# Chapter 3 The Use of Theory

One component of reviewing the literature is to determine what theories might be used to explore the questions in a scholarly study. In *quantitative research,* researchers often test hypotheses stemming from theories. In a quantitative dissertation, an entire section of a research proposal might be devoted to presenting the broader theory guiding the study hypotheses. In *qualitative research*, the use of theory is much more varied. The inquirer may generate a theory as the final outcome of a study and place it at the end of a project, such as in grounded theory. In other qualitative studies, it comes at the beginning and provides a lens that shapes what is looked at and the questions asked, such as in ethnographies or in participatory–social justice research. In mixed methods research, researchers may both test theories and generate them. Moreover, mixed methods research may contain a theoretical framework within which both quantitative and qualitative data are collected. These frameworks can be drawn from feminist, racial, class, or other perspectives and they flow through different parts of a mixed methods study.

Theories can be used in quantitative, qualitative, and mixed methods studies. We begin this chapter by focusing on theory use in a quantitative study. We review a definition of a theory, the use of variables in a quantitative study, the placement of theory, and the alternative forms it might assume in a written plan. Procedures in identifying a theory are next presented, followed by a script of a theoretical perspective section of a quantitative research proposal. Then the discussion moves to the use of theory in a qualitative study. Qualitative inquirers use different terms for theories, such as *patterns*, *theoretical lens*, or *naturalistic generalizations*, to describe the broader explanations used or developed in their studies. Examples in this chapter illustrate the alternatives available to qualitative researchers. Finally, the chapter turns to the use of theories in mixed methods research and the use of social science and participatory–social justice theories in such research.

# Quantitative Theory Use

# Testing Causal Claims in Quantitative Research

Prior to discussing variables, their types, and their use in quantitative research, we first need to visit the concept of *causality* in quantitative research. A leading writer in this area has been Blalock (1991). Causality means that we would expect variable X to cause variable Y. As a simple example, does drinking one glass of red wine daily *cause* you to have a reduced risk for a heart attack? In this case, daily wine consumption is the X variable, and a heart attack event would be the Y variable. One critically important consideration in evaluating causal claims (like this red wine consumption example) is whether an unmeasured third variable (Z) may be the cause of the outcome you are measuring. For example, there may be a Z variable (such as daily exercise) that is positively associated with both moderate red wine consumption and with heart attacks, and may be the causal factor for reducing heart attacks (not moderate red wine consumption!). In quantitative research this third variable is called a *confounding variable*, and can become quite problematic for establishing causality if it is not measured in a study. We would not want to mistakenly infer that moderate red wine consumption promotes heart health if it plays no causal role in reducing heart attacks. If you aim to test a causal claim about the relationship between two or more variables in your quantitative study, your best choice is to conduct a true experiment, which will provide more control over potential confounding variables (see Chapter 8). If you are less interested in testing a causal claim or if you cannot conduct an experiment, then survey methods can be used to test claims about hypothesized associations between variables (see Chapter 8)—for example, you may be interested in first establishing if a positive association exists between moderate daily red wine consumption and clinical markers of heart disease risk in a correlation analysis. Indeed, a number of epidemiological health science studies highlight a positive association between moderate daily red wine consumption (1–2 drinks per day) and a 20% reduction in risk for heart disease (e.g., Szmitko & Verma, 2005).

# Variables in Quantitative Research

Before discussing quantitative theories, it is important to understand variables and the types that are used in forming theories. A **variable** refers to a characteristic or attribute of an individual or an organization that can be measured or observed and that varies among the people or organization being studied. Variables often measured in studies include gender; age; socioeconomic status (SES); and attitudes or behaviors such as racism, social control, political power, or leadership. Several texts provide detailed discussions about the types of variables one can use and their scales of measurement (e.g., Isaac & Michael, 1981; Keppel, 1991; Kerlinger, 1979; Thompson, 2006; Thorndike, 1997). Variables are distinguished by two characteristics: (a) *temporal order* and (b) their measurement (or observation).

Temporal order means that one variable precedes another in time. Because of this time ordering, it is said that one variable affects or predicts another variable. Temporal order also means that quantitative researchers think about variables in an order from "left to right" (Punch, 2014) and order the variables in purpose statements, research questions, and visual models into left-to-right, cause-and-effect type presentations. Types of variables include the following:

- *Independent variables* are those that influence, or affect outcomes in experimental studies. They are described as "independent" because they are variables that are manipulated in an experiment and thus independent of all other influences. Using the earlier example, you may decide to run an eight-week experimental study where you ask some participants to drink one glass of red wine daily (red wine group), whereas other participants in a comparison group are instructed to maintain their normal consumption patterns (control group). You are systematically manipulating red wine consumption, and thus moderate red wine consumption is an independent variable in this study. Independent variables are also commonly referred to as *treatment* or *manipulated* variables in experimental studies.
- *Dependent variables* are those that depend on the independent variables; they are the outcomes or results of the influence of the independent variables. We recommend that one aim to measure multiple dependent measures in experimental studies, and in the red wine example a researcher might consider measuring dependent variables such as heart attack

incidence, strokes, and/or the amount of arterial atherosclerotic plaque formations.

- *Predictor variables* (also called *antecedent* variables) are variables that are used to predict an outcome of interest in survey method studies. Predictor variables are similar to independent variables in that they are hypothesized to affect outcomes in a study, but dissimilar because the researcher is not able to systematically manipulate a predictor variable. It may not be possible or feasible to assign individuals to a red wine consumption or control group (as an independent variable) but it may be possible to measure naturally occurring red wine consumption in a community sample as a predictor variable.
- *Outcome variables* (also called *criterion* or *response* variables) are variables that are considered outcomes or results of predictor variables in survey method studies. They share the same properties as dependent variables (described above).

