Social Learning (Cognitive) Theory and Implications for Human Resource Development

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The problem and the solution. The complexity of the domains of human resource development (HRD) requires knowledge of learning theories that can inform the development of HRD theory building, research, and practice. Social learning (cognitive) theory (SLT/SCT) identifies learning as a dynamic interplay between the person, the environment, and behavior. This article explores the elements of SLT/SCT that are most relevant to HRD and identifies theory-building, research, and practice arenas in HRD that have incorporated one or more SLT/SCT propositions. Implications for future HRD theory, research, and practice are proposed. SLT/SCT is shown to have high potential use for HRD due to the comprehensive nature of this theory for explaining learning and behavior.

Keywords: *social learning theory; social cognitive theory; human resource development; adult learning; role modeling; self-efficacy*

Social learning theory is identified in the adult learning literature as one of five traditional theories of adult learning (Merriam & Caffarella, 1999) and as a metatheory of learning for human resource development (HRD) (Swanson & Holton, 2001). Although there are a variety of theorists using the social learning label, Bandura's (1977, 1986) social learning theory, later renamed social cognitive theory to more accurately reflect its emphasis on both learning and cognition, has been predominant in the adult learning and HRD literature. Bandura's theory provides a robust set of propositions that can be useful in informing HRD theory, research, and practice. Although fields highly related to HRD, such as organizational behavior and management, have extensively used social learning theory in their theory-building and research efforts, HRD as a discipline has just begun to explore the potential breadth of its application to topics and areas of interest

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to its constituents. The purpose of this article is to examine the application of social learning theory to inform HRD and to discuss implications for its use in HRD theory building, research, and practice.

This article first explores the foundations of social learning theory and reviews major propositions of this theory within the context of adult learning. Because Bandura's (1977, 1986) social learning (cognitive) theory is viewed as providing a broad explanation of the variables that influence adult learning (Merriam & Caffarella, 1999), this article will focus on the application of Bandura's theory to HRD theory building, research, and practice. Recognizing that the term *social learning* is more commonly used in the adult learning literature, an acronym representing both terms—social learning theory and social cognitive theory (SLT/SCT)—is used to reflect the combined and comprehensive focus on learning processes and cognitive and social elements in Bandura's theory as applied to the development of human resources. Implications for future application of social learning (cognitive) theory to HRD will then be explored.

Foundations of Social Learning Theory

One can trace the belief that people learn through observation of others to the early Greeks, such as Plato and Aristotle. At that time, education for the most part entailed selecting the best models to be presented to students so that students might observe and emulate the model's qualities. Observational learning was explained as a "natural tendency for humans to imitate what they see others do" (Hergenhahn & Olson, 1997, p. 326). It was not until the 1940s that this nativistic explanation of observational learning was challenged as a result of Miller and Dollard's book *Social Learning and Imitation*. Miller and Dollard's beliefs were based on stimulus-response and reinforcement theory. Their ideas were firmly founded in behaviorism and they proposed that humans must observe, imitate, and reinforce what has been observed. Moreover, they believed that learning could not occur unless there was imitation and reinforcement (Hergenhahn & Olson, 1997; Merriam & Caffarella, 1999).

Although Miller and Dollard's work spurred a variety of different versions of social learning theory, it is Rotter's (1954, 1982) social learning theory and Bandura's (1977, 1986) social learning (cognitive) theory that have been identified in the adult education literature as those most relevant to adult learning (Merriam & Caffarella, 1999). Rotter's social learning theory was based in behaviorism, cognitivism, and personality theory and described four concepts that were used to predict behavior: (a) behavior potential, (b) expectancy, (c) reinforcement value, and (d) the psychological situation.

> In its most basic form, the general formula for behavior is that the potential for a behavior to occur in any specific psychological situation is a function of the expectancy that the behavior will lead

> to a particular reinforcement in that situation and the value of that reinforcement. (Rotter, 1982, p. 267)

In this approach, expectancy and reinforcement were proposed to influence the possibility that any given behavior will occur. Rotter (1954, 1982, 1990) also introduced the notion of locus of control as related to one's beliefs with respect to internal versus external control of reinforcement.

