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What is This?

The General Method of Theory-Building Research in Applied Disciplines

Susan A. Lynham

The problem and the solution. One of the challenges of theory-building research in applied disciplines is making the logic used to build the theory explicit and accessible to the user of the developed theory. Although different methods of theory building advocate different theory-building research processes, there is an inherently generic nature to theory building. This chapter acts as a foundation for the journal by highlighting strategies commonly used in building theory and offers a generic, five-phase method of theory-building research.

I passionately believe in the need for and utility of good theory. As a result, one familiar statement that dumbfounds me is, "Well, that is all very well in theory, but it does not work like that in practice or in the real world." Statements of this nature are informed by a number of deeply held, and generally erroneous, assumptions about the nature and utility of theory. Some of these false assumptions include the following:

- that theory is disconnected and removed from practice,
- that the process of theory construction happens in isolation of the real world,
- that those who engage in theory building or development are not the same as those who engage in practice or in the real world, and
- that usefulness and application are optional outcomes of theory.

What is the purpose of good theory other than to describe and explain how things actually work and, in so doing, to help us improve our actions in this world? Some will contend that theory is largely idealistic (Kaplan, 1964). How-

ever, it can just as easily be argued that good theory in applied disciplines is about as realistic as it comes (Dubin, 1978; Kaplan, 1964; Lewin, 1951; Lynham, 2000b; Swanson, 1997; Van de Ven, 1989). Think about it: How many theories do you hold about the world around you and how that world works? How do these theories inform you of what things work, and do not work, in day-to-day actions? Every time we encounter a new issue, we first experience it, and then we try to observe and understand how that issue presents itself and works. Next, we begin to develop a system of ideas, informed from our experience and knowledge of the world and the issue, about how to address the issue. Then, we put those ideas to the test by applying them to the issue. If these ideas work, then the issue or problem gets satisfactorily addressed. If not, we go back to our own internal drawing boards and begin the process of problem-solution formulation and application all over again. In effect, what we are continuously doing is developing informed knowledge frameworks about how to act on things in our world, thereby formulating ways in which to understand and address issues and problems in the world around us (Alvesson & Deetz, 2000). These informed knowledge and experience frameworks that we apply to our world are simply personal theories-in-use (Argyris & Schon, 1974, 1996). Think about them as theories-in-practice. Each of our lives is informed by many theories-in-practice. They are put into practice or use precisely because they help us to understand, explain, anticipate, know, and act in the world in better and more informed ways, and to better ends and outcomes. Theories therefore have a very practical role in our everyday lives.

Sure, we can hold and develop grandiose and idealistic theories of how the world might be and work. Argyris and Schon (1996) called these idealistic, speculative conceptions of espoused theories. However, espoused and unconfirmed theories of the world and phenomena within the world are less of what we are interested in as applied theorists and cannot be classified as real theory. In an applied discipline such as human resource development (HRD), theory is required to be of practical value (Kaplan, 1964; Lynham, 2000b; Mott, 1996; Swanson, 1997, 1999; Van de Ven, 1989). By virtue of its application nature, good theory is of value precisely because it fulfills one primary purpose. That purpose is to explain the meaning, nature, and challenges of a phenomenon, often experienced but unexplained in the world in which we live, so that we may use that knowledge and understanding to act in more informed and effective ways (Campbell, 1990; Lewin, 1951; Strauss & Corbin, 1990; Van de Ven, 1989; Whetten, 1989).

Theory is described as "a coherent description, explanation and representation of observed or experienced phenomena" (Gioia & Pitre, 1990, p. 587). *Theory building* is the ongoing process of producing, confirming, applying, and adapting theory (Lynham, 2000b). In a way, to live life successfully we are all obliged to engage in theory building, that is, in processes by which we observe, experience, think about, and understand and act in our worlds, and

we do so continuously. However, these theories-in-practice are not always explicit and often occur in the form of implicit, unconscious knowledge on the part of the theorist. As such, these theories that we put into use in our daily lives are no more, or less, than personal theories-in-practice and are seldom made explicit by the holder and user of those theories. For example, how many times has a parent or trusted friend given you advice about what works and what does not, about what you should or should not do about something, but when questioned about what he or she actually knows and how it all works, you get the response: "I just know; trust me, I have had lots of experience with this."

As the recipients of such personal theories-in-practice, we are faced with two choices. The first is one of a leap of faith—to apply the advice given and hope that it will have the same results for you as it did for the advisor. The second is the choice of inquiry and discovery—to develop our own explanations for the issue at hand and how to deal with it. If both are pursued on only a personal front, then it is unlikely that the wisdom of either will be transmitted to anyone else. And next time we are asked the same question by someone facing a similar issue, our response is likely to mimic that of our original advisor: "I just know; trust me." The point here is that an important function and characteristic of theory building is to make these explanations and understandings of how the world is and works explicit and, by so doing, to make transferable, informed knowledge for improved understanding and action in the world tacit rather than implicit.

Theory building can be described as "the purposeful process or recurring cycle by which coherent descriptions, explanations, and representations of observed or experienced phenomena are generated, verified, and refined" (Lynham, 2000b, p. 161). Good theory building should result in two kinds of knowledge: outcome knowledge, usually in the form of explanative and predictive knowledge, and process knowledge, for example, in the form of increased understanding of how something works and what it means (Dubin, 1976). Good theory and theory building should also reflect two important qualities: rigor and relevance (Marsick, 1990a), or what are also termed *validity* and *utility* (Van de Ven, 1989). Theory building achieves these two desired knowledge outputs and empirical qualities by use of what Kaplan (1964) called "the logic-in-use" and the "reconstructed logic" (p. 8), that is, by following a logical cognitive style in the development and application of the theory and by explicitly reconstructing, or making explicit, that logic-in-use.

