CHAPTER 4

The Role of Theory and Philosophy in Human Resource Development

CHAPTER OUTLINE

INTRODUCTION

In response to popular opinion to the contrary, Kurt Lewin, the famous early organization development innovator and scholar, presented his famous quote: "There is nothing so practical as good theory." It bears repeating. His description of practicality is in contrast to commonly held thoughts that theory is made of "half-baked ideas" disconnected from the "real world." A good theory is thorough and has been tested both intellectually and in practice. Lewin prevents us from misusing the word *theory*.

Sound theory helps direct the professional energies to models and techniques that are effective and efficient. Sound theory also confronts celebrity professionals and infomercial consultants that riddle the profession. For example, to the unsubstantiated promises of techniques for *accelerated learning*, buyers were warned to beware that it doesn't deliver on its promises (Torraco, 1992). For the unfulfilled promise and premises of Kirkpatrick's (1998) flawed four-level evaluation model, Holton (1996) warned the profession that after thirty-eight years it still does not meet any of the criteria required of sound theories or models. Science writer Michael Shermer has spent a career debunking false and flimsy ideas. He challenges practitioners and participants to step back and ask themselves if the art of the phenomenon under question is good enough, and if not, how can the science become attainable (Shermer, 2005)?

Importance of Theory

The HRD profession continues to develop its core theories and to understand that theory building is a scholarly process, not soapbox oratory. Below are a few organizing thoughts about theory. These ideas are important to highlight because some in HRD believe that it is not essential to the profession to clearly specify its underlying theory or even have one, for that matter (McLean, 1998). An interpretation of this view of theory is that the profession needs simply to have an ethical intent and to situationally draw upon as many theories as required in pursuit of its work. While practitioners need many theories in their toolkit, scholars of HRD seek an encompassing theory to define and guide the profession.

Importance of Theory Building

Theory is particularly important to a discipline that is emerging and growing (Chalofsky, 1990; Ruona, 2000; Torraco, 2005). Sound theory is not pontificating or forcefully marketing the latest fad. Rather, theory in an applied field such as HRD is required to be both scholarly and successful in practice and can be the basis of significant advances. Rhetoric that negates theory, or the promotion of the idea that theory is disconnected from practice, does not come from those who have rigorously worked to use sound theory to enhance practice.

Definition of Theory

The following two definitions from HRD scholars capture the essence of theory and the challenge facing our profession:

- *"A theory simply explains what a phenomenon is and how it works"* (Torraco, 1997, p. 115). Torraco's definition poses the following questions: What is HRD, and how does it work?
- *"Theory building is the process or recurring cycle by which coherent descriptions, explanations, and representations of observed or experienced phenomena are generated, verified, and refined"*(Lynham, 2000b, p. 160). Lynham's definition poses the following question: What commitments must individuals, the HRD profession, and its infrastructure make to establish and sustain theory-development research in the HRD profession?

Theory-Development Process

Theory development can be thought of as an unending journey for any discipline. Yet, it is reasonable to assume that there are points in the maturation of a field of study that cause it to press theory-development research to the forefront. We contend (1) that the demand for HRD theory is increasing, (2) that our present available understandings have taken us about as far as we can go, and (3) that what we do is too important to wallow in atheoretical explanations.

RECOGNIZING THE THEORY-DEVELOPMENT JOURNEY AS RESEARCH

When a scholar takes a serious look at the theory development research journey, it is quite intricate and rigorous. A journal theme issue titled "Theory Building in Applied Disciplines," edited by Lynham (2002), is recommended reading for all those interested in HRD theory development. In addition, there are numerous benchmark theory-practice publications. "Workplace Learning: Debating the Five Critical Questions of Theory and Practice," edited by Rowden (1996), and *Systems Theory Applied to Human Resource Development,* edited by Gradous (1989), have provided excellent contributions to the theory in HRD. Gradous's classic monograph uses systems theory as a springboard for thinking about the theory of HRD with arguments for and against a unifying theory for HRD. The perspectives in this monograph range from a call for focusing on system outputs—that is, being results driven versus activity driven (Dahl, 1989)— to the consideration of field and intervention theory, the theory of work design, critical theory, and human capital theory (Watkins, 1989). The idea of multiple theories that pay attention to people, organizational viability, and a systematic and systemic understanding of the context, emerged in this monograph. These far-ranging ideas are present in most theoretical debates about HRD.

Serious theory-development methodologies are challenging (Reynolds, 1971; Dubin, 1978; Cohen, 1991). Even comparatively simple theory-building tools and methods put forward require significant effort for the theory builder (e.g., Patterson, 1983; Storberg-Walker, 2006; Strauss and Corbin, 2007). The HRD

profession needs to encourage and respect a full continuum of theory-building engagement. Examples are varied.

Seemingly elementary investigations into definitions and identification of the range of thought within HRD can be important theory-development stepping-stones. Specific examples include the following:

- "Commonly Held Theories of Human Resource Development" (Weinberger, 1998). Weinberger charts the history and the evolving definition of human resource development. Up to this point, this basic information has been scattered throughout the literature.
- "Operational Definitions of Expertise and Competence" (Herling, 2000). HRD methodically analyzes the literature on knowledge, competence, and expertise—core concepts in HRD. The HRD profession lacked clear scholarly literature defining human competence and expertise until Herling's work.
- *Organization Development: An Analysis of the Definitions and Dependent Variables* (Egan, 2000). Similar to Weinberger, Egan traces the definition of organization development over time with the added identification of declared outcomes.
- On the philosophical side, an example of theory research is *An Investigation into Core Beliefs Underlying the Profession of Human Resource Development* (Ruona, 1999). This study investigates the thought and value systems the discipline of HRD. Within her extensive findings, Ruona has determined that *learning* and *performance* are the two dominant philosophical views among HRD leaders.
- "Philosophical Foundations of HRD Practice" (Ruona and Roth, 2000) exposes core values in the field, while "Theoretical Assumptions Underlying the Performance Paradigm of Human Resource Development" (Holton, 2002) pushes to articulate the underlying assumptions related to the performance and learning paradigms and their common connection to learning.

It is important to recognize that each of these studies advances understanding of the HRD phenomenon.

Examples of straightforward theory-building efforts on the part of HRD scholars include the following. Each one of these cited pieces and numerous others deserve forums with opportunity for reflection in an effort to advance the profession.

- *Systems Theory Applied to Human Resource Development* (Gradous, 1989) presents an exploration of systems theory as being foundational to HRD.
- "A Theory of Knowledge Management" (Torraco, 2000) helps us think theoretically about the supportive systems required of the phenomenon of knowledge management.

- "Human Resource Development and its Underlying Theory" (Swanson, 2001) discusses the underlying theory of HRD when performance improvement is viewed as the desired outcome.
- "A Theory of Scenario Planning" (Chermack, 2002) emphasizes the dynamic impact scenario planning can have on an organization preparedness for uncertain futures.
- "The Evolution of Social Capital Theory" (Storberg, 2002) emphasizes the importance of social capital theory to HRD and its impact on organizational effectiveness.
- "Responsible Leadership for Performance: A Theoretical Model and Hypotheses" (Lynham and Chermack, 2006) looks at leadership in the context of purpose rather than the limited lens of leaders' traits and behaviors.

REQUIREMENTS OF A SOUND THEORY

Critics of HRD have chided the large number of HRD practitioners and commercial HRD products as being atheoretical (Swanson, 1998; Holton, 1996). *Atheoretical* means there is no thorough scholarly or scientific basis for the ideas and products being promoted. Organizations seeking quick or magical solutions are vulnerable to the exaggerated promises of suppliers. Patterson (1983) has provided the following criteria for assessing the theory that undergirds sound practice: (1) importance, (2) preciseness and clarity, (3) parsimony and simplicity, (4) comprehensiveness, (5) operationality, (6) empirical validity or verifiability, (7) fruitfulness,

Reflective practitioners and scholars want to know about the completeness and integrity of ideas they adopt. Certainly there are always new ideas, and those ideas generally deserve to be tried and tested. An ethical problem arises when unjustified claims are made in an attempt to market these ideas before they are fully developed and assessed.

PHILOSOPHY AND THEORY UNDERLYING HRD

There is tension in the academic world about the distinction between disciplines and fields of study. Some of the tension is rooted in history and tradition, some with singularity of focus in some fields, and some has to do with knowledge apart from practice. The debates around academic "turf" contain a number of issues. First, HRD is an old and established realm of practice and yet a relatively young academic field of study. While HRD continues to mature, the stage of maturation varies within nations and between nations.

Most academic fields of study are *applied* (e.g., medicine, engineering, education, business, and communication) and draw upon multiple theories in articulating

their disciplinary base. HRD is not alone. It is common for applied disciplines to create specializations that over time come to outgrow their hosts and break away as independent disciplines. For example, university departments of adult education and vocational education have historically supported HRD in the United States. In the late 1990s, many of these HRD programs became larger than their adult education and vocational education academic university hosts and carried with them particular emphases. A simple example would be a higher interest in self-directed learning in programs from those nurtured in an adult education department, performance-based learning from those nurtured in a vocational education department, and human capital development from those nurtured in a human resource department.

Another point of confusion is that most disciplines are rooted in a set of theories, and some of those theories are shared by other disciplines. A major question is, "What core theories help define the HRD discipline?" If psychological theory were determined to be one of them, note that HRD programs are hosted in colleges of the arts, engineering, business, and education—all draw upon some aspect of psychological theory. What slice of psychological theory, and for what purpose, are the questions that help select the specific psychological theories that help frame the discipline? In that HRD has specific purposes, those purposes are instrumental in guiding the profession to general theories and specific theories as being core. Thoughtfully identifying core component theories of HRD and their fusion is essential for advancing HRD's academic status (Swanson, 2007).

Choosing core contributing theories is not a casual exercise. Take two theories often considered as foundational to HRD: systems and anthropological theories. Systems theory is not as value laden as anthropology. Anthropologists are generally committed to not disturbing or changing the culture they study. In contrast, systems theory is almost always thinking about understanding the system and the potential of improving it. Thus, it can be paradoxical to have HRD people espouse anthropological views while intending to change the culture. This is a simple illustration of the missing logic that can occur when theory development is bypassed. Given the nature and purpose of HRD, easy arguments can be made that systems theory is core to HRD and that anthropology is secondary. Anthropology can provide important situational methods and tools to be called upon as needed while never being core to the theory and practice of HRD. Recently, social capital theory has been seriously entertained by HRD scholars (Akdere, 2008; Storberg, 2002; Tuttle, 2002). By itself, social capital theory is particularly useful for the organization development side of HRD. Yet, it could be argued that social capital theory, like HRD, is a fusion of economic, psychological, and systems theories for its own purposes.

A second example of missing logic within HRD is seen when HRD professionals claim a whole systems view (of the world, the organization, and the people in it) without having the rigorous systems theory and tools to match those claims. Putting people into a guided group process and relying only on those interaction skills is inadequate for whole systems understanding. Such a limited view would reduce the skill of the HRD professional to group interaction facilitation.

Theory has an enormous challenge and opportunity in the growing HRD profession. The concurrent questions are questions of philosophy: What is there? (ontology); How do you know? (epistemology), and Why should I? (ethics). The following essay by Dr. Karen Watkins, a noted HRD scholar, provides alternative philosophical metaphors for thinking about HRD theory and practice.

PHILOSOPHICAL METAPHORS FOR HRD THEORY AND PRACTICE

Contributed by Karen E. Watkins

Theories from different disciplines attempt to explain the universe, using the tools and perspectives of that discipline. An interdisciplinary applied field like HRD can thus be expected to make use of many different theories. For example, general systems theory is a robust and useful diagnostic theory, which befits a particular philosphic metaphor.

Just as different disciplines and different system levels may call for different theories, so may alternative *philosophies* for the role of human resource development call for different theories. Five such philosophic metaphors will be considered and are depicted in Figure 4.1: The human resource developer as organizational problem solver, organizational change agent/interventionist or helper, organizational designer, organizational empowerer/meaning maker, and developer of human capital.

Organizational Problem Solver

For many years, the dominant image of the trainer has been one of a person who designs instructional programs to respond to organizationally defined problems. Training has been largely behavior oriented, in keeping with the emphasis on skills training. Systems theory is a useful tool for designing programs to respond to clearly defined problems. It enables people to attend to the whole and to classify and define the parts of a system. Depending on how broadly they define the system, they can think about the problem in increasingly broad terms. From the level of the individual to the "whole wide world environment," systems are made up of the same parts—context, inputs, processes, outputs, and feedback loops. These parts not only help clarify the elements of a system, but they have definable

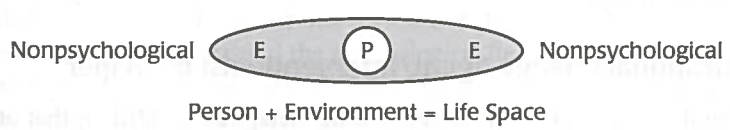

Figure 4.1 The Psychological Life Span

characteristics that can be tinkered with to produce alternative outputs. By increasing the number of inputs, by improving the processes that produce the outputs, or by drawing resources more effectively from the environment, or context, we can alter the cost and effectiveness of our outputs. Because systems theory has been so useful for helping trainers think about the nature of the problems they are trying to solve, the theory has been widely favored. But there are problems with relying on it.

Systems theory is a useful diagnostic theory, but it does not help us decide which parts are working and which are not. It is not normative, so there is no hint about what might be a more ideal solution to the present situation. Moreover, systems theory focuses more on problem solving than on problem finding, yet the complex, turbulent environments in which organizations find themselves today demand much greater emphasis on the problem-identification phase of the problem-solving process.

Systems theory has grown out of the recognition that to solve the problems of the world, we need models that are more holistic than analytic, as were those in favor previously. Greenman (1978) suggested that efficient system models help people and organizations maintain purposeful, goal-directed behavior. He pointed out that there are inherent dilemmas in the use of systems models, such as the dilemma of oversimplifying complex environments or the dilemma of idealism versus realism. To accompany the classic systems model, Greenman developed a decision-making cycle that moves through three phases: *policy making, preplanning evaluation,* and *action implementation,* which therefore incorporates problem solving. Senge (1987) has noted that decision making is where most problems occur. Decision making is the product of a mental model, and if a manager's mental model is inadequate, he or she will make poor decisions.

Senge hypothesizes that managerial learning processes will be more effective if they are the result of a systemic and dynamic perspective or worldview. He concludes that the task of HRD professions is to map, challenge, and improve existing mental models. The systems approach, when conceptualized broadly, may be a useful model for addressing short-term perspectives, truncated problem-solving processes, or limited worldviews.

Because systems theory does not include even an implicit normative model, it is often coupled with other theories of organizational change or effectiveness to enable decision makers to move from diagnosing problems in a system to prescribing action. Systems thinking is often at a fairly macro or abstract level and some other model or theory is needed to identify operational constructs that can be enacted in organizations. The following metaphors are often used in concert with systems theory.

Organizational Change Agent/Interventionist or Helper

Many would argue that the most compelling metaphor for HRD is that of organizational change agent or helper (see Mink and Watkins, 1983). In this conception,

human resource developers help people and organizations change. To do this, they need a theory of how human beings and groups are led to act as they do and what interventions might influence them to act differently. To start at the beginning, we must start with Kurt Lewin, the father of organizational change agentry.

Lewin's field theory is a comprehensive depiction of human behavior. First there was Freud, who gave us a theory to help us understand the importance of individual history, and then there was Lewin, who helped us understand the group, especially as a means of understanding people (Argyris, 1952). These two remain two of the most influential thinkers in psychology. Lewin developed field theory out of the field concept in physics—the study of electromagnetic fields—which eventually led to Einstein's theory of relativity. The first psychologists to use field theory were the gestalt psychologists, who believed that the way an object is perceived is determined by the context in which it is embedded and that the relationship between the parts of that perceptual field is more important than the characteristics of those separate parts (Hall and Lindzey, 1970). Lewin, who was associated with these early Gestalt psychologists while at the University of Berlin, developed field theory as a way to represent psychological reality. He had three major premises:

- Behavior is a function of the field that exists at the time the behavior occurs. This has often been expressed as the equation $B = f(P,E)$, or behavior (B) is a function (f) of the interaction between a person (P) and his or her psychological environment (E).
- Analysis begins with the situation as a whole (the Gestalt) from which we may differentiate parts.
- The concrete person in a concrete situation can be represented mathematically (Hall and Lindzey, 1970).