However, it is Albert Bandura who is typically viewed as the most comprehensive theorist and researcher in the area of social learning (Hergenhahn & Olson, 1997; Sims & Lorenzi, 1992). Bandura's theory shifted the focus of observational learning more toward the cognitive processes involved in the observation. Bandura believed that humans can learn through observation without the need for imitation; learning could be either direct or indirect (vicarious) in that one could learn through observing others' behaviors and the consequences of those behaviors (Bandura, 1977). He also introduced the concept of self-regulation, proposing that by visualizing self-generated consequences, humans can regulate their own behavior (Bandura, 1977, 1986, 1991).

In later writings, Bandura (1986) relabeled his approach as *social cognitive theory* in recognition of the more comprehensive nature of his theory than what was traditionally viewed as "learning" at that time. Bandura explains his rationale for this shift in terminology in his book, *Social Foundations of Thought and Action: A Social Cognitive Theory.*

> The theoretical approach presented in this volume is usually designated as social learning theory. However, the scope of this approach has always been much broader than its descriptive label, which is becoming increasingly ill-fitting as various aspects of the theory are further developed. From the outset, it encompassed psychosocial phenomena, such as motivational and self-regulatory mechanisms, that extend beyond issues of learning. Moreover, many readers construe learning theory as a conditioning model of response acquisition, whereas within this theoretical framework, learning is conceptualized mainly as knowledge acquisition through cognitive processing of information. The labeling problem is further compounded because several theories with dissimilar postulates . . . bear the social learning label. In the interests of more fitting and separate labeling, the theoretical approach of this book is designated as *social cognitive theory.* (Bandura, 1986, p. xii)

Bandura has most recently focused on the concept of self-efficacy, defined as a "judgement of one's capability to accomplish a certain level of performance" (Bandura, 1986, p. 391). Our perceptions of self-efficacy—how competent we believe we are likely to be in a given situation—influence the effectiveness of our interactions with our environment and with others (Lefrancois, 1999). In the past few years, Bandura's writings have expanded these concepts in relation to human agency (i.e., personal, proxy, and collective) and explored this perspective in cultural contexts (Bandura, 2001, 2002).

SLT/SCT has been considered a synthesis of cognitive and behavioral learning theories (Black & Mendenhall, 1990; Lefrancois, 1999; Sims & Lorenzi, 1992). It is both a behaviorist theory that assumes that a great deal

of learning involves the observation and imitating of models and a cognitive theory that recognizes "our ability to think, to symbolize, to figure out cause-effect relationships, to anticipate the outcomes of behavior" (Lefrancois, 1999, p. 41). As described by Sims and Lorenzi (1992), "Social cognitive theory seems to offer a path leading away from the zero-sum controversy represented by the notions of behaviorism versus cognitivism; it seems to capture the best elements of both frameworks" (p. 23). Since the 1960s, components of Bandura's theory have been subject to extensive empirical investigation (see, e.g., Bandura, 1982, 1986; Hergenhahn & Olson, 1997; Holland & Kobasigawa, 1980; Stajkovic & Luthans, 1998a). Social learning theory has been broadly applied to learning situations that occur over an individual's life span, reflecting real-life situations and problems, and has been shown to be highly applicable in adult learning contexts. The major propositions of SLT/SCT are discussed below.

Major Propositions of SLT/SCT as Related to Adult Learning

Four major elements of Bandura's theory are most relevant to our discussion of SLT/SCT's influence on HRD theory, research, and practice. They are variables affecting observational learning, reciprocal determinism, self-regulation, and self-efficacy. Each of these elements is briefly described within the context of adult learning.