It is the purpose of this monograph to present multiple possible methods, or logics-in-use, for generating, confirming, and refining theory in HRD and other applied disciplines. It is intended that these explicit representations and descriptions of theory building will be useful to practitioners, researchers, and educators in learning about, engaging in, and evaluating the traits

and outcomes of HRD and other applied theory-building endeavors. It is the aim of this first chapter to provide a contextual overview and reconstruction of the general logic-in-use embedded in the nature and challenges of the journey of theory building. Specifically, this chapter first presents some considerations common to theory-building inquiry in applied disciplines. Second, it describes theory building as a five-phase, general, and recursive process. Third, it briefly highlights why theory-building research is important to the HRD profession, together with some of the challenges associated with building applied theory. Finally, it offers concluding comments on some of the key points raised in the chapter.

General Considerations of Theory-Building Research

Before considering the generic methodological components of theory building, it might be helpful to highlight and discuss considerations general to theory-building research. The first is the notion of the multiple purposes of theory-building research methods. Second is a brief presentation and description of two commonly used strategies in theory building. And finally, consideration is given to the requirement of expertise in both knowledge of and experience with the phenomenon that is the focus of the theory-building endeavor.

The Multiple Purposes of Theory-Building Inquiry

Theory-building research is a method of scholarly inquiry (Gall, Borg, & Gall, 1996; Kaplan, 1964; Swanson, 1997). Just like any other form of scholarly inquiry, theory building can involve varied and various logics-in-use and can be engaged in from multiple research paradigms (Kaplan, 1964). There is no one supreme method of theory building, and nor should there be (Gioia & Pitre, 1990; Kuhn, 1970; Lynham, 2000b; Marsick, 1990b; Swanson, 1997; Swanson, Lynham, Ruona, & Torraco, 2000; Thomas, 1997). Rather, the specific theory-building research method employed should be dictated by the nature of the theory building being engaged in, and not by the preferred inquiry methodology of the researcher-theorist or the practitioner-theorist. It is therefore less important that we support one specific theory-building research method over another than that we view applied theory-building research as a necessary and helpful form of scholarly inquiry in developing and expanding our understanding of and ability to explain, anticipate, and act on related phenomena, issues, and problems.

Like any form of inquiry, theory-building research is used for numerous purposes, and these intended purposes influence the nature and require-

ments of the theory-building method employed. Habermas's (Hultgren & Coomer, 1989) three-perspective classification of scholarly inquiry is informative in considering the various purposes and nature of theory building in HRD. He highlighted three broad modes of inquiry in the social or human sciences, namely, empirical-analytical, interpretive, and critical science research. When applied to theory building, this framework can be used to provide a general, comparative overview of the contrasting empirical characteristics of three dominant modes of theory-building inquiry or research (McLean, 2001) (see Table 1).

As indicated earlier, and informed by Table 1, the question is not one of whether we should engage in multimethod theory-building research in HRD. Rather, it is one of when is theory-building research the most justifiable means to address the phenomena or problem, and therefore, what theory-building methods, or combinations thereof, are the most suited to the issue under inquiry?

Two Common Strategies Used in Theory Building

Because HRD is of an applied nature, theory-building methods must be capable of dealing with issues of application (Campbell, 1990; Dubin, 1976, 1978; Lynham, 1998, 2000b; Swanson, 1988, 1997, 2000; Torraco, 1994, 1997, 2000). This monograph highlights and discusses a number of research methods particularly well suited to and relevant for use in theory building in HRD and other applied disciplines. Beyond these applied methods of theory building, it is worth considering two strategies common to theory building (Reynolds, 1971). The first is one of a research-to-theory strategy, whereas the second is one of a theory-to-research strategy (Reynolds, 1971).

The research-to-theory strategy, also termed the *research-then-theory strategy*, is related to "deriving the laws of nature from a careful examination of all the available data" (Reynolds, 1971, p. 140). Francis Bacon referred to the outcome of this theory-building strategy as interpretations of nature (Reynolds, 1971). As described by Reynolds (1971), the essences of this research-to-theory strategy are as follows:

1. Select a phenomenon and list all the characteristics of the phenomenon,
2. measure all the characteristics of the phenomenon in a variety of situations (as many as possible),
3. analyze the resulting data carefully and determine if there are any systematic patterns among the data "worthy" of further attention, and
4. once significant patterns have been found in the data, formalization of these patterns as theoretical statements constitutes the laws of nature (*axioms*, in Bacon's terminology). (p. 140)

TABLE 1: The Contrasting Features of Empirical-Analytical, Interpretive, and Critical Science Approaches to Theory-Building Research

View of Theory-Building Inquiry	Area of Human Interest and Application	Assumption About Knowledge	Empirical Purpose	Desired HRD-Related Outcome
Empirical-analytical	• Work • Technical, that is, about practice affected through newly developed means to achieve established ends	• Observational data are considered the foundation of knowledge • Generalizations characterized by empiricism	• To explain, predict, and control	• Generalizable laws and explanations of organizational and human behavior
Interpretive	• Interaction (language) • Practical, that is, about policy and practice informed through interpretations of daily events and contexts	• Constructed meanings of stakeholders are considered the foundation of knowledge	• To make sense of, understand, and interpret	• Common meanings and clarifying interpretations of organizational and human actions and experiences
Critical	• Power (reason) • Emancipatory, that is, about policy and practice changed through critique and recovering self-reflection to unite theory and practice	• Constructed meanings of stakeholders are considered the foundation of knowledge • Critique of ideologies believed to promote needed social change, which is open and ongoing	• To enlighten and emancipate through the process of critique and identifying potential	• Underlying, hidden, or unreflected choices surfaced to inform reasoned human and organizational choice

Note: HRD = human resource development.

