FOUNDATIONS
OF THE DISCIPLINE OF HRD

Psychological Foundations of HRD

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Psychology is one of the major theoretical foundations for HRD (Chalofsky, 2007; McGuire & Cseh, 2006). HRD research undergirded by psychological theory has been instrumental in exploring and testing the links between learning, performance, and change and many other variables (e.g., affect, job satisfaction, mentoring, motivation, turnover, profit) in organizations at individual, team/group, and organizational levels (e.g., Ferguson & Reio, 2010). HRD research into organizational behaviors, including employee motivation, is strongly supported by psychological theory. Exciting new research supported by psychological theories has also extended our understandings of gender, ethnic, and cultural similarities and differences in the workplace, allowing for increased sensitivity to issues of diversity and inclusion. The research, in turn, has informed more expert HRD practice in training and development, career development, and organization development activities. The focus of this chapter will be to explore the psychological foundations of HRD and its association with the major research and practice issues and trends in the field.

Innovation, based on the creative development of new products or processes, requires attendant change in workplace procedures and the training of workers to manage these procedures (Stubblefield & Keane, 1994). Thus, the more organizations invest in research and development to generate innovation and growth, the more they need to invest in training and development to maintain it. Recognizing that HRD is an applied, interdisciplinary field, theories from a number of disciplines have lent themselves to guiding better HRD research and practice to support such activity (Chalofsky, 2007).

Swanson (1995, 2001) proposed that the theoretical foundations of HRD could be best represented by systems, economic, and psychological theories within an ethical frame. In a Delphi study of HRD subject-matter experts,

McGuire and Cseh (2006) found at least partial corroboration of Swanson's work, as systems and psychological theories were found to be foundational supports in HRD, but not economic theory. Ferguson and Reio (2010) also found economic theory in the form of competitive advantage to be useful for understanding HRD's link to high performance systems. In a more expansive view, Chalofsky (2007) also supported economic theory as being foundational to HRD, along with sociology, anthropology, management, physical science, philosophy, education, and psychology theories.

As "HRD is . . . primarily concerned with people's performance in workplace organizations and how those people can strive to reach their human potential and enhance their performance through learning" (Chalofsky, 2007, p. 437), HRD centers then on the learning and development of individuals, groups/teams, and organizations. This learning and development is enriched through improving learning opportunities and providing process for learning and development and positive change that serve the purpose of improving performance. Psychological theory provides a key foundation for the field of HRD, as it explains the development of employee mental processes and behaviors (Passmore, 1997).

Acknowledging the contributions of systems and economic theories for informing the HRD field (Ferguson & Reio, 2010; Lynham, Chermack, & Noggle, 2004), the focus of this chapter will be exploring the psychological foundations of HRD. In the following section we will review key psychological theories and their respective links to HRD practice: behavioral, humanistic, Gestalt, and developmental.

FOUNDATIONAL PSYCHOLOGICAL THEORIES AND HRD

Behavioral Psychology and HRD

A main focus of behavioral theory has been the observable change of behavior. Behavioral theory is also known as learning theory, and it remains one of the most widely accepted classes of theories in the field of psychology (Yang, 2004). In this perspective, knowledge and skills are thought to be an accumulation of each individual's personal experiences with his or her environment. The accrued knowledge and skills and learning are useful in turn to inform better performance of daily tasks at home, school, and work. In addition, change in the behavioral tradition is not a reflection of being in a certain stage, as in cognitive development theory; rather, it is steady and incremental. We present the two most studied behavioral theories in the context of HRD: operant conditioning (e.g., Skinner) and social learning (e.g., Bandura) and how they are linked to HRD practice.