Other types of variables provide a supporting cast in quantitative research, and we recommend that you make efforts to identify and measure these variables in your quantitative research study:

- *Intervening* or *mediating variables(Intervening or mediating variables)* stand between the independent and dependent variables, and they transmit the effect of an independent variable on a dependent variable (for a review, see MacKinnon, Fairchild, & Fritz, 2007). A mediating variable can be tested using different kinds of statistical mediation analyses (see MacKinnon et al., 2007, for some examples), and provides a quantitative assessment of how the independent variable is exerting its effects on the dependent variable (or in the case of survey method studies how a predictor variable may be exerting its effects on an outcome variable of interest). One leading idea is that the polyphenol compounds in red wine are what is driving the health benefits of moderate red wine consumption (e.g., Szmitko & Verma, 2005), so one possibility could be to measure the amount of polyphenols occurring in a red wine consumption study as a mediating variable. Researchers use statistical procedures (e.g., analysis of covariance [ANCOVA]) to control for these variables.
- *Moderating variables* are predictor variables that affect the direction and/or the strength of the relationship between independent and dependent variables, or between predictor and outcome variables (Thompson, 2006). These variables act on or intersect with the independent variables, and then together in combination with the independent variables influence the dependent variables. Moderating variables are powerful in that they can

identify potential boundary conditions (e.g., participant gender; are the effects of moderate red wine consumption on heart attacks much larger for males compared to females?) of the effect of interest.

In a quantitative research study, variables are related to answer a research question, and while we have focused our discussion on the simple red wine–heart disease relationship, these variables and links can be extended to a multitude of other phenomena that we care to understand (e.g., “How does self-esteem influence the formation of friendships among adolescents?” “Does number of overtime hours worked cause higher burnout among nurses?”). Specifically, we use our theories and specification of variables to generate hypotheses. A *hypothesis* is a prediction about a specific event or relationship between variables.

# Definition of a Theory in Quantitative Research

With this background on variables, we can proceed to the use of quantitative theories. In quantitative research, some historical precedent exists for viewing a theory as a scientific prediction or explanation for what the researcher expects to find (see Thomas, 1997, for different ways of conceptualizing theories and how they might constrain thought). For example, Kerlinger's (1979) definition of a theory seems still valid today. He said that a theory is "a set of interrelated constructs (variables), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena" (p. 64).

In this definition, a **theory in quantitative research** is an interrelated set of constructs (or variables) formed into propositions, or hypotheses, that specify the relationship among variables (typically in terms of magnitude or direction). A theory might appear in a research study as an argument, a discussion, a figure, a rationale, or a conceptual framework, and it helps to explain (or predict) phenomena that occur in the world. Labovitz and Hagedorn (1971) added to this definition the idea of a *theoretical rationale,* which they defined as "specifying how and why the variables and relational statements are interrelated" (p. 17). Why would an independent variable, X, influence or affect a dependent variable, Y? The theory would provide the explanation for this expectation or prediction. A discussion about this theory would appear in a section of a proposal on the literature review or in a separate section called the *theory base,* the theoretical rationale, or the *theoretical perspective* or the *conceptual framework*.. We prefer the term *theoretical perspective* because it has been popularly used as a required section for proposals for research when one submits an application to present a paper at the American Educational Research Association conference.

The metaphor of a rainbow can help to visualize how a theory operates. Assume that the rainbow *bridges* the independent and dependent variables (or constructs) in a study. This rainbow ties together the variables and provides an overarching explanation for *how* and *why* one would expect the independent variable to explain or predict the dependent variable. Theories develop when researchers test a prediction over and over.

For example, here is how the process of developing a theory works. Investigators combine independent, mediating, and dependent variables into questions based on different forms of measures. These questions provide information about the type

of relationship (positive, negative, or unknown) and its magnitude (e.g., high or low). Forming this information into a predictive statement (hypothesis), a researcher might write, “The greater the centralization of power in leaders, the greater the disenfranchisement of the followers.” When researchers test hypotheses such as this over and over in different settings and with different populations (e.g., the Boy Scouts, a Presbyterian church, the Rotary Club, and a group of high school students), a theory emerges, and someone gives it a name (e.g., a theory of attribution). Thus, theory develops as an explanation to advance knowledge in particular fields (Thomas, 1997).

Another aspect of theories is that they vary in their breadth of coverage. Neuman (2009) reviewed theories at three levels: (a) micro-level, (b) meso-level, and (c) macro-level. Micro-level theories provide explanations limited to small slices of time, space, or numbers of people, such as Goffman’s theory of face work, which explains how people engage in rituals during face-to-face interactions. Meso-level theories link the micro and macro levels. These are theories of organizations, social movement, or communities, such as Collins’s theory of control in organizations. Macro-level theories explain larger aggregates, such as social institutions, cultural systems, and whole societies. Lenski’s macro-level theory of social stratification, for example, explains how the amount of surplus a society produces increases with the development of the society.

Theories are found in the social science disciplines of psychology, sociology, anthropology, education, and economics, as well as within many subfields. To locate and read about these theories requires searching literature databases (e.g., *Psychological Abstracts*, *Sociological Abstracts*) or reviewing guides to the literature about theories (e.g., see Webb, Beals, & White, 1986).