To amplify the first premise, Lewin termed the environment, as the person perceives and organizes it, the psychological field, or the *life space*. Lewin suggested that the life space was made up of the person and his or her environment. He believed these parts were dynamically interrelated and held in equilibrium, with changes in any part affecting the whole just as in an electromagnetic field. Field theorists believe that a field not only surrounds the individual, but it also combines or overlaps with that of others to make up the *social field* (Argyris, 1952). Thus, by studying the organization in the individual, we can know the organization. A related idea in field theory is that past events only influence behavior in the present in terms of present conditions. For example, growing up with an alcoholic does not affect one's present behavior, but the mental "tapes" and embedded shame-based behavior one carries over from the past may.

Lewin sought to understand the psychological field with enough rigor that it could be represented mathematically. He even developed a new mathematic to help him represent psychological reality. Using topology, he could mathematically depict the connectedness of regions in the life space. Such concepts as Karl

Weick's (1976) loose and tight coupling and the idea of having no permeable boundaries for the self illustrate ways we have conceptualized the degree of connectedness between regions. Although that degree of connectedness is more psychological than spatial, it is nevertheless clear and observable and hence may be represented mathematically. Organizational researchers, for example, sometimes measure the degree of loose or tight coupling in decision making by the number of decisions that organizational members say must go to the top of the organization.

Lewin developed "hodology," or a mathematic of path, to express psychological distance and direction. Lewin's concern was for powerful, scientific discourse, and the language of mathematics was considered the most powerful. He chose the mathematics of spatial relationships to explain the person in his or her life space. He depicted the person as a circle within a larger circle, much like the boy in a bubble. Thus, people have boundaries that differentiate them from each other and from their environment. Yet they are included in a larger area or context, which also defines who they are. Bordering the entire life space is a *foreign hull,* which Lewin described as made up of all the data to which a person is not now attending but which is nevertheless part of his or her environment (Hall and Lindzey, 1970).

By varying the thickness of the circle around *P,* we can indicate a person's accessibility or inaccessibility. Lewin divided the life space into regions based on relevant psychological facts at any given moment. Those that are relevant to the person are *needs;* those that are relevant to the environment are *valences.* Needs are a system in a state of tension, or psychological energy, directed toward the boundaries of the system (Argyris, 1952). Needs are directed toward *goals*—regions in the life space that are attractive to the person or, in other words, have a positive valence. Here the analogy seems clear. Lewin said there may be *barriers* in the life space that create resistance to goal attainment, and these barriers may be social, physical, or psychological. The clarity with which a person perceives the field in terms of structure, the amount of differentiation, and the relationships between regions is the *cognitive structure.* The regions of the personality are organized in definite relationships to each other; this arrangement is called the *psychological structure.*

Force in the psychological field is the tendency toward movement in people or groups. *It is the cause of change.* It is a vector with direction and magnitude or size. Every force in one direction has its opposite, so the direction of movement will depend on the strength of a given force. A force field is a constellation of forces. Human resource developers commonly use force-field analysis to analyze conflict situations, to problem solve, or to identify change strategies. It consists of analyzing the forces promoting and inhibiting change and determining the strength of each of those forces, followed by developing strategies to reduce the strength of the restraining forces and testing those strategies in action.

Lewin's theory can also be viewed in terms of adult development. Adults, he said, have more regions in their personality and are thus more differentiated than children. The boundaries between regions of the adult are less permeable, making adults more rigid but also less affected in one region by frustrations in another. In contrast, the child who wants an apple and can't have it will find that his frustration spreads to his play, his ability to concentrate, and so on. Long periods of frustration may produce de-differentiation in adults. For example, when workers are underutilized, their behavior deteriorates in all areas of their lives.

The *social field* is made up of the group life space and may contain many subgroups or regions. The group has its own unique properties, both structural (the degrees of differentiation, stratification, and unity, as well as the type of organization or social hierarchy) and dynamic (group goals, ideal goals, style of living, and psychological and social climate) (Argyris, 1952).

Most people are part of many groups. Often these groups create *overlapping situations* for people. Chris Argyris (1952) used the example of a foreman who is both part of the worker groups and part of the management group. The degree of *consonance,* or similarity in values, norms, and goals between the groups will increase or decrease the amount of overlap, the valence or desirability of that overlap, and the nature of the barriers between the groups (Argyris, 1952). A clearer understanding of the nature of groups, intergroup conflicts, and the psychological reality internalized by individuals as members of groups grew out of Lewin's work.

Finally, people vary in terms of the relative accessibility of various regions in their life spaces. This concept is defined as their *space of free movement.* A person may view a region negatively or may have a barrier imposed around a region. In either case, movement toward personal goals will be impeded. For example, adults who have difficulty playing have limited their space of free movement. Also, in the case of a foreman in a newly unionized company, the union will circumscribe the foreman's ability to hire, fire, and work directly with the workers. Psychologically, the foreman's space of free movement also will be circumscribed.

Perhaps the most significant aspect of field theory is that it does not purport to be or to explain objective reality, but rather to explain a person's psychological reality, which is not what *is* but what that person perceives reality to be. But Lewin did not develop his theory only to explain human behavior at an abstract level. Like most human resource developers, he was interested in observing these abstract concepts at work at the practical level. He believed that one had to have a theory that was broad enough to encompass the multifaceted nature of human action, and that the way to test that theory was through a process called *action research.*

Action research can be thought of as a series of successive approximations. Interventions are developed while looking at the whole (at the individual level, at the life space, at the organizational level, and at the social field). Interventions are made and their effects studied. They are followed by new interventions, which are developed upon reflection of the previous effects on the whole. Lewin depicted the process of movement from a present state to a desired state through action and reflection as a process of unfreezing, changing, and refreezing.

Lewin's concepts will not lead to simple prescriptions or step-by-step instructions for human resource developers wondering what to do on Monday, but

they do bring into sharper focus the architectural structure of human and organizational relationships in a way that permits a rich analysis of organizational life.

The work of Chris Argyris, who was one of Lewin's last students, furthers our understanding of how to use field theory in organizational change efforts. He defined intervention as entering "into an ongoing system of relationship, to come between or among persons, groups, or objects for the purpose of helping them" (1970, p. 15). In field-theory terms, to intervene is to interrupt the forces in the life space in such a way as to disrupt the quasi-stationary equilibrium.

Argyris emphasized that the system exists independently of the intervenor and that despite the interdependencies that develop between the client system and the intervenor, the intervenor should focus on how to maintain or increase the autonomy of the client system, how to differentiate even more clearly the boundaries between the client system and the intervenor, and how to conceptualize and define the client system's health, independent of the intervenor. *The client must be the system as a whole regardless of where one initially begins to work*, he said. Interventions, must, over time, provide all members with opportunities to enhance their competence and effectiveness (Argyris, 1970). Perhaps because of the ethical implications of tinkering with a person's or an organization's life space, the intervenor's primary tasks are to seek valid information, to provide for free and informed choice, and to encourage the client's internal commitment to the choices made in the interventions.

As HRD practitioners, our theories of practice usually contain intervention theories—theories of action aimed at increasing our effectiveness (Argyris and Schon, 1982). Because these theories are largely tacit, we need to reflect critically on what we actually do in order to examine and test our assumptions about what causes us to be effective. Argyris developed a normative theory of intervention. Having observed repeated patterns in people's theories of practice, he identified the pattern most commonly found in people's actual practice as a control orientation. In contrast to this pattern is a learning-oriented intervention theory that encapsulates Argyris's prescription for effective intervention.

Viewed from the perspective of field theory, Argyris can be seen to have defined the intervenor-client relationship in a way that will minimize the potential conflict in an overlapping situation (or field) in order to decrease the conflict that might be produced by attempts to control others and in order to permit learning to occur. His primary tasks for intervenors are designed to minimize the production of perceptual barriers in the form of defensiveness, negative attributions about the intervenor's motives, and other self-protective responses that could limit the intervenor's space of free movement and subsequent learning. By emphasizing the need for shared meaning between client and intervenor about goals and the personal causal responsibility of the client for actions and choices, Argyris hoped to increase the consonance between the two overlapping situations.

Action science (Argyris, Putnam, and Smith, 1985) has been defined as "an inquiry into how human beings design and implement action in relation to one another." It has three key features:

- empirically disconfirmable propositions that are organized into a theory;
- knowledge that human beings can implement in an action context;
- alternatives to the status quo that both illuminate what exists and inform fundamental change, in light of values freely chosen by social actors (p. 4).

These three propositions have traveled far from Lewin's three key tenets. Like Lewin, Argyris believed that human action is the result of subjective human perception that occurs within a behavioral world or a life space. Both agreed that this knowledge of the perceptual world could inform and reform action. Lewin believed that for adults, education was most often reeducation, a process of unfreezing that begins with a disconfirmation of one's present beliefs or perception of reality, which leads to anxiety or guilt and finally to a search for psychological safety. The critical theory that people change as a result of an internal critique in which they perceive that their own action is in conflict with their own values has refined Argyris's concept of reeducation.

Argyris described re-education as a process of disconfirmation based on internal critique, which leads to a sense of personal causal responsibility (as in, "I produced this mismatch—this action that conflicts with my values"), which can then lead to psychological success or congruence between one's internal critique and the external feedback one receives. Argyris noted that people and organizations develop elaborate defensive routines to deny that these mismatches occur and to save face. Only by interrupting those defensive routines will people and organizations experience psychological success.

In both Lewin's and Argyris's work, the emphasis is on a way of understanding people, especially in their social context. They offer not a technical prescription of action for change agents, but rather a rich conceptual framework for action in any change situation.

Organizational Designer

A third metaphor for HRD is that of organizational designer. Organizational design is the process of first diagnosing and then selecting the structure and formal system of communication, authority, and responsibility to achieve organizational goals. Organizational designers attend to environmental flux, strategic choices, and the uncertainty or certainty of task or technology (Hellriegel, Slocum, and Woodman, 1986). People who work from this conception see a clear connection between the structure of work and work organizations and the development of the organization's human resources. A foundational theory for students of organization design is Herb Simon's administrative decision-making theory.

Simon (1965) theorized that individuals have a bounded rationality that leads to satisfaction in decision making. Given the quantity of information we deal with, we need to find boundaries within which to make rational decisions. We may use heuristics or rules of thumb, which, experience suggests, usually lead to acceptable solutions; but heuristics may limit the search for solutions, especially

in large, complex problem spaces (note the Lewinian image). In contrast, algorithms are more rigorous, systematic procedures. One goal of management science is to discover more algorithms by which managers may make more consistently effective decisions.

To meet this goal, we need to have a concept of the elements that make up decision-making activity. The typical response of managers to stimuli is a program, the basic element of Simon's theory. A program has basic parts:

- stimuli—the information that evokes a program
- inputs—both facts and values
- content—a series of execution steps
- outputs

There are programmed and unprogrammed activities: A programmed activity is prompted by a single clear stimulus. An unprogrammed activity is evoked when there is no tried-and-true method for handling the stimulus, either because it is a new situation, its nature is elusive and complex, or because it is so important that it deserves a customized response. Unprogrammed activity has three stages of individual activity, each stage of which is so rich that the stage itself has theories. The stages are:

- intelligence activity—searching the environment for conditions calling for a decision
- design activity—inventing, developing, and analyzing a course of action
- choice activity—selecting a course of action from those available

For intelligence activity, theorists have explored the differences in problem framing between novices and experts. Schon (1983) found that experts frame problems through a kind of artistry that defies routinization, whereas novices follow more of a technical, by-the-numbers process. Jaques (1985) suggested that individuals vary in cognitive complexity, or work capacity. Work capacity is the longest time period one can plan a project or work without the need of feedback. This variable, Jaques said, is a given in individuals, like their height, and it varies enormously. Most people have a work capacity between three months and one year. A few scientists, politicians, and leaders have work capacities that exceed their lifetimes; they are designing new worlds. People with limited work capacities cannot fall back far enough to view a problem with a wide-angle lens, nor can they conceive of long-term solutions or parallel implications. Thus, they are limited in the scope of work that they can design.

Design activity has also been studied extensively. We see design as having both a conceptual and an aesthetic quality, whether we conceive of it

- in the dictionary sense, as in conceiving an idea or a form, planning and shaping a structure, using tools and materials creatively, and making something useful;

- in the broader context used by Simon, as in converting actual to preferred situations;
- or in accordance with C. West Churchman's (1971) notion that design is occurring whenever we consciously attempt to change ourselves and our environment to improve the quality of our lives (p. vii).

Churchman (1971) stated that design is "thinking behavior which conceptually selects among a set of alternatives in order to figure out which alternative leads to the desired goals or set of goals" (p. 5). Schon (1983, 1987) understands design to be a process of problem framing or problem setting, in which the artistry of expert practitioners is a "reflective conversation with a situation," which may lead to a reframing of the situation and thence to an architectural plan or a therapeutic intervention. Pfeiffer and Jones (1973) described the design process in training as dependent on four considerations:

- the parameters of the situation (time, place, resources, staff, etc.)
- the skill needed to design
- the components to be designed
- outcome criteria, which are defined in terms of client needs.

Those considerations will be influenced greatly by the conceptual skill (thinking behavior) and the design expertise (artistry) of the designer. Design is artistic, because in these nonroutine, unprogrammed activities, we must create a new artifact, plan, or training program.

Most of what human resource developers do is unprogrammed activity. Organizational design has emerged as a distinct field within the study of organizations. Galbraith (1974) noted that "the ability of the organization to successfully utilize coordination by goal setting, hierarchy, and rules depends on the combination of the frequency of exceptions and the capacity of the hierarchy to handle them" (p. 29).

Organizational design was thus the creation of responses to uncertainty, which he said could be done either by

- reducing the need for information processing through creating slack resources or self-contained tasks, or by
- increasing the organization's capacity to process information through investment in vertical information systems or through the creation of lateral relationships.

Lorsch (1971) focused on the design dimensions of differentiation and integration. In each of these theoretical models, organizational design is triggered through a process of assessing the gap between where the organization is now and where it needs to be, based on a normative model of organizational effectiveness.

Design theory has emerged from the literature of art, architecture, computer science, decision making, and education. Houle, in *The Design of Education*

(1972), found that design is a two-part process consisting of first examining the situation in which the learning activity occurs and then applying a framework to that situation. The framework can be systems theory, field theory, or some other theory; although designers who operate only out of a credo or belief system, such as Malcolm Knowles's andragogy, will find that their frameworks are not broad enough to guide a program design process. Thus, the systems approach is a useful theoretical tool to guide the design stage, but other theories may be more useful for Simon's other two stages of unprogrammed activity.

Organizations increase productivity by increasing the level of routinization. Thus, a major task for human resource developers is to help managers design routine responses for nonroutine, unprogrammed activities. There are many ways to do this, from designing a learning program for training machine operators to use a new machine, to designing strategic systems for monitoring unstable or unpredictable processes. General systems theory is an analytical process model, not a content model. In order to develop models for diagnosis and prescriptions for action, organizational design theorists add to systems theory other normative content theories, such as a theory of an open, healthy person or a theory of organizational effectiveness.

Organizational Empowerer/Meaning Maker

Theorists who embrace this metaphor seek to transform people and organizations in order to foster long-term health and effectiveness. They view the organization and its people as repressed and disenfranchised. As adherents of the philosophy that meanings are in people, they would agree with Smirich (1983) that "organizations are socially constructed systems of shared meaning" (p. 221). In modern terms, they follow the prescripts of critical theory. Critical theories are aimed at producing enlightenment in those who hold them and are inherently emancipatory in that they help people free themselves from self-imposed coercion.

Critical theorists contrast their type of knowledge, which is "reflective," with that of normal science, which is "objectifying." They argue that because knowledge is never objective, the search for objectivity in normal science tends to objectify people and natural phenomena. Critical theory emancipates by offering a critique of "what is" from the perspective of "what might be." It seeks to stimulate self-reflection so that people may freely choose to transform their world. Geuss (1981) has defined emancipation as a movement, or transformation, from an initial state to a final state. The initial state is one of false consciousness, error, and unfree existence, in which

- this false consciousness is interconnected with the oppression
- the false consciousness is self-designed, and the oppression is self-imposed
- the power in the above lies in the fact that people do not realize their oppression is self-imposed.

The final stage is one in which people are free of false consciousness (enlightened) and free of self-imposed constraints (emancipated).

People move from one state to another by engaging in a process of self-reflection, or critical reflectivity, in which they

- dissolve the illusion of objectivity
- become aware of their own origin and
- bring to consciousness the unconscious determinants of their action (Geuss, 1981).