Operant Conditioning. Operant conditioning theory regards learning that occurs via rewards or punishment for an individual's behavior (Skinner, 1938). Immediately following a random or accidental behavior (the operant behavior), reinforcement can occur when the behavior is experienced as being satisfying or pleasurable, resulting in strengthening the behavior. There are positive and negative types of reinforcement. Positive reinforcement occurs when a desirable behavior (e.g., mentoring a newcomer without being asked) is accompanied with adding something that would be experienced as satisfying, such as giving the worker public recognition for engaging in this prosocial behavior. In contrast, negative reinforcement occurs when a desirable behavior is accompanied by taking away something that would be experienced as satisfying, such as a manager taking away mandatory Saturday work because of voluntarily serving as a mentor. In both situations, the reinforcement will strengthen the operant behavior, that is, make the voluntary mentoring behavior more likely to recur.

As for punishment, there are two types: presentation and removal. Presentation punishment involves adding something one does not like due to engaging in an undesirable behavior (e.g., incessantly "surfing the web" rather than being attentive in management training class) such as publicly embarrassing the web surfer in class. Removal punishment involves taking away something that one wants because of engaging in an undesirable behavior (like consistently being late to a management development course), for example, temporarily dismissing the individual from the management development program. In both cases, the punishments will likely decrease undesirable behavior by taking away something the individual desires, in this case career development.

Operant conditioning principles are particularly useful for shaping and increasing learning, behavior, and performance. In essence, by controlling the consequences of an employee's behavior, the HRD professional and manager can shape an employee's behavior. In the training classroom, better learning and performance have been associated with taking a behavioral, mastery learning approach (direct instruction is another). Mastery learning entails setting a pre-specified mastery level, such as earning an 80 percent on a learning module quiz, and allowing the learner to repeat the quiz or an equivalent at his or her own pace until mastery has been demonstrated. Such an approach involves setting clear learning objectives, deciding what constitutes acceptable mastery of stated objectives, setting well-defined goals to attain objectives, formative assessment, reinforcement of learning through feedback, and summative evaluation of success in terms of achieving learning and performance objectives (Bloom, 1971). Instructor use of such structured procedures has been shown to increase the likelihood that most learners will achieve a

predetermined mastery level, but less so in fostering higher-order learning related to critical thinking and creativity (Joyce, Weil, & Calhoun, 2004). Outside the classroom and more relevant to the typical day-to-day activities of an employee, consistent sloppy dressing behavior could be shaped by linking sloppy, inappropriate dress to a reinforcement or punishment consequence. One means a manager might try to increase the likelihood of appropriate dress might be offering sincere praise each time the employee dresses as desired (positive reinforcement); another means might be taking away something desirable like free parking privileges for a month (removal punishment).

Social Learning. Social learning theory focuses on how individuals acquire personality characteristics and social skills through observational learning or modeling. Thus, unlike operant conditioning, learning can be vicarious, with no direct instruction or shaping being required. Further, learning is no longer merely an observable change in behavior; one can learn much, but without necessarily demonstrating it. In this type of learning, the learner observes a model performing some kind of desirable behavior (making a compelling presentation) and, from close observation, subsequently learns to perform the behavior as well. The model can be either live or symbolic, that is, observed through various media like movies, books, and the Internet. The observer may or may not imitate the behavior, depending on the interest in the behavior being performed, the competence and status of the model, and gender-appropriateness. The imitators also must pay attention to the behavior being modeled, remember the information, produce the behavior, and have the motivation to perform the behavior themselves in the future. Trainers, for example, by keeping the information being taught interesting, can increase a learner's motivation to imitate the performance being modeled in the classroom context.

Bandura's (1997) socio-cognitive learning theory extends social learning theory in that it also heavily emphasizes one's efficaciousness beliefs. Self-efficacy develops from positive past personal performances related to a task, seeing others similar to themselves experience success, verbal persuasion, and physiological states where, when strong (e.g., enthusiasm), can make it more likely the individual will view his or her capabilities as leading to success. Strong self-efficacy beliefs are powerful contributors to better task performance because highly efficacious individuals are more likely to try performing the task in the first place, set more difficult goals, try harder when doing so, remain resilient in the face of obstacles, and exhibit less anxiety.