# Forms of Theories in Quantitative Research

Researchers state their theories in research proposals in several ways, such as a series of hypotheses, if-then logic statements, or visual models. First, some researchers state theories in the form of interconnected hypotheses. For example, Hopkins (1964) conveyed his theory of influence processes as a series of 15 hypotheses. Some of the hypotheses are as follows (these have been slightly altered to remove the gender-specific pronouns):

1. The higher one's rank, the greater one's centrality.
2. The greater one's centrality, the greater one's observability.
3. The higher one's rank, the greater one's observability.
4. The greater one's centrality, the greater one's conformity.
5. The higher one's rank, the greater one's conformity.
6. The greater one's observability, the greater one's conformity.
7. The greater one's conformity, the greater one's observability. (p. 51)

A second way is to state a theory as a series of if-then statements that explain why one would expect the independent variables to influence or cause the dependent variables. For example, Homans (1950) explained a theory of interaction:

> If the frequency of interaction between two or more persons increases, the degree of their liking for one another will increase, and vice versa. . . . Persons who feel sentiments of liking for one another will express those sentiments in activities over and above the activities of the external system, and these activities may further strengthen the sentiments of liking. The more frequently persons interact with one another, the more alike in some respects both their activities and their sentiments tend to become. (pp. 112, 118, 120)

Third, an author may present a theory as a visual model. It is useful to translate variables into a visual picture. Blalock (1969, 1985, 1991) advocated causal modeling and recasted verbal theories into causal models so that a reader could visualize the interconnections of variables. Two simplified examples are presented here. As shown in Figure 3.1, three independent variables influence a single dependent variable, mediated by the influence of two intervening variables. A diagram such as this one shows the possible causal sequence among variables

leading to modeling through path analysis and more advanced analyses using multiple measures of variables as found in structural equation modeling (see Kline, 1998). At an introductory level, Duncan (1985) provided useful suggestions about the notation for constructing these visual causal diagrams:

- Position the dependent variables on the right in the diagram and the independent variables on the left.
- Use one-way arrows leading from each determining variable to each variable dependent on it.
- Indicate the strength of the relationship among variables by inserting valence signs on the paths. Use positive or negative valences that postulate or infer relationships.
- Use two-headed arrows connected to show unanalyzed relationships between variables not dependent upon other relationships in the model.

More complicated causal diagrams can be constructed with additional notation. This one portrays a basic model of limited variables, such as typically found in a survey research study.

A variation on this theme is to have independent variables in which control and experimental groups are compared on one independent variable in terms of an outcome (dependent variable). As shown in Figure 3.2, two groups on variable X are compared in terms of their influence on Y, the dependent variable. This design is a between-groups experimental design (see Chapter 8). The same rules of notation previously discussed apply.

**Figure 3.1** Three Independent Variables Influence a Single Dependent Variable Mediated by Two Intervening Variables

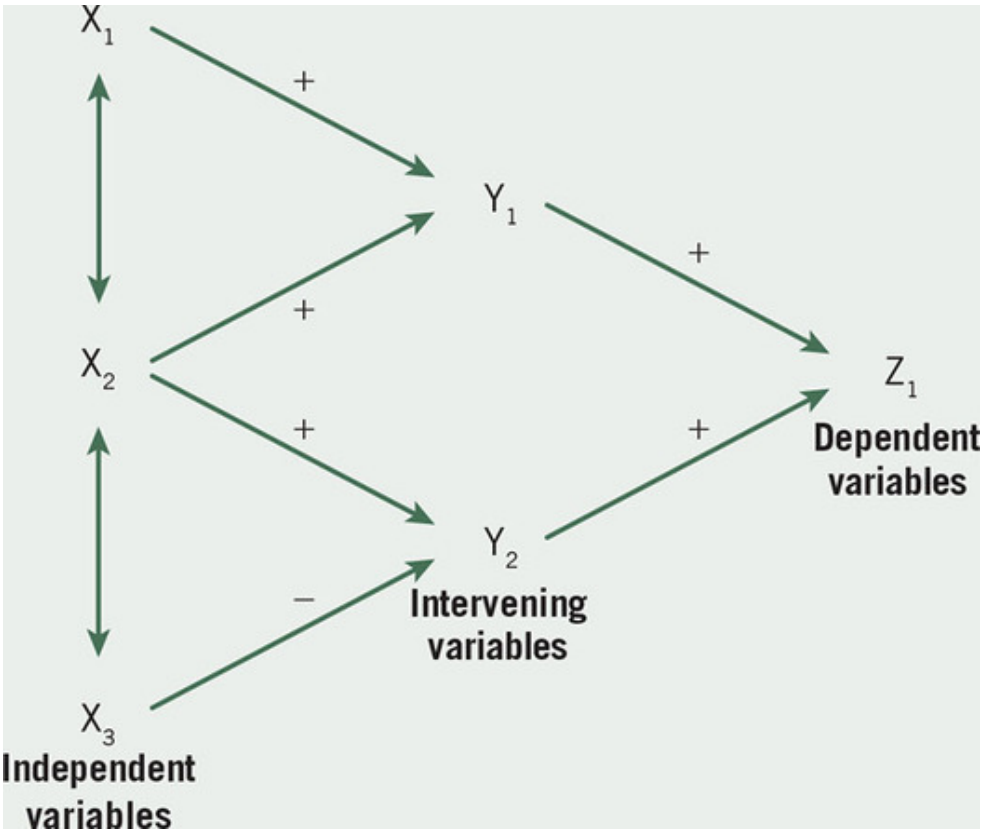
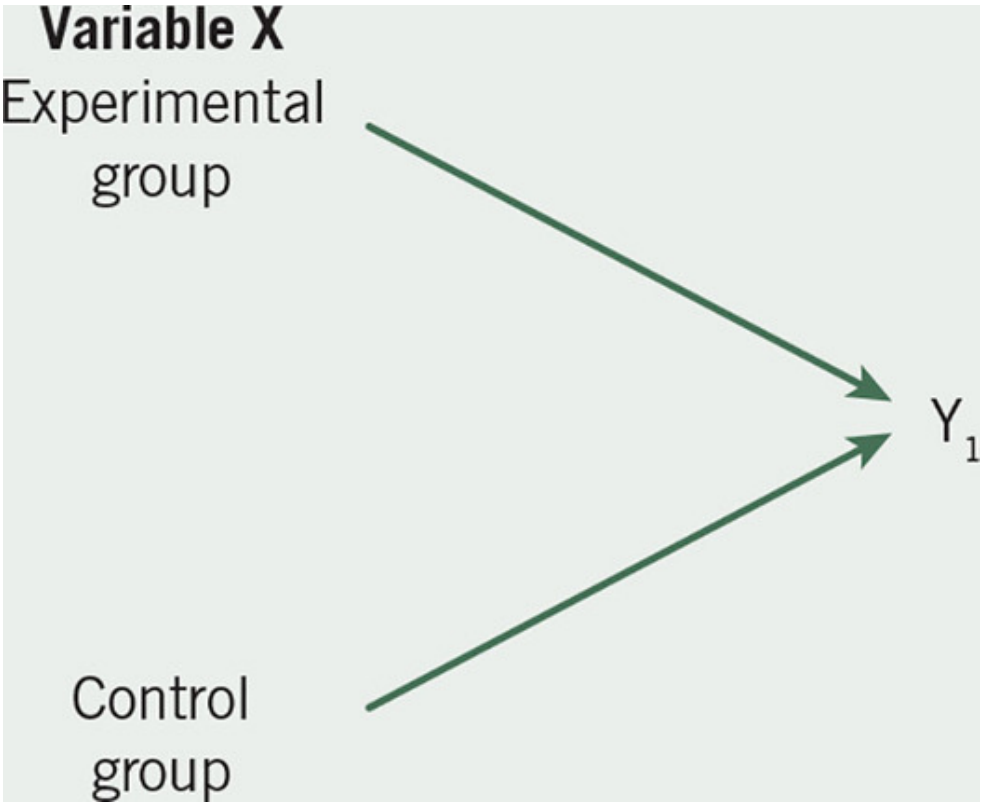