Also frequently referred to as the Baconian approach, this research-to-theory theory-building strategy requires, according to Reynolds (1971), two important conditions, namely, "a relatively small number of variables to measure during data collection" and "that there be a few significant patterns to be found in the data" (p. 140). The dominant ontology of this theory-building strategy is a quantitative one. As a result, the corresponding assumptions about knowledge (epistemology) that underlie and govern the research-to-theory strategy are also of a quantitative nature (for example, that the real world is objective and external to the researcher; that the truth is out there to be discovered through careful, methodical, and comprehensive inquiry by the researcher; and that the purpose of research is the discovery of universal, causal laws to enable causal explanation). Of a predominantly deductive nature, this research-to-theory strategy is thought to be well suited to the pure sciences, where the purpose of theory building is to develop large, generalizable laws of nature that explain how phenomena in the natural, objective world within which we live can be expected to work and potentially be predicted and controlled.

The second strategy for building theory is that of theory to research, or what Reynolds (1971) called the "theory-then-research strategy" (p. 144). In this approach to theory building, theory is made explicit through the continuous, reiterative interaction between theory construction and empirical inquiry (Kaplan, 1964; Reynolds, 1971). Reynolds highlighted the essences of this theory-building strategy as follows:

1. Develop an explicit theory in either axiomatic or process description form;
2. select a statement generated by the theory for comparison with the results of empirical research;
3. design a research project to "test" the chosen statement's correspondence with empirical research;
4. if the statement derived from the theory does not correspond with the research results, make appropriate changes in the theory or the research design and continue with the research; and
5. if the statement from the theory corresponds with the results of the research, select further statements for testing or attempt to determine the limitations of the theory. (p. 144)

This theory-to-research strategy was made popular by Karl Popper, in which "he suggests that scientific knowledge would advance most rapidly through the development of new ideas [conjectures] and attempts to falsify them with empirical research [refutations]" (Reynolds, 1971, p. 144). Often more inclusive of qualitative research, this strategy is informed by corresponding assumptions about the nature of scientific knowledge, for example, that there is no "real world" or "one truth" but rather that knowledge about human behavior is created in the minds of individuals, "that science is a process of inventing descriptions of phenomena" (Reynolds, 1971, p. 145), that there are multiple and divergent realities and therefore "truths," and that the purpose of science is one of interpretive

discovery and explanation of the nature and meaning of phenomena in the world in which we live and experience life (Hultgren & Coomer, 1989). Of an interactive inductive-deductive nature, this theory-to-research strategy is well suited to the applied nature of the behavioral and human sciences (Lynham, 2000b; Reynolds, 1971).

The significance of these two theory-building strategies lies not in the need to choose one above the other. Rather, their value to the theorist is in the insight that they provide regarding the virtuous, systemic nature of the interaction among three elements critical to applied theory building, namely, the development and accumulation of a system of coherent, disciplined, and rigorous knowledge and explanation (theory); the conduct of focused and disciplined scholarly inquiry and discovery (research); and the resulting informed and improved action that ensues from the application of the outcomes of the first two elements in practice (practice). The concept of a virtuous cycle (also noted by Egan in Chapter 3) is informed by systems theory and refers to a positive, reinforcing relationship of interdependence among the components of the system concerned (Kauffman, 1980; Senge, 1990; Von Bertalanffy, 1968). This growth cycle of theory-research-practice (see Figure 1) is fundamental to building rigorous and relevant applied theory (Dubin, 1978). The expertise required for successful applied theory building must therefore relate to the virtuous nature of applied theory building and will be discussed more in the next section of this chapter.

Toward a General Theory-Building Research Method

The theory-to-research theory-building strategy, coupled with the applied nature and emphasis of numerous theory-building methods described in this monograph, demands that the theorist have expertise of both the phenomenon central to the theory as well as of the theory-building method itself (Campbell, 1990; Cohen, 1991; Dubin, 1976; Gioia & Pitre, 1990; Hearn, 1958; Patterson, 1986; Reynolds, 1971; Van de Ven, 1989). Applied theory-building methods therefore require the theorist to interact with and be influenced and informed by both her or his experience of the phenomenon in practice and her or his acquired knowledge/mastery of the phenomenon in theory. In this way, both knowledge of and knowledge about the phenomenon central to the theory are brought together through the theory-building process and are ordered according to the internal logic, or logic-in-use, and informed imagination of the theorist (Cohen, 1991; Dubin, 1978; Reynolds, 1971; Weick, 1995). This continuous and iterative conversation in applied theory construction, between knowledge and experience of the phenomenon that is the focus of the theory, facilitates the accumulation of relevant and rigorous theoretical knowledge of the phenomenon in the expe-
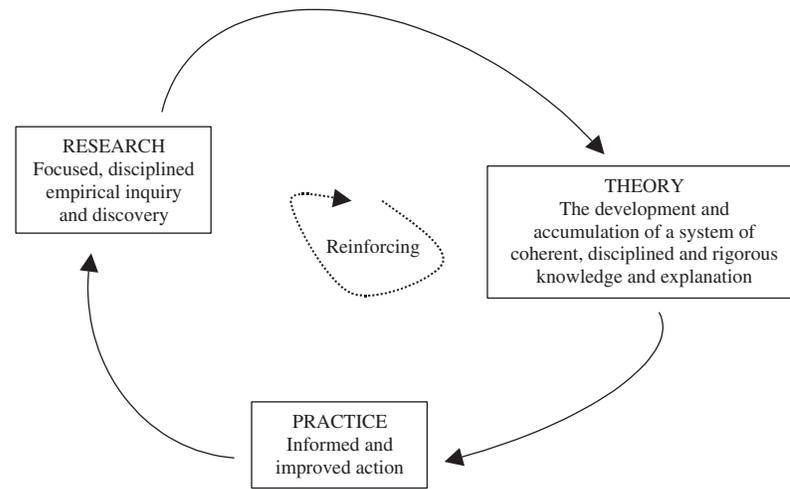
FIGURE 1:   The Growth Cycle of Applied Theory-Building

rienced world and is the focus of the theory and the theory-building method itself (see Figure 2).

