# THESES AND DISSERTATIONS

## A Guide to Planning, Research, and Writing

R. Murray Thomas, Dale L. Brubaker

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## *A Guide to Planning, Research, and Writing*

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*and*
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To the grandchildren—

Courtney, Devon, and Kaitlin
Ellie, Mitch, and Amy

# *Contents*

# *Preface*

This book is designed for graduate students who are preparing master's degree theses or doctoral dissertations. As the table of contents indicates, the book is organized according to stages of the research-and-writing process. Although those stages are applicable in all academic disciplines, the book's examples of topics and data-gathering methods are more directly associated with the social and behavioral sciences than they are with the physical sciences and the arts. Thus, students in the social and behavioral sciences—and in such allied fields as education, social work, and business—are likely the ones for whom this volume will be most useful. The writing style throughout is intentionally conversational, as if we were talking directly with students.

We expect that readers may wonder from what sorts of experiences the authors of this book have derived the suggestions they offer about how to create respectable theses and dissertations. Here is the answer:

R. Murray Thomas, during a 40-year career of directing graduate students' work, served as an advisor and committee member for scores of theses and dissertations in three universities in the United States (San Francisco State, the State University of New York at Brockport, and the University of California at Santa Barbara) as well as at Pajajaran University in Bandung, Indonesia. He also has been an external examiner of doctoral dissertations for five universities in Australia, four in India, two in Malaysia, one in Hong Kong, and one in Fiji.

Dale L. Brubaker, in a 34-year career of guiding graduate students, has functioned as an advisor and committee member for over 50 theses and dissertations at the University of California (Santa Barbara), the University of Wisconsin (Milwaukee), and the University of North Carolina (Greensboro). At present he is directing dissertation projects of more than a dozen doctoral candidates.

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# THESES AND DISSERTATIONS

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# Chapter 1

# *The Nature of Theses and Dissertations*

> *"It's never been clear to me why I'm expected to do a thesis in order to earn my degree."*

The threefold purpose of this chapter is to set the foundation for subsequent chapters by identifying functions that theses and dissertations can serve, by considering relationships among academic disciplines, and by describing the structure of the rest of the book.

(To avoid the tedium occasioned by our endlessly repeating the phrase *thesis and dissertation* throughout the book, we adopt the following alternatives as equivalents of that phrase—*project, study, enterprise, investigation, research,* and *work.*)

## FUNCTIONS OF THESES AND DISSERTATIONS

Traditionally in academia, the two main purposes of master's-degree and doctoral projects are (a) to provide graduate students guided practice in conducting and presenting research and (b) to make a contribution to the world's fund of knowledge or to improve the conduct of some activity.

The *practice* aspect goes well beyond the demands of a typical term paper or individual-study assignment, since the aim is to equip students to do research and writing of respectable, publishable quality in the future.

The *contribution-to-knowledge* aspect is intended to make the student's study more than just a learning exercise by using this opportunity to produce valued information or to introduce a point of view not available before. This aspect is what usually distinguishes a master's thesis from a doctoral dissertation, in that the contribution of the dissertation is expected to be of greater magnitude than that of the thesis. Several things may add to the import of a contribution—the difficulty of the problem that the study addresses, the number of people to be affected by a solution, the amount of controversy the problem has engendered in

the past, the extent to which the study offers an innovative point of view, and more.

At the outset of your project, you can profit from recognizing the type of knowledge that your work might provide. Four familiar types are substantive, theoretical, methodological, and practical.

*Substantive* refers to new *facts, information,* or *data.* Here are titles of studies offering substantive contributions.

Sea Shell Exchange Systems in the Foi and Taude Cultures of Papua New Guinea
Parents' Reactions to Preschoolers' "Toilet Talk"
The Role of the School Principal as Viewed by North Carolina State Legislators
Power Struggles in a City Council: Strategies, Tactics, and Outcomes
Social Stratification in an Urban Medical School

*Theoretical* refers to ways of explaining phenomena. Theoretical contributions typically consist of new ways to view and interpret familiar events. A theory usually identifies (a) which facts or variables are important for understanding the issue at hand and (b) how those variables interact to produce some outcome of interest. (Chapter 4 includes a description of roles theories can play in research projects, and Chapter 5 describes ways of creating or adapting theories as components of theses and dissertations.) The following are titles of studies intended to advance the understanding of theories in representative academic fields.