**Figure 3.2** Two Groups With Different Treatments on X Are Compared in Terms of Y



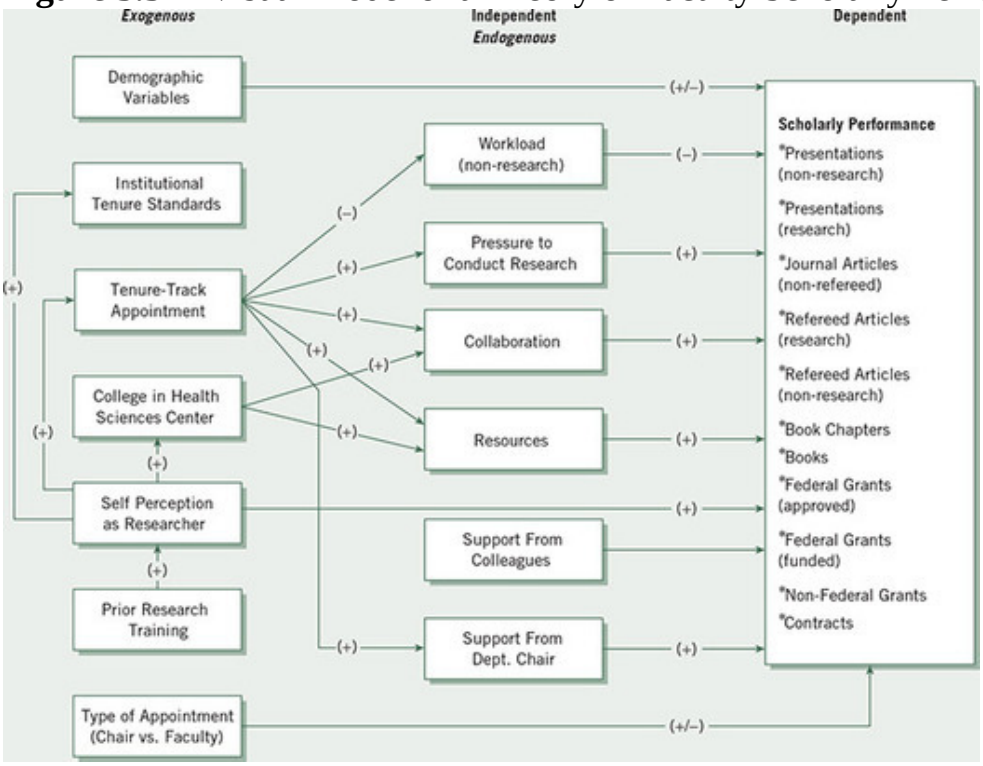

Source: Jungnickel (1990). Reprinted with permission.

These two models are meant only to introduce possibilities for connecting independent and dependent variables to build theories. More complicated designs employ multiple independent and dependent variables in elaborate models of causation (Blalock, 1969, 1985, 1991). For example, Jungnickel (1990), in a doctoral dissertation proposal about research productivity among faculty in pharmacy schools, presented a complex visual model, as shown in Figure 3.3. Jungnickel asked what factors influence a faculty member's scholarly research performance. After identifying these factors in the literature, he adapted a theoretical framework found in nursing research (Megel, Langston, & Creswell, 1987) and developed a visual model portraying the relationship among these factors, following the rules for constructing a model introduced earlier. He listed the independent variables on the far left, the intervening variables in the middle, and the dependent variables on the right. The direction of influence flowed from the left to the right, and he used plus and minus signs to indicate the hypothesized direction.