Observational Learning Variables

According to Bandura (1977, 1986), observational or "social" learning is governed by four component processes, which results in a person translating a modeled event into performance that is matched with the model. A model can be either an actual person or symbolic, such as a book, television or film character, a picture, a demonstration, or a set of instructions (Hergenhahn & Olson, 1997; Lefrancois, 1999). These four processes—attention, retention, behavior production, and motivation—are discussed below (Bandura, 1977, 1986: Hergenhahn & Olson, 1997).

Attention. In order for people to learn from observation, they must first attend to the important components of the behavior that is being modeled. Attention is influenced by a number of factors including the person's sensory capacities, past reinforcements, the attributes of the modeled activities or the models themselves (e.g., their attractiveness or status), and the nature of the interactions between individuals.

Retention. For the information gained from observation to be beneficial, people must be able to remember the modeled behavior. Therefore, people must represent the response patterns in memory in symbolic form—either imaginally

or verbally. Imaginally stored symbols are pictures or mental images of past experiences, whereas verbal symbols capture the complexities of behavior in words. Bandura notes that conceptual representations often comprise both images and verbal symbols. In addition, once the information is stored symbolically, delayed modeling is possible as this information can be retrieved covertly, rehearsed, and strengthened some time after the observational learning has occurred.

Behavior production. These processes involve translating the observational learning into performance. Assuming that individuals have the physical capabilities to respond appropriately, they compare their actions to the symbols retained from a modeling experience and undergo a rehearsal process whereby they gradually adjust their behavior based on self-observation and self-correction until an acceptable match with the model is achieved.

Motivation. Motivational processes influence the observational learning experience in that people are more likely to adopt the modeled behavior if this behavior is seen as likely to result in positive outcomes. Reinforcement creates an expectation in observers that if they act similarly to a model whom they have observed receiving reinforcement, they will be reinforced as well. In addition, reinforcement provides an incentive or motive for translating learning into behavior. Bandura distinguishes between learning and performance in that information that is gained through observational learning will only be acted on when there is a perceived need to do so.

In the adult learning context, SLT/SCT highlights the processes necessary for modeling and provides insights into social role acquisition and mentoring (Merriam & Caffarella, 1999). Observational learning through modeling can influence behavior acquisition, inhibition, disinhibition, facilitation, and creativity. One's moral code (e.g., moral judgments) can also be developed through one's interactions with models (Hergenhahn & Olson, 1997). Observational learning processes are relevant to many organizational learning situations or relationships in which individuals attempt to model the behaviors or attributes of others.

Reciprocal Determinism

Bandura (1986) proposed a model of reciprocal determinism in which "behavior, cognitive and other personal factors, and environmental influences all operate interactively, as determinants of each other" (p. 23). Bandura (1986) schematically represented this model as a triangle with each factor bidirectionally influencing the others. There is mutual interaction between the causal factors; however, the relative influence exerted by the interacting factors will vary based on the particular situation or individual.

From an adult learning perspective, this model is particularly relevant in that it takes into account the learning, the individual, and the environment in which the individual operates. Learning is situated firmly in its social context and learning behavior is a function of the interaction of the person and his or her environment. This reciprocal interaction of environment, behavior, and the person—with each influencing and being influenced by the other—provides a comprehensive explanation of the factors that influence adult learning (Merriam & Caffarella, 1999).

Self-Regulation of Behavior

In addition to the learning processes noted earlier, Bandura (1977, 1986, 1991) asserted that human behavior is also partially governed by mechanisms of self-regulation.

> Knowledge, transformational operations, and component skills are necessary but insufficient for accomplished performances. Indeed, people often do not behave optimally; even though they know full well what to do. This is because self-referent thought also mediates the relationship between knowledge and action. (Bandura, 1982, p. 122)

As a result of direct or vicarious experiences, people learn standards of performance, which then become the basis of self-evaluation. Anticipated self-reactions are determined by a person's internalized performance standards and by one's perceived self-efficacy (further described below). Bandura (1977) believed that intrinsic reinforcement that comes from one's self-assessment has a greater influence than extrinsic (externally administered) reinforcement (Hergenhahn & Olson, 1997). With respect to adult learning, the observer's anticipated self-reactions are fundamental to the learning process that occurs through imitation.