Contrasting Conceptions of Dream Interpretation
An Inquiry into the Problematics and Possibilities of a Pedagogy of Compassion
Folk Theories of the Learning Process in Four Isolated Cultures
The Suitability of Functional Theory for Analyzing Politics in a Frontier Town
Testing Gilligan's Feminist Model of Morality

The term *methodological* refers to ways of collecting, classifying, and interpreting knowledge, as implied by these titles:

Narrative History and the Objectivity Question
A Taxonomy of Social Services
Alternative Field-Note Techniques
A Validation Study of the Cross-Cultural Self-Perception Scale
Modes of Hermeneutic Analysis

The word *practical* in the present context refers to studies whose purpose is to improve the conduct of some activity. The author's aim is to help people do a job more efficiently. The job can be of various sorts—teaching children, furnishing social services to the needy, directing a political campaign, guiding individuals' vocational choices, planning a company's financial future, establishing a health-enhancement routine, searching the World Wide Web, and thousands more.

In summary, then, your investigation is expected to furnish you guided practice in conducting serious research and in presenting the results in a manner that

offers at least a modest contribution to knowledge or to the practical conduct of some activity.

## ACADEMIC DISCIPLINES

It is useful to recognize that the traditional categories of academic disciplines were not defined by some divine power but have been created by academics themselves—past and present. It is also useful to note that the borders of the disciplines are indistinct and permeable. The domain of anthropology merges into the domains of psychology, sociology, economics, and literature. Political science spills into the arts, astronomy, paleontology, and linguistics. Such spillages are often reflected in hybrid disciplines—social psychology, sociobiology, biochemistry, astrophysics, and the like.

However, it's also true that specialists in each discipline have identified certain core concerns, viewpoints, and investigative methods they regard as unique to their field. And the resulting ways they define their field help explain the perspective they bring to their work.

> Anthropology is the scholarly discipline that focuses on the study of human beings, especially the study of their physical characteristics, cultural characteristics, evolutionary history, racial classification, geographic distribution, and group relationships. Thus, anthropology involves the naturalistic description and interpretation of the diverse peoples of the world.
>
> Economics is the science that seeks to analyze and describe the production, distribution, and consumption of wealth.
>
> Education, as a field of study and practice, is concerned mainly with methods of teaching and learning in schools or in schoollike environments as opposed to such informal means of socialization as parents' childrearing practices. The discipline also involves the aims, organization, and management of educational institutions.
>
> Political science addresses the functions of governments (legislation, administration of the law), voters' behavior, political parties, and the influence of political organizations.
>
> Psychology is the science of the mental processes and behavior of individuals and groups, both human and animal. The word *psychology* literally means "study of the mind," and the issue of the relationship between mind and body —or more precisely, mind and brain—is an intimate concern of this science.
>
> Sociology is the human behavioral science that investigates the nature, causes, and effects of social relations among individuals and groups, including social customs, structures, functions, and institutions. (Adapted and condensed from *Encyclopaedia Britannica,* 1994.)

Despite the usefulness of academicians' efforts to stake out exclusive territories, the traditional disciplines continue to be much intermingled.

Now why is this observation about academic-discipline domains important for doing theses and dissertations? We think it's significant for two reasons. First, the guidelines for conducting and writing research investigations in different academic departments are much the same, especially within the broad realm of the social sciences and such applied fields as education, social work, and business administration. Therefore, the contents of this book should be suited to the needs of students in a variety of departments. In the titles of research projects that we include throughout the book, we illustrate this commonality among the traditional disciplines.

Second, you may find yourself wanting to adopt methods and theories from more than one traditional discipline, and we believe that doing so is quite proper. We are convinced that the categories of knowledge from which you draw your assumptions, methods, instruments, and theories should be determined by the problem that your work is intended to solve, so you should not be restricted to a narrow interpretation of the main academic discipline in which you are earning a degree.

## THE BOOK'S STRUCTURE

As the table of contents shows, this book is organized according to five major stages in the research and writing process.

*Stage I: Preparing the Way.* The aim of the first stage is to orient you to the tasks ahead by: (1) Identifying resources that can help you in carrying out your project (Chapter 2: Sources of Guidance), and (2) Describing (a) how the professional literature can be of use and (b) how to survey the literature efficiently (Chapter 3: Searching the Literature).