Informed by Figures 1 and 2, a useful way of conceptualizing the research method for applied theory building is as a recursive system of five distinct phases:

- conceptual development,
- operationalization,
- application,
- confirmation or disconfirmation, and
- continuous refinement and development (of the theory).

This five-phase depiction of the method of applied theory building is presented in Figure 3.

From an overall perspective, applied theory-building research consists of two broad components, namely, theorizing to practice and practice to theorizing. Each of these components produces distinct in-process outputs that guide the applied theory-building research and, ultimately, result in a trustworthy, rigorous, and relevant theory for improved action (Denzin & Lincoln, 2000; Marsick, 1990a; Van de Ven, 1989). An essential output from the theorizing component of theory building is a coherent and informed theoretical framework, which encapsulates and "contains" the explanation of the phenomenon, issue, or problem that is the focus of the theory. Key outputs from

Building applied theory requires two
kinds of expertise…

… Of the phenomenon

… Of the theory
building research
method being used

Knowledge …   **Expertise**   Experience …

When one starts on the
theory this component is in
the background of
attention. It is then moved
to the foreground of the
attention of the researcher-
theorist.

When one starts on the
theory this component is in
the foreground of attention.
It is then moved to the
background of the attention
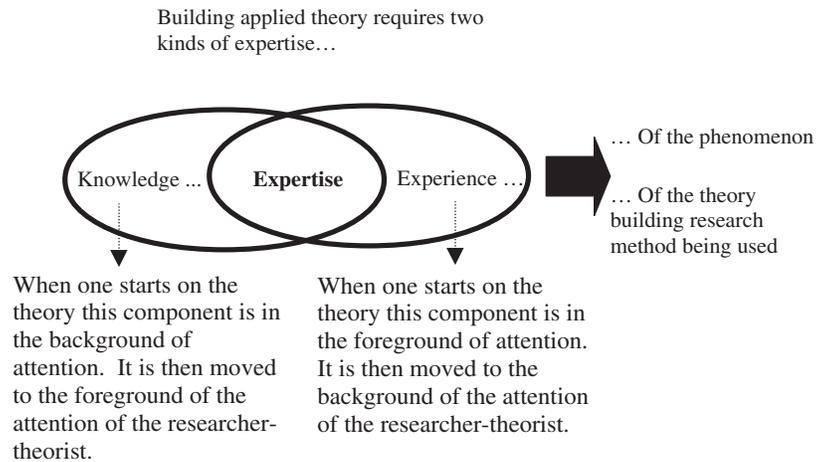of the researcher-theorist.

FIGURE 2:   The Recursive Nature of Practical and Theoretical Expertise Inherent in Applied Theory-Building Research

the practice components of theory building are carefully obtained data/findings and experiential knowledge that are used to confirm, or disconfirm, and further refine and develop the existing theory and to enhance the utility of the theory in practice. The five phases of the applied theory-building research method take place within this larger two-component theory-building frame indicated in Figure 3.

It is important to note that these five phases do not necessarily need to be pursued in the order in which they appear in Figure 3. However, each complete applied theory-building research effort, regardless of the specific theory-building method employed by the researcher-theorist, involves, in some form, these five general theory-building phases, namely, conceptual development, operationalization, application, confirmation or disconfirmation, and continuous refinement and development.

Furthermore, it is important to bear in mind that an applied theory is never considered complete but rather "true until shown otherwise" (Cohen, 1991; Dubin, 1978; Kaplan, 1964; Reynolds, 1971; Root, 1993). As such, the theory is always "in progress," and further research related to the theory is used to refine and increase confidence, or not, in the existing theory—hence the nature of the cyclical phase of applied theory building, namely, continuous refinement and development. Which phase is actually carried out first in the theory-building process is dependent on the theory-building method being employed by the researcher-theorist. The remaining chapters in this monograph reflect this multiple entry point option that characterizes theory building in applied disciplines.

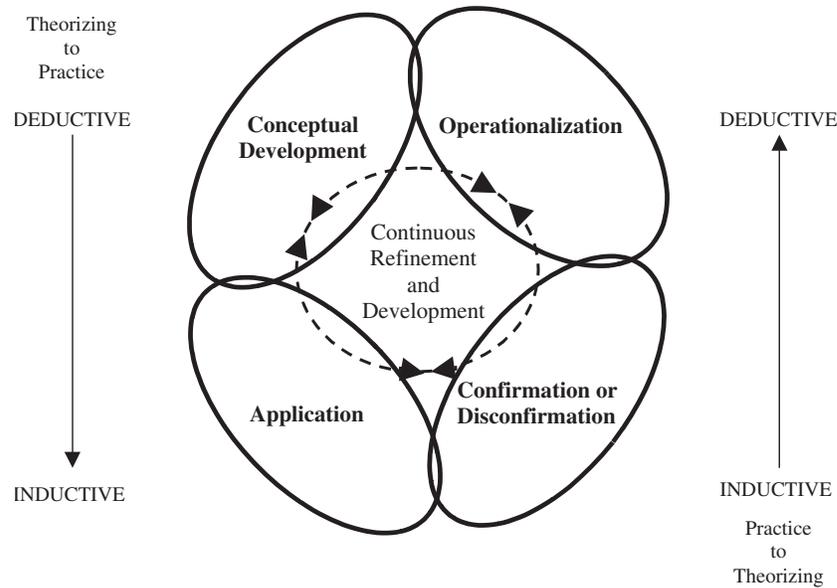*The environment in which we live, observe and experience the world.*