Self-Efficacy

Bandura's concept of self-efficacy (1977, 1982, 1986) also has an important role in self-regulated behavior. Self-efficacy is the belief that one can succeed even in the face of challenges and refers to one's judgments as to how effective one is likely to be in a particular situation. Self-efficacy beliefs are influenced by one's personal accomplishments or failures, observations of models performing similar tasks, verbal persuasion, and the intensity of one's emotional reaction or arousal (Bandura, 1982).

Self-efficacy is a concept that can be directly applied to learning and performance. Self-efficacy assessments influence people's motivation to pursue learning goals based on their confidence that they have the capacity to achieve their objectives. Therefore, individuals with high perceived self-efficacy are likely to persist longer at learning activities and to be able to overcome obstacles in their path.

SLT/SCT Propositions as Related to Adult Learning

As a metatheory of learning for HRD, SLT/SCT, through its elucidation of the propositions of observational learning, reciprocal determinism, self-regulation, and self-efficacy, has a central role in learning in HRD (Swanson & Holton, 2001). These propositions attempt to describe elements that influence the learning process, which is viewed as an "interaction with and observation of others in a social context" (Merriam & Caffarella, 1999, p. 264). SLT/SCT, although applicable to learning in all age groups, is shown to be especially relevant to adult learning, as it helps to explain the modeling function of observational learning; emphasizes the interaction of the person, behavior, and environment; and accounts for motivational aspects of learning. Its contribution to HRD and its potential to inform future HRD theory, research, and practice will be described in the following sections.

Applications of SLT/SCT to HRD Theory, Research, and Practice

HRD Theory-Building

Perhaps the most compelling argument for the utility of SLT/SCT to inform HRD theory is the proliferation of recent theory-based articles that incorporate various components of Bandura's theory since the inception of the Academy of Human Resource Development's theory-building journal, *Human Resource Development Review* (first issue, March 2002). Bandura's concepts of reciprocal determinism, observational learning, self-regulation, and self-efficacy have been used by theorists to contribute to our understanding of various HRD constructs. This section reviews recent theory-building efforts in HRD and related fields that have integrated various components of Bandura's SLT/SCT. This review indicates a considerable diversity in HRD topics to which SLT/SCT has been applied, including workplace learning and transfer, employee learning and development, motivation, cognitive demands of new technologies, and organizational socialization.

Workplace learning and transfer. Although focusing solely on training design elements and work environment characteristics (as opposed to individual characteristics), Russ-Eft (2002) included various elements of SLT/SCT in her design of a typology of factors affecting workplace learning and transfer. She referred to Bandura's concept of symbolic rehearsal in her practice component of *training design* elements, positing that "perhaps reproduction can be enhanced with behavioral practice, whereas retention and generalization can be

enhanced with symbolic practice" (Russ-Eft, 2002, p. 53). She also included feedback as a mechanism, consistent with social learning theory, in that information is provided to the learner that allows current and desired behavior to be compared, resulting in some change or adaptation. Self-efficacy is emphasized under *posttraining intervention* elements, both in terms of the elements of self-management and self-talk. Russ-Eft recognized that these areas need further investigation in terms of the development of this typology; however, her middle-range theory incorporated a number of Bandura's observational learning principles as well as important elements of self-regulation and self-efficacy.

Employee learning and development orientation. Maurer (2002) proposed a model of employee learning and development orientation (ELDO) that includes cognitive, affective, and behavioral constructs integrated with work context and content variables. In this model, he combined theory from a number of primary sources including social cognitive literature and the literature on self-efficacy. Maurer applied self-efficacy from SLT/SCT to develop his concept of "self-efficacy for development" (p. 12). He defined self-efficacy for development as "self-confidence in one's ability to attain a possible self with enhanced or increased personal characteristics; bound to a self within a specific situation or context" (p. 13). He noted that, among other theories, the literature on self-efficacy has distinct implications for affect and behavior in development and learning. Consistent with SLT/SCT, he posited a research proposition that work content and context variables will influence self-efficacy for development (Maurer, 2002). Although a number of theoretical frameworks are applied in Maurer's ELDO model, elements of SLT/SCT can be seen as informing various constructs in this model.