# Placement of Quantitative Theories

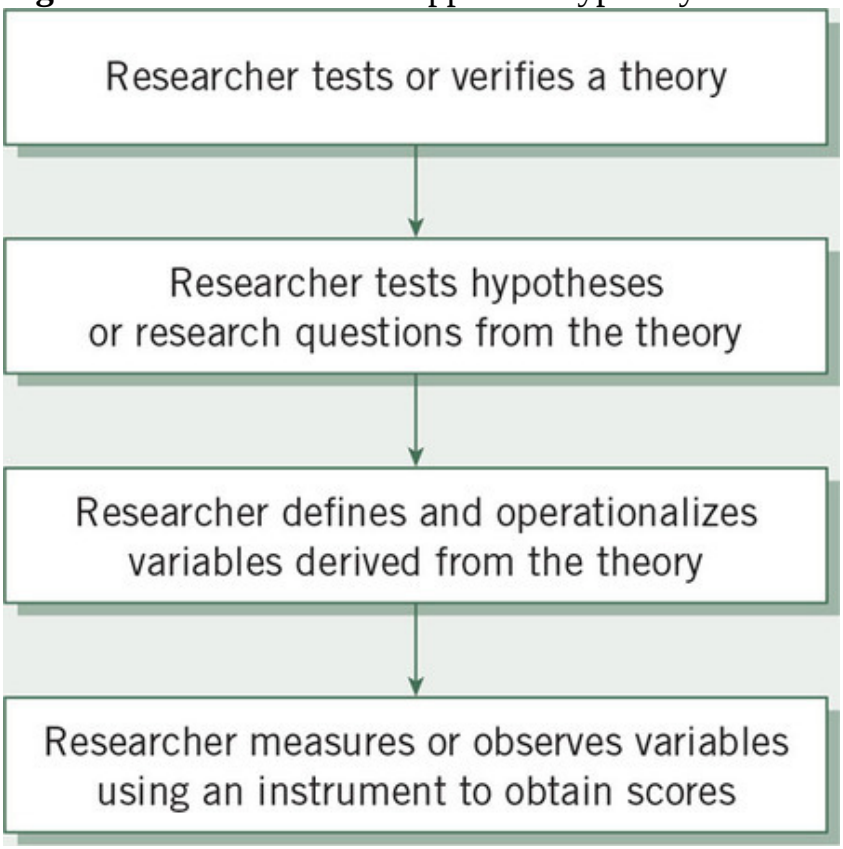
In quantitative studies, one uses theory deductively and places it toward the beginning of the proposed study. With the objective of testing or verifying a theory rather than developing it, the researcher advances a theory, collects data to test it, and reflects on its confirmation or disconfirmation by the results. The theory becomes a framework for the entire study, an organizing model for the research questions or hypotheses and for the data collection procedure. The deductive model of thinking used in a quantitative study is shown in Figure 3.4. The researcher tests or verifies a theory by examining hypotheses or questions derived from it. These hypotheses or questions contain variables (or constructs) that the researcher needs to define. Alternatively, an acceptable definition might be found in the literature. From here, the investigator locates an instrument to use in measuring or observing attitudes or behaviors of participants in a study. Then the investigator collects scores on these instruments to confirm or disconfirm the theory.

**Figure 3.3** A Visual Model of a Theory of Faculty Scholarly Performance




Source: Jungnickel (1990). Reprint with permission.

**Figure 3.4** The Deductive Approach Typically Used in Quantitative Research




This deductive approach to research in the quantitative approach has implications for the *placement of a theory* in a quantitative research study (see Table 3.1).

A general guide is to introduce the theory early in a plan or study: in the introduction, in the literature review section, immediately after hypotheses or research questions (as a rationale for the connections among the variables), or in a separate section of the study. Each placement has its advantages and disadvantages.

Table 3.1 Options for Placing Theory in a Quantitative Study

| Placement | Advantages | Disadvantages |
|---|---|---|
| In the introduction | As an approach often found in journal articles, it will be familiar to readers. It conveys a deductive approach. | It is difficult for a reader to isolate and separate theory base from other components of the research process (e.g., with the methods). |
| In the literature review | Theories are found in the literature, and their inclusion in a literature review is a logical extension or part of the literature. | It is difficult for a reader to see the theory in isolation from topics being reviewed in the literature. |
| After hypotheses or research questions as a rationale | The theory discussion is a logical extension of hypotheses or research questions because it explains how and why variables are related. | A writer may include a theoretical rationale after hypotheses and questions and leave out an extended discussion about the origin and rationale for the use of the theory. |
| In a separate section | This approach clearly separates the theory from other components of the research process, and it enables a reader to better identify and to understand the theory base for the study. | The theory discussion stands in isolation from other components of the research process (e.g., the questions or the methods) and, as such, a reader may not easily connect it with other components of the research process. |

Here is a **research tip**: We write the theory into a separate section in a research proposal so that readers can clearly identify the theory from other components. Such a separate passage provides a complete explication of the theory section, its use, and how it relates to the study.

# Writing a Quantitative Theoretical Perspective

Using these ideas, the following presents a model for writing a quantitative theoretical perspective section into a research plan. Assume that the task is to identify a theory that explains the relationship between independent and dependent variables.

1. Look in the discipline-based literature for a theory. If the unit of analysis for variables is an individual, look in the psychology literature; to study groups or organizations, look in the sociological literature. If the project examines individuals and groups, consider the social psychology literature. Of course, theories from other disciplines may be useful, too (e.g., to study an economic issue, the theory may be found in economics).
2. Examine also prior studies that address the topic or a closely related topic. What theories did the authors use? Limit the number of theories and try to identify *one overarching theory* that explains the central hypothesis or major research question.
3. As mentioned earlier, ask the rainbow question that bridges the independent and dependent variables: What explains why the independent variable(s) would influence the dependent variables?
4. Script out the theory section. Follow these lead sentences: “The theory that I will use is _____ (name the theory). It was developed by _____ (identify the origin, source, or developer of the theory), and it was used to study _____ (identify the topics where one finds the theory being applied). This theory indicates that _____ (identify the propositions or hypotheses in the theory). As applied to my study, this theory holds that I would expect my independent variable(s) _____ (state independent variables) to influence or explain the dependent variable(s) _____ (state dependent variables) because _____ (provide a rationale based on the logic of the theory).”