As a result of this reflection, a perspective transformation will occur (Mezirow, 1981), and the person will generate new knowledge, which may be generalized into a critical theory. This reflective thinking has also been referred to as an internal critique of a person's epistemic beliefs (second-order beliefs about which beliefs are acceptable), in which the person's values are seen to contradict his or her ideal of a good life.

The critical theory so generated will consist of three parts:

- a demonstration that change is possible
- a depiction of the practical necessity of the change, as the present situation has produced frustration and suffering and is only thus because people hold a particular world-view that, upon critical reflection, is no longer acceptable
- an assertion that the movement or transformation can only come about if people accept the critical theory as their "self-consciousness" (Geuss, 1981, p. 76).

The best-known critical theories are psychoanalysis for individuals and Marxism for social systems. Action science comes closest to operationalizing the idea of a critical theory for organizations.

The strategies used to transform perspectives in action science include determining the potential unintended or unjust consequences of action strategies, ensuring that participants feel personal causal responsibility for their actions, and offering an alternative for action in the form of learning-oriented behavior rather than coercive or control-oriented behavior.

Developer of Human Capital

The fifth and final metaphor of the human resource developer is that of the developer of human capital. A derivative of economics, human capital theory refers to "the productive capabilities of human beings that are acquired at some cost and that command a price in the labor market because they are useful in producing goods and services" (Parnes, 1986, p. 1). Flamholtz (1985) emphasized that it is the "expected realizable value" of a person, given opportunities for training, expected turnover, age to retirement, promotability, and so on, that has ultimate

value in a human resource accounting system. Value is typically perceived as the relationship between costs and benefits (or the return on investment). Gordon (in LaBelle, 1988) outlines the economic assumptions that underlie human capital theory: "Product and labor markets are competitive, firms attempt to maximize profits, workers seek to maximize earnings, and the labor force has both knowledge and mobility to take advantage of the best opportunities available" (p. 206).

Salaries are seen in supply-and-demand terms. A worker's skills and abilities are a form of capital because they influence the worker's productivity for the organization as well as the worker's opportunities for higher wages, greater economic security, and increased employment prospects. Education, or training, is seen in the human capital model as a major tool to influence workers' acquisition of the needed knowledge and skills.

Dierkes and Coppock (1975) suggest that human needs are met in organizations as the result of a chain of interventions that have allowed a problem to bubble up from a state of recognition by subgroups in society, to legislation, to organizational enforcement of new human resource standards. An example is the human need for equal pay for equal work. A more proactive approach—one that attends to the organization's long-term human resource needs—is human resource accounting.

To illustrate how difficult it is to justify training without the concept of human resource accounting, Dierkes and Coppock compared how we now account for management's spending $100,000 on a new piece of equipment and how we account for spending the same amount on employee training or on efforts to improve the quality of the work environment. When purchasing equipment, the manager anticipates amortizing the costs over the expected life of the equipment and being able to document benefits by listing the equipment as an asset over a number of years. When purchasing human resource development, the manager anticipates incurring costs for the current year, with no amoritization over the useful life of the skills gained.

Human resource accounting systems have been developed to attempt to overcome this short-range distortion in measuring organizational economic effectiveness. Initially, the focus was on developing accounting procedures to determine investments in human capabilities. Human resource information systems attempted to inventory human resources, determine outlay and replacement costs, and determine the economic value of the human resources employed in the organization. Succession plans and lists of high-potential employees are recent outgrowths of organizational attempts to develop inventories of their human resource assets. These approaches led to a definition of the economic value of human resources as "the present discounted value of their [individuals'] future contributions less the costs of acquiring, maintaining, and utilizing these resources in the organization (Pyle, in Dierkes and Coppock, 1975, p. 313).

The first extension of the application of human resource accounting systems was to health and safety measures, because, if people are assets, anything that diminishes those assets will diminish the organization's expected realizable value. The costs of investments in employee health, rehabilitation, safety measures, and safety training can be compared with the costs of days lost because of accidents and illnesses. It is a short step from there to examining the economic impact of the psychological work environment. The research and literature on job satisfaction, matching jobs and people, climate, leadership, motivation, etc., illustrate the high degree of interest in this approach. However, research linking these tertiary effects to productivity typically involves assumptions of correlation when, for example, a change in both climate and productivity occurs without careful concomitant control of any intervening social, historical, demographic, or political variables. Such research is difficult to conduct. Rensis Likert and David Bowers (1973) made perhaps the most comprehensive attempt to capture such relationships. In analyzing the result of a large number of studies, they found a .67 correlation between organizational climate and subordinates' satisfaction and a .42 correlation between subordinates' satisfaction and total productive efficiency. Given the large number of studies they used, these are fairly strong relationships, which suggest that climate influences satisfaction and leads to at least modest gains in productivity.

Human capital theory provides a strong, bottom-line-oriented justification for HRD. It breaks down the barriers that now exist between organizational development approaches that attempt to influence climate and quality of work life, employee assistance, and other employee health and safety areas, and the more conventional training and development arena of HRD. Each area makes its contribution to the organization's long-term effectiveness. The human capital, or human resource accounting approach, is perhaps most valuable for this long-term emphasis.

Changing demographics and higher labor participation by women and minorities along with recent technological changes are creating an enormous need for long-range thinking. "It becomes increasingly clear that economic security in the post-industrial economy depends less on expertise and more on *flexpertise*—the ability to continually adapt individual knowledge and skill. . . . Virtually the entire adult population needs retraining and new learning to be economically productive. . . . The emergence of a knowledge-based economy requires a new synthesis of the functions of training, education, and other forms of communication and learning under the single umbrella of the learning enterprise" (Perelman, 1984, pp. xvi–xvii).

Carevale (1984) has offered a similar analysis of the role of training and development in developing human capital. According to Carevale, workplace learning and formal education account for more growth in economic output than employee health, capital, the composition of the workforce, population size, or resource adaptation. Workplace learning, he said, accounts for 85 percent of the variance in lifetime earnings. The relationship between learning and training and economic returns for both people and organizations enjoys a distinguished, currently prominent place among the theoretical underpinnings for HRD.

Critics of human capital theory point to the limits of capitalism and to economic explanations of what people gain from investments in learning. In the first instance, they discuss the role of training as a means of social control, using as examples

- training as a means of despoiling, or "cooling out" the aspirations of many people so they will accept low-level jobs, and
- organizational training programs to socialize newcomers into conforming to the organization's norms and values.

Moreover, the inherent class structure and objectification of workers in bureaucratic organizations may produce lower productivity despite training efforts (LaBelle, 1988).

People gain considerably more from training than simply an enhanced economic value. Intrinsic satisfaction, enhanced life skills, the increased capacity to function effectively as parents, as citizens, are alternative benefits derived from training. In fact, people often regard training as a fringe benefit—a view human resource developers deplore, as it often leaves training budgets seeming as expendable as other fringe benefits. Yet this perspective may also correctly capture a more holistic, value-added approach to understanding the benefits of training.

Summary

The underlying root philosophies and theories of HRD are rich and varied. Increasing understanding among practitioners of their potential to enrich and improve practice often requires translations, such as Peter Senge's translation of systems theory to management practice and Argyris's translation of field theory to HRD practice. When human resource developers come to embrace many different theoretical foundations, practice will be enlarged and will rise to the level demanded by the present complex, nonroutine, ambiguous business environment. Not one, but many metaphors can be used to guide our understanding of the field of our practice.

CONCLUSION

Theory, research, development, and practice together compose a vital cycle that allows ideas to be progressively refined as they evolve from concepts to practices and from practices to concepts (Swanson, 2007). The Theory-Research-Development-Practice Cycle (Figure 4.2) illustrates the systematic application of inquiry methods working to advance the knowledge used by both HRD researchers and practitioners.

There are those that caution us in constructing the relationships among theory, research, development, and practice. In offering the notion of a scientific

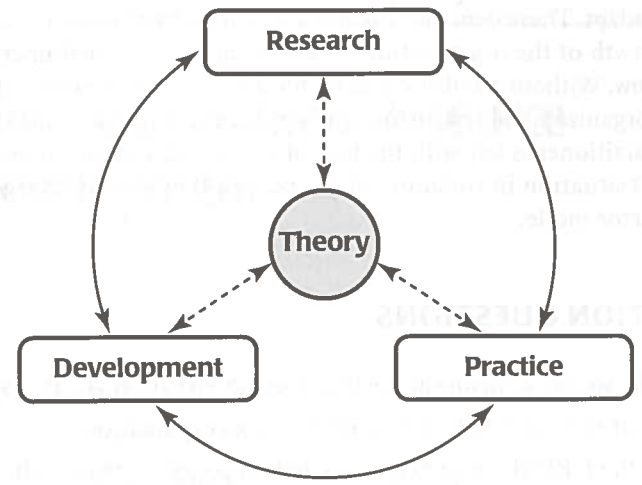

Figure 4.2 Theory-Research-Development-Practice Cycle
Source: Swanson, 2005, p. 8.

paradigm, Kuhn (1970) compelled philosophers and researchers to rethink the assumptions underlying the scientific method and paved the way for alternative, postpositivistic approaches to research in the behavioral sciences. Ethnography and naturalistic inquiry allow theory to emerge from data derived from practice and experience; theory does not necessarily precede research as theory can be generated *through* it. The model of theory, research, development, and practice for HRD embraces these cautions (see Figure 4.2).

The cyclical model brings HRD theory, research, development, and practice together in the same forum. The union of these domains is itself an important purpose of the model. Two other purposes also exist. First, each of the four domains makes a necessary contribution to HRD. There is no presumption about the importance to the profession of contributions from research, practice, punctuated development efforts, and theory itself. The model demonstrates the need for all domains to inform each other in order to enrich the profession as a whole. Second, exchange among the domains is multidirectional. Any of the domains can serve as an appropriate starting point for proceeding through the cycle. Improvements in the profession can occur whether one begins with theory, research, development, or practice. Thus, each of the cycle's domains both *informs* and *is informed by* each of the other domains.

In summary, HRD philosophy and theory results in powerful and practical *explanations, principles,* and *models* for professionals to carry out their work in organizations. The problem facing almost every organization, and those who work in them, is in meeting the constant demand for high performance. In that organizations are human-made entities, they require human expertise to perform,

grow, and adapt. These demands include everything from assuring sustainable financial growth of the organization to satisfying the next customer standing in the front row. Without a holistic mental model of human resource development within an organizational system and improvement context working through people, the practitioner is left with the task of dissecting and interpreting each and every HRD situation in isolation. Or worse yet, they simply charge ahead in a trial-and-error mode.

REFLECTION QUESTIONS

1. Why would someone argue that good theory is practical?
2. What is theory? Give a definition and an explanation.
3. Of the HRD theory references cited on pages 77–90, which one interests you the most? Why?
4. Which of the five philosophical metaphors for HRD theory presented by Dr. Karen Watkins makes the most sense to you? Explain why?
5. Which of the five philosophical metaphors for HRD theory makes the most sense to a high-tech business organization? Explain why.

CHAPTER 5

Theory of Human Resource Development

CHAPTER OUTLINE

INTRODUCTION

Models of HRD have been developed and disseminated through books, seminars, and consulting projects. Many models are based on extensive practical experience with development and improvement (Brache, 2002; Nadler, Gerstein, and Shaw, 1992; Rummler and Brache, 1995; Schwartz, 1996; Weisbord, 1987). Other models have been embraced as ways to solve problems then casually called "multidisciplinary" to demand that the user apply multidimensional thinking.

Armed with a flowchart and a description of its components, HRD professionals often find that while their personal models may be powerful enough to create change, those models and their explanations are almost always too superficial to *explain* the complex dynamics of HRD and its connection to results. In short, a model derived from logic is no substitute for sound theory. Such models can guide improvement efforts through hypothesized relationships without having those relationships ever tested. You can have a model and no theory and you can have a theory with no model. Yet, most theories are accompanied by a model. A model by itself is not theory.

PERSPECTIVES ON THEORY AND PRACTICE

Perspectives on the link between theory and practice are wide-ranging. In the lay world, theory is a very loose construct, even to the point of ridicule in noting that something is "just a theory"—an untested speculative idea or antithesis of reality. In the academic world, theories require extensive development and verification before earning the label "theory." In an applied discipline, verification must take place in both the laboratory and in practice.

Bacharach's (1989) definition of theory states that "A theory is a statement of relations among concepts within a set of boundary assumptions and constraints" (p. 496). Many definitions of theory use the words phenomenon or phenomena. For example, Torraco (1997) says, "A theory explains what a phenomenon is and how it works" (p. 115). Gioia and Pitre (1990) described theory as "a coherent description, explanation, and presentation of observed or experienced phenomena" (p. 587). Lynham (2000) described theory development as "the purposeful process or recurring cycle by which coherent description, explanations, and representations of observed or experienced phenomena are generated, verified, and refined" (p. 161).

Unfortunately, the popular use of the words *phenomenon* and *phenomena* often suggest a narrow realm of concern, event, or occurrence. It is important to note that a phenomenon can be long lasting, large, and broad—such as democracy, global warming, and civil engineering. As an example, human resource development scholars can pay attention to training transfer theory while others focus on the theory of the broader realm of workplace learning, or even broader to the human resource development discipline itself.

Within any discipline or field of study, rival views regarding its purposes and practices exist at almost every level. The rival perspectives can be very broad, such as

the focus and the nature of the discipline itself, or narrow, such as the explanation of a simple elemental aspect of the discipline. In applied disciplines, where matters of both theory and practice are of great concern, the range of perspectives expands even further in an effort to satisfy the demands of both scholars and practitioners.

Having rival theories in a discipline is not disturbing. Not having well-developed theory is disturbing, however. This holds true when framing an entire discipline or when considering even the smallest phenomena within a discipline. The assumption is that theoretical challenges from within can only help to advance the theory. For applied disciplines rooted in professional practice (such as human resource development or management), a problem emerges that is less likely to exist in more staid disciplines that are disconnected from practical matters (such as history, religion, or philosophy). The theory development challenge in applied disciplines is exacerbated by the dynamic that comes from practice and the relative youthfulness of most applied disciplines.

Beyond a few traditional academic disciplines, the majority of disciplines in contemporary institutions of higher learning are applied, dynamic, and relatively young—such as management, information technology, interior design, or dental hygiene. Applied disciplines almost always have both a strong theory component and a strong practice component. The focus of this chapter is on HRD, an applied discipline, and the quest to bring disciplinary coherence to both the theory and practice of the field

Most applied disciplines are attempting to make significant advancements in articulating the theoretical foundation of their fields of study. Management (Weick, 1979), human resource development (Swanson, 2001) and information science (Benbasat, 1999) are just a few. Most theory discussions and theory research are not held together in a manner that allows interpretation and integration. For example, theory development related to the essence of HRD can be held up against a theory effort focused on an extremely narrow sub-phenomenon within HRD, such as emotional intelligence theory, with no clear means of connecting the two. Without a theory framework, there is a sense of randomness and incoherence to theory discussions and developments.

THEORY FRAMEWORK FOR APPLIED DISCIPLINES

The Theory Framework for Applied Disciplines (Swanson, 2007) helps scholars and practitioners think about, develop, and critique the status of the theory in their disciplines through a holistic perspective. It is made up of six components that are displayed in a graphic presentation (Figure 5.1).

Each of the six theory components for applied disciplines is described below. These descriptions establish the purpose and features of each theory framework component.

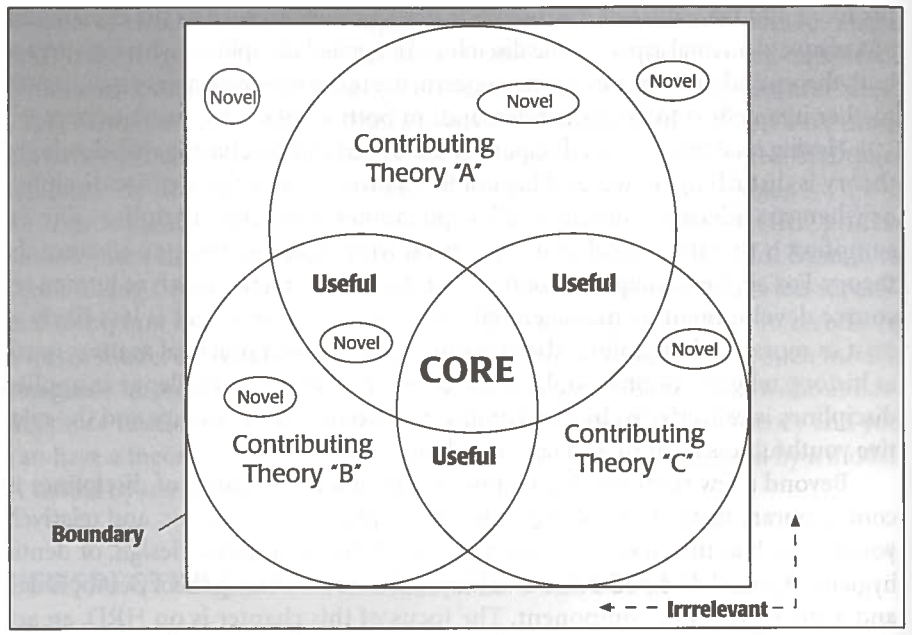

Figure 5.1 Theory Framework for Applied Disciplines: Boundaries, Contributing, Core, Useful, Novel, and Irrelevant Components
Source: Swanson, 2007, p. 328.