Motivation research: Instructional design and human performance technology. Hardre (2003), in her review of motivation theories, asserted that instructional design must fully address the motivational needs of learners and give explicit attention to motivation. She emphasized the potential of self-efficacy, both individual and collective, as a resource for instructional design and HRD. Similarly, feedback was identified as a means to promote competence perceptions and persistence of performance competence. She further contended that "cognitive capacity is dependent on the interaction of individual, social, and contextual factors within the performance environment" (Hardre, 2003, p. 65). She presented the case for motivation as a complex phenomenon and identified high self-efficacy as one of four optimal motivational characteristics. She proposed that these elements, along with other theoretical perspectives, be synthesized into a new model of motivation for instructional design.

Cognitive demands of new technologies. Torraco (2002) examined how well four learning theories addressed the cognitive demands of tasks involving the use of new technologies. In reviewing communities of practice as a phenomenon of Wenger's (1998) theory of social learning, he noted that, in these commu-

nities, learning mainly occurs as a result of participation in social practice. The elements of SLT/SCT—reciprocal determinism or the bidirectional interaction between behavior, cognition, and environment; tenets of observational learning; and self-efficacy—were identified as foundational qualities in this learning theory. According to Torraco, social learning formed one of the bases of the communities of practice phenomenon and helped to explain the relationships and expertise that employees gain at work. "This process of social learning helps meet the cognitive demands of distancing technologies, which require users to possess the capabilities for inference, imagination, and mental modeling to understand what is going on elsewhere" (Torraco, 2002, p. 456). The social context for learning was identified as fundamental to communities of practice.

Organizational socialization. In discussing organizational socialization as a symbolic response to societal expectations, Fogarty and Dirsmith (2001) integrated Bandura's (1986) SLT/SCT in their discussion of mimetic isomorphic forces involved in socialization practices.

> At the individual level, new members imitate other members performing their roles in order to fit in with the work unit and organization. They also are actively and implicitly taught the skills, behaviors, and values necessary for career advancement in the organization by imitating hierarchically superior mentors. This involves a complex interplay of cognitive, behavioral, and environmental elements. (p. 257)

In addition, these authors discussed the role of modeling in the adult socialization process, noting the relevance of Bandura's concept of self-regulation in the context of individuals making judgments about themselves based on standards determined by the environment.

Theory-building in related fields. SLT/SCT has been used extensively as part of theory-building efforts in disciplines related to HRD. Although a comprehensive review of theory building in these related fields is beyond the scope of this article, examples of areas in which SLT/SCT have been applied include organizational behavior and performance (Davis & Luthans, 1980; Kreitner & Luthans, 1984), modeling (Decker, 1986; Manz & Sims, 1981), career development (Hackett & Betz, 1981), self-management (Davis & Luthans, 1980; Manz & Sims, 1980; Sims & Lorenzi, 1992), and organizational management (Wood & Bandura, 1989). There is a strong base of research in these related areas utilizing SLT/SCT as a theoretical foundation, and SLT/SCT is suggested as a framework that can enhance our understanding of the complexities of human resources in the modern workplace and contribute to more effective management of human performance (Stajkovic & Luthans, 1998b).

HRD Research

SLT/SCT has had a considerable influence on research on behavior in organizations. This can perhaps be attributed to the middle ground offered

by this theory between behaviorism and cognitivism and the tripartite recognition of the interactions between environmental, behavioral, and cognitive elements. In addition, SLT/SCT encompasses motivational aspects with its concept of self-efficacy and addresses how individuals both learn and apply what they learn (Black & Mendenhall, 1990). This section focuses on three areas in which there has been considerable interest and application of SLT/SCT in HRD and related literature: self-efficacy in relation to performance, training, and motivation; cross-cultural training; and self-regulation and self-management.