Thus, the topics to include in a quantitative theory discussion are the theory to be used, its central hypotheses or propositions, information about past use of the theory and its application, and statements that reflect how it relates to a proposed study. Example 3.1, which contains a passage by Crutchfield (1986) from her dissertation, illustrates the use of this model.

Example 3.1 A Quantitative Theory Section

Crutchfield (1986) wrote a doctoral dissertation titled *Locus of Control, Interpersonal Trust, and Scholarly Productivity.* Surveying nursing educators, her intent was to determine if locus of control and interpersonal trust affected the levels of publications of the faculty. Her dissertation included a separate section in the introductory chapter titled “Theoretical Perspective,” which follows. It includes these points:

- The theory she planned to use
- The central hypotheses of the theory
- Information about who has used the theory and its applicability
- An adaptation of the theory to variables in her study using if-then logic

We have added annotations in italics to mark key passages.

# Theoretical Perspective

In formulation of a theoretical perspective for studying the scholarly productivity of faculty, social learning theory provides a useful prototype. This conception of behavior attempts to achieve a balanced synthesis of cognitive psychology with the principles of behavior modification (Bower & Hilgard, 1981). Basically, this unified theoretical framework "approaches the explanation of human behavior in terms of a continuous (reciprocal) interaction between cognitive, behavioral, and environmental determinants" (Bandura, 1977, p. vii). *[Author identifies the theory for the study.]*

While social learning theory accepts the application of reinforcements such as shaping principles, it tends to see the role of rewards as both conveying information about the optimal response and providing incentive motivation for a given act because of the anticipated reward. In addition, the learning principles of this theory place special emphasis on the important roles played by vicarious, symbolic, and self-regulating processes (Bandura, 1971).

Social learning theory not only deals with learning, but also seeks to describe how a group of social and personal competencies (so called personality) could evolve out of social conditions within which the learning occurs. It also addresses techniques of personality assessment (Mischel, 1968), and behavior modification in clinical and educational settings (Bandura, 1977; Bower & Hilgard, 1981; Rotter, 1954). *[Author describes social learning theory.]*

Further, the principles of social learning theory have been applied to a wide range of social behavior such as competitiveness, aggressiveness, sex roles, deviance, and pathological behavior (Bandura & Walters, 1963; Bandura, 1977; Mischel, 1968; Miller & Dollard, 1941; Rotter, 1954; Staats, 1975). *[Author describes the use of the theory.]*

Explaining social learning theory, Rotter (1954) indicated that four classes of variables must be considered: behavior, expectancies, reinforcement, and psychological situations. A general formula for behavior was proposed which states: "the potential for a behavior to occur in any specific psychological situation is the function of the expectancy that the behavior will lead to a particular reinforcement in that situation and the value of that reinforcement" (Rotter, 1975, p. 57).

Expectancy within the formula refers to the perceived degree of certainty (or probability) that a causal relationship generally exists between behavior and rewards. This construct of generalized expectancy has been defined as internal locus of control when an individual believes that reinforcements are a function of specific behavior, or as external locus of control when the effects are attributed to luck, fate, or powerful others. The perceptions of causal relationships need not be absolute positions, but rather tend to vary in degree along a continuum depending upon previous experiences and situational complexities (Rotter, 1966). *[Author explains variables in the theory.]*

In the application of social learning theory to this study of scholarly productivity, the four classes of variables identified by Rotter (1954) will be defined in the following manner.

1. Scholarly productivity is the desired behavior or activity.
2. Locus of control is the generalized expectancy that rewards are or are not dependent upon specific behaviors.
3. Reinforcements are the rewards from scholarly work and the value attached to these rewards.

4. The educational institution is the psychological situation which furnishes many of the rewards for scholarly productivity.

With these specific variables, the formula for behavior which was developed by Rotter (1975) would be adapted to read: The potential for scholarly behavior to occur within an educational institution is a function of the expectancy that this activity will lead to specific rewards and of the value that the faculty member places on these rewards. In addition, the interaction of interpersonal trust with locus of control must be considered in relation to the expectancy of attaining rewards through behaviors (Rotter, 1967). Finally, certain characteristics, such as educational preparation, chronological age, post-doctoral fellowships, tenure, or full-time versus part-time employment may be associated with the scholarly productivity of nurse faculty in a manner similar to that seen within other disciplines. *[Author applied the concepts to her study.]*

The following statement represents the underlying logic for designing and conducting this study. If faculty believe that: (a) their efforts and actions in producing scholarly works will lead to rewards (locus of control), (b) others can be relied upon to follow through on their promises (interpersonal trust), (c) the rewards for scholarly activity are worthwhile (reward values), and (d) the rewards are available within their discipline or institution (institutional setting), then they will attain high levels of scholarly productivity (pp. 12–16). *[Author concluded with the if-then logic to relate the independent variables to the dependent variables.]*

# Qualitative Theory Use

# Variation in Theory Use in Qualitative Research

Qualitative inquirers use theory in their studies in several ways. First, much like in quantitative research, it is used as a broad explanation for behavior and attitudes, and it may be complete with variables, constructs, and hypotheses. For example, ethnographers employ cultural themes or aspects of culture to study in their qualitative projects, such as social control, language, stability and change, or social organization, such as kinship or families (see Wolcott's 2008 discussion about texts that address cultural topics in anthropology). Themes in this context provide a ready-made series of hypotheses to be tested from the literature. Although researchers might not refer to them as theories, they provide broad explanations that anthropologists use to study the culture-sharing behavior and attitudes of people. This approach is popular in qualitative health science research in which investigators begin with a theoretical or conceptual model, such as the adoption of health practices or a quality of life theoretical orientation.