In a training setting, it is not unusual to find someone who suffers from low self-efficacy beliefs. For example, when individuals are required to attend a writing course because of poor workplace writing skills, writing self-efficacy may be decidedly low. Applying socio-cognitive learning principles (Bandura, 1997)

to increase the learners' writing self-efficacy beliefs, the trainer can take steps to increase self-efficacy through providing ample opportunities to be successful at writing in the course, ensuring that the learners see others like themselves experiencing success, providing words of encouragement, and reducing anxiety toward writing. Thus, through purposeful design, learner self-efficacy can be enhanced and subsequent writing performance improved.

As for application of social learning principles beyond the classroom, HRD professionals, by remaining mindful of the power of observational learning on enhancing learning and behavior, can assist management, for instance, in designing mentoring programs where protégés can be teamed with mentors who possess competence, high status, and similar appearance model characteristics. Successful mentors are more likely to allow for ample observational learning opportunities through modeling appropriate behaviors supportive of the protégé's psychosocial and career development (Kram, 1983); protégés are more likely to imitate their mentor's behavior if the mentor is perceived to be competent, high status, and similar in appearance. The protégé, in turn, must be attentive to the mentor's modeled behavior, retain it, practice producing the behavior, and remain motivated to produce the same behaviors.

Humanistic Psychology and HRD

Humanistic psychology concerns itself with humans' intrinsic motivation to grow, theorizing that we strive to reach our highest potential. In essence, humans are best considered holistically, where the whole person is more than the sum of his or her parts and the needs and values of human beings take precedence over material things. Humanistic psychology stresses that we must pay attention to the individual's way of seeing the world to understand him or her best, the capacity for change is inherent in the individual, human activity is self-regulatory in nature, and that people are inherently good (Peterson, 2006). Humanistic psychology, then, is not focused on mechanical causes and effects as in the behavioral tradition, but rather toward more elemental questions about existence and meaning and the process of becoming. To be clear, humans are not simply objects in an environment that can be shaped through reward and punishment, but we also have our own values and beliefs that motivate and orient us.

Carl Rogers (1951, 1961, 1969) and Abraham Maslow (1970) are two of the most well-known psychologists within humanistic psychology, with Ryan and Deci (2000; self-determination motivation theory) as more recent representatives. Rogers and Maslow both stressed that individuals are self-actualizing, self-directed beings who strive to make the most of their potential. Self-actualization can be enhanced by creating conditions under which individual potential can unfold. For Maslow, growth toward self-actualization is free

choice and can only progress forward when basic needs for safety, belonging-ness, and love and respect are met.

Adult learning theory has been strongly influenced by the humanistic tra-dition (Yang, 2004). Knowles' (1990) theory of andragogy includes Rogers' notions of facilitating learning instead of teaching someone directly, making learning relevant to the learner, and reducing threat to the self in the con-text of learning. Knowles' work also emphasizes Maslow's (1970) ideas about being free to choose and develop on one's own, feeling safe to being curious and exploratory to support creativity, and the benefit of building upon person-ally meaningful experiences for the sake of attempting more complex ones. In andragogy, these notions are linked to Knowles' theoretical assumptions regarding adult learning: the need to know, learner self-concept, learner expe-rience, readiness to learn, orientation to learning, and motivation.

In the context of HRD, instructional design models have embraced humanistic psychology quite readily. For example, Wlodkowski's (1993) Time Continuum Model of Motivation, assuming that everyone is motivated to learn and grow, includes Maslow's (1970) needs hierarchy as a means to develop motivational learning for adults. As one of the "beginning activities" of a learning endeavor, the instructor must attend to the learners' needs. For motivated learning to occur, the instructor must employ strategies to address Maslow's physiological, safety, belongingness, and self-esteem needs for their learners. To address the need for self-esteem in one's course, the instructor might implement strategies such as affording opportunities for self-directed learning or appealing to the learners' curiosity, sense of wonder, and need to explore. As another instructional method, experiential learning can be used as a means of creating learning motivation and developing the person as a whole through active engagement in the learning process (Swanson & Holton, 2001).