Self-efficacy in relation to performance, training, and motivation. Bandura's concept of self-efficacy appears to be of great interest to HRD researchers, especially given the emphasis that HRD places on determining the various factors that influence both learning and performance (Swanson & Holton, 2001). A number of studies specific to HRD have explored the relationship of self-efficacy to performance, training outcomes, learning, and motivation. For example, Bhanthumnavin (2003) researched the predictors of subordinate performance in Thai work units and found that perceived self-efficacy was one psychological characteristic found to be associated with subordinate performance. Hertenstein (2001) examined the training outcomes for participants in weekly (spaced) and residential (massed) labor education classes and found that at the conclusion of training, individuals with high learning goal orientation had more positive outcomes on task-specific self-efficacy (described as an affective outcome of individual training) in the massed labor education class than in the spaced practice course. Ellstrom (2001) discussed conditions that promote integration of learning and work and identified self-efficacy as a learning resource. Lim and Chan (2003) found that self-efficacy was one of the factors that were positively related to motivation for skills upgrading. As these authors noted, "Presumably, self-efficacy affects an individual choice of activity and the act of choosing may in turn raise his/her level of motivation" (Lim & Chan, 2003, p. 222).

There has also been significant research in fields related to HRD that supports the positive relationship between self-efficacy and performance (see Stajkovich & Luthans, 1998a, 1998b). A number of researchers have explored efficacy-performance spirals, in which a high interdependence between efficacy and performance produces a deviation-amplifying loop whereby the relationship between perceived efficacy and performance continues to build on itself over time. This concept is highly applicable to HRD due to both the cyclical nature and systems aspect of this relationship, in that efficacy-performance spirals can be both upward and downward and are affected by a variety of factors that can occur at multiple levels of analysis—individual, group, and organization (Hostager, Neil, Decker, & Lorentz, 1998; Lindsley, Brass, & Thomas, 1995). In addition, variables such as task feedback and task experience have been found to influence the

occurrence of self-corrections in the efficacy-performance spirals (Shea & Howell, 2000). Bandura's concept of self-efficacy has also been examined as a mediator of motivation, goal setting, and performance (Appelbaum & Hare, 1996).

In addition, various researchers have discussed the organizational implications of self-efficacy. Gist (1987) examined self-efficacy in terms of selection, leadership, training and organization development, vocational counseling, locus of control interactions, equal employment opportunity, performance appraisal, goals and incentives, and group and organizational performance. Appelbaum and Hare (1996) also surfaced various organizational applications of self-efficacy including selection, performance appraisal and feedback, training, and absenteeism. In his most recent book, Bandura (1997) emphasized the role of self-efficacy in relation to career development and pursuits, mastery of occupational roles, organizational decision making, and collective organizational efficacy, all of which are important HRD topics.

Cross-cultural training. There has been a significant amount of recent attention placed on cross-cultural issues in HRD. Black and Mendenhall (1990) suggested social learning theory as a framework for understanding the literature on cross-cultural training and as a means for guiding future research in this area due to the need for a theoretical framework that would also encompass cross-cultural interaction, considering the differences in domestic and foreign contexts. These authors presented a model of cross-cultural training and social learning theory that incorporated Bandura's four processes of observational learning and the elements of motivation and incentives. Osman-Gani and Zidan (2001) expanded this application in their discussion of the cross-cultural implications of planned on-the-job training and recommended incorporating contextual factors—a paradigm shift if you will—in terms of emphasizing culture-specific versus universal elements in international HRD research. The application of SLT/SCT was proposed to enhance the theoretical robustness of cross-cultural research given the globalization of today's work environments.