Second, researchers increasingly use a **theoretical lens or perspective in qualitative research,** which provides an overall orienting lens for the study of questions of gender, class, and race (or other issues of marginalized groups). This lens becomes a transformative perspective that shapes the types of questions asked, informs how data are collected and analyzed, and provides a call for action or change. Qualitative research of the 1980s underwent a transformation to broaden its scope of inquiry to include these theoretical lenses. They guide the researchers as to what issues are important to examine (e.g., marginalization, empowerment, oppression, power) and the people who need to be studied (e.g., women, low economic social status, ethnic and racial groups, sexual orientation, disability). They also indicate how the researcher positions himself or herself in the qualitative study (e.g., up front or biased from personal, cultural, and historical contexts) and how the final written accounts need to be written (e.g., without further marginalizing individuals, by collaborating with participants), and recommendations for changes to improve lives and society. In critical ethnography studies, for example, researchers begin with a theory that informs their studies. This causal theory might be one of emancipation or repression (Thomas, 1993).

Some of these qualitative theoretical perspectives available to the researcher are as follows:

- *Feminist perspectives* view as problematic women's diverse situations and the institutions that frame those situations. Research topics may include policy issues related to realizing social justice for women in specific contexts or knowledge about oppressive situations for women (Olesen, 2000).
- *Racialized discourses* raise important questions about the control and production of knowledge, particularly about people and communities of color (Ladson-Billings, 2000).
- *Critical theory* perspectives are concerned with empowering human beings to transcend the constraints placed on them by race, class, and gender (Fay, 1987).
- *Queer theory*—a term used in this literature—focuses on individuals calling themselves lesbians, gays, bisexuals, or transgendered people. The research using this approach does not objectify individuals, is concerned with cultural and political means, and conveys the voices and experiences of individuals who have been suppressed (Gamson, 2000).
- *Disability inquiry* addresses understanding this population's sociocultural perspectives allowing them to take control over their lives rather than a biological understanding of disability (Mertens, 2009).

Rossman and Rallis (2012) captured the sense of theory as critical and postmodern perspectives in qualitative inquiry:

> As the 20th century draws to a close, traditional social science has come under increasing scrutiny and attack as those espousing critical and postmodern perspectives challenge objectivist assumptions and traditional norms for the conduct of research. The critical tradition is alive and well in the social sciences. Postmodernists reject the notion that knowledge is definite and univocal. Central to this attack are four interrelated assertions: (a) Research fundamentally involves issues of power; (b) the research report is not transparent but rather it is authored by a raced, gendered, classed, and politically oriented individual; (c) race, class, and gender (the canonical triumvirate to which we would add sexual orientation, able-bodiedness, and first language, among others) are crucial for understanding experience; and (d) historically, traditional research has silenced members of oppressed and marginalized groups. (p. 91)

Third, distinct from this theoretical orientation are qualitative studies in which theory (or some other broad explanation) becomes the *end point*. It is an inductive

process of building from the data to broad themes to a generalized model or theory (see Punch, 2014). The logic of this inductive approach is shown in Figure 3.5.

The researcher begins by gathering detailed information from participants and then forms this information into categories or themes. These themes are developed into broad patterns, theories, or generalizations that are then compared with personal experiences or with existing literature on the topic.

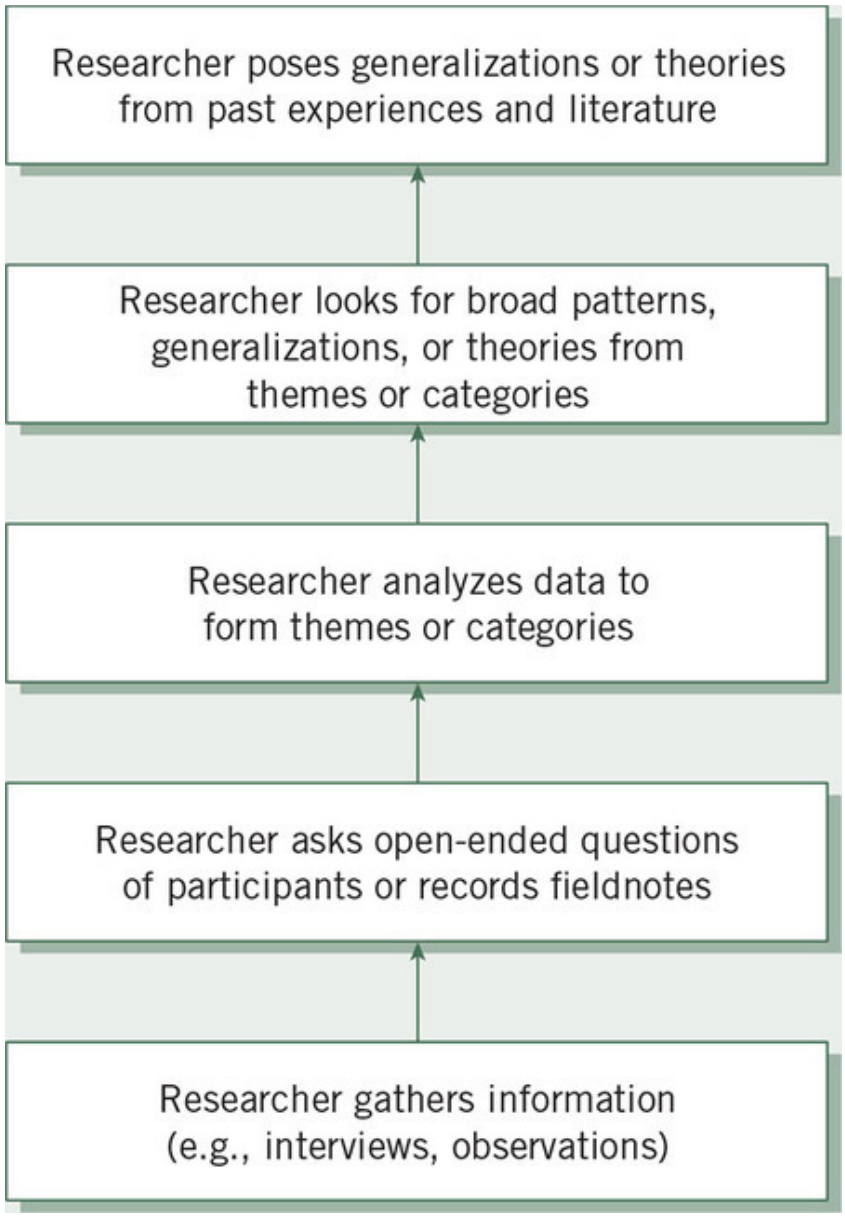
The development of themes and categories into patterns, theories, or generalizations suggests varied end points for qualitative studies. For example, in case study research, Stake (1995) referred to an assertion as a *propositional generalization*—the researcher's summary of interpretations and claims—to which is added the researcher's own personal experiences, called "naturalistic generalizations" (p. 86). As another example, grounded theory provides a different end point. Inquirers hope to discover and advance a theory that is grounded in information from participants (Strauss & Corbin, 1998). Lincoln and Guba (1985) referred to "pattern theories" as explanations that develop during naturalistic or qualitative research. Rather than the deductive form found in quantitative studies, these pattern theories or generalizations represent interconnected thoughts or parts linked to a whole.