Theorizing
to
Practice

DEDUCTIVE

**Conceptual
Development**

Operationalization

DEDUCTIVE

Continuous
Refinement
and
Development

Application

**Confirmation or
Disconfirmation**

INDUCTIVE

INDUCTIVE

Practice
to
Theorizing

FIGURE 3:   The General Method of Theory-Building Research in Applied Disciplines

The following sections provide a brief description of each of the five phases of the general method of applied theory-building research as portrayed in Figure 3. It should be noted that the discussion sequences the phases from the perspective of a theorizing-to-practice strategy of applied theory-building research. Using a practice-to-theorizing strategy of theory building does not change the occurrence of these five phases but rather what makes for the appropriate sequencing of each phase in the applied theory-building research process.

Conceptual Development

Conceptual development requires that the theorist formulate initial ideas in a way that depicts current, best, most informed understanding and explanation of the phenomenon, issue, or problem in the relevant world context (Dubin, 1978; Lynham, 2000b). The purpose of this phase is therefore to develop an informed conceptual framework that provides an initial understanding and explanation of the nature and dynamics of the issue, problem, or phenomenon that is the focus of the theory.

The process of conceptual development varies according to the theory-building method employed by the theorist. However, at a minimum this process will include the development of the key elements of the theory, an initial explanation of their interdependence, and the general limitations and conditions under which the theoretical framework can be expected to operate. The output of this phase is an explicit, informed, conceptual framework that often takes the form of a model and/or metaphor that is developed from the theorist's knowledge of and experience with the phenomenon, issue, or problem concerned (Dubin, 1978; Kaplan, 1964).

The phase of conceptual development is one of two phases that dominate the theorizing component of theory-building research. Here, the theorist conducts theoretical inquiry into the phenomenon, issue, or problem core to the theory. Starting the journey at this point is often more typical of quantitative-type (or experimental) theory-building research methods, for example, the hypothetico-deductive method and meta-analysis (Cohen, 1991; Dubin, 1976, 1978; Hearn, 1958; Kaplan, 1964; Patterson, 1986; Reynolds, 1971). More qualitatively oriented theory-building research methods, for example, case study, grounded theory, and social constructivist approaches, typically begin with inquiry in the application phase and then use the results of such inquiry to inform the development of the conceptual framework of the theory (Eisenhardt, 1989, 1995; Stake, 1994; Strauss & Corbin, 1998). Regardless of the sequencing of the conceptual development phase of theory building, the development of an informed conceptual framework is fundamental to all theory-building research. This theoretical framework is essentially the core explanatory container of any theory.

Operationalization

The purpose of the *operationalization* phase of theory-building research is essentially an explicit connection between the conceptualization phase and practice. The operationalization of a theory needs to be confirmed and/or tested in its real-world context. In order for the theoretical framework to evoke trust and confidence, the initial explanation of the phenomenon, problem, or issue embedded in the framework must be applied to and empirically confirmed in the world in which the phenomenon, issue, or problem occurs. To achieve this necessary confirmation, the theoretical framework must be translated, or converted, to observable, confirmable components/elements. These components/elements can be in the form of, for example, confirmable propositions, hypotheses, empirical indicators, and/or so-called knowledge claims (Cohen, 1991), and are addressed through appropriate inquiry methods, depending on the theory-building method being employed by the theorist.

Operationalization reaches toward an overlap between the theorizing and practice components of the theory-building research process. A primary output of the theorizing component of theory-building research in applied disciplines is therefore an *operationalized theoretical framework,* that is, an informed theoretical framework that has been converted into components or elements that can be further inquired into and confirmed through rigorous research and relevant application.

Confirmation or Disconfirmation

The *confirmation or disconfirmation* phase falls within the practice component of applied theory building. This theory-building phase involves the planning, design, implementation, and evaluation of an appropriate research agenda and studies to purposefully inform and intentionally confirm or disconfirm the theoretical framework central to the theory. When adequately addressed, this third phase results in a confirmed and trustworthy theory that can then be used with some confidence to inform better action and practice.

Application

A theory that has been confirmed in the contextual world to which it applies (i.e., operationalized) and has, at least to some extent, gone through inquiry in the practical world is not enough. A theory must also be threaded through the *application* phase. The application of the theory to the problem, phenomenon, or issue in the world of practice is in the practice component of the general theory-building research method. Application of the theory enables further study, inquiry, and understanding of the theory in action.

An important outcome of this application phase of theory building is therefore that it enables the theorist to use the experience and learning from the real-world application of the theory to further inform, develop, and refine the theory. It is in the application of a theory that practice gets to judge and inform the usefulness and relevance of the theory for improved action and problem solving (Lynham, 2000b). And it is through this application that the practical world becomes an essential source of knowledge and experience for ongoing development of applied theory (Ruona & Lynham, 1999; Swanson, 1997).

Ongoing Refinement and Development

Because a theory is never "complete," it is necessary that the theory be continually refined and developed (Cohen, 1991; Root, 1993). This recur-

sive nature of applied theory-building research requires the ongoing study, adaptation, development, and improvement of the theory in action and ensures that the relevance and rigor of the theory are continuously attended to and improved on by theorists through further inquiry and application in the real world. This continuing phase marks a further overlap between the practice and theorizing components of applied theory-building research. This phase addresses the responsibility of continuous attention to the trustworthiness and substantive quality of the theory that is the burden of the theorist (Dubin, 1978; Van de Ven, 1989). The intentional outcome of this phase is thus to ensure that the theory is kept current and relevant and that it continues to work and have utility in the practical world. It also ensures that when the theory is no longer useful, or is found to be "false," that it is shown to be as such and adapted or discarded accordingly.