*Stage II: Choosing and Defining Research Topics.* The second stage involves: (1) Selecting the question or problem on which your project will focus (Chapter 4: Sources and Types of Research Problems), (2) Deciding if you wish to create or adapt a theory as part of your project's contribution; and—if you do, indeed, plan to devise a theory—deciding how to go about it (Chapter 5: Building and Adapting Theories), and (3) Clearly delineating your selected problem and creating a rationale that explains what sort of contribution your research will make to the realm of knowledge within which it's located (Chapter 6: Stating the Problem and Its Rationale).

*Stage III: Collecting and Organizing Information.* Once your research question has been specified and its value explained, your next task is to select an effective way to gather the information needed for answering the question. This phase is presented as two substages—*III-A* and *III-B.* The two are typically pursued in parallel, because they are interdependent. That is, collecting data efficiently requires a plan for organizing the data and vice versa. Even though the tasks are performed simultaneously, for clarity of presentation we find it convenient to describe them separately.

*Stage III-A: Collecting Information.* The aim of the first data-collection chapter is to describe a variety of the most useful approaches to gathering information. The purpose is not to inspect in detail the steps that comprise each method. Instead, the intention is to (a) sketch principal features of a method, (b) illustrate the sorts of research questions or problems for which it's well suited, and (c) point out the method's advantages and limitations. The approaches that are cited include historical accounts, case studies, ethnographies, experience narratives, surveys, correlation analyses, and experiments. (Chapter 7: Types of Research Methods and Sources of Information).

The three-part aim of the second chapter is to (a) describe popular data-collection techniques and instruments, (b) illustrate research problems for which each technique is particularly appropriate, and (c) note strengths and limitations of each. The techniques and instruments include content analysis, interviews, observations, tests, and questionnaires (Chapter 8: Data Collection Techniques and Instruments).

Students often encounter problems at the data-collection stage of their project. The third chapter within Stage III-A addresses some of the more common difficulties and offers suggestions about how you might successfully cope with them (Chapter 9: Things That Go Wrong).

*Stage III-B: Organizing Information.* No matter what sort of information you gather to solve your research problem, you need to organize it in a way that enables you to draw comparisons and contrasts, to estimate causes and effects, or to identify trends. For this purpose you require a classification system, such as a chronology, typology, or taxonomy (Chapter 10) and a method of condensing the mass of data in an accurate, comprehensible form (Chapter 11: Summarizing Information Verbally, Numerically, and Graphically).

*Stage IV: Interpreting the Results.* At this stage you explain what your collection of classified, summarized information means. This is the "so what?" phase of your project. A single chapter is dedicated to matters of interpretation (Chapter 12: Modes of Interpretation).

*Stage V: Presenting the Finished Product.* In this final stage, you are obliged to describe your completed project to appropriate audiences. Your most immediate audience includes your major advisor and any other faculty members who are assigned to assess your work. Therefore, your first responsibility is to present them with a well crafted written account of your project (Chapter 13: Writing the Final Version). Then, if you are also obliged to defend your project before a committee in an oral examination session, your second responsibility is to fashion a convincing explanation of your research methods and findings (Chapter 14).

In addition to receiving their supervising committee's approval, students often wish to communicate their work to a more extensive audience, one that includes

fellow students, scholars in the domain of the research problem, practitioners who could find the results of value, and perhaps the general public. Such is the concern of the final chapter (Chapter 15: Reaching a Wider Audience).

With the above overview of *Theses and Dissertations* now in hand, we move directly to Stage 1.

# STAGE I

# *PREPARING THE WAY*

In the earliest phases of planning your research, you will find it useful to estimate the help you will need and to recognize where you can find such help. The dual purpose of Stage I is to illustrate typical kinds of aid from which you can benefit and to suggest sources of aid, including professors, fellow students, you yourself, and the professional literature in your field of interest.

Chapter 2 (Sources of Guidance) describes the most frequently used resources along with their advantages and disadvantages. Since one of those resources—the professional literature—is so important, a separate chapter (Chapter 3: Searching the Literature) is dedicated to explaining (a) multiple ways the literature can serve your needs and (b) efficient methods for surveying published materials.