Positive Psychology and HRD

Positive psychology is a relatively new movement in psychology that empha-sizes "positive subjective experiences, positive individual traits, and posi-tive institutions" for the sake of improving quality of life and preventing "the pathologies that arise when life is barren and meaningless" (Seligman & Csikszentmihalyi, 2000, p. 5). Overall, it seeks to describe rather than pre-scribe what we as humans do.

In a number of important ways, positive psychology overlaps with human-istic psychology (Peterson, 2006). Still, Seligman and Csikszentmihalyi (2000) were careful to distance the field from humanistic psychology, claiming the perceived lack of scientific rigor (e.g., How does one design empirically rigorous research that could validate one's need to grow?) had relegated humanistic psychology to little more than pop psychology. Waterman (2013)

also cautioned that it may not be possible to merge the two fields (even if desired) because of philosophical differences in how to conceptualize human nature and well-being, conduct research related to well-being, and implement therapy.

The theoretical perspectives are similar in that both regard the good about life as being indisputable, yet positive psychology also considers the realities of the bad part of life as well. Both also emphasize creating value in one's life and others' lives, meaningful work, and accomplishing something worthwhile. Further, both highlight that individuals are intrinsically motivated to grow. A major contrast is the kind of evidence used to evaluate the theories (Peterson, 2006). Positive psychology tends to emphasize quasi- and experimental research (Seligman & Csikszentmihalyi, 2000), rather than case studies, phenomenological inquiry, interviews, and surveys (Peterson, 2006). This is unfortunate in that both quantitative and qualitative research can provide considerable evidence to evaluate the utility and validity of a theory (Reio, 2010). A major contribution of positive psychology has been developing better instruments to measure constructs associated with the field, including subjective experiences like well-being (personal and job-related), optimism for the future, flow, life satisfaction, and positive affective states (Diener, 2000; Salovey, Rothman, Detweiler, & Steward, 2000; Turner, Barling, & Zacharatos, 2005); and, forgiveness, creativity, wisdom, and hope at the individual trait level (Simonton, 2000). At the group level, positive psychology concerns an orientation toward being a better citizen: civility, work ethic, altruism, and tolerance (Diener, 2000; Larson, 2000; Simonton, 2000).

Borrowing from positive psychology, HRD professionals might focus on finding ways to focus on the positive aspects of work. By creating a workplace climate where worker engagement might be enhanced (e.g., being in a state of flow while working), job satisfaction, organizational commitment, and job-related well-being could be optimized (Shuck, Reio, & Rocco, 2011; Turner, Barling, & Zacharatos, 2005). In training situations, facilitating making people better at what they value (e.g., making an honest sale to a client), rather than trying to change what they value just to meet organizational priorities (e.g., making a sale at any cost), would be a positive way to promote job-related well-being (Turner et al., 2005). Providing employees opportunities to give something back to society through allowing workers the time for tutoring needy students at the local high school might be another means to improve not only their job-related well-being, but perhaps assist employees in working toward personal meaning in life.

Both humanistic and positive psychology then support investing in and developing employees, because it is not only good for the company, but it is the right thing to do. The "D" in HRD is development. HRD professionals

would seem most attuned to developing the optimal potential and expertise of employees. Indeed, when human beings are nurtured under the right conditions, they can attain a much higher potential, to the short- and long-term benefit of the individual, company, and society.

Gestalt Psychology and HRD

Gestalt psychological theory is a cognitive theory centered on how individuals interpret the stimuli around them. This theory focuses on perception; in fact, Gestalt is the German word for structure or pattern. This theory states that individuals interpret stimuli or experiences as an aggregate of the parts, or the sum of all parts (Zwikael & Bar-Yoseph, 2004). This theory informs the HRD field on how individuals move from one learning experience to another, as well as how they interact with others depending on their perception. Gestalt psychology provides a framework to understand the whole person, as part of the organizational system, how the person interacts with the whole, which is the organization (Swanson, 2001). Additionally, this theory provides insight to the inputs of individual contributors and work processes within the organization (Swanson, 2001).

