get the kids to give it to each other, like Robert and Frederick were saying. That could make it quite special.”

Gloria adds, “We think this survey methodology allows us to get consistent, standardized information with the minimum of error. Even though there are cultural variations, we believe that development is a universal process and thus best assessed via standardized and carefully administered measures.”

Group 4—Youth Center Director James and Program Evaluation Expert Linda

“Our ideas combine some of the best thoughts of all of you,” said Linda. “Please recall that we identified both program processes and short-term program outcomes as important foci for the study. We think that some kind of comparison—kids in the program to similar kids not in the program—will be important for the outcomes component of the study, both for us and for the W. T. Grant Foundation. And we believe that a realist, theory-driven framework for this outcomes component is appropriate.”

James observes, “While development may not be universal, we believe that what counts as positive development in our community counts for all kids and can be assessed with high-quality, consistent measures (even as they are culturally responsive).”

Linda finishes, “At the same time, the experiences of the mentees and mentors in the program are likely to be quite variable and individual, best understood through a constructivist lens with accompanying open-ended, qualitative kinds of methods—interviews are likely to be most helpful here, although creative ideas like journaling and photography may also be quite useful.”

Interlude

Again, please observe the various influences on these different ideas about study design and methods. A sampling of these influences includes:
Methodological beliefs and traditions (causal understanding as most important and the experiment as the ideal design to obtain causal understanding, Pedro and Anne; the importance of standardized measurement, Latisha and Gloria)

Methodological orientation (to research, the first three pairs; to program evaluation, the fourth pair)

Contextual opportunities and constraints (“But that won’t be possible here” —Pedro and Anne)

The research literature (“Some interesting work coming out of Northwestern University”—Pedro and Anne; “Some wonderful recent research on participatory inquiry with children and youth”—Robert and Frederick)

Professional experience (“I know because I have been trying to refine methods for studying peer relationships for years”—Frederick)

Values (“We also value the commitments of participation”—Robert and Frederick)

Education and training (“I learned a lot about case studies from my own mentor”—Frederick)

Practicality (“It just makes practical sense to use existing data whenever possible” —Latisha and Gloria)

Conceptual theories and beliefs (“We believe that development is a universal process”—Latisha and Gloria)

Philosophy of science (“A realist, theory-driven framework . . . [and] best understood through a constructivist lens”—James and Linda)

Creativity (“Creative ideas like journaling and photography may also be quite useful”—James and Linda)

**MAKING SENSE OF THESE CONVERSATIONS: THE CONCEPT OF MENTAL MODELS**

This group of youth development practitioners and researchers offered varied though not necessarily conflicting ideas for study foci and design—ideas that appear to be influenced by or rooted in an even greater variety of underlying predispositions, beliefs, and understandings. These underlying influences can be roughly grouped into the following (overlapping) clusters, with illustrations from the preceding scenario:

- Substantive theory, as in particular genres of developmental psychology or intergroup relationships, as well as theoretical commitments therein—for example, to universal or to culturally sensitive markers of development—along with relevant research literature, as in ongoing empirical work on youth development
Disciplinary perspectives, mostly the psychology of positive youth development in the preceding scenario

Philosophy of science, which includes beliefs about the nature of the social world, the nature of the knowledge we can have about that social world, and what is important to know—as in traditions of realism and constructivism

Methodological traditions, as in experimentalism, case study inquiry, survey research, secondary data analysis, and participatory inquiry; as well as methodological genres, as in research and evaluation

Education and training, as in the substantive and methodological orientations of one’s formal education, as well as experiential influences from powerful mentors; along with professional experience, or ideas and commitments obtained from one’s own practice over time

Contextual factors—including issues of practicality and resources, opportunities, and constraints presented by the context at hand, important trends or issues in the larger community or society

Political factors, as in sensitive issues of race and class, and issues of power and voice

Personal values, as in a respect for diversity or a commitment to inclusive participation by all affected or a valuing of creativity; along with personal experience, or ideas and commitments obtained from one’s own lived experience

These clusters, and probably others as well, represent important and intertwined strands of the individual mental models that guide the work of social inquirers. A mental model is the set of assumptions, understandings, predispositions, and values and beliefs with which all social inquirers approach their work. Mental models influence how we craft our work in terms of what we choose to study and how we frame, design, and implement a given inquiry. Mental models also influence how we observe and listen, what we see and hear, what we interpret as salient and important, and indeed what we learn from our empirical work. Speaking of evaluation, Mary Lee Smith (1997) observed, “A particular evaluation rests on the evaluator’s mental picture of what the world is like, how evaluations ought to be, and what counts as knowledge. Because evaluation is a social action, an act of inquiry rests also on expectations of what standards the relevant community will likely apply to it” (p. 73); for example, the Joint Committee Standards for Educational Evaluation that are widely accepted by evaluators (http://www.wmich.edu/evalctr/jc/). Moreover, distinguishing relatively crude mental models from formalized statements of assumptions in the form of philosophical paradigms, Smith continued, “initial designs, as well as the day-to-day decisions, negotiations, and compromises that seem to characterize all inquiry projects, depend on the crude mental models of the people involved. . . . It is the crude mental model [rather than the formalized, logical paradigm] that gauges the potential meaning and usefulness of employing Method A or Method B or some combination of A and B.
Likewise, it is the crude model that embeds standards for considering the information yield of these methods” (M. L. Smith, 1997, p. 74).

Denis Phillips (1996) referred to the concept of mental models in a discussion of the connections between philosophical perspectives and the practice of social inquiry. He suggested that mental models comprise “assumptions, analogies, metaphors, or crude models that are held at the outset of the researcher’s work . . . [that is, they] are present even before any [more formal or explicit] theories or models have been constructed” (pp. 1008–1009). For M. L. Smith, an inquirer’s mental model is best revealed not by formally inquiring about her or his epistemological and ontological beliefs, but rather by “shaking an evaluator awake in the middle of the night and asking, Is it possible to have validity without reliability? Or, Can an evaluator know anything about a program without having seen it in action personally?” (1997, p. 74).

The stance taken in this book is wholly consonant with the ideas about mental models presented by M. L. Smith and Phillips. From these ideas, a mental model is understood as the complex, multifaceted lens through which a social inquirer perceives and makes sense of the social world. Each inquirer’s mental model is unique, just as each human being in the world is unique. At the same time, facets of mental models are commonly shared across inquirers—as when the inquirers have similar educational backgrounds, professional experiences, and personal values and beliefs, or when the meanings of these mental model facets are socially constructed. Mental models thus subsume philosophical paradigms, as well as substantive theories, disciplinary perspectives, and a whole host of more personalized experiences, values, and ways of knowing.

Furthermore, it is inquirers’ mental models that importantly frame and guide social inquiry. Decisions about what to study, how to study it, and why are all rooted in the complex tangle of substantive frameworks, methodological training, philosophical stances, practical experience, personal commitments, and so forth that an inquirer brings to a social scientific study. Just as important, the interpretive sense that inquirers make of their data is also guided by their understandings of meaning and of the rules of interpretation they have embraced, and by their self-understandings of themselves as social inquirers—in short, by their mental models.

**MIXED METHODS SOCIAL INQUIRY AS MIXING MENTAL MODELS**

Moreover, in the emerging tradition of mixed methods approaches to social inquiry that is the subject of this book, the concept of mental models has a central role. The core meaning of mixing methods in social inquiry is to invite multiple mental models into the same inquiry space for purposes of respectful conversation, dialogue, and learning one from the other, toward a collective generation of better understanding of the phenomena being studied. By definition, then, mixed methods social inquiry involves a plurality of philosophical paradigms, theoretical assumptions, methodological traditions, data gathering and analysis techniques, and personalized understandings and value commitments—because these are the stuff of mental models.
But by extension, the mixed methods conversation is not fundamentally about paradigm commensurability or the compatibility of rival theoretical explanations or even the consonance of various methodological traditions. Of course, these considerations feature in the conversation, because they are part of the mix. Considered and thoughtful attention to various ways of knowing and various ways of conducting social inquiry is, in fact, a central and defining characteristic of mixed methods inquiry as presented in this book. Most fundamentally, to mix methods in social inquiry is to set a large table, to invite diverse ways of thinking and valuing to have a seat at the table, and to dialogue across such differences respectfully and generatively toward deeper and enhanced understanding. This view positions mixed methods inquiry as a practice of active engagement with difference. “In good mixed methods evaluation, difference is constitutive and generative” (Greene, Benjamin, & Goodyear, 2001, p. 32).

AN INVITATION TO READ THIS BOOK

Anchored in the concept of mental models and in the importance of engaging with difference in social inquiry, this book presents a particular conceptualization of the rationale, location, and practice of mixed methods social inquiry. In the book, I retain the label of mixed methods social inquiry, because of the historical legacies of this label (as further discussed in Chapter Three). But in my view, mixed methods social inquiry is not chiefly about mixing different ways to gather, analyze, and interpret empirical data about social life. Rather, the various ways in which different methods can be mixed represent the practice of this genre of social inquiry, but not its purpose or role in society. Practice is, of course, critically important, and the field of mixed methods inquiry currently embraces a rich array of creative ideas about how to mix diverse methods in social research and evaluation. The authors of these creative ideas have contributed thoughtfully to the mixed methods conversation about design (Creswell, 2002; Maxwell & Loomis, 2003; Tashakkori & Teddlie, 1998), language and terminology (Teddlie & Tashakkori, 2003), and analysis (Bazeley, 2003; Onwuegbuzie & Teddlie, 2003). Many of their ideas are included in the practice sections of this book (chapters Six through Ten).

But distinctively, this book emphasizes the rationales and purposes for mixing methods in social inquiry. It is centered on the value of mixed methods inquiry for the overall purpose of better understanding social phenomena, which are inherently complex and contextual (as elaborated in Chapter Six). In this book, mixed methods practice becomes defined and directed by mixed methods purpose. The discussion in the book is also resolutely grounded in a distinctive stance regarding the role of science in society—a stance committed to meaningful engagement with difference—and the book focuses on the particular, even unique contributions that mixed methods inquiry offers to this engagement (as elaborated in Chapter Two). Moreover, what is importantly mixed in mixed methods inquiry—or the differences that are engaged—goes well beyond method to include the myriad other strands entangled in inquirers’ mental
models. As illustrated previously, some of these strands are the inquirer’s philosophical assumptions, theoretical commitments, political beliefs, personal wisdom, and professional experience; other strands are represented in specific data gathering and analysis tools. (See chapters Four and Five for further discussion of all that can be mixed in mixed methods inquiry, and why social inquirers should seriously and thoughtfully consider these multiple mixes in their work.)

In these ways, the discussion in this book offers a counterpoint to two trends in the broader contemporary mixed methods conversation. In one trend, mixed methods inquiry is importantly defined by its design alternatives, which comprise various methods (usually labeled qualitative and quantitative) arranged in various sequences and priorities. Discussions of these design alternatives—again while contributing creatively to ideas about mixed methods practice—too often give only passing attention to the many other dimensions of difference that are inherently part of social inquiry. Muted by the emphasis on design typologies are the possible contributions to better understanding that could come from mixes of differences in philosophy, substantive theory, and disciplinary thinking, alongside mixes of differences in personal experience, education, values, and beliefs. This book is a clear and unequivocal argument in favor of the richness of mixing multiple dimensions of social inquirers’ mental models, as this best serves the generative potential of mixed methods inquiry. Moreover, a priority focus on design and method in the mixed methods conversation is misplaced, as methods are always the servants of substance, not vice versa.

The second trend popular in current mixed methods discourse features the advancement of an “alternative” philosophical paradigm for mixed methods social inquiry; that is, alternative to extant “quantitative” and “qualitative” paradigms. Paradigm in this discussion refers to an integrated set of assumptions about the nature of the social world, about the character of the knowledge we can have about the social world, and about what is important to know. Social science in most Western societies was dominated by a post-positivist paradigm (Phillips & Burbules, 2000) through much of the twentieth century. The assumptions of this paradigm characteristically invoke standardized, a priori, quantitative designs and methods. During the last three decades of the twentieth century, persistent challenges to post-positivist thought generated an explosion of interest in other philosophical paradigms more consonant with qualitative methodologies, including interpretivism, various forms of constructivism, and phenomenology (Schwandt, 2000, 2001). A smaller explosion of interest occurred in ideologically oriented philosophical paradigms—notably, critical social science and multiple forms of feminist thought. And more recently, postmodern and poststructural challenges to all previous “meta-narratives” (Lyotard, 1984)—such as philosophical paradigms—have crowded the spaces where philosophical assumptions are engaged and contested. These are heady and difficult debates, as the issues are complex and abstract. Is the social world really there, or is it constructed by people in interaction with one another? Are there only contextual truths, or are there some understandings about human behavior that are true across different settings? How are the predispositions and standpoints of
the inquirer present in the knowledge that is generated in a given study, and is this really a problem? And so forth. It is understandably tempting to locate the mixed methods discussion in a space uncluttered by such complexities and unfettered by such abstractions. It is understandably tempting to identify an “alternative” philosophical paradigm that somehow dissolves or resolves these long-standing debates, a paradigm like American pragmatism (Biesta & Burbules, 2003) or critical realism (Maxwell, 2004a).

In this book, I enthusiastically support the consideration of possible alternative paradigms for mixed methods social inquiry. I consider this a viable stance on the challenging issue of mixing what can be different, even incompatible philosophical assumptions in a mixed methods study. But I reject this as the only viable response to this challenge, embracing instead several other stances on mixing paradigms while mixing methods. Again, because I believe that the generative and creative potential of mixed methods social inquiry requires full engagement with differences of all kinds, I resist trends or ideas that seek to paper over potentially important differences or to homogenize mixed methods thought along just one channel. (Again, these ideas about how philosophy of science is engaged in mixed methods inquiry are elaborated in chapters Four and Five.)

WHO IS INVITED

Applied social inquirers from multiple fields are the intended audiences for this book—academicians, graduate students, and practitioners alike. Although the examples presented favor the fields I know, particularly educational program evaluation, the ideas are applicable to all fields of applied social inquiry.

The next four chapters of the book address conceptual issues in mixed methods social inquiry, followed by five chapters devoted to mixed methods practice and then a concluding final chapter. Small examples are sprinkled throughout the book. Three extended examples are also included as concrete illustrations of the conceptual ideas presented. The examples both illustrate and reinforce two final premises of this book—that mixed methods practice is one of artful craftspersonship and that practice is ever so much harder than theory (Schwandt, 2003). Mixed methods “theory” today consists of several organized sets of concepts and ideas that offer important guidance but not prescriptive instructions for mixed methods practice. The mixed methods practitioner must indeed be a craftsperson, making sense of these conceptual ideas in the context at hand, and patiently weaving and reweaving them into a meaningful pattern and a practically viable blueprint for generating better understanding of the social phenomena being investigated.