Limitations of the General Method of Theory Building

Like all multidimensional models presented in a two-dimensional media, this five-phase method of theory-building research in applied disciplines is much less programmatic than is apparent in Figure 3. These phases of applied theory building are not so much linear as they are necessary. The process of applied theory building can begin with any one of these phases and progress in a much less orderly way than this model might suggest. Where one begins and ends with applied theory-building research is less relevant than the acknowledgment that all of the five phases presented in the method are necessary and required for the outcome of a relevant, useful, and trustworthy research-based theory.

Each specific theory-building research method in the following chapters has its own distinctive characteristics, process, and requirements. However, common to all these methods are the five phases of the general method of theory-building research. It is believed that this five-phase method and conceptualization of applied theory building can be used as the generic and informative organizer and guide to those involved in theory building in HRD and applied disciplines. It can also be used as a means to compare and contrast specific research methods and their contributions to the general method (as indicated in Table 2 of chapter 7). This general method of applied theory-building research can further be used to serve and address the acknowledged importance and challenges of theory building in HRD and other applied disciplines.

The Importance and Challenges
of Theory Building in HRD

The past decade, and particularly the past few years, has seen increased recognition by HRD scholars of the importance of theory building to the profession (Chalofsky, 1996, 1998; Gradous, 1989; Hansen, 1998; Hatcher, 1999; Lynham, 2000a, 2000b; Marsick, 1990a, 1990b; Mott, 1996, 1998; Passmore, 1990; Shindell, 1999; Swanson, 1997, 1999, 2000; Swanson & Holton, 2001; Torraco, 1997, 1999). Three compelling such points of professional import are offered by Lynham (2000b), namely, that theory building can play an important role in advancing professionalism and maturity in the field, that theory building can help to dissolve the tension between research and practice in HRD, and that theory building can enable the development of multiple and inclusive methods of research for HRD theory and practice.

Torraco (1997), a notable scholar of theory building in HRD, provided further support to the importance of theory building to the profession. He highlighted nine "prominent roles served by theory . . . in the context of human resource development" (p. 117), namely,

- "a means by which new research data can be interpreted and coded for future use,"
- "a means for responding to new problems that have no previously identified solutions strategy,"
- "a means for identifying and defining applied problems,"
- "a means for prescribing or evaluating solutions to applied problems,"
- a way of telling "us that certain facts among the accumulated knowledge are important and others are not,"
- a means of giving "old data new interpretations and new meaning,"
- a means by which to identify "important new issues and prescribe the most critical research questions that need to be answered to maximize understanding of the issue,"
- a means of providing "members of a professional discipline with a common language and a frame of reference for defining boundaries of their profession," and
- a means "to guide and inform research so that it can, in turn, guide development efforts and improve professional practice." (pp. 117-119)

Theory, and by association theory building, therefore acts to improve and protect HRD research and practice and does so by providing a means of rigor and

relevance for reducing both atheoretical practice (Swanson, 1997) and nonscientific research (Lynham, 2000b). Having recognized the importance of theory building to the profession, it is, however, necessary to recognize that the task of theory building in HRD and other applied disciplines does not come without certain challenges (Dubin, 1978; Gioia & Pitre, 1990; Glaser & Strauss, 1967; Hansen, 1998; Jacobs, 1997, 1999; Klein, Tosi, & Cannella, 1999; Kuhn, 1970; Lynham, 2000b; Marsick, 1990a, 1990b; Morgeson & Hofmann, 1999; Mott, 1998; Torraco, 1997; Van de Ven, 1989). The first of these challenges is that of having to deal with the pressure that theory building puts on the relationship between the researcher and the practitioner and the second is of the need to recognize that the outcomes of theory-building research are enriched by building theory from multiple research perspectives and methods (Lynham, 2000b).

Conclusions

This chapter attempted to present an overview of the general method of theory-building research in applied disciplines. Specifically, it presented some considerations general to theory building as well as a framework of five core phases of the general theory-building research process. The following chapters present specific methods of theory building considered to be particularly well suited to applied disciplines.

A common myth associated with theory is that theory is all good and well, but it seldom can be expected to work in the real world. It has been recognized that in an applied field like that of HRD, theory is good precisely because of its utility in practice. No one underscores the utility of good theory more than Lewin (1945, 1951), who long since coined the notion that there is nothing quite as practical as good theory. This utility-relevance requirement of theory in an applied field has been increasingly echoed by HRD and related scholars of theory building.

Although relevance-utility is seen as a necessary condition of HRD theory, it is also agreed that good applied theory must be extended to include the conditions of empirical rigor and trustworthiness. It is this dual condition of what Marsick (1990a) referred to as rigor-relevance that makes theory building useful in reducing the occurrence of atheoretical practice (Swanson, 1997) and related nonscientific inquiry (Lynham, 2000b).

Another misconception commonly associated with theory building is not only that the task of this empirical endeavor is primarily the responsibility of the HRD academic-researcher but that the origins of theory come essentially from research. Swanson (1997) allayed this concern, however, and provided us with clear logic and evidence of the multiple practice-development-research origins of theory and the corresponding researcher-practitioner nature of theory builders.