Gestalt psychology has contributed to the field of HRD a holistic perspective of learning, such as Lewin's experiential learning and Kolb's experiential learning cycle. It is the sum of the parts (perception, cognition, and behavior) that leads to learning (Ikehara, 1999). Additionally, by focusing on enhancing intrapersonal and interpersonal awareness and acceptance in psychologically healthy individuals, for example, to build trust, this theory has pioneered the study of the impact of feelings and perceptions in group and team interactions.

HRD practitioners need to understand the different elements that impact social behavior in the workplace. Using Gestalt psychology, HRD practitioners can better understand how perceptions and other elements play a role in group and team interactions. Thus, groups cannot be understood as merely a function of the characteristics of their individual members; when individuals come together as a group, a new entity has been created, and it is this new entity as a whole that must be examined.

As a Gestalt/social psychologist, Lewin (1958) proposed field theory as a means to understand and direct organizational change and development. Consisting of three stages (unfreezing, moving, and refreezing), the process of change can proceed productively if workers refrain from relying on previous tried-and-true procedures and accept the inevitability of a new change in procedure (unfreezing), assent to the change in procedure (moving), and make the new procedure change permanent (refreezing). Thus, in the context of employing interventions to facilitate organizational change, Lewin (1958)

noted how behavioral change must first be directed at changing group norms instead of changing the individual. Group pressures to conform tend to dampen individual behavior change. HRD/OD consultants act as change agents who facilitate such change.

Developmental Psychology and HRD

McGuire and Cseh (2006) noted the clear developmental focus of HRD as mirrored in individual, career, and organization development. However, the field of HRD has not yet tapped sufficiently into the benefits that developmental theory can provide. We will concentrate on cognitive and social and emotional development for the purposes of this chapter, as each presents a substantial theoretical and empirical basis for supporting moving the field forward.

Piagetian Theory. Cognitive development theory supports much of what we do to facilitate learning and development, not only in classrooms, but virtually in any place where learning takes place. Piaget's (1952) groundbreaking work supports an understanding that cognitive development is a function of brain maturation, quality physical and social experiences, and equilibration. In this theoretical model, development precedes learning. The stage of development influences how we think, learn, and act. At different stages of development, we have qualitatively different ways of reasoning logically (sensorimotor, pre-operational, concrete operational, and formal operational stages). Further, learners construct their own knowledge through active engagement with their environment; in other words, learners must act on new information in some way to make it personally meaningful. Piaget and colleagues' research supports particular educational practice in that it presents guidance as to when it would be developmentally appropriate to introduce concepts to learners.

Although most adults can think abstractly, they primarily function at a concrete operational level in daily activities, Piaget's third stage of development. The point for an HRD professional is this: align instructional practice with concrete experiences like using familiar examples in a learner's life to explain more complex ideas or employing concrete props and visual aids to demonstrate hierarchical relationships (timelines, dimensional models, and diagrams). For teaching that requires more hypothetical or abstract reasoning (e.g., teaching an abstract concept like "innovation"), allow learners to start with their personal, concrete experiences with the innovation concept and from that point explore hypothetical innovation-related questions through, for example, position papers and debates or group discussions to examine its nature.

Piagetian theory has been extended to include additional stages and phases of development beyond formal operations by a number of theorists (Neo-Piagetians; Arlin, Baltes, Commons, Kegan, Sinnott, and others; see Hoare [2006] for full exploration of these and others' adult developmental views). The thinking is that, as adults, we understand the world differently than an adolescent does. Neo-Piagetian theorizing has been useful in promoting understanding of the complex, situational interplay of learning and development in diverse, uncertain settings that require problem finding, reflective judgment, expertise, and wisdom throughout adulthood.