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# Chapter 2

# *Sources of Guidance*

*"If I'd known he'd be too busy to be of much help, I would have tried to find a better advisor."*

At the outset of your project, it is well to identify potential sources of help and to recognize the advantages and limitations of each. Those sources of most value are usually academic advisors, fellow graduate students, experts outside of your own department or institution, you yourself, and the professional literature.

## ACADEMIC ADVISORS

Policies for assigning faculty members to supervise students' thesis and dissertation projects can vary from one institution to another and even across departments within the same institution.

In some cases, the advisor who guides a student's general academic progress automatically becomes the supervisor of the candidate's work on the thesis or dissertation. Under such a policy, students are relieved of the responsibility of choosing a mentor, but they may unfortunately end up with less than optimal help. In other cases, an academic advisor will not automatically be assigned, but he or she will be only one of a group of several faculty members from whom a student can choose a guide. Under these circumstances, before students announce their choice of a mentor they can profitably collect several kinds of information about the professors who form the pool of potential advisors. Included among the sources of information are fellow students, the professors within the pool, other faculty members, secretaries, research assistants, and the professors' publications.

Institutions and departments can also differ in the number of faculty members assigned to supervise and evaluate a student's research. One common pattern at the master's level is to have a three-member committee for each thesis, with the committee chairperson acting as the candidate's principal supervisor. However,

in colleges and universities with large numbers of master's degree students, the entire master's project may be directed and assessed by a single faculty member. At the doctoral level, the supervising committee often consists of three to five professors.

In the following paragraphs, we describe kinds of information to seek about potential advisers. We then suggest useful sources of each kind.

## Kinds of Information to Collect

In learning about the professors in your pool of potential mentors, you will likely find it helpful to discover their (a) fields of interest and expertise, (b) style of advising, and (c) attitudes about appropriate research topics and methods of research.

### Fields of interest and expertise

Obviously, the closer an advisor's area of expertise is to your research problem, the better equipped she or he will be to identify difficulties you may encounter, recommend sources of information pertinent to your topic, and guide your choice of methods for gathering and interpreting data. There are several ways to learn about faculty members' specializations—the titles and contents of classes they teach, their published books and articles, the topics of theses and dissertations produced under their guidance, other staff members' opinions, and other students' experiences with those faculty members.

The task of deciding how well a potential advisor's interests and skills suit your needs is likely easiest if you already have a specific research problem in mind, or at least if you have identified the general realm you hope to explore. If you have no inkling of the kind of topic on which your study will focus, then the next of our selection criteria—style of advising—may become your primary concern.

### Style of advising

Professors vary greatly in how they work with students on theses and dissertations. Those at one end of a monitoring scale closely control each phase of the student's effort, in some cases dictating what is to be done at every step, then requiring the student to hand in each portion of material for evaluation and correction. Advisors at the opposite end of the scale tell students to work things out pretty much by themselves and to finish a complete draft of the project before handing it in for inspection.

Advisors also vary in how available they are when students need them. Some are frequently away from the campus. Some require students to make an appointment with a department secretary several days or weeks ahead of time in order to confer about the individual's research. Others allow students to drop by the office or to phone any time they need help. Some answer queries only in their office. Others permit students to phone them at home.

Professors also differ in the way they offer advice and criticism. Some are blunt about the shortcomings of a student's effort, perhaps derisive and abusive. Others are direct in pointing out weaknesses in the candidate's work, but they do so in a kindly, understanding manner, recognizing that doing serious research is a new endeavor for the student and that mistakes along the way are not only expected but can function as valuable learning opportunities. Yet others are so cautious about potentially hurting a student's feelings that they are reluctant to point out weaknesses in the project and thereby fail to guide their advisees toward correcting the shortcomings of their efforts.

Consequently, you will likely find it useful to learn ahead of time about faculty members' styles of directing theses and dissertations—about how closely they monitor steps in the process, how available they are to offer help, and how skillfully they identify deficiencies and suggest solutions without unduly damaging students' egos.

Your best sources of information about advising styles are usually (a) fellow graduate students who are farther along than you are in the thesis or dissertation process and (b) other professors whom you know personally and who are willing to talk about their colleagues' modes of guidance.