Boundary of the Theory of an Applied Discipline

The boundary of the theory of an applied discipline is established by specifying its name, definition, and purpose along with assumptions or beliefs that conceptually frame the theory and practice of that discipline.

Contributing Theories for an Applied Discipline

The contributing theories are selected theories that fundamentally address the definition, purpose, and assumptions under-girding an applied discipline.

Core Theory for an Applied Discipline

The core theory of an applied discipline is the intersection and integration of the contributing theories that operationalize the definition, purpose, and assumptions of an applied discipline.

Useful Theory for an Applied Discipline

The theory of a phenomenon that is outside the *core theory* of an applied discipline and within the intersection of two *contributing theories* has utility in explaining an important realm of practice within the discipline.

Novel Theory for an Applied Discipline

The theory of a narrow phenomenon that is related to an aspect of the applied discipline under consideration could logically provide an unusual explanation of how the phenomenon works.

Irrelevant Theory for an Applied Discipline

Any theory that falls outside the theory boundary, contributing theories, core theory, and useful theory of the applied discipline under consideration with no compelling evidence as to its *usefulness* or logic supporting its potential for a *novel* contribution.

The remainder of this chapter articulates a theory of HRD and the following chapter expands on the three primary contributing theories to HRD. These four updated writings are rooted in papers presented at an Academy of Human Resource Development theory symposium by Holton, Ruona, Swanson, and Torraco. The first section, "Theory of Human Resource Development," was written by Richard A. Swanson. The purpose of this section is to frame the discipline of HRD by identifying definitions and explanatory models along with the theory boundaries, contributing theories, (psychological theory, economic theory, and systems theory), core theory, and propositions arising from the theory. Each of three contributing core theories to HRD are discussed in depth in the following chapter.

THEORY OF HUMAN RESOURCE DEVELOPMENT

Contributed by Richard A. Swanson

The purpose of this section is to propose one theory of HRD that is supported by both research and practice.

Assumptions, Context, Definition, and Models of HRD

The bias of HRD has been the belief that organization, work process, group, and individual performance are mediated through human expertise and effort. In contrast to this belief, the performance scorecards available to organizational decision makers generally ignore the human element. The most evident example is the short-term financial view of company performance as judged by daily stock market data.

The journey of understanding performance improvement for those having the "human resource perspective" has not been easy. The range of performance perspectives in organizations forces the HRD profession to face the realities of how others strategically view HRD and how HRD views itself (Torraco and Swanson, 1995; Swanson, 1995a, 1995b). It appears as though HRD has taken a detour during the past fifty years. The clear vision and practice during World War II was lost in the 1950s and began returning in the 1980s.

The massive Training within Industry (TWI) project, that culminated with the ending of World War II, is seen as the origin of contemporary HRD (Dooley, 1945; Ruona and Swanson, 1998; Swanson and Torraco, 1994; Swanson, 2001). The performance language was simpler then—"Is it a production problem?" they would ask. If yes, they would use performance improvement tools that were masquerading under the name of "training." Besides operating under a training title that they quickly outgrew, the TWI project delivered on organization, process, and individual performance outputs using simple and powerful tools they called *job instruction*, *job relations*, and *job methods*.

In the 1950s, a psychology-only perspective took over the training and development professions. As far back as 1950, Peter Drucker warned that while this thinking freed managers from viciously bad ideas about working with people, it never provided substantive alternatives (1964, p. 278). He went on to chide the profession for an inadequate focus on the work and for inadequate awareness of the economic dimensions of work (pp. 278–279).

The reality is that most decision makers in organizations pursue performance and improvement, with or without professional HRD interventions. This simple fact confronts the HRD profession with the need to think about performance with and without the human resource perspective. The willingness to *temporarily* let go of the human bias in favor of performance improvement at all levels is the key to elevating HRD to its fullest potential. Without this fundamental mental shift, HRD will awkwardly keep trying to claim system performance (organizational system) through subsystem thinking (individuals). The best HRD theory and practice has invariably validated the contribution of human expertise and the unleashing of it as integral to performance at multiple levels.

The basic decision to begin with the host system of HRD (usually the organization) as the primary avenue to performance alters the models, thinking, and tools of HRD effort. Without this shift beyond the individual, the human resource development lens remains clouded, the HRD model is fragmented, and the underlying theory remains unclear.

Performance as the Key Outcome Variable of HRD

To *perform* is "to fulfill an obligation or requirement; accomplish something as promised or expected" (*American Heritage College Dictionary*, 1993, p. 1015). Performance is not system design, capability, motivation, competence, or expertise. These, or other similar performance taxonomies, can best be thought of as *performance variables* (or *performance drivers*), but not performance. Performance may be aligned within missions, goals, and strategies—but not always. *Performance is the valued productive output of a system in the form of goods or services.* The actual fulfillment of the goods and/or services requirement is thought of in terms of *units of performance*. Once these goods and/or services units of performance are identified, they are typically measured in terms of production quantity, time, and quality features (Swanson and Holton, 1999; Swanson, 2001).

Chasing after individual or organizational change without first specifying a valid unit of performance is foolhardy and a waste of time. Change can take place while "real" performance decreases. One example is to pursue employee satisfaction with the assumption that production will increase. Numerous studies have demonstrated that employee satisfaction can increase while actual production decreases or remains the same. The reengineering fad is another example of the pursuit of change with the majority of instances ending up in losses in performance instead of gains (Micklethwait and Wooldridge, 1996). There are those in the profession speaking directly to the topic of performance in an attempt to clarify the relationships among performance *drivers* (Holton, 1998) and/or performance *variables* (Swanson, 2007).

Systems theory informs us that (1) there are systems and subsystems, and (2) all systems are open systems. It is humbling to realize that there are tiers of subsystems and larger host systems and that systems are open entities constantly changing. These realizations help prevent professionals from thinking and acting simply and mechanically. HRD practitioners and scholars should not lose sight of the constantly evolving state of overall systems.

The larger frame in which HRD operates includes organizational systems and the milieu in which they function. Organizations are the host systems for most HRD activity. Some of these systems are profit-making organizations that produce goods and/or services for consumers. Some are nonprofit or government organizations that produce goods and/or services for consumers. Some are publicly owned, some are shareholder owned and publicly traded, and some are owned by individuals or a group of individuals. All these organizations function in an ever present political, cultural, and economic milieu. Each has its own mission/strategy, structure, technology, and human resource mix. And, each has core processes related to producing the goods and services it produces.

Definition and Model of Human Resource Development

The expectation is that HRD efforts will logically culminate with important performance improvements for its host organization. Thus, the operational definition of HRD is as follows:

> Human resource development (HRD) is a process of developing and unleashing expertise for the purpose of improving performance.

The realms of performance improvement include organizational systems, processes, groups, and individuals. The two primary components of HRD include (1) organization development (OD), the unleashing of expertise for the purpose of improving performance, and (2) training and development (T&D), systematically developing expertise for the purpose of improving performance. These definitions and their connection to application areas and contexts are portrayed in Figure 5.2.

Additionally, HRD itself can be viewed and pursued as an improvement process functioning within the host organization. This is graphically portrayed in Figure 5.2. This model of HRD illustrates HRD as a five-phase process working

Figure 5.2 Human Resource Development: Definitions, Components, Applications, and Contexts
Source: Swanson, 2008.

in concert with other core organizational processes, all functioning in the organizational system context and the larger environmental context. The boundaries of HRD relate to the system hosting HRD. In most instances, this is an organization such as a business, industry, government, or nonprofit agency. In some instances, the host organization for HRD could be a geopolitical region or a nation.

While performance will likely always demand multiple interpretations, performance and, more importantly, performance improvement, are not simply abstract notions about desirable ways to reach a better state. In every organization, the concrete determinants of performance are reflected in people, their ideas, and the material resources through which their ideas reach the marketplace. Performance cannot be described or improved without specifying its determinants, accounting for the sophisticated processes through which performance is expressed (e.g., human behavior, work process innovation, stock market performance), and making some judgment about whether performance has, in fact, improved. Performance improvement can only be manifested through outputs, and change in outputs can only be assessed through some form of measurement. Thus, performance is a concept that can be systematically operationalized in any organization when we set out to demonstrate whether or not it has improved.

Theoretical and Disciplinary Foundations of HRD

HRD as a discipline is broader than any single theory. Reflecting the reality that most successful strategies for system and subsystem improvement require multifaceted interventions, HRD draws from multiple theories and integrates them in a unique manner for the purposes of HRD. This section develops a core theoretical foundation for HRD that draws upon contributions from several respected theoretical domains. For the purpose of a deeper understanding, refer to the Model of Human Resource Development within the Organization and Environment (Figure 5.3).

While "a theory simply explains what a phenomenon is and how it works" (Torraco, 1997, p. 115), "a discipline is a body of knowledge with its own organizing concepts, codified knowledge, epistemological approach, undergirding theories, particular methodologies, and technical jargon" (Passmore, 1997, p. 201). The belief that HRD is a discipline that draws upon many theories is widely held. This overly generous idea has served as fool's gold to the profession. In the attempt to be inclusive of so many theories—staking its claim so broadly—HRD has come up with no theory using this approach. However, many believe that efforts in developing core HRD theory are essential to the maturation of the profession.

Having well-defined core HRD theories in no way limits the utility of hundreds of available theories that could *inform* HRD research or the development of specific practitioner tools and methods.

Contributing and Useful Theory Components of HRD

Presently there is no universal view or agreement on the theory or multiple theories that support HRD as a discipline. Furthermore, there are no HRD theory alternatives being visibly proposed in the literature and being debated by the profession. On one hand, some have called for systems theory to serve as a unifying theory for HRD to access all useful theories as required (Gradous, 1989; Jacobs,

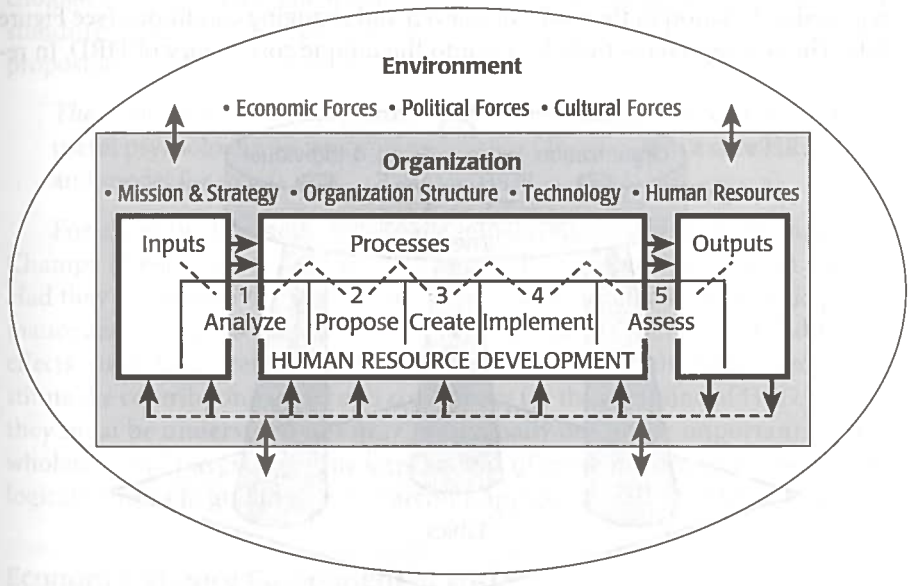

Figure 5.3 Model of Human Resource Development within the Organization and Environment
Source: Swanson, 2001, p. 305.

1989; McLagan, 1989); on the other hand, many have proposed sets of principles in the forms of comparative lists of added value, products, processes, and expertise (e.g., Gilley and Maycunich, 2000).

The alternative to having a sound theoretical and disciplinary base for the HRD profession is the present state of rudderless random activity aggressively sponsored by atheoretical professional associations and greedy consultants (Micklethwait and Wooldridge, 1996; Swanson, 1997). This present state celebrates short-term results without having deep understanding of the ability to replicate the results or the utility of those results. For this reason, a discrete and logical set of theories as the foundation of HRD is proposed as a means of understanding the Model of Human Resource Development within the Organization and Environment. The discipline, definition, and the model of HRD are believed to be supported and explained through the three contributing core theory domains of psychological theory, economic theory, and systems theory (Passmore, 1997; Swanson, 1995a, 1995b). Economic theory is recognized as a primary driver and survival metric of organizations; systems theory recognizes purpose, pieces, and relationships that can maximize or strangle systems and subsystems; and psychological theory acknowledges human beings as brokers of productivity and renewal along with the cultural and behavioral nuances. Each of these three theories is unique, complementary, and robust. Together they make up the foundational contributing theory underlying the discipline of HRD.

The theories have been visually presented as a three-legged stool, with the three legs providing great stability for HRD as a discipline and field of practice required to function in the midst of uneven and changing conditions (see Figure 5.4). The seat represents their fusion into the unique core theory of HRD. In recent years, particularly with the demands of the global economy and an unbridled free-market condition, the stool has been positioned on an ethical rug—a filter, if you will—between its three contributing theories and the context in which HRD functions. Thus, the three contributing theories are poised to shape the core of the HRD discipline, and ethics plays an important moderating role (Hatcher, 2002). Furthermore, the ethical concerns are believed to be best expressed through recognition and adherence to the following basic beliefs:

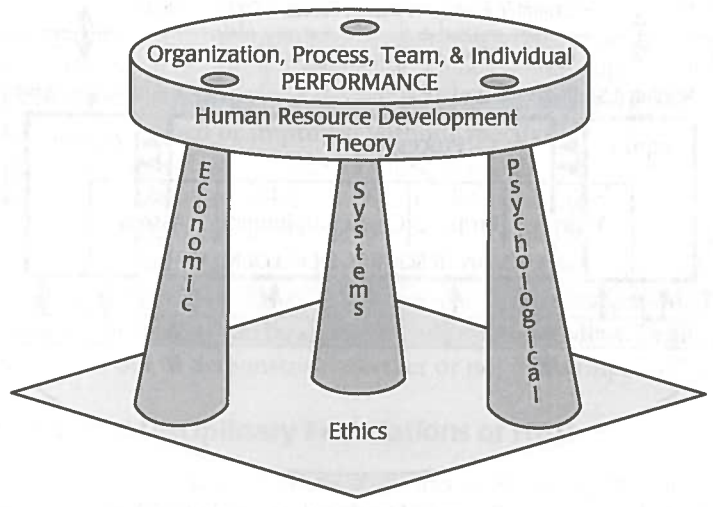

Figure 5.4 The Theoretical Foundations of Human Resource Development
Source: Swanson, 2001, p. 306.

1. Organizational systems are human-made entities that rely on human expertise in order to establish and achieve their goals.
2. Human expertise is developed and maximized through HRD processes for the mutual long- and/or short-term benefits of the sponsoring organization and the individuals involved.
3. HRD professionals are advocates of individual, group, work process, and organizational system integrity.

The *whole* or core theory of HRD is proposed to be the fusion of psychological, economic, and systems theories while being filtered by a filter of ethical beliefs. This integrative state is central to securing HRD as a discipline, not in just knowing the elements. The journey to this disciplinary fusion results in the organizing concepts, codified knowledge, underpinning theories, particular methodologies, and the unique technical jargon of HRD. The *core* of an integrated HRD theory will be larger than the sum of the parts and unique to HRD. On their own, psychological theory, economic theory, or systems theory are inadequate for understanding HRD and for producing reliable results. Thus, the overarching proposition for HRD is as follows:

> *The theory integration proposition:* HRD must integrate its contributing and useful psychological, economic, and systems theories into a core HRD theory and model for practice.