Sociocultural Theory. Sociocultural theory builds upon Vygotsky's (1978, 1986) pivotal work, which posits that cognitive development cannot be understood without considering the social, cultural, and historical context. Cognitive development then is not so much a function of brain maturation and physical and social experiences, as in Piagetian theory, but more a function of social experiences and learning within certain maturational constraints. In this view, learning precedes development. A more knowledgeable peer or tutor works to scaffold instruction through the learner's zone of proximal development (zone where individual can master a task if provided appropriate help and support), where he or she can learn more quickly and deeply than simply learning through discovery. The contribution of the sociocultural perspective cannot be overemphasized because it was one of the first to highlight the importance of the context of learning and development.

Beyond bringing to light the significance of settings, institutions, and environments, sociocultural theory has made a number of pedagogical contributions. In training classrooms, cooperative learning, peer tutoring, and reciprocal teaching are useful for scaffolding the best learning and development. Sociocultural theory provides a lens to understand why face-to-face and online apprenticeships, internships, mentorships, coaching, on-the-job-training, team/group collaborations, retreats, committees, quality circles, and others work as meaningful ways to learn and develop throughout one's lifespan (Bonk & Kim, 1998). In each case, experts and peers stimulate curiosity, deliver information in manageable amounts, mark critical features of a task, manage learner frustration, model the appropriate way to perform the task, ask questions, and provide feedback—all in the service of assisting learning and performance.

Information Processing Theory (IP). Using the computer as a metaphor for human information processing, IP theory has been instrumental in furthering our understanding of how stimuli are perceived, stored, and accessed through the information processing system. Operating at three levels (sensory, working, and long-term memory), new stimuli are encoded in sensory memory,

where perception will determine what will be held in working memory for additional processing (Atkinson & Shiffrin, 1968). Thoroughly processed information becomes part of long-term memory, a vital source of knowledge for working on current and future problem-solving activities. In this perspective, learning is the result of our active attempts at making sense of the world, rather than simple information acquisition.

For HRD, IP theory provides guidance for instructional design, computerized instruction, and, in turn, learning. For training classroom instruction, learner attention, activation of prior knowledge, and the retrieval context are vital because perception and comprehension depend heavily upon each. Trainers can guide learner attention to relevant aspects of the learning task and present information in such a way as to avoid overloading learners' working memory capacity. Trainers can also activate relevant prior knowledge prior to teaching the new task. Trainers must devise activities, too, that will ensure they will elaborate on the material (e.g., by requiring learners to rephrase the material in their own words, drawing pictures of the materials). Further, trainers would also need to teach learners a variety of organization, contextualization, and mnemonic (systematic procedures for improving memory) strategies about why, when, and where to use the strategies.

A major contribution of IP theory is that is helps to break the learning process into meaningful parts that can assist intervention efforts. Although criticized for depicting cognitive development too simplistically and unrealistically (e.g., computer metaphor), IP theory has been useful for understanding, remembering, and learning among those who are developmentally delayed, learning disabled, suffering from traumatic brain trauma, and lacking attentional focus (ADD). IP theory allows the learning process to be broken into meaningful parts where interventions can be directed best. Piagetian and sociocultural theories have little to add when considering such learners.

SOCIAL AND EMOTIONAL DEVELOPMENT

Attention to social and emotional development tends to be short-shrifted by HRD researchers as compared to cognitive development. This state of affairs is unfortunate in that there is rich, compelling psychological theory, backed by substantial empirical evidence, to guide the field. We will focus on attachment theory and psychosocial theory first and finish by introducing Arnett's (2000) theory of emerging adulthood.