### Attitudes toward topics and methodology

Faculty members often disagree about what constitutes proper research. Consequently, you might end up with an advisor whose notions of suitable research topics and methods of investigation are at odds with your own beliefs. Therefore, three types of information you may wish to seek are your potential advisors' views of (a) quantitative-versus-qualitative methods, (b) positivism-versus-postmodernism perspectives, and (c) basic-versus-applied research.

***Quantitative-versus-qualitative methods:*** As these terms are generally used, quantitative research involves amounts, which are usually cast in the form of statistics, but qualitative research does not involve amounts in any strict sense. Here are titles of projects that might be categorized under each type:

Quantitative:
*Germany's Economic Growth, 1950-2000*
*Rural and Urban Educational Achievement in Oregon*
*Amounts of Public and Private Finance for Welfare Programs*
*Generational Height and Weight Comparisons—Japan and the USA*
*The Growth of Tourism—Florida and Alabama*
*Short-Term Effects of Three Antidepressant Drugs*

Qualitative:
*The Philosophical Foundations of Psychoanalysis*
*Silverado—The History of a Frontier Town*
*A Theory of Political Participation*
*One Week in the Life of a Deaf-Mute*
*Judaic Foundations of Islamic Doctrine*
*The Present-Day Relevance of William James's Pragmatism*

Professors who locate themselves exclusively in the quantitative camp demand that students' research involve the compilation of data in the form of amounts. Hence, they reject historical chronicles, philosophical analyses, a line of logic leading to a conclusion, a comparison of the qualities of different societies, the detailed description of an individual's or group's style of life, and the like. Furthermore, adherents of quantitative studies sometimes prefer studies that focus on rather large numbers of people, schools, cities, or political constituencies so that broadly inclusive generalizations can be drawn from the research results. Such adherents thus disapprove of studies focusing on one autistic person (single-subject research) or only a few subjects (three autistic children, two schools, four candidates for political office, five neighborhoods) whose results cannot, with confidence, be generalized to a wide range of people or events. Proponents of quantitative studies tend to prefer such research methods as controlled experiments and surveys that employ interviews, tests, systematic observations, questionnaires, and quantitative content analysis. (For arguments supporting the quantitative position, see the following references: Howell, 1997; Shavelson, 1996.)

In contrast, professors who subscribe strictly to qualitative methodology tend to belittle research that involves what they may refer to as "no more than number crunching" which they feel oversimplifies complex causes, dehumanizes evidence, and fails to recognize individual differences among people, among environments, and among events. Advocates of qualitative studies tend to favor such research techniques as historical and philosophical analyses, descriptive observation, case studies, ethnography, and hermeneutics. (For rationales supporting the qualitative stance, see: Bogdan & Knopp, 1992; Denzin & Lincoln, 1994.)

There are, in addition to the foregoing two polar positions, a great many faculty members who will accept a wide array of research approaches, quantitative and qualitative alike. We would count ourselves among their number because, in our opinion, the quantitative-versus-qualitative controversy is really off target. The issue, in our minds, should not be: Are quantitative methods better than qualitative, or vice versa? Instead, the issue should be: Which approach—quantitative, qualitative, or some combination of both—will be the most suitable for answering the particular research question being asked? This point of view, which respects the contributions that can be made by all sorts of methods, is the one we espouse throughout this book.

However, to be practical about your own situation as a student pursuing a degree in a particular department, what we as the authors of this book believe about the quantitative-qualitative debate is really not important. What is important is how well your own beliefs match those of the advisors with whom you might conduct your research. Thus, a useful twofold question to ask is: Which research methodologies do the potential members of my research-project committee prefer or even accept? And how well do my own preferences match the opin-

ions of those professors? In effect, establishing a good match promotes efficiency, effectiveness, and goodwill in your work with advisors.

***Positivism versus postmodernism:*** Somewhat linked to the quantitative-qualitative dispute in recent decades is the oftentimes acrimonious controversy between academicians who subscribe to a positivist worldview and those who style themselves as postmodernists. It is also possible to identify a position that is intermediate between the positivism and postmodernism, a position sometimes labeled *postpositivism.* You may find it useful to learn where in this controversy your potential advisors locate themselves so that you will know how closely their opinions coincide with your own.

