

**TOWARD A MULTILEVEL THEORY OF CAREER DEVELOPMENT:  
ADVANCING HUMAN RESOURCE DEVELOPMENT THEORY BUILDING**

A Dissertation

by

MATTHEW GLEN UPTON

Submitted to the Office of Graduate Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2006

Major Subject: Educational Human Resource Development

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Approved