For example, business process reengineering, according to Hammer and Champy (1994), focused on cost reductions through low-level system analysis. Had they considered the larger frame system and sustainable economic performance and not ignored the psychological domain, the intervention and its total effects would have been very different. The premise is that the three theories constitute the contributing useful and core theory for the discipline of HRD. As such, they must be understood not only individually but, more important, in their wholeness and integration. The implications of economic, systems, and psychological theories in guiding the overarching approach to HRD practice follows.

Economic Theory Component of HRD

Any minimization of economic theory in HRD is untenable. The widely used book on organization development, *Organization Development and Change*

(Cummings and Worley, 1993), does not have the words *economic, financial,* or *cost-benefit analysis* in its index. The organization development literature addresses the psychological theory leg of the theory stool and a portion of the systems theory leg, but it regularly ignores the economic leg. As a result, what is called organization development is reduced to individual development or team development in hopes of achieving improvement in organizational performance. While there is still much to be learned, a substantial amount of information about the economics of short-term interventions (Swanson, 2001) and broader-based investments is available (Becker, Huselid, and Ulrich, 2001; Fitz-enz, 2000; Lyau and Pucel, 1995).

How could responsible HRD not include direct analysis, action, and measurement of economic outcomes? Over time, organizations must generate more income than they spend in order to exist. Unless expenditures on HRD contribute to the viability and profitability of an organization, those expenditures will almost certainly be reduced or eliminated. Three specific economic theory perspectives are believed to be most appropriate and useful to the discipline of HRD: (1) scarce resource theory, (2) sustainable resource theory, and (3) human capital theory.

Scarce Resource Theory

Scarce resource theory informs us that there are limitations to everything. The limitations in money, raw materials, time, and so on, require us to make choices as to how capital will be utilized in order to gain the greatest return. Decision makers choose among options based on their forecasted return on investment. This is a simple and powerful notion that forces decision makers to separate the most valuable and worthy initiatives from the many things that they would like to do if there were no resource limitations (Swanson and Gradous, 1986).

Sustainable Resource Theory

Sustainable resource theory is much like scarce resource theory except for one major point: The concern for the long-term versus short-term agenda. Thurow (1993) informs us that, "in the future, sustainable advantage will depend on new process technologies and less on new product technology. New industries of the future depend . . . on brain power. Man-made competitive advantages replace the comparative advantage of Mother Nature (natural-resources endowment) or history (capital endowments)" (p.16). Economist David Warsh (2006) punctuates these points throughout his recent book titled *Knowledge and the Wealth of Nations: A story of Economic Discovery*.

Human Capital Theory

Becker's (1993) classic book, *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education* (1993), illustrates this domain. Becker implores the reader, "I am going to talk about a different kind of capital. Schooling, a computer training course, expenditures on medical care, and lectures on the

virtues of punctuality and honesty are capital too, in the true sense that they improve health, raise earnings, or add to a person's appreciation of literature over a lifetime. Consequently, it is fully in keeping with the capital concept as traditionally defined to say that expenditures on education, training, and medical care, etc., are investments in capital" (pp. 15–16). These are not simply costs but investments with valuable returns that can be calculated.

The Economic Theory Propositions for HRD

The economic principles for HRD revolve around managing scarce resources and the production of wealth. Most people who talk about performance can mentally convert units of performance into monetary units. HRD itself has costs and benefits that need to be understood and are not always favorable. As they are better understood in terms of theory and practice, the HRD discipline and profession will mature. The economic propositions for HRD appear elementary, yet must be addressed through sound economic theory and practice:

Scarce resource theory: HRD must justify its own use of scarce resources.

Sustainable resource theory: HRD must add value to creating sustainable long-term economic performance.

Human capital theory: HRD must add short-term and long-term value from investments in the development of knowledge and expertise in individuals and groups of individuals.

In conclusion, economist Alfred Marshall (1949) argues that the most valuable of all capital is that invested in human beings. Since HRD takes place in organizations that are economic entities, HRD must call upon economic theory in shaping its core theory (Wang and Dobbs, 2009). In addition, most management theories and methods should be properly viewed as useful extensions of economic theory (see Drucker, 1964).

Psychological Theory Component of HRD

The psychological theory which HRD can draw on is immense. It includes theories of learning, human motivation, information processing, group dynamics, and psychology-based theories of how we make decisions and behave in organizations. Yet it has been poorly interpreted by the profession. Most practitioners grab onto a small and relatively irrelevant slice of psychological theory and act upon it in exaggerated ways. Examples include the fascination with whole-brain theory, personality types, and emotional intelligence. Passmore (1997) informs us, "Psychology is the science of behavior and mental processes of humans and other animals. Beyond that, we have something that resembles a teenager's closet" (p. 210).

While psychological theory may have something for everybody, HRD has yet to capitalize fully on its psychology leverage to improve performance. Interestingly, the widely used book on training, *Training in Organizations: Needs Assessment,*

Development and Evaluation (Goldstein, 1993), is almost exclusively focused on the behaviorist school of psychology and does not deal in any meaningful way with Gestalt psychology or cognitive (purposive-behaviorism) psychology. At best, the HRD literature addresses the psychological theory leg of the theory stool in an unpredictable manner. Add to this the fact that HRD interventions are rarely systematically connected to the economic agenda via a systematic analysis of the organization and its goals (Brache, 2002; Swanson, 2007), it is no wonder that HRD interventions based only on psychological theory are often dismissed as irrelevant by organization leaders.

Fascination appears be the watchword of the psychological leg, as questions from psychology are typically narrow and/or disconnected from the core purpose of the organization, the work process, and often even the individual. For example, the continued intrigue of such topics as transfer of training from the psychology perspective mostly focuses on the individual and individual perceptions. The response to this limited perspective in HRD is best expanded through the addition of systems and economic theory, not by psychological theory alone (Holton, 1996c).

How could responsible HRD not integrate and use the vast body of knowledge from psychological theory? With such vast and divergent psychological theory available, it is more appropriate to focus on core understandings related to behavior and learning rather than fringe psychology theories and techniques. Three specific psychological theory perspectives are proposed here to be most appropriate to the discipline of HRD: (1) Gestalt psychology, (2) behavioral psychology, and (3) cognitive (purposive-behaviorism) psychology.

Gestalt Psychology

Gestalt is the German term for configuration or organization. Gestalt psychologists inform us that we do not see isolated stimuli but instead see stimuli gathered together in meaningful configurations. We see people, chairs, cars, trees, and flowers—not lines and patches of color. Gestaltists believe that people add something to experience that is not contained in the sensory data, and that we experience the world in meaningful wholes (Hergenhahn and Olson, 1993). Thus, learning involves moving from one whole to another. Words associated with gestalt psychology include introspection, meaning, closure, insight, life space, field theory, humanism, phenomenology, and relational theory. The holistic view of individuals and their own need for holistic understanding is in sharp contrast to a mechanistic and elemental view of human beings.

Behavioral Psychology

Behavioral psychology is concerned with what can be seen, and therefore behavior is what is studied. Behavioral psychologists inform us that individuals respond the only way they can given their capacity, experience, and present forces working on them. No more introspection, no more talk of instinctive behavior, and no more attempts to study the vague notions of human conscious or unconscious

mind. Words associated with behaviorism include *readiness, law effect, exercise, recency, frequency, stimulus, response, reinforcement, punishment, programmed learning,* and *drives.*

Cognitive Psychology

Tolman's (1932) term of *purposive-behaviorism* has been selected as the exemplar of this third important perspective from psychology. Purposive-behaviorism attempts to explain goal-directed behavior and the idea that human beings organize their lives around purposes. Purposive-behaviorism (and other cognitive psychologies) attempts to integrate theory from Gestalt and behavioral psychology.

"For Purposive Behaviorism, behavior, as we have seen, is purposeful, cognitive, and molar, i.e., 'Gestalted.' Purposive Behaviorism is molar, not a molecular" (Tolman, 1932, p. 419). Words associated with cognitive psychology, including purposive-behaviorism, include *drive discriminations, field-cognition modes, cognitive map, learning by analogy, learned helplessness, structuring, information processing, short- and long-term memory,* and *artificial intelligence.*

The Psychological Theory Propositions for HRD

The psychology principles for practice revolve around the mental processes of humans and the determinants of human behavior. Among scholars and practitioners of psychology, the schisms and gimmicks reported under the psychology banner abound with little integration. As the three useful psychology theories here are interpreted in terms of the theory and practice relevant to HRD, the discipline and profession will mature. While the psychological propositions appear to be elementary, they are regularly ignored in practice:

Gestalt psychology theory: HRD must clarify the goals of individual contributors, work process owners, and/or organization leaders.

Behavioral psychology theory: HRD must develop the knowledge and expertise of individual contributors, work process owners, and organization leaders.

Cognitive psychology (purposive behaviorism) theory: HRD must harmonize the goals and behaviors among individual contributors, work groups, work process owners, and organization leaders.

In conclusion, since HRD takes place in organizations that are psychologically framed by those who invented them, operate in them, and renew them, HRD must call on psychology as a contributor for its useful and core theory (see Argyris, 1993; Bereiter and Scardamalia, 1993; Dubin, 1976). In addition, learning theories such as constructivism and situated cognition should be properly viewed as useful derivatives of psychological theory. Performance cannot be improved if people choose not to perform, put forth little effort, or do not persist in their efforts (Bereiter and Scardamalia, 1993). Moreover, systematically designed learning experiences and workplace systems provide a durable foundation for performance improvement. Thus, specific theories of learning, human motivation, information

processing, and other psychologically based phenomenon complement core theoretical foundation for the discipline of HRD and have high utility for specialized (novel) challenges.

Systems Theory Component of HRD

Systems theory, a small body of knowledge compared to economics and psychology, contains a harvest of low-hanging fruit for HRD. From a systems theory perspective, a wide range of systemic disconnects is adversely affecting performance. They include (1) not being able to clearly specify the required outcomes of the host organization and (2) not having a systematically defined HRD process (see Brache, 2002; Rummler and Brache, 1995; Swanson, 2007).

Systems theory is a relatively young discipline made up of "a collection of general concepts, principles, tools, problems and methods associated with systems of any kind" (Passmore, 1997, pp. 206–207). Gradous's (1989) classic monograph set the stage for serious consideration of systems theory by the HRD profession. Jacobs's (1989) chapter, "Systems Theory Applied to Human Resource Development," called for the profession to adopt an individual contributor view of systems theory as the unifying theory. Seeing this as limited, McLagan (1989) proposed the larger organization and societal views in her chapter titled "Systems Model 2000: Matching Systems Theory to Future HRD Issues." Her challenge was for HRD to think about, and work within, a more expansive and tiered world of systems.

Three specific systems theory perspectives are proposed here to be appropriate to HRD: (1) general systems theory, (2) chaos theory, and (3) futures theory.

General Systems Theory

At the core, general systems theory (GST) forces us to talk intelligently about inputs, processes, outputs, and feedback. Furthermore, GST informs us of the reality of open systems (vs. closed systems), that systems engineering focuses on the less dynamic aspects of the organization, and of the limitations of a single personality theory in predicting human behavior (Bertalanffy, 1962).

Boulding's (1956a) classic article on general systems theory describes the paradox of a theory so general as to mean nothing and the seeming inability of a single theory from a single field of study to ever reach a satisfactory level of theory generality. He goes on to talk about the power of a "spectrum of theories"—a "system of systems" that would perform the function of a "gestalt" in theory building. "General Systems Theory may at times be an embarrassment in pointing out how far we still have to go" (Boulding, 1956a, p. 10).

Chaos Theory

"Where chaos begins, classical science stops . . . . chaos is a science of process rather than a state, of becoming rather than of being" (Gleick, 1987, pp. 3–5). Chaos theory confronts Newtonian logic head-on by offering a revised motto away from determinism to something much softer: "Given an approximate

knowledge of a system's initial conditions and an understanding of natural law, one can calculate the approximate behavior of the system" (Gleick, 1987, p. 15). Chaos theory purposefully acknowledges and studies phenomena that are unsystematic and do not appear to follow the rules.

Futures Theory

Futures theory is "not necessarily interested in predicting the future, it is about the liberation of people's insights" (Schwartz, 1996, p. 9). Thus, futures theory, in the context of planning for the future in uncertain conditions, in no way resembles the reductionist view of most strategic planning efforts that end up with a single strategy. The language and tools of *alternative futures* and *scenario building* are intended to create a true picture of the facts, the potential flux in those facts, and the decision-making agility required of the future. Futures theory is critical for sustainable performance in that it prepares one to recognize and cope with an evolving future state (Chermack, 2005).

Systems Theory Propositions for HRD

The systems theory principles for practice are organic. The system elements, their arrangements, the interdependencies—the complex nature of the phenomenon under study—must be faced. The systems theory principles for practice require serious thinking, sound theory-building research, and the utilization of new tools for sound practice. A full pursuit of the following simple propositions in HRD would reshape the HRD purpose and the tools utilized in practice:

General systems theory: HRD must understand how it and other subsystems connect and disconnect from the host organizational system.

Chaos theory: HRD must help its host organizational system retain its purpose and effectiveness given the chaos it faces.

Futures theory: HRD must help its host organizational system shape alternative futures.

In conclusion, since HRD takes place in organizations that are themselves systems and subsystems functioning within an environmental system that is ever-changing, systems theory is both useful and at its core (see Buckley, 1968; Gradous, 1989). Furthermore, engineering-technology theories and methods should be viewed as useful extensions of systems theory, even though they have a longer scholarly history (see FitzGerald and FitzGerald, 1973; Davenport, 1993).

Ethics in HRD

As noted earlier, the rug of ethics is viewed as the supporting theory for HRD, but not a core theory. It serves as the filter among the three core theories of economics, psychology, and systems within the performance improvement context.

From the ethical beliefs perspective, some argue about the exploitive nature of organizations and would criticize HRD as an unthinking arm of management

(Korten, 2001), challenging the profession to act as the agent of democracy and equity (Dirkx, 1996). Others argue that exploitation is a much more expansive concept (e.g., employees can exploit their employers) and that it must be dealt with as such (Swanson, Horton, and Kelly, 1986). The ethical issue is not with performance. It is the distribution of the gains realized from performance. Such distribution among contributors and stakeholders is the bogeyman behind most of the emotional performance discussions in HRD. It should be dealt with directly and apart from the pursuit of performance (Hatcher, 2002).

Summary

The purpose of this theory of HRD discussion was to frame the discipline and theory of human resource development by identifying its definition, model, component theories, and the propositions of the theory.

Research in the realm of theory requires that theories be developed through rigorous theory-building research methods (Dubin, 1969; Hearn, 1953; Torraco, 1997; Lynham, 2000b) and that the journey be continuous. If theory just happened as a result of practice, the development of an HRD theory bucket would be overflowing. Instead, the massive field of HRD practice is still experiencing a "theory application deficit disorder" (Swanson, 1997). Fulfilling HRD's performance improvement mission by advancing the HRD discipline around sound theory, proven in practice, is fundamental to the maturation of the profession. The following chapter provides extended and alternative views of the contributions of psychological, economic, and systems theories to HRD.

CONCLUSION

This has been an attempt to investigate the contribution of systems theory to HRD. It is hoped that it offers a unique synthesis of the literature in describing its scope and meaning as well as a framework to organize its multiple contributions to HRD theory and practice.

The twenty-first century is seeing a burst of HRD theory-building research. It is being spurred on by the maturing of the academic side of the HRD profession and the high expectations organizations have for the HRD contribution. The *Human Resource Development Review* and the Academy of Management Review have provided a boost to HRD theory research and theory visibility.

REFLECTION QUESTIONS

1. Explain how models and theories differ and discuss if it is possible to have one without the other.

2. What general idea about theory from this chapter did you find most interesting and why?
3. What is the argument for multiple contributing theories being used and fused for creating a unique theory of HRD?
4. From the section on the discipline of HRD, what do you see as the connection between the definition of HRD (Figure 5.2) and the model of HRD (Figure 5.3)?
5. What do you think the main contribution of psychological theory is to HRD? Why?
6. What do you think the main contribution of economic theory is to HRD? Why?
7. What do you think the main contribution of systems theory is to HRD? Why?