What does appear to be common to theory-building research in applied disciplines, regardless of the origins and interest of the theory builders, is the virtuous, systemic nature of the relationship between HRD theory, inquiry, and practice. This systemic nature of applied theory building is fundamental to understanding and being able to participate in the general process of theory building and can be framed by way of five interdependent, interacting phases of theory building, namely, conceptual development, operationalization, confirmation, application, and continuous refinement and development of the theory. This generic applied framework of theory-building research is further useful in that it informs and makes the logic-in-use embedded in multiple research methods of theory building explicit and, in turn, accessible to the HRD theorist. This framework also helps to address one of the current difficulties of theory building in HRD and other applied disciplines, namely, the generally perceived inaccessibility and often academically viewed nature of theory-building methods—a common deterrent to the aspiring practitioner-theorist.

It is further evident that theory-building research methods are of a duo deductive-inductive nature. Although some theory-building research methods may begin with deduction, at some point they become informed by induction. With other theory-building methods, the relationship between deduction and induction may be the other way around. What is important in theory building inquiry, whether one starts with theory and then moves to research and/or application, or vice versa, is that the choice of specific theory-building research methods should be based on the nature of the phenomenon, issue, or problem that is the focus of the theory-building endeavor, and not by the theorist's preferred specific method of theory building. It is also increasingly acknowledged that multiple methods of theory building can and should be used to develop theory in fields of the applied nature of HRD. Just as each specific method of applied theory building is a way of developing insight, understanding, and possible explanation of the phenomenon, issue, or problem, so it is a way of not doing so (Passmore, 1997).

By developing integrated, inclusive, and multiple-methods perspective and approaches to building theory in HRD, the profession has a better chance that the resulting theories will reflect the rigor-relevance characteristic of good applied theory. In turn, these theories are likely to result in better outcomes and understanding for improved HRD research, practice, and education.

References

Alvesson, M., & Deetz, S. (2000). *Doing critical management research*. London: Sage.

Argyris, C., & Schon, D. A. (1974). *Theory in practice: Increasing professional effectiveness*. San Francisco: Jossey-Bass.

Argyris, C., & Schon, D. A. (1996). *Organizational learning II. Theory, method, and practice*. New York: Addison-Wesley.

Campbell, J. P. (1990). The role of theory in industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook for industrial and organizational psychology* (Vol. 1, pp. 39-73). Palo Alto, CA: Consulting Psychologists Press.

Chalofsky, N. E. (1996, Winter). Professionalization comes from theory and research: The why instead of the how to. *New Directions for Adult and Continuing Education*, p. 7.

Chalofsky, N. E. (1998). Professionalization comes from theory and research: The "why" instead of the "how-to." In R. J. Torraco (Ed.), *Proceedings of the Academy of Human Resource Development annual conference* (pp. 666-670). Baton Rouge, LA: Academy of Human Resource Development.

Cohen, B. P. (1991). *Developing sociological knowledge: Theory and method* (2nd ed.). Chicago: Nelson-Hall.

Denzin, N. K., & Lincoln, Y. S. (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Dubin, R. (1976). Theory building in applied areas. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 17-39). Chicago: Rand McNally.

Dubin, R. (1978). *Theory building* (Rev. ed.). New York: Free Press.

Eisenhardt, K. M. (1989). Building theories from case study research. In G. P. Huber & A. H. Van de Ven (Eds.), *Longitudinal field research methods: Studying processes of organizational change* (pp. 65-90). Thousand Oaks, CA: Sage.

Eisenhardt, K. M. (1995). Building theories from case study research. In G. P. Huber & A. H. Van de Ven (Eds.), *Longitudinal field research methods* (pp. 65-90). Thousand Oaks, CA: Sage.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research* (6th ed.). White Plains, NY: Longman.

Gioia, D. A., & Pitre, E. (1990). Multiparadigm perspective on theory building. *Academy of Management Review*, *15*(4), 584-602.

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies of qualitative research*. London: Weidenfeld and Nicholson.

Gradous, D. B. (1989). Preface to the monograph. In D. B. Gradous (Ed.), *Systems theory applied to human resource development: Theory-to-practice monograph series* (pp. 1-6). Alexandria, VA: American Society for Training and Development.

Hansen, C. D. (1998). HRD theory building through qualitative research. In R. J. Torraco (Ed.), *Proceedings of the Academy of Human Resource Development annual conference* (pp. 281-284). Baton Rouge, LA: Academy of Human Resource Development.

Hatcher, T. (1999). Reorienting the theoretical foundations of human resource development: Building a sustainable profession and society. In P. K. Kuchinke (Ed.), *Proceedings of the Academy of Human Resource Development annual conference* (pp. 202-208). Baton Rouge, LA: Academy of Human Resource Development.

Hearn, G. (1958). *Theory building in social work*. Toronto, Canada: University of Toronto Press.

Hultgren, F. H., & Coomer, D. L. (Eds.). (1989). *Alternative modes of inquiry in home economics research*. Peoria, IL: Glencoe.

Jacobs, R. L. (1997). HRD partnerships for integrating HRD research and practice. In R. A. Swanson & E. F. Holton III (Eds.), *Human resource development handbook: Linking research and practice* (pp. 47-61). San Francisco: Berrett-Koehler.

Jacobs, R. L. (1999). Partnership research: Ensuring more useful HRD collaborations. In P. K. Kuchinke (Ed.), *Proceedings of the Academy of Human Resource Development annual conference* (pp. 874-879). Baton Rouge, LA: Academy of Human Resource Development.

Kaplan, A. (1964). *The conduct of inquiry: Methodology for behavioral science*. San Francisco: Chandler.

Kauffman, D. L. (1980). *Systems 1: An introduction to systems thinking*. Minneapolis, MN: Future Systems, Inc.

Klein, K. J., Tosi, H., & Cannella, A. A., Jr. (1999). Multilevel theory building: Benefits, barriers, and new developments. *Academy of Management Review*, *24*(2), 243-248.

Kuhn, T. (1970). *The structure of scientific revolutions* (2nd ed.). Chicago: University of Chicago Press.