Self-regulation and self-management. The internalization of goal setting and reinforcement mechanisms provides an opportunity to apply Bandura's SLT/SCT to the topic of self-management. In an effort to improve work attendance, Frayne and Latham (1987) trained unionized employees in self-management techniques and found that the higher the perceived self-efficacy of the worker, the higher the attendance record. Research on strategies such as self-observation, goal specification, cueing, incentive modification, and rehearsal has been explored with respect to developing self-management behavior in subordinates (Manz & Sims, 1980). Similarly, training on relapse prevention strategies, based on self-management techniques, has been proposed to enhance self-efficacy and the subsequent maintenance of behavior change (Marx, 1982), and, furthermore, these strategies were noted to interact differ-

ently depending on the nature of the transfer climate (Burke & Baldwin, 1999). A number of arenas in which SLT/SCT can offer a significant contribution to effective management of employee behavior include modeling, self-efficacy, self-management, and self-managed teams. SLT/SCT is also a useful lens through which to extrapolate the elements of self-regulation to the group level of analysis, as would be the case with self-managed teams (Sims & Lorenzi, 1992).

HRD Practice

SLT/SCT is recognized as being highly applicable to classroom learning in HRD, in which facilitators serve a role-modeling function in their instructional capacity. Its role in non-classroom-based learning has also been emphasized, with respect to socializing new employees into organizations through interactions with experienced organizational members and through the observational and role-modeling functions of mentoring and on-the-job training (Swanson & Holton, 2001). These practice applications are further explored below.

Observational modeling techniques. Behavior modeling techniques, based on SLT/SCT theory, can be used to help learners form mental models of appropriate behavior. This technique involves presenting the skill to be learned, viewing an appropriate model or example of how the behavior is accomplished, discussing the effectiveness of the behavior, practicing the behavior, and providing corrective feedback. To achieve the most training benefits, behavior modeling techniques should incorporate practice, simulations, and role-plays. Target stores have effectively implemented behavior modeling techniques as part of their customer service training (Milkovich & Boudreau, 1997). In addition, SLT/SCT modeling principles can be used in managerial leadership training through applying the elements of observation, behavioral rehearsal, feedback and social reinforcement, and transfer of training (Sims & Lorenzi, 1992). The principles of SLT/SCT can also be applied to video-based training to enhance the effectiveness of this approach (Bell, 1992).

Self-efficacy and training and development. The most extensive application of self-efficacy has occurred in the area of training, with a focus on training needs assessment and training methodology (Appelbaum & Hare, 1996). Practitioners should consider integrating methods to increase self-efficacy as part of their training and development efforts. Self-efficacy can be fostered in employees through modeling-based training, coaching, job supports, and the application of appropriate reinforcements. Self-regulation and self-efficacy can be applied to develop behavioral self-management strategies (e.g., goal setting, self-assessment, intrinsic motivation, and self-correction processes) and cognitive self-management strategies (e.g., positive self-talk, converting obstacles into opportunities, and mental imagery) (Sims & Lorenzi, 1992). In addition,

practitioners engaged in organization development activities within organizations should be aware that employee perceptions of self-efficacy could affect their reactions to change initiatives. An integrated instruction design approach that involves cognitive, social, and behavioral aspects of learning, such as that suggested by Moisy (2001), can be helpful in situations in which the behavioral change needs to be integrated into the learner's lifestyle or in which there is resistance to change.

Employee socialization and on-the-job (OTJ) training. SLT/SCT principles can also be incorporated in employee socialization and OTJ training initiatives. Organizational socialization often occurs through interactions with colleagues, as people tend to rely on observing others to understand and make sense of a new environment and in learning how to fit in with the established social norms. For example, as part of their orientation for newly hired employees, Disney Company has these new employees spend time with another employee on the job so that they can be exposed to the various learning experiences that apply to their new roles (Milkovich & Boudreau, 1997). Practitioners can apply observational learning principles to enhance the likelihood that these employee socialization and OTJ training initiatives will achieve successful outcomes. These same principles apply to the establishment of mentoring programs in which a less experienced member of an organization is paired with a more seasoned member to facilitate social learning.