CHAPTER 6

Component Theories of Human Resource Development

CHAPTER OUTLINE

INTRODUCTION

The preceding chapter presented a theory of Human Resource Development (HRD) and advocated three primary theory components and a purposeful fusion of them. The fusion of the three theory components was done in context of the definition and purpose of HRD and is now presented as the core theory of the HRD discipline. The following three sections in this chapter provide extended views of the contributions of psychological, economic, and systems component theories to HRD.

Elwood F. Holton's section, titled "Psychology and the Discipline of Human Resource Development," addresses psychological theory. He notes that psychology has long provided a core theoretical base for HRD. Contemporary HRD extends beyond psychology to embrace multiple theoretical bases. This section examines psychology's theoretical contributions to the discipline of HRD. It argues that psychological theories are both powerful and yet limited as a foundation for HRD. Specific psychological theories and their conceptual relationships with economics and systems theory are discussed.

The second section, "Economics, Human Capital Theory, and Human Resource Development," was written by Richard J. Torraco. He argues that the development of a theory base to support the rapidly growing field of HRD is the most important issue facing HRD scholars today. The pressures on HRD to meet the needs of a diverse workforce in a rapidly changing work environment demand the inclusion of economics as a foundational theory of HRD. He further argues for human capital theory as the primary economic theory relevant to HRD.

The final section, "Systems Theory as a Foundation for Human Resource Development," by Wendy E. A Ruona, investigates the contribution of systems theory to HRD. The treatise offers a framework to organize themes emerging from the literature on how systems theory supports HRD. Finally, some current challenges and how systems theory relates to the disciplines of economics and psychology are discussed.

PSYCHOLOGY AND THE DISCIPLINE OF HUMAN RESOURCE DEVELOPMENT

Contributed by Elwood F. Holton III

Psychology has been identified as one of the core theories of human resource development (Passmore, 1997; Swanson, 1994). There can be little question that the discipline of psychology has made, and continues to make, major contributions to the discipline of HRD. Indeed, references from industrial psychology, educational psychology, cognitive psychology, and developmental psychology are common in our research. It is psychology that keeps HRD's focus on the individual.

However, there are those who practice HRD as if it were little more than applied psychology. This approach results in overemphasis on the individual to the exclusion of other vital components of our discipline. The thesis of this section is

that there can also be little question that psychology is inadequate *by itself* to define the discipline of HRD. The purpose of this section is to systematically identify some key issues surrounding psychology's contribution to defining the discipline of HRD.

Psychology and HRD

Understanding Psychology as a Discipline

To understand psychology as a field, one must first differentiate between what are alternately called foundational or framework theories (Wellman and Gellman, 1992) and systems of psychology (Lundin, 1991) versus specific theories. "Framework theories outline the ontology and the basic causal devices for their specific theories, thereby defining a coherent form of reasoning about a particular set of phenomena" (Wellman and Gellman, 1992, p. 342). A *system* has been defined as "a framework or scaffolding which permits the scientist to arrange his data in an orderly meaningful way" (Lundin, 1991, p. 2). In psychology, these systems are also known as *movements* or *schools.*

Systems or framework theories, then, inspire specific theories that propose specific formal propositions. For example, behaviorism is a framework theory or system because it defines a particular set of assumptions about human behavior. Within that system are a variety of theorists (e.g., Watson, Skinner) who vary in their specific propositions about behaviorism but nonetheless agree as to the underlying epistemology. Our interest here is not in specific theories but rather the underlying framework theories or systems from psychology that are in turn foundational theories for the discipline of HRD. Continuing the previous example, we will not discuss which theory of behaviorism is appropriate but rather whether behaviorism is a foundational theory for HRD.

No universal agreement prevails among psychology scholars as to which theories are specific versus foundational theories, and some theorists are "bridge" theorists in that they attempt to integrate multiple systems. Furthermore, many noted psychologists can be classified in multiple categories (e.g., Is Bandura a behaviorist or a cognitivist?). Thus, it is difficult to find one "best" classification. For this discussion, Lundin's (1991) and Brennan's (1994) classifications of twentieth-century psychology systems have been integrated to generate the following list of candidates to be included as foundational theories for HRD: functionalism, behaviorism, Gestalt (classic and field theory), psychoanalysis, "third force" (humanistic and existential), cognitive, and emerging systems (social psychology and developmental psychology).

Interestingly, some psychologists have called for the creation of a "metadiscipline" of theoretical psychology to recapture the theoretical roots of psychology (Slife and Williams, 1997). They use some of the same language that scholars in HRD do to bemoan movement away from theory "toward models, techniques, and microtheories in the more modern sense" (Slife and Williams, 1997, p. 118). Due in large part to the emergence of applied or functional psychology in the

early 1900s (Watson and Evans, 1991), psychology has moved away from the creation of broad theories such as behaviorism and cognitivism, to the scientific testing of theories and models.

Psychological Theories for HRD

Within psychology, Swanson (1998a) proposes three foundational psychological theories: Gestalt, behavioral, and cognitive psychology. Figure 6.1 summarizes these three foundational theories and selected contributions to the discipline of HRD.

Relationship to Other Core Theories of HRD

Swanson (1998a) also proposes that the other two foundation theories of HRD are economics and systems theory. Yet unresolved is the relationship between psychology and the other two core domains. While there may be many microlevel linkages, at the macrolevel possible relationships are as follows:

- *Behaviorism* provides the link between psychology of the individual and economic theory. One of behaviorism's strengths is its emphasis on external reinforcers of human behavior. Human behavior within organizations is deeply affected by organizational performance goals as represented by individual performance criteria and associated rewards. This performance system is largely economic, as described by Torraco (1998). Behaviorism provides the theoretical linkage between the external performance system and individual behavior.
- *Gestalt* psychology is primarily concerned with the integration of the parts of the self into the whole person. Conceptually, this is the same contribution that systems theory makes to understanding organizations—the focus on the whole and the interaction of the parts, rather than reducing it to just its parts. In addition to helping the HRD profession focus on the whole person, the emphasis on holism also logically leads to a holistic view of the person embedded in the organizational system.
- *Cognitivism* is primarily focused on the self. Cognitive psychology explains how individuals make meaning of what they experience. It emphasizes that individuals are not simply influenced by external factors but make decisions about those influences and their meaning. In the constellation of psychological theories relevant to HRD, it is cognitive psychology that exclusively focuses on the internal processes of individuals. It helps explain how people learn and how they make sense of the organizational system.

Figure 6.1 Foundational Psychological Theories and their Contribution to HRD

Foundation Theory	*Representative Theorists*	*Contributions to HRD*
Gestalt	Wertheimer, Kofka, Kohler, Lewin	▪ Focus on the whole person ▪ Holistic view of organizations and individuals
Behaviorism	Watson, Pavlov, Thorndike	▪ How external environments affect human behavior ▪ Reward and motivation systems ▪ Goal setting
Cognitive	Piaget, Bruner, Tolman	▪ How humans process information ▪ Foundation for instructional design ▪ How humans make meaning of their experiences

Emerging Foundational Theories of Psychology

There is little question that, of the well-established foundation theories in psychology, these three are the appropriate ones. Others, such as functionalism and psychoanalytic theory, simply don't fit. That said, two other emerging psychological theories point out possible weaknesses in this scheme and offer possible theoretical solutions.

Individual Growth Perspective

None of these three theories fully recognizes the potential that humans have to expand and develop capabilities well beyond those immediately apparent. Gestalt psychology comes closest but still is focused primarily on how people perceive, think, and learn in the here and now (Hunt, 1993). It still leaves unexplained the human processes that underlie the motivation to grow and develop. It is this potential for growth and expansion of human capabilities that undergirds human capital theory in economics.

Humanistic psychology is still a somewhat loosely formed movement that views humans as self-actualizing, self-directing beings. It is one of the roots for much of adult learning theory (Knowles, Holton, and Swanson, 2005). Two of its most recognizable names are Carl Rogers and Abraham Maslow. While still not as theoretically "tight" as behaviorism or cognitivism, it nonetheless makes contributions in explaining individuals' motivation and potential. A core presumption of some HRD models is that employees have intrinsic motivation to grow. While some growth can be explained from the behavioristic notion that people grow to seek organizational rewards, a strictly behaviorist view of this phenomenon is much too limited. The three psychological theories proposed earlier (Gestalt, behaviorism, and cognitive) may fall short in supporting HRD's position that humans are capable of reaching far higher potential, justifying long-term investment to build expertise.

Social System of Organizations

A second area of concern is whether these three psychological theories, along with systems theory and economic theory, provide adequate theory to account for

individuals within the social system of organizations. Organization development specialists are particularly focused on elements of the social system such as organizational culture, power and politics, group dynamics, intergroup communication, and how these social systems change (Cummings and Worley, 1997). The question is whether the core theories proposed provide an adequate foundation to understand the individual within the organizational social system.

It is these very concerns that have led to the emergence of social psychology that studies interactions between people and groups. It, too, is seen by some as an eclectic discipline lacking any unifying theory (Hunt, 1993), while others are more generous in describing it as still emerging in its theoretical base (Brennan, 1994). In some respects, social psychology is much like HRD, building on other theories while creating a new theory of its own. Wiggins, Wiggins, and Vander Zanden (1994) define *social psychology* as "the study of behavior, thoughts, and feelings of an individual or interacting individuals and their relationships with larger social units" (p. 17). According to them, social psychology consists of four theoretical streams, the first two from psychology and the second two from sociology:

1. *Behavioral perspective*—Social learning and social exchange theory
2. *Cognitive perspective*—Field theory, attribution theory, and social learning of attitudes
3. *Structural perspective*—Role theory, expectation states theory, and postmodernism,
4. *Interactionist perspective*—Symbolic interaction theory, identity theory, and ethnomethodology

Frankly, I offer it more as a "placeholder" than with certainty that it is a foundational theory. What social psychology emphasizes, and which seems lacking in this HRD discipline model, is some theory base that defines the social system of an organization. There are deep roots in some aspects of HRD that have relationships with social psychology. For example, social psychologist Lewin's force field theory is a core model for organizational change and development. Social psychology also focuses on humans in groups, which is clearly a major issue in HRD. If social psychology is not the correct foundational theory, then we must identify a component that provides a base for HRD's work in the social systems of organizations.

In summary, Kuhn (1970) cautions us that the emergence of new theory is rarely an orderly or quick process. While both humanistic and social psychology lack the conceptual clarity of cognitivism, behaviorism, and Gestalt psychology, they emerged to fill the need to explain human phenomena that the others did not adequately explain. The question for HRD to debate is whether these same holes are important considerations for HRD theory. If so, then these two emerging areas of psychology—or some other theory—should be carefully considered.

Limits of Psychology

Issue 1: Domains of Performance

Two predominant performance frameworks are the Rummler and Brache (1995) model and Swanson's (1994) expanded framework. Because Swanson's framework uses five performance variables, it is a more powerful lens for this analysis. He suggests that there are three levels of performance and five performance variables. By definition, psychology's primary focus is on the individual. Psychologists do consider organizational context, but as environmental influences on the individual, not as a core area of focus.

Historically, HRD was also defined at the individual level (Ruona and Swanson, 1997). It is increasingly considering multiple levels (individual, group, work process, and organizational) as core areas of focus. The implications of this for HRD as a discipline are significant. If the discipline of HRD is a multilevel discipline, then we can draw heavily upon psychology as a foundation discipline but must also realize it is inadequate by itself.

The psychological lens, while powerful, leads to incorrect or inadequate conceptions of HRD when used alone. For example, Barrie and Pace (1997) state:

> The question of whether the field of human resource development is in the business of improving *performance* or of enhancing learning in organizations has not been sufficiently explored. Succinctly put, advocates argue that the field should focus on creating *behavioral* changes or on fostering a cognitive perspective in organization members. (p. 335, emphasis added)

The authors equate the performance perspective with the behavioral perspective in psychology, which is incorrect. Performance theory is concerned with the outputs and outcomes of humans in organizations, and the extent to which cognitive strategies improve them. From an applied psychology definition of HRD, theirs is the logical conclusion. From a broader theoretical base, their argument is incorrect.

Issue 2: Building Capacity for Performance

Holton (1999) presents an expanded framework for conceptualizing performance domains in HRD that offers another lens within which to consider psychology's contribution to HRD. One important addition is the integration of Kaplan and Norton (1996) to two categories of performance measures: outcomes and drivers. Unfortunately, they do not offer concise definitions of either. For our purposes, *outcomes* are measures of effectiveness or efficiency relative to core outputs of the system, subsystem, process, or individual. The most typical are financial indicators (profit, return on investment [ROI], etc.) and productivity measures (units of goods or services produced) and are often generic across companies. According to Kaplan and Norton, these measures tend to be lag indicators in that they reflect what has occurred or has been accomplished in relation to core outcomes.

Drivers measure elements of performance that are expected to sustain or increase system, subsystem, process, or individual ability and capacity to be more effective or efficient in the future. Thus, they are leading indicators of future outcomes and tend to be unique for particular business units. Together with outcome measures, they describe the hypothesized cause-and-effect relationships in the organization's strategy (Kaplan and Norton, 1996). Thus, drivers should predict future outcomes. For example, for a particular company, ROI might be the appropriate outcome measure that might be driven by customer loyalty and on-time delivery, which in turn might be driven by employee learning so that internal processes are optimized. Conceptually, performance drivers could be added as a third axis to Swanson's performance levels and performance variables.

This lens further defines the limits of psychology's contribution to HRD:

- At the individual level, psychology pays only limited attention to building future capacity for individual performance.
- At other levels, performance drivers are not an area of focus for psychology.

Some areas of psychology are preoccupied with current performance and outcomes, while HRD has a more balanced view of building capacity for future performance in addition to present performance (see Figure 6.2).

Summary

As part of a series of papers on the core theories of HRD, this treatise was primarily designed to initiate an ongoing dialogue to continue defining the discipline of HRD. HRD has, and always will have, psychology as one of its core theories. It is psychology that reminds us that our discipline is one concerned with humans in organizations. It is important that we recognize its contributions, as well as its limitations as a lens through which to view HRD.

ECONOMICS, HUMAN CAPITAL THEORY, AND HUMAN RESOURCE DEVELOPMENT

Contributed by Richard J. Torraco

Economics offers a distinctive perspective for analyzing social conditions and making choices about how scarce resources can be distributed among competing needs. This section addresses economics, human capital theory, and the economic realities faced by the organizations in which human resource development professionals carry out their work. The application of human capital theory to human resource development reveals the importance of economic considerations to the human resource development practice and demonstrates the central role of economics in the theoretical foundation of human resource development.

Figure 6.2 Performance Domains and Metrics

Domains of Performance	*Typical Metrics for Measuring Performance Domains*	
	PERFORMANCE OUTCOMES	**PERFORMANCE DRIVERS**
Mission	Economic returns External metrics Market share Profitability Mortality rate Poverty level	Societal benefits Innovation Knowledge capital Management/leadership Strategy Social responsibility
Process	Customers Quality Cost Time Product features Market share (in product category)	Customer (needs satisfaction) Quality Innovation
Critical performance subsystem (team, department, etc.)	Team effectiveness Structural subunits performance Productivity (resource efficiency) Internal metrics Work outputs	Team/group climate Management/leadership Ethical performance
Individual	Productivity Work output	Knowledge, expertise Learning Renewal and growth Human relations Ethical performance Turnover Absenteeism

What is Economics?

Economics addresses the allocation of scarce resources among a variety of human wants and needs. Economics represents human wants and the scarcity of resources as essential and perennial elements in the study of any human activity. Like other social sciences, economics deals with human behavior that cannot be controlled as can, for example, the physical mechanisms of automated equipment used by an engineer. Economics uses society as its laboratory and cannot engage in the kind of experimentation favored by the physicist or chemist. As with the social sciences in general, economics is not an exact science and its predictions about economic developments are subject to error. Nonetheless, according to Lewis (1977), economics is the social science "with the most sophisticated body of theory—that is, the one with the greatest predictability accuracy of all the social sciences" (p. 43). For comprehensive treatments of economics, see Samuelson (1980), Milgrom and John (1992), and Shughart, Chappell and Cottle (1994).

What is Human Capital Theory?

Human capital theory is considered the branch of economics most applicable to human resource development. Human capital theory offers an increasingly influential perspective to social and economic policy. While Theodore Schultz's (1961) address to the American Economic Association was the first presentation of research on the return-on-investment in human capital, Gary S. Becker is generally credited with developing human capital theory. Classical economic theory considers labor as a commodity that can be bought and sold. Because of the negative connotations associated with the exploitation of labor by capital, it is understandable that human capital theory is still suspect in some circles. However, unlike the meaning traditionally associated with the term "labor," human capital refers to the knowledge and expertise one accumulates through education and training. Emphasizing the social and economic importance of human capital theory, Becker (1993) quotes the economist Alfred Marshall's dictum that, "the most valuable of all capital is that invested in human beings" (p. 27).