Lewin, K. (1945). The research center for group dynamics at Massachusetts Institute of Technology. *Sociometry*, *8*, 126-135.

Lewin, K. (1951). *Field theory in social sciences*. New York: Harper Row.

Lynham, S. A. (1998). The development and evaluation of a model of responsible leadership for performance: Beginning the journey. *Human Resource Development International*, *1*(2), 207-220.

Lynham, S. A. (2000a). *The development of a theory of responsible leadership for performance* (Tech. Rep.). St. Paul: University of Minnesota, Human Resource Development Research Center.

Lynham, S. A. (2000b). Theory building in the human resource development profession. *Human Resource Development Quarterly*, *11*(2), 159-178.

Marsick, V. J. (1990a). Altering the paradigm for theory building and research in human resource development. *Human Resource Development Quarterly*, *1*(1), 5-24.

Marsick, V. J. (1990b). Responding to Professor Passmore's response. *Human Resource Development Quarterly*, *1*(1), 29-34.

McLean, G. A. (2001). *Contrasting three modes of inquiry*. Unpublished manuscript.

Morgeson, F. P., & Hofmann, D. A. (1999). The structure and function of collective constructs: Implications for multilevel research and theory development. *Academy of Management Review*, *24*(2), 249-265.

Mott, V. J. (1996). Knowledge comes from practice: Reflective theory building in practice. In R. Rowden (Ed.), *Workplace learning: Debating five critical questions of theory and practice* (New Directions for Adult and Continuing Education No. 72, pp. 57-63). San Francisco: Jossey-Bass.

Mott, V. J. (1998). Professionalization and reflective theory building in HRD. In R. J. Torraco (Ed.), *Proceedings of the Academy of Human Resource Development annual conference* (pp. 671-676). Baton Rouge, LA: Academy of Human Resource Development.

Passmore, D. L. (1990). Invited reaction: Pick a paradigm, any paradigm. *Human Resource Development Quarterly*, *1*(1), 25-28.

Passmore, D. L. (1997). Ways of seeing: Disciplinary bases of research in HRD. In R. A. Swanson & E. F. Holton III (Eds.), *Human resource development handbook: Linking research and practice* (pp. 199-214). San Francisco: Berrett-Koehler.

Patterson, C. H. (1986). *Theories of counseling and psychotherapy* (4th ed.). San Francisco: Harper & Row.

Reynolds, P. D. (1971). *A primer in theory construction*. New York: Macmillan.

Root, M. (1993). *Philosophy of social science: The methods, ideals, and politics of social inquiry*. Cambridge, MA: Blackwell.

Ruona, W. E., & Lynham, S. A. (1999). Towards a philosophical framework for thought and practice. In P. K. Kuchinke (Ed.), *Proceedings of the Academy of Human Resource Development annual conference* (pp. 209-216). Baton Rouge, LA: Academy of Human Resource Development.

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday & Currency.

Shindell, T. (1999). The need for theoretical model building in HRD. In P. K. Kuchinke (Ed.), *Proceedings of the Academy of Human Resource Development annual conference* (pp. 217-220). Baton Rouge, LA: Academy of Human Resource Development.

Stake, R. E. (1994). Case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 236-247). Thousand Oaks, CA: Sage.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Thousand Oaks, CA: Sage.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Grounded theory procedures and techniques* (2nd ed.). Thousand Oaks, CA: Sage.

Swanson, R. A. (1988). Research and development (and other life and death matters). *Performance Improvement Quarterly*, *1*(1), 69-82.

Swanson, R. A. (1997). HRD research: Don't go to work without it. In R. A. Swanson & E. F. Holton III (Eds.), *Human resource development handbook: Linking research and practice* (pp. 3-20). San Francisco: Berrett-Koehler.

Swanson, R. A. (1999). Foundations of performance improvement and implications for practice. *Advances in Developing Human Resources*, *1*, 1-45.

Swanson, R. A. (2000). Theory and other irrelevant matters. *Human Resource Development International*, *3*(3), 273-278.

Swanson, R. A., & Holton, E. F., III. (2001). *Foundations of human resource development*. San Francisco: Berrett-Koehler.

Swanson, R. A., Lynham, S. A., Ruona, W.E.A., & Torraco, R. J. (2000). Theory building research in HRD—Pushing the envelope! In P. Kuchinke (Ed.), *Proceedings of the Academy of Human Resource Development 2000 annual conference* (pp. 1125-1130). Baton Rouge, LA: Academy of Human Resource Development.

Thomas, G. (1997). What's the use of theory? *Harvard Educational Review*, *67*(1), 75-104.

Torraco, R. J. (1994). *The development and validation of a theory of work analysis*. Unpublished doctoral dissertation, University of Minnesota, St. Paul.

Torraco, R. J. (1997). Theory-building research methods. In R. A. Swanson & E. F. Holton III (Eds.), *Human resource development handbook: Linking research and practice* (pp. 114-137). San Francisco: Berrett-Koehler.

Torraco, R. J. (Ed.). (1999). Performance improvement: Theory and practice. *Advances in Developing Human Resources*, *1*.

Torraco, R. J. (2000). A theory of knowledge management. *Advances in Developing Human Resources*, *5*, 38-62.

Van de Ven, A. H. (1989). Nothing is quite so practical as a good theory. *Academy of Management Review*, *14*(4), 486-489.

Von Bertalanffy, L. (1968). *General systems theory* (Rev. ed.). New York: George Braziller.

Weick, K. E. (1995). What theory is *not*, theorizing *is*. *Administrative Science Quarterly*, *40*(3), 385-390.

Whetten, D. A. (1989). What constitutes a theoretical contribution? *Academy of Management Review*, *14*(4), 490-495.