Attachment refers to forming an enduring emotional bond to another (Bowlby, 1988). Bowlby proposed that attachment experiences become internalized into expectations about significant others' reliability in being helpful in handling distress and about oneself as being worthy of love throughout

the lifespan. Hazan and Shaver (1987) extended attachment theory by linking attachment styles to adolescence and adulthood, particularly as it relates to how one manages one's love relationships. Reio, Marcus, and Sanders-Reio (2009) further extended attachment theory by positing and empirically testing the notion that adolescents and adults not only form emotional bonds in affectionate relationships, but also with meaningful others like instructors and even schools. The authors found that instructor and peer relationships were linked positively and powerfully to being securely attached and, ultimately, GED program completion. The upshot of all this is that attachment theory can be a powerful theoretical lens to understanding relationship building and learning-related outcomes (e.g., task performance) among adults. Attending to attachment theory might be another means to think about mentoring in the workplace. One relatively untested notion, for instance, is that a large part of what predicts better mentoring experiences might be the quality of emotional bond developed between the mentor and protégé.

Erikson (1968, 1980) examined how emotional changes are linked to the social and cultural environment and how each interacts to influence one's personal development. Although he posited eight stages of psychosocial development, each associated with a major developmental task, his thinking was foundational in the field of HRD because four of the stages go beyond childhood. For example, generativity is the major developmental task of middle adulthood. These four stages and accompanying developmental tasks concern identity formation during adolescence, intimacy development during young adulthood, generativity development during middle adulthood, and ego integrity development during late adulthood. Positive or negative resolution of each stage has decided repercussions on the individual's self-image and assessment of society. Yet, it remains possible that identity, intimacy, and generativity can form later, as not everyone has the same experiences; that is, there are social and cultural constraints (e.g., identity exploration is not permitted in some cultures) that can delay development. There are gender and ethnic differences as well. Thus, not everyone has the same experiences or quality of experiences that foster optimal development. Overcoming developmental delays is a function of engaging productively in the social and work roles afforded by the social context. Thus, quality social interactions will foster psychosocial development.

Erikson's psychosocial theory has been applied fruitfully, especially in the realm of career activities and development. The theory supports our understanding of successful school-to-work transitions, not only for adolescents, but also for college students and doctoral graduates (Smith & Reio, 2006). Coaching and mentoring are clearly generative activities that are linked not only to positive career outcomes for protégés, but also for the mentors

themselves. Knowledge of Erikson's stages can be a useful tool for planning purposes, because his theory predicts possible development issues associated with the respective stages. These issues can be addressed productively by HRD professionals to lessen the impacts of such issues on the individual and organization. We know, for example, that a satisfied employee is far more likely to be prosocial, productive, and therefore generative. This issue becomes important in the case of organizational downsizings; HRD professionals must work creatively to take reasonable steps to keep the remaining employees satisfied and therefore generative, despite being shell-shocked, through treating the displaced workers with dignity, maintaining open communication, providing career coaching, and the like.

Although beyond the scope of this chapter, HRD professionals also need to be attuned to issues of gender, cultural, ethnic, and sexual identity. Thus, members of minority groups not only have to navigate their identity formation in relation to who they think they are, what they find interesting, and what they really want to do in their lives as it relates to fitting into majority culture, but they also have the extra weight of dealing with identity formation as it relates to fitting into their own situations as members of a minority group. This is one of the frontiers of research in the field of HRD that requires much more investigation, especially as it relates to self-esteem, self-concept, and career development.

Arnett (2000) built on Erikson's work to propose a new theory of emerging adulthood, a theory that has generated tremendous interest in the fields of psychology and education. All the same, emerging adulthood theory remains noticeably absent in the HRD literature. Arnett proposes a new stage of development that essentially extends adolescence well into early adulthood (to twenty-five years of age, and in some cases up to twenty-nine years of age). Restricting his theory to those in industrialized countries, Arnett argues that emerging adulthood is distinct for identity explorations with regard to love, work, and worldviews. Thus, as compared to adolescents, emerging adults have distinct patterns of love (more intimate, serious, longer-lasting), work (more serious and focused on adult role preparation), and worldviews (e.g., more likely to challenge previously held beliefs, challenge authority). What is important for HRD researchers and practitioners is that the identity exploration that emerging adults go through at this time is normative and, for the most part, healthy. Explaining poor employee retention for emerging adults becomes more understandable because of the extensive identity exploration (e.g., exploring different work roles, jobs) taking place during this time (Arnett, 2000). HRD professionals can anticipate this possibility and work with managers to find ways to make work more meaningful and career development activities more visible, within obvious economic realities. It would be

interesting to link emerging adulthood theory with adult educational theory, such as andragogy (Knowles, 1990), to further explore improving adult educational practice.