Becker distinguished *specific* human capital from *general* human capital. General human capital development increases the skills and productivity of people by the same amount in the organizations providing the training as it would if they went to work for another organization. However, organization specific training increases the productivity of people working in that organization and not in other organizations if people decided to leave. Becker refers to training that increases productivity more in the organizations providing it as specific training. Examples of specific human capital include training in firm-specific purchasing procedures, management information systems, and most types of on-the-job training since they address skills that are specific to a particular organization. General human capital is knowledge gained through education and training in areas of value to a variety of organizations. Examples include leadership, problem solving, and communication skills. Both specific training and general training are means of human capital development. Both are important to those acquiring the knowledge and skill and to the organizations and communities where trainees use these skills. However, the incentives for an organization to invest in training are different for these two types of training. Because general training develops expertise that can increase productivity by the same amount in the organization providing the training as in other organizations, competitors could benefit by hiring trained employees away from the organizations providing the general training. For this reason organizations may be less likely to offer general training. This distinction notwithstanding, Becker (1993) states that "education and training are the most important investments in human capital" (p. 17).

The rates of return on education analyzed by Becker are impressive and contributed substantially to advancing human capital theory into the forefront of social and economic policy. The findings of Becker's empirical analysis of the rates of return on education conclude that the average rate of return on a college education to white males is between 11 and 13 percent, with higher rates on a high school education, and even higher rates on an elementary school education.

Investing in the education and training of those who are more educated to begin with is justified by the concept of rates of return. Within the present knowledge economy that demands more human capital, there are increasingly strong market-based incentives to produce expertise more efficiently. The need to produce more human capital cheaper, faster, and better inevitably leads to an investment bias that favors the most highly skilled and educated. An additional dollar invested in a more highly skilled person brings higher economic returns than an additional dollar invested in a less skilled youth or adult. As a result, economic incentives alone are unlikely to lead to greater investments in the least skilled workers (Carnevale and Fry, 2001).

A Model of Human Capital Theory (see Figure 6.3) presents the key relationships in human capital theory and the assumptions underlying these relationships. Key relationships and assumptions of human capital theory are represented in Figure 6.3 by the numbered brackets 1, 2, and 3. Based on systems theory, the relationships in Figure 6.3 are process models, each composed of *inputs, processes,* and *outputs.*

- *Relationship 1* represents the concept of *production functions* as applied to education and training. This relationship shows the potential of education as a means to foster learning and human capital development. Relationship 1 is a process model showing that inputs/resources to education and training (e.g., investments in schools, instructors, learning materials, and so on)

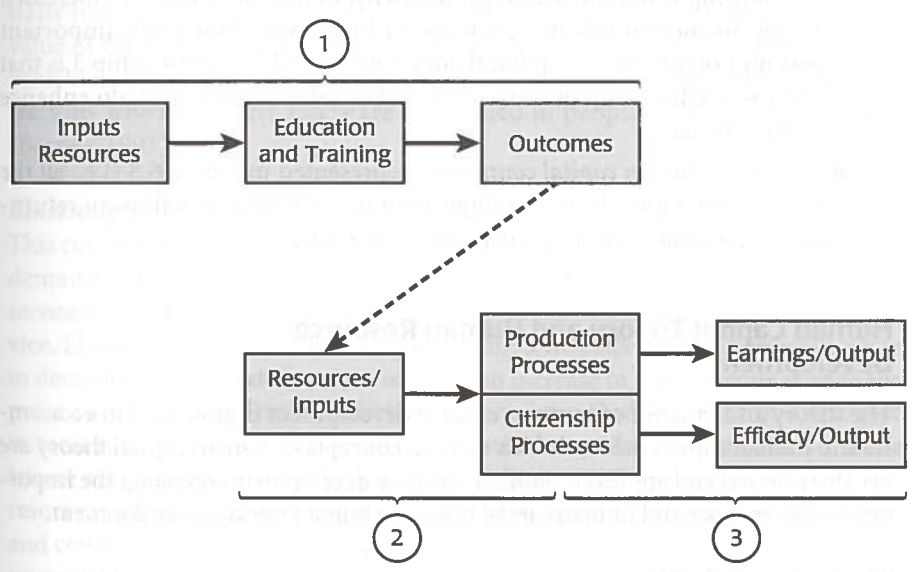

Figure 6.3 A Model of Human Capital Theory

should produce learning outcomes. Presumably as people participate in education and training, they are involved in learning and acquire knowledge and skill. The key assumption underlying this relationship is that investments in education and training, in fact, do result in increased learning. Relationship 1 includes the human capital variables assessed using cost-effectiveness analysis.

- *Relationship 2* represents the human capital relationship between learning and increased productivity. This relationship shows the potential contribution of education and learning to increased productivity. The process model in relationship 2 shows that increased learning should produce increased productivity. Presumably as people acquire more knowledge and skill, they apply this expertise in their work and thereby enhance productivity. The key assumption underlying this relationship is that increased learning, in fact, does result in increased productivity.
- *Relationship 3* represents the human capital relationships between increased productivity and increased wages and business earnings, and between increased citizenship processes and increased social efficacy. Presumably as productivity increases, business revenues are generated that result in higher wages for employees and higher earnings for businesses. Similarly, as citizenship processes affected by education are enhanced (e.g., community involvement, voting, socially responsible action), social efficacy would be expected to increase (e.g., social equity and opportunity, enhancements to the environment). The key assumption underlying this relationship is that increased productivity, in fact, does result in increased wages for individuals and earnings for businesses. An equally important assumption of human capital theory represented by Relationship 3 is that increased citizenship processes affected by education, in fact, do enhance social efficacy.
- *The entire human capital continuum* represented in Figure 6.3 (i.e., all the bracketed relationships as a single continuum) are assessed using return-on-investment analysis or cost-benefit analysis.

Human Capital Theory and Human Resource Development

The theory and practice of human resource development is grounded in economics and human capital theory. In this section, concepts of human capital theory are briefly reviewed and applied to human resource development, revealing the importance of economics and human capital theory to human resource development.

Macroeconomic Theory

Macroeconomic theory addresses the aggregate performance of an entire economy or economic system (e.g., the European economy or world economy).

Macroeconomics is concerned with fiscal and monetary policy and the interaction of major determinants of economic developments such as wages, prices, employment levels, interest rates, capital investments, the distribution of income, and other factors. Macroeconomics is contrasted with microeconomics, which focuses on the individual consumer, family or firm and the determinants of each of these factors (i.e., wages, interest rates) in particular.

Human capital theory has both macroeconomic and microeconomic implications for human resource development. Human resource development on a regional or national level is what economists might call "human capital deepening" on a macroeconomic scale. The increased value of human capital derived from human resource development is likely to influence productivity, wages, prices, and other factors at an aggregate level of the economy. Conversely, the decisions made by human resource development professionals in organizations are microeconomic in scope—that is, they influence the economic performance of a particular community, organization, group, or its members.

Supply and Demand

The supply of, and demand for, education and training affects the competitive position of organizations such that human resource development's role becomes central to the organization's long-term viability. Classical economics posits that, on average, scarce resources are more valuable than plentiful resources. Grounded in economic theory, Wright, McMahan and McWilliams's (1994) resource-based view of the firm is based on the concept of supply and demand. They suggest that human resources, and skilled workers in particular, substantially increase the competitive position of the firm because they enhance the value of the firm's human resources in ways that are (a) rare, (b) inimitable, (c) valuable, and (d) non-substitutable. It is difficult to stay competitive with organizations whose greatest assets are embedded in people—their human capital (Barney, 1991).

Elasticity of Demand

This concept is an elaboration of the concept of supply and demand. Elasticity of demand indicates the degree of responsiveness of the quantity of a product or service demanded by consumers to changes in the market price of the product or service. Elastic demand exists when a price reduction leads to a substantial increase in demand for the product or service (and an increase in total revenue despite the price cut). Inelastic demand exists when a price reduction leads to a decrease in total revenue despite the price cut. Elastic demand is said to exist for some leisure and recreation-related goods (e.g., airfares, vacation cruises, and hotel and resort rates). Inelastic demand is said to exist for gasoline prices, railroad service, and certain necessities (e.g., foods, medicine) for which acceptable substitutes are unavailable.

The elasticity of demand for human resource development can be viewed in a number of contexts. For example, how elastic is the demand for education/training

when its cost increases relative to the cost of alternative activities in the workplace (e.g., attend training versus remain on the job)? Will attendance or support for human resource development increase, despite its increased cost, if the intervention is perceived as crucial to organizational growth or survival (e.g., an organization development or performance improvement intervention)? To what degree does the availability of substitutes for training (e.g., outsourcing, hiring versus training skilled personnel) influence the elasticity of demand for training?

Opportunity Costs

Opportunity costs are the value of opportunities foregone due to participation in a given project or activity. By electing a particular course of action among alternatives, one necessarily foregoes the opportunities offered by the alternatives. Human capital theory involves opportunity costs at several levels of human resource development practice. At the organizational level, opportunity costs in human resource development occur with programs that have been established to prepare groups of employees for particular positions or career opportunities. By adopting these programs in an environment of scarce resources, the organization necessarily foregoes the opportunities to provide programs for other positions or employee populations.

At the individual level, participation in employer-sponsored training, especially during normal working hours, incurs the opportunity costs associated with lost productivity on the job. This opportunity cost has traditionally been a major source of management reluctance to support certain types of training. Similar opportunity costs are incurred at the department level when work activities are foregone to participate in training. At the organization level, the value of opportunity costs is necessarily higher, as is the value of human capital, because it is applied across the organization. Opportunity costs are the flip side (and sometimes the unnoticed side) of the benefits of education and human resource development.

Agency Theory

Agency theory derives from a branch of organization theory concerned with reconciling the behavior of self-interested individuals with conflicting goals within a larger organizational context where collaboration among individuals is sought. Levinthal's (1988) agency theory proposes that principals (i.e., owners) monitor the performance of agents (i.e., employees) and use incentives such that employees work to achieve the principals' goals in spite of employees' self-interests. Given discretion in the direction and degree of investments in human capital, agency theory suggests that principals are far more likely to promote firm-specific human capital over general-purpose human capital, which increases the ease with which employees can move to other firms.

Production Functions

Production functions are the technical or physical relationships between the inputs and outputs in a value-added process. With respect to educational investments in human capital, we wish to know the precise inputs (i.e., resources) that enter the production process (i.e., education), the precise relationship between factors within the production process, and the outputs (i.e., benefits, outcomes) which result from the educational production process (Lewis, 1977). The production function for education is represented as relationship 1 in Figure 6.3. Educational economists are not disinterested in the learning process and the best ways for people to acquire skills. On the contrary, studies of the way people learn and the way people use their skills in the workplace should reflect economic considerations and human capital theory. Production functions in human resource development are represented by choices such as internal training (i.e., provided by the employer) versus external training (i.e., provided by a training vendor), classroom versus on-line training, the direct involvement of supervisors or subject matter experts in developing programs, and other means of "producing" education and training.

Screening Theory of Education

The screening theory of education suggests that, as opposed to affecting the productivity increases espoused by human capital theory, education serves a screening function in which individuals are ranked by ability, achievement levels, and grading. Any productivity gains apparent from education are, therefore, a function of the traits of those being educated, not a product of the education process. That is, increased productivity derives from the abilities of individuals, not from the education. Education serves to screen out those who do not have the ability; individuals with ability complete their educations, others do not. Some evidence exists in support of the screening theory of education (Stiglitz, 1975). The implications of this theory extend to human resource development in that training might be seen as a screening activity and thus perceived as not improving productivity. Education also may be viewed as a screening process for promotion, transfer or other personnel action.

Summary

Human capital development is critical not only to organizations, but to all areas of workforce and human resource development. The economic realities facing human resource development professionals strongly influence human resource development research and practice. These realities are:

- The measurements used most frequently in organizations, of any kind, are financial measures.
- Efficiency is a universal value, not limited to economics. Efficiency is simply a ratio of the optimal level of accomplishments relative to the effort and resources required to achieve them.
- Human resource development professionals are reluctant to express their work in financial terms, even though their organizations are economically driven.

Principles of economics and human capital theory are part of the fabric of the organizations in which human resource development professionals carry out their work. Ideology aside, the reality in our culture is that economic choices are among the most important decisions made in the workplace. These considerations support economics and human capital theory having a central place in the theoretical foundation of human resource development.

SYSTEMS THEORY AS A FOUNDATION FOR HUMAN RESOURCE DEVELOPMENT

Contributed by Wendy E. A. Ruona

It is widely acknowledged that HRD is a discipline rooted in multiple theories. While it is true that HRD utilizes many theories, all of these theories are not foundational or core to HRD. A foundation is the basis on which a thing stands and comprises those elements that are essential to its survival. For a profession such as HRD, a foundation must be theoretically sound and its professionals must be well-versed in what comprises that core. Indeed, Warfield (1995) regards the specification of foundations as central to the progress of a discipline when he stated that, "Science is a body of knowledge consisting of three variously integrated components: foundations, theory, and methodology. Foundations inform theory and the theory informs the methodology" (p. 81).

Systems theory has been proposed here as one of three theories that are integrated to constitute HRD theory. While many are committed to systems theory implicitly, if not explicitly, its incorporation into HRD's foundational base has yet to fully take hold. The goal of this section is to investigate the contribution of systems theory to HRD.

What is Systems Theory?

Systems theory is fundamentally a theory concerned with systems and their interdependent relationships. Beyond this elementary description, there is not one correct way to define it. The father of general systems theory was von Bertalanffy, who in 1968 first forwarded his revolutionary ideas on complex systems. General systems theory, as forwarded by von Bertalanffy, actually birthed a new organized body of science and a new scientific paradigm. Systems theory today includes *many* specific theories. All of them share a fundamental interest in understanding *systems*—with a particular emphasis on the *interdependencies* and *dynamics* of the parts, how they are organized, and how they work together to produce results.

Scope

Describing this burgeoning field of science is difficult. Multiple fields are direct descendants of systems theory and operate as part of the larger conceptual system of systems inquiry. Although all these related fields are distinctive, they align in their concern with the system. Four of these fields, in particular, dominate the discussion in systems theory.

General Systems Theory. As described above, General Systems Theory is known for focusing multiple disciplines on wholes, parts, the organization and connectedness of the various parts, and, especially, the relationships of systems to their environment. Von Bertalanffy (1968) challenged traditional conceptions of organization by forwarding the notion of open systems; and, in so doing, laid the foundation for the other major fields of study described below.

Cybernetics. Cybernetics is the science of information, communication, feedback, and control both *within* a system as well as *between* a system and its environment. Its focus is more on *how* systems function—how they react to and process information. The result of much of its core work has been in defining heterogeneous interacting components such as mutuality, complementarily, evolvability, constructively, and reflexivity (Joslyn, 1992). It is cybernetics which is the foundation for the emphasis on feedback loops that is commonly associated with modern-day systems thinking.

Chaos. Chaos theory is the "qualitative study of unstable aperiodic behavior in deterministic non-linear dynamic systems" (Kellert, 1993, p. 2). A parallel and highly related field of study growing predominantly out of physics, this theory revolutionized science through its discovery that complex and unpredictable results were actually not random but, rather, could be expected in systems that are sensitive to their initial conditions. Behavior that had been assumed to be random in systems of every type was actually found to be bounded and operating within recognizable patterns. Now it is widely recognized that forces in a system endlessly rearrange themselves in different, yet similar patterns. The resulting hidden pattern is coined chaos, fractal, or strange. Chaos theory seeks to understand this ordered randomness and enables scientists to discover and study chaotic behavior.

Complex Adaptive Systems. This field inquires into a special kind of system and strives for an even more holistic view. These systems are *complex* because they are diverse and nonlinear and they are *adaptive* in that they have the capacity to change and learn from experience. Founded by the Santa Fe Institute, the field of complex adaptive systems (CAS) proposes that systems function in a unique area of complexity and conduct self-organizing and learning processes which include structural change through self-renewal (replication, copy and reproduction), nonlinear flows of information and resources, and "far-from-equilibrium conditions that create a dynamic stability where paradox abounds" (Dooley, 1996, p. 20). The field of CAS, then, is vitally important to our understanding of how systems emerge, change, and learn from experience in a way that makes the future of a system unpredictable and, ultimately, determined by a dynamic network of agents acting and reacting in parallel (Holland, 1995).