Implications for Future Theory, Research, and Practice in HRD

A review of the applications of SLT/SCT to HRD theory building, research, and practice supports the following conclusions. There is a strong body of knowledge and research on organizational behavior and social learning theory. The application of SLT/SCT specifically to HRD, although it has much potential, is less well established. Current theory-building efforts, however, indicate that many of the concepts of SLT/SCT are seen as relevant to HRD theory-building and research agendas. The robust and comprehensive nature of SLT/SCT, with its combined focus on both learning and performance and its emphasis on the interaction of person, environment, and behavior, supports its utility in a variety of HRD arenas. In addition, SLT/SCT is seen as incorporating both cognitive and behavioral elements of learning and could, therefore, serve an integrating role with respect to the complexity of topics that are explored by HRD researchers. SLT/SCT has a strong body of empirical evidence that could assist in providing a solid foundation for expansion of future HRD research using this theoretical framework. Although no single theory can provide a complete explanation of human learning and development, this article suggests that SLT/SCT

could be useful as one lens through which to view the multidisciplinary nature of various phenomena in HRD that require the integration of theoretical perspectives.

The topics explored above, including the relationship of self-efficacy with respect to performance, training, motivation, and its organizational implications; cross-cultural training; self-regulation and self-management; and classroom and non-classroom-based learning are important HRD areas that deserve additional attention. However, SLT/SCT has the potential to address an even broader array of problems including, among others, those related to motivation, personality, and moral conduct (Hergenhahn & Olson, 1997). For example, social learning theory has been suggested as a foundation for the development of mentoring relationships and systems that could lead to organizational change (Zagumny, 1993). In addition, enhancing individuals' self-efficacy has been proposed to facilitate organizational change (Porras & Hargis, 1982). A common thread of many HRD interventions is the management of organizational change, and SLT/SCT has much to offer in terms of our understanding of the impact of change on employees, feedback systems, goal-setting activities, and retraining programs. Bandura's (1997) recent writings on how self-efficacy operates within the broader elements represented by social cognitive theory in influencing human action, adaptation, and change have particular relevance here. Similarly, concepts of leadership as related to self-management (Sims & Lorenzi, 1992) and the implications of this theory for human performance in organizations (Stajkovich & Luthans, 1998b) deserve further attention in the HRD research and practice literature. HRD researchers should extend the work that has been done by related disciplines on these and other relevant topics and use SLT/SCT to its fullest advantage, based on the power of this theory to explain complex behavior in organizations.

In addition, Bandura (1977) has discussed issues of moral conduct as a component of his theory, proposing that one's moral code develops through interactions with models. Currently, there is a high emphasis in the HRD literature on issues of ethical leadership and corporate governance. There is also a resurgence of interest in the factors that influence ethical leadership in our society given the unfortunate examples of Enron and WorldCom today. As proposed by Sims and Lorenzi (1992), self-management, which has as its basis the elements of self-regulation, may be the ethical alternative. Considering the interests of HRD, the topic of ethical development deserves special attention and SLT/SCT can be used to inform future research and practice in this area.

In summary, SLT/SCT is particularly important in the development of adults in our complex society as they must navigate among various and diverse models, determine which are competent and contextually applicable, and learn appropriate behaviors that are congruent with their self-per-

ceptions and beliefs. SLT/SCT helps to explain the various learning and cognitive processes that go into the determination of what is learned and how this learning is translated into behavior. SLT/SCT is offered here as a conceptually rich perspective that can lend a solid theoretical and empirical base to support future HRD theory building. A number of HRD researchers have used SLT/SCT to inform their research efforts, and key practice and organizational applications of SLT/SCT relevant to HRD have been identified. There is great potential to apply this theory to other top-priority areas in HRD, such as change management and the development of ethical leaders, that are of great importance in today's workplaces and to contemporary society.

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