Fourth and finally, some qualitative studies *do not employ any explicit theory.* However, the case can be made that no qualitative study begins from pure observation and that prior conceptual structure composed of theory and method provides the starting point for all observations (Schwandt, 2014). Still, one sees qualitative studies that contain no *explicit* theoretical orientation, such as in phenomenology, in which inquirers attempt to build the essence of experience from participants (e.g., see Riemen, 1986). In these studies, the inquirer constructs a rich, detailed description of a central phenomenon.

Our **research tips** on theory use in a qualitative proposal are as follows:

- Decide if theory is to be used in the qualitative proposal.
- If it is used, then identify how the theory will be used in the study, such as an up-front explanation, as an end point, or as a transformative-advocacy lens.
- Locate the theory in the proposal early in the study or at the end.

**Figure 3.5** The Inductive Logic of Research in a Qualitative Study


Researcher poses generalizations or theories from past experiences and literature
Researcher looks for broad patterns, generalizations, or theories from themes or categories
Researcher analyzes data to form themes or categories
Researcher asks open-ended questions of participants or records fieldnotes
Researcher gathers information (e.g., interviews, observations)

# Locating the Theory in Qualitative Research

How theory is used affects its placement in a qualitative study. In those studies with a cultural theme or a theoretical lens, the theory occurs in the opening passages of the study (see Example 3.2). Consistent with the emerging design of qualitative inquiry, the theory may appear at the beginning and be modified or adjusted based on participant views. Even in the most theory-oriented qualitative design, such as critical ethnography, Lather (1986) qualified the use of theory:

> Building empirically grounded theory requires a reciprocal relationship between data and theory. Data must be allowed to generate propositions in a dialectical manner that permits use of *a priori* theoretical frameworks, but which keeps a particular framework from becoming the container into which the data must be poured. (p. 267)

Example 3.2 A Theory Early in a Qualitative Study

Murguia, Padilla, and Pavel (1991) studied the integration of 24 Hispanic and Native American students into the social system of a college campus. They were curious about how ethnicity influenced social integration, and they began by relating the participants' experiences to a theoretical model, the Tinto model of social integration. They felt that the model had been "incompletely conceptualized and, as a consequence, only imprecisely understood and measured" (p. 433).

Thus, the model was not being tested, as one would find in a quantitative project, but modified. At the end of the study, the authors refined Tinto's model and advanced their modification that described how ethnicity functions. In contrast to this approach, in qualitative studies with an end point of a theory (e.g., a grounded theory), a pattern, or a generalization, the theory emerges at the end of the study. This theory might be presented as a logic diagram, a visual representation of relationships among concepts.

As Example 3.3 shows, we developed a visual model that interrelated variables, derived this model inductively from informant comments, and placed the model at the end of the study, where the central propositions in it could be contrasted with the existing theories and literature.

# Mixed Methods Theory Use

**Theory use in mixed methods** studies may include using theory deductively, in quantitative theory testing and validity, or in using it inductively as in an emerging qualitative theory or pattern. In addition, there are several unique ways that theory is incorporated into a mixed methods study in which researchers collect, analyze, and integrate both quantitative and qualitative data using diverse mixed methods designs. This framework has taken two forms: (a) the use of a social science framework and (b) the use of a participatory–social justice framework. Both of these forms have emerged in the mixed methods literature over the past 5 to 10 years (see Creswell & Plano Clark, 2011).

Example 3.3 A Theory at the End of a Qualitative Study

Using a national database of 33 interviews with academic department chairpersons, we (Creswell & Brown, 1992) developed a grounded theory interrelating variables (or categories) of chair influence on scholarly performance of faculty. The theory section came into the article as the last section, where we presented a visual model of the theory developed inductively from categories of information supplied by interviewees. In addition, we also advanced directional hypotheses that logically followed from the model. Moreover, in the section on the model and the hypotheses, we compared the results from participants with results from other studies and the theoretical speculations in the literature. For example, we stated the following:

This proposition and its sub-propositions represent unusual, even contrary evidence, to our expectations. Contrary to proposition 2.1, we expected that the career stages would be similar not in type of issue but in the range of issues. Instead we found that the issues for post-tenure faculty covered almost all the possible problems on the list. Why were the tenured faculty's needs more extensive than non-tenured faculty? The research productivity literature suggests that one's research performance does not decline with the award of tenure (Holley 1977). Perhaps diffuse career goals of post-tenure faculty expand the possibilities for "types" of issues. In any case, this sub-proposition focuses attention on the understudied career group that Furniss (1981) reminds us of needs to be examined in more detail (p. 58).