Why Systems Theory?

Even after this brief review of systems theory, the question must be raised as to whether HRD has any choice but to fully embrace systems theory. If HRD agrees that it serves organizations and the people in them, it *must* adopt the science of systems as a core foundation. Organizations *are* systems. A system is defined here as a collection of elements where the performance of the whole is affected by every one of the parts and the way that any part affects the whole depends on what at least one other part is doing. Although there remains some critique of using the "organization as organism" metaphor (Morgan, 1996), organizations can be viewed as living systems of discernible wholes that have lives of their own which they manifest through their processes, structures, and subsystems (Jaros and Dostal, 1995; Wheatley, 1999). One of the largest differences between organizations and other living systems is that they are multi-minded, a fact which HRD has long accepted, and that newer systems theories such as those coming out of complex adaptive systems embraces.

Systems theory provides a common conception of organizations—an organizer or conceptual frame through which HRD can ensure a holistic understanding of its subject. It also provides analysis methodologies capable of including multiple variables. For these important two reasons, systems theory/inquiry is viewed as the only meaningful way to comprehend an organization.

The Support Provided to HRD by Systems Theory

It is not possible to provide a comprehensive review here of the multiple ways in which systems theory contributes valuable knowledge to HRD. However, some general themes can be drawn from the literature and grouped into conceptual categories. A cross-section of the systems leg of the three-legged stool proposed by Swanson (1998) visually depicts these three categories—three ways that systems theory supports HRD (Figure 6.4). Systems inquiry provides (a) information: knowledge or data about systems, (b) capabilities: the potential to act, and (c) direction: guidance for a field's activities and development.

Information Provided by Systems Theory

A primary goal of systems theory is to uncover information about systems. During the last forty to fifty years a large amount of knowledge has been compiled that can help HRD professionals understand the basic structure and essences of systems' parts and wholes. Four distinct areas of information have emerged from the literature review conducted by this author. A description of each area as well as a cursory discussion of the implications resulting from that knowledge is provided below.

Structure of Systems. Systems theory has sought to understand the basic structure of systems—the way that their parts are arranged, the interrelation of parts to other parts and of wholes to the environment, and the purposes of the

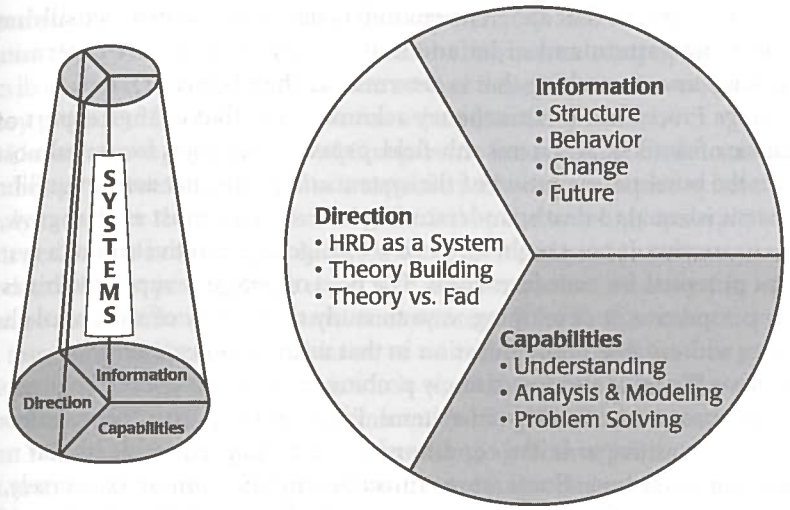

Figure 6.4 A Cross-section of the Systems Leg: Contributions of Systems Theory

system design. Although some systems scientists propose that the structure of a system is hardly separable from its functioning or behavior, others study structure specifically and agree that there are specific elements that provide necessary infrastructure (such as boundaries, feedback structures, and mechanisms that serve specific purposes). Prigogine and Stengers (1984), for example, discovered that systems in disequilibrium produce new structures spontaneously from the disorder. Field theory, commonly discussed as related to organizational development, emerged in the 1970s as an explanation of the empty space in systems that affect the structure. Finally, the issue of levels in complex systems has begun to attract scholarly attention.

Behavior of Systems. The behavior of a system must be understood before it can be influenced. Systems theorists conduct considerable research into the processes and behaviors of a system. While it is not possible here to offer a comprehensive inventory of the plethora of information in this area, a brief account demonstrates how extensive it is and how much information is available for HRD to tap to better understand how systems behave.

Katz and Kahn (1966) identified nine common characteristics of open systems that help to inform HRD of the basic character of systems. To date, seventeen laws of complexity have been discovered and can be classified in a matrix particularly relevant to behavior outcomes (Warfield, 1995). McLagan (1989) discusses processes unique to self-creating systems. Dooley (1996) offers theoretical propositions of complex adaptive systems. The entire field of cybernetics exists for the primary goal of understanding information processing and how nonlinear feedback guides systems behavior. Finally, chaos and emerging fields of

complexity inform us that apparent random behavior of a system actually reveals an underlying pattern and order and that complex systems are deterministic (that is, they have something that is determining their behavior).

Change Processes. Systems theory acknowledges that change is part of the very fabric of systems. A systems sub-field, *population ecology*, focuses almost entirely on the potential evolution of the system and posits that actual equilibrium in a system is equal to death; underscoring how systems must evolve, grow, and change to survive. It has taught us to view change as the activation of a system's inherent potential for transformation. The field of *ontogeny* supports this evolutionary perspective in developing ways to study the history of structural change in a unity without loss of organization in that unity (Dooley, 1995).

Systems theory is also increasingly probing for a deeper understanding of the nature and processes of change in systems. Findings in systems theory inform us that systems sensitive to initial conditions are fairly unpredictable in that minor changes can cause huge fluctuations through amplification or, conversely, that some changes in systems can have no apparent effect at all. We also know from the theory that (a) systems behavior gets worse before it grows better, (b) systems tend toward equilibrium (thus, to expect resistance to incremental change), and (c) changes in the essential nature of a system take place when a control parameter passes a critical threshold or bifurcation point (Dooley, 1996). From the field of chaos and complexity, we are beginning to understand that a system is creative not when all of its components pull in same direction, but when they generate tension by pulling in contradictory directions (Stacey, 1992). Systems theory renders the complex dynamics of change more comprehensible through the uncovering of general principles about the nature of change.

The Future in Systems. There have been many distinguished systems scientists who have also been very active in the study of the future. Systems theory contributed a rather revolutionary element to futures theory in that it surfaced the reality that the future is *emergent*—it is created by, and emerges from, self-organization and the interaction of its members (Banathy, 1997; Hammond, 2005; Stacey, 1992).

What does this mean? This means that emergent systems are adaptable, evolvable, boundless, and resilient and are *not* optimal, controllable, or predictable. The literature emerging out of chaos, in particular, informs us that the future is unpredictable due to a system's sensitivity to initial conditions as well as specific characteristics being discovered about emergent systems. Attempting to perform traditional strategic planning given this information has extreme limitations. In a systems approach, rather, the focus of inquiry is on the general character of a system's long-term behavior. There is ongoing pressure to develop improved ways of understanding the qualitative patterns that emerge, how to increase the ability of a system to cope with its emerging future, and how to use evolution as a tool. The emphasis in modern organizations on core competencies, strategic thinking, and scenario planning reflects the application of these principles.

Capabilities Offered by Systems Theory

Systems theory offers a specific contribution that, beyond simply the information described above, affects how things are seen or done. It is in this way that systems theory provides HRD with *capabilities*—the potential to act.

Understanding of Wholes and Complexity. Some might find it strange that this theme has been categorized as a capability. However, it is placed here to sufficiently recognize the perspective contributed by the ontology and epistemology discussed earlier in this paper. Information provided by systems theory is simply raw data without professionals using it to act in ways that are unique in what can often be a mechanistic, reductionist environment. If we accept and utilize systems as a foundational theory, it enables us to set critical standards for our profession that demand a deep analysis of the whole to seek understanding. The conceptual importance of the whole cannot be minimized in HRD, and it has great implications. While there are many frameworks emerging from organization theory that seek to model the parts of an organization, systems theories remind us that we must use these only as a starting point. Systems theories acknowledges that systems have a life of their own separate from their parts, focuses on the interactions *between* the parts rather than the variables themselves, concedes that cause and effect are distant in time and space, and reminds us that the properties of the parts and the whole system are constantly interacting, emerging, and evolving. Systems theories should help to remind the HRD practitioner that the nature of a system is a continuing perception and deception—a continual reviewing of the world.

Systems theory also offers a unique capability rooted in its perspective on the complexity that organizations face. This includes understanding the environment and its impact on systems as well as the complexities within systems. These types of understandings better position systems professionals to deal with the unpredictability inherent in systems and, in fact, to recognize the need for nonlinear feedback and structural instability as a source of innovation and growth. Furthermore, current literature reveals that chaos methods are being discussed as tools to simplify decisions made in conditions of complexity. Guastello (1995) asserts that the tool kit of nonlinear dynamical systems theory consists of: attractor and repellor forces, stabilities and instabilities, bifurcation and self-organization, fractal geometry, the distinction between evolutionary and revolutionary change, and catastrophes and discontinuous change. All of this redirects the potential of HRD to act and forces the development of new capabilities.

Methodologies for Analysis and Modeling. Systems theory offers much in the way of describing, analyzing, and creating models of systems. These methods facilitate the analysis and modeling of complex interpersonal, intergroup, and human/nature interactions without reducing the subject matter to the level of individual agents. The key is to utilize methods that allow the abstraction of certain details of structure and component, while concentrating on the *dynamics* that define the characteristic functions, properties, and relationships—this simplification is coined "reduction to dynamics" (Laszlo and Laszlo, 1997). There are

multiple analysis and modeling approaches grounded in the systems approach to be reviewed in the literature. Generally they entail identification of multiple elements around and in a system and a refocusing on the whole, integrating what was learned in an understanding of the overall phenomena.

Problem-Solving Approaches. Systems theory offers two things in terms of approaching problem solving in applied sciences such as HRD. First, systems theorists actually start from the problem, not some preconceived notion of a model or a solution. Once the manifestation of the problem has been identified and described, they proceed inward to the subsystems and outward to the environment (Laszlo and Laszlo, 1997). Second, systems theory is the antithesis of the "one-tool-fits all" mentality. Rather, the theory accepts complexity, freeing problem solvers from causality and linearity and fostering the identification of patterns and tools that apply to different entities. Furthermore, systems theory encourages drawing on multiple disciplines without being unduly restricted from points of view within those disciplines (McLagan, 1989).

Direction Provided by Systems Theory

Finally, it is suggested that systems theory can serve as a guiding force that offers direction for a discipline's activities and future. Interpretations grounded in systems theory can help to build the case for the structure and behavior of HRD.

HRD as a System. There continues to be much discussion about the purpose, function, and definition of HRD. Further work on how HRD will conceive of itself is imperative to ensure a robust future for the field. While there have been multiple proposals to conceive of HRD as a system, there continues to be no firm agreement or discussion of the implications of such a conception. Systems theory provides guidance for identifying the field's contexts and boundaries, actual versus desired goals, inputs, processes, and outputs, modes of operation, constraints, various systems states, and roles.

Theory Building in HRD. Systems theory can enhance the development of theory in HRD in a few ways. First, it serves as a unifier with other disciplines and sciences in the spirit of its founder. Von Bertalanffy (1968) called for the unity of science through an interdisciplinary theory that sought to integrate findings into "an isomorphy of laws in different fields" (p. 48). This isomorphy needs to be built at two levels. On a microlevel, it can assist in the organization of HRD's "various practical experiences into some formal, theoretical structure that will be useful in advancing our practice and that in turn will provide a basis for further theory building" (Jacobs, 1989, p. 27). On a macrolevel, systems theory provides a foundation on which to acknowledge how interdisciplinary it really is and contribute to the isomorphy integrating those disciplines.

Secondly, systems theory provides relief from mechanistic approaches and a rationale for rejecting principles based on the closed-system mentality (Kast and Rosenzwig, 1972). The theory requires a new heuristic other than reducing things

to their components—that is, focusing on wholes, dynamics, and general theory constructs.

Finally, systems theory provides great insight into the process of theory-building. It offers guidance about the limits of theoretical generalization. Although a motivation undergirding the theory is the unity of science and discovery of general systems principles and laws, it should be noted that systems scientists take great pains to avoid the trap of creating theory that explains 'everything' but actually explains nothing. The goal of systems theory is to build theory that explains a lot and has tentacles linking it to other general theories whose purposes it is to describe a particular class of phenomena (Guastello, 1995).

Theory versus "Fad." Systems theory provides knowledge of the nature and behavior of systems. In this knowledge is once again found a capability—the capability to fight against the propagation of fads. Most of these types of solutions are only partial, focusing on parts that gurus can easily see or market, rather than the holistic view that is needed. They typically lack an overall understanding of complexity and how a system copes with the implications. Systems theory is not a panacea or an easy "six-step" kind of thing. It is hard. However, it provides a foundation that facilitates a thorough understanding of complex situations and systems. This is the strongest way to increase the likelihood of appropriate action. Professionals embracing systems theory as a foundation of HRD are best positioned to influence other practitioners to change their perception of the development and the unleashing of expertise in systems. This is the very nature of scientific revolution (Kuhn, 1970).

Summary

Even in the limited space of these pages, it would be incomplete not to acknowledge that systems theory poses challenges to the field. Some of these are noted in Figure 6.5 in terms of how they impact theory and practice. These issues provide ample challenges to HRD professionals; however, most of them can be overcome through research, development, and increased dialogue between theoreticians and practitioners.

Attending to these challenges will certainly make the field of HRD more capable of being a strategic partner and more able to effectively work to achieve the aims to which we espouse. Systems theories offer much wisdom for HRD professionals and should certainly be requisite for foundational knowledge and effective practice. Hammond (2005), sums it up well in saying that, "Systems thinking nurtures a way of thinking that engenders a different kind of practice and cultivates an ethic of integration and collaboration that has the potential to transform the nature of social organization . . . the challenge is to integrate what we have learned, to communicate these insights to a larger audience, and to nurture institutional practices that honor the ethical principles inherent in the systems view" (p. 20).

Figure 6.5 Challenges Posed by Systems Theory as a Foundation for HRD

Theoretical Challenges	*Practical Challenges*
▪ Provides more information about dynamics between the parts than it does about the parts themselves	▪ Theories are complex
▪ Biological model may ignore social-psychological nature of social systems (Katz and Kahn, 1966)	▪ Responsibilities of systems practitioners have yet to be clearly articulated and developed
▪ Can be misinterpreted as not offering a definite body of knowledge since there is not one mainstream approach	▪ Necessitates interventions that may lie outside of the mandate of the "client" (Dash, 1995)
▪ Lacking in reliable methods of "total" conception of the whole	▪ Can be viewed as constraint to practitioners because time-consuming and costly
▪ Requires subjectivity, which is still a "stretch" for strict positivists	▪ Coercive structures in organizations have to be confronted as they undermine the pluralist spirit of systems approach (Dash, 1995)
▪ Normative implications of systems theory not clarified (Dash, 1995)	▪ Raises the risk of becoming obsessed with system and forgetting individual (Bierema, 1997)
▪ Requires more empirical data on systems applications and concepts relative to theoretical formulations	▪ Places great demands on the field in terms of theory building
▪ Risk of losing scientific depth in favor of breadth	▪ Requires knowledge and skills that are not readily available in academia†

CONCLUSION

Three component theories have been proposed as constituting the theoretical foundation of HRD. Explicit in this proposal is that the *integration* of these three theories is what will equip HRD to contend with the challenges it is called upon to address. In this sense, the whole of the theory of HRD stemming from these foundations will be larger than the sum of the parts and must be unique to HRD (Ruona and Swanson, 1998). The component theories complement one another in explaining the phenomenon of HRD.

REFLECTION QUESTIONS

1. What aspect of psychological theory interests you the most? Why?
2. What aspect of economic theory interests you the most? Why?
3. What aspect of systems theory interests you the most? Why?
4. How do you see the three component theories working together for HRD?

PART THREE

Perspectives of Human Resource Development

This section explains the performance and learning paradigms of HRD and associated models within each. It clarifies the learning–performance perspectives and their logical connection.

CHAPTERS