There is too little space available here to delve thoroughly into the positivist-postmodernist debate. Thus, we limit the following discussion to identifying five components of each position—(a) the nature of reality, (b) the aim of research, (c) the question of validity, (d) the nature and function of research results, and (e) how to understand reality. At the outset, we admit that defining positivism, postpositivism, and postmodernism will invite a good deal of contention, because writers frequently fail to agree on what beliefs constitute each position. However, we think the following rendition does no serious violence to the core convictions held by typical members of each camp, and thus it should adequately serve our present purpose.

*Positivism/Modernism.* The words *modernism* and *positivism* are so closely linked in much of present day discussion that the two terms can be considered synonymous.

*Positivism,* and particularly the 20th century's subvariety known as *logical positivism,* has functioned over the past two centuries as the principal paradigm guiding the conduct of modern science (Toulmin, 1994). Here are typical assumptions on which a positivist or modernist worldview is founded:

1. Reality: There is an objective real world beyond the individual's body, and that world can be known and described. Thus, positivists disagree with both forms of philosophical *solipsism.* Form 1 is the belief that there is no real world outside the person's mind; the only reality is what's in one's mind. Form 2 is the belief that although there is a "real world out there," occupied by objects and people, each person carries in mind a subjective image of that world, and it's impossible to know the contents and processes of anyone's mind other than one's own.

For positivists, all conclusions about reality—about the "truth" of what exists—must be based on empirical observations and measurements, that is, on real-life experiences and not on speculation about things that cannot be publicly verified (seen, heard, touched, smelled, measured) or that cannot be reduced by logical operations to public observations. Logical positivists reject "statements of only emotional significance, as judged by an inability to be verified against a formal analysis involving the facts of experience" (Moore, 1995, p. 53).

2. Research aim: The purpose of collecting empirical evidence and interpreting it is to reveal the truth about the physical/social world and how it functions. The aim of a positivist approach to human behavior is to discover principles or natural laws that are the foundation of behavior under all circumstances. The principles or generalizations can be organized in the form of theories or models of reality. Models of reality are always tentative, subject to revision on the basis of better methods of data collection, more complete sampling of contexts, convincing statistical analysis, and the application of more adequate logic for drawing interpretations.

3. Validity: Decisions about whether an account of events is "true" (accurately reflects the real world) are guided by criteria of objectivity (the methods of research are free from the researcher's personal biases), of representativeness (the study's sample of people, places, or events accurately represents the characteristics of the broad population of people, places, or events to whom the generalizations will be applied). In other words, the validity of a generalization or theory is fostered by such scientific procedures as (a) conducting a research study with large numbers of people or events, (b) replicating the study in different settings and with different kinds of people or events, (c) checking on how consistently one researcher agrees with another regarding observations, and others.

4. Nature and function of results: An increasingly accurate picture of reality (of what the world "out there" is truly like, as based on an ever-expanding quantity of empirical evidence and its logical interpretation) can be portrayed and communicated in linguistic, mathematical, and graphic descriptions. The portrayal assumes the form of principles and theories which are not limited to the things directly studied but can legitimately be applied to understanding similar events that were not studied. For instance, generalizations about how children learn, as derived from observing one group of children, can legitimately be applied to explain learning among other groups of children of similar age and in similar contexts.

5. Understanding reality: People can learn the nature of reality by studying experts' descriptions of empirical findings and their interpretation.

*Postpositivism.* A growing dissatisfaction with the ability of positivist approaches to describe people's lives has led in recent years to the revision of certain traditional positivist assumptions.

> Most of the social science disciplines have experienced an eruption of internal "crises" over the past several decades. . . . To many in the disciplines, social scientific knowledge seems to have had only limited relevance for understanding societal problems, whether those involve social behavior such as school learning and interpersonal violence, or community and institution conditions such as poverty, unemployment, and racial segregation. Another common theme—of particular concern in psychology—has been the contextual character of research findings, the fact that the accumulated body of knowledge tends not to be situated, not to be conceptually and empirically

> connected to the properties and texture of the social settings in which it was obtained. A third theme reflecting discontent in the social sciences is the failure to accommodate human subjectivity in inquiry and to attend to the role of meaning in behavior, in development, and in social life. (Jessor, 1996, p. 4)

Because many of the critics have only revised—not completely abandoned—a positivist perspective, they have been dubbed *postpositivists*. The following precepts typify the postpositivist paradigm (Campbell, 1996; Shweder, 1996).