IMPLICATIONS FOR HRD

Psychology is a vital foundation for the field of HRD and has decided implications for learning, development, and performance at individual, group, and organization levels. The field of psychology provides strong theoretical lenses to guide research and practice in the social and behavioral sciences of which HRD is part. Thus, when considering learning, development, behavior, personality, performance, motivation, affect, culture, group dynamics, resistance to change, and the like, the field of psychology offers a useful theoretical base for informing HRD research practice. In the case of individual learning, for instance, behavioral and developmental theory have made remarkable contributions to our understanding about the nature of learning and how it changes behavior and fosters development in the context of classrooms, the workplace, and even over the adult lifespan. Psychological theory also supports how learning can be measured in psychometrically sound ways, what motivates it best, the relevance of context, technology's possible contribution to supporting learning, and its prospective outcomes, such as task and job performance. This valuable theoretical guidance could be used, for example, by HRD researchers to test new notions about the degree to which technology can augment individual learning in novel contexts (e.g., learning via an iPad for expatriate managers who need training updates, but travel extensively). HRD practitioners could use this new knowledge, in turn, to design better learning opportunities, even for those who cannot attend training regularly because of scheduling conflicts.

Social and emotional developmental psychological theory can be consulted to understand peer relationships within groups, the act of joining groups, attachment to groups or organizations, and forming an identity with a group as a function of one's gender, ethnicity, and cultural backgrounds. Through fostering trust among group members, HRD practitioners might facilitate more positive emotional bonds or attachment to co-workers. On the other hand, Gestalt psychological theory provides additional insights into how to think about and manage group behavioral interactions. Teams and groups should be considered as systems and not as the sum of their separate individuals. Thus, the behavior of a group member is a function of the interaction of his or her personal characteristics (e.g., personality) with environmental factors, such as the other group members and the particular situation. To change the behavior of an individual in a group, HRD practitioners should start at

the group level, where changing the group's behavioral norms can be addressed in line with changing individual behavior.

At the organizational level, Gestalt/social psychological theory is useful for guiding the process of change and handling possible resistance to change in organizational improvement efforts. By making a solid case for individuals to take ownership of the need to change and managing restraining forces that may thwart the change effort, an intervention can move forward to meeting organizational goals. It must be remembered, too, that promoting positive group dynamics is an integral part of managing the change process.

Moreover, the field of psychology offers a solid empirical research tradition, supported by rigorous research designs that not only allow for detecting heretofore untested associations among variables and possible group differences, but also the causal influences of variables introduced through interventions on meaningful organizational outcomes like intrinsic motivation, voluntary turnover, and corporate performance. In a quantitative sense, this empirical research has been supported substantially by the development of validated measures, although much needs to be done to search for gender, ethnic, and cultural invariance to validate them further (Nimon & Reio, 2011). In a qualitative sense, the field of psychology has a long tradition of creating new methods to understand the nature of problem solving (e.g., Piaget's clinical method, Vygotsky's double-stimulation method) and other complex psychological phenomena. Currently, emergent new methods are used to conduct research in novel contexts like the Internet (see Hesse-Biber & Leavy, 2008).

In sum, psychology provides a rich theoretical and empirical base to draw upon for the purpose of thinking about and guiding learning, performance, and change in workplace settings. Psychology has historically focused on studying individual, and to a lesser extent group, learning and performance. Psychological research regarding organizational-level learning and performance is in its ascendency. Ecological development theory (Bronfenbrenner, 1979) holds some promise, but remains relatively untested in workplace contexts.

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