1. Reality: There is indeed an objective real world beyond the individual's body. However, no one can offer an objective account of that reality because each investigator's own needs, cultural traditions, training, and biases filter her or his experiences. A sociologist's account of social-class structure inevitably becomes a combination of the researcher's social-class background and the societies being studied. This means that a postpositivist viewpoint fits the definition of anthropologists' field work as "that form of inquiry and writing that produces descriptions and accounts about the ways of life of the writer and those written about" (Denzin, 1997, p. 3). Investigators who have proper training and recognize the danger of the biases they could bring to their task can more closely approach objectivity than do those who are less aware of factors that prejudice their conclusions. Still, no matter how careful investigators are, each of their accounts necessarily includes a large measure of their subjective selves.

Conclusions about reality—about the "truth" of what exists—should be based on empirical observations and their interpretation from the viewpoints of both the investigator and the people the investigator interviews or observes. When a researcher performs the exercise of data collection and interpretation, the result is a *personally constructed reality.* When numbers of people agree on the interpretation, the result is a shared, *socially constructed reality.* Hence, people's interpretation of life's events constitutes their constructed reality.

2. Research aim: The purpose of research and theorizing is to produce a description of constructed reality. This aim is pursued by an individual fabricating "my vision of the world out there" and of continually refining that vision on the basis of new experiences and more convincing logic.

Postpositivists share the hope of positivists that they can identify general principles that help explain life in all places at all times. But whereas positivists generally are most interested in discovering principles that explain the likenesses among people and societies, postpositivists are interested as well in explaining how and why individual differences make people or societies different.

3. Validity: Hammersley (1992, p. 64) proposes that typical postpositivists evaluate research studies on the basis of how well they (a) generate or test formal theory, (b) are founded on empirical, scientifically credible evidence, (c) produce findings that can be generalized or transferred to other settings, and (d) identify the influence that the researcher and the research methods exert on the findings.

4. Nature and function of results: Postpositivists share positivists' opinion that an increasingly accurate picture of reality (of what the world "out there" is really like) can be portrayed and communicated in linguistic, mathematical, and graphic descriptions. The portrayal assumes the form of generalizations, principles, and theories which are not limited to the things directly studied but can be legitimately applied to understanding similar events that were not studied. However, it is important not to be content with generalizations but also to portray the individualistic features of the people and contexts that have been directly studied—features that make them unique. As for objectivity, the researcher openly admits to personal bias in selecting interview questions, choosing the people and places that are studied, and adopting theoretical assumptions that influence the interpretation of data. It is important not to feign objectivity but, instead, to inform readers of the sorts of subjectivity that give the research report its particular texture.

5. Understanding reality: When people read postpositivist research, they are not learning what "the world out there" is really like but, rather, they are learning an interpretation of what it seems to be like from a particular investigator's vantage point.

*Postmodernism.* The dissatisfaction with positivism since around 1970 led not only to postpositivism but, among especially rebellious revisionists, to an even more drastic abandonment of positivist convictions, an abandonment labeled *postmodernism* that links such vaguely allied groups as avant guarde artists and architects, literati, critical social scientists, feminists, neo-Marxists, postcolonialists, anti-imperialists, and poststructuralists. Thus, postmodernism is not a unified, coherent movement but, rather, is what Clark (1993, p. 22) characterizes as an "ill-defined melange of attitudes, theories, and cultural criticism." Variants of postmodernism are found in diverse disciplines—the arts, humanities, social sciences. The following treatment is limited to social-science versions.

Since there are far more variations of postmodern belief than can be described here, we try to convey the general sense of postmodernism by reducing the varieties to a pair—the *mild* and the *radical.*

1. Reality: The belief that there is an objective "real world out there" can either be questioned (the mild version) or be regarded as blatantly false (the radical version).

*The mild version:* There apparently is such a real world, but people can never know it objectively for the same reasons that postpositivists offer: the investigator's own needs, cultural traditions, training, and biases filter her or his experiences. Consequently, an ethnographic account of either an individual child's life or the lives of a group of children is a combination "of the ways of the life of the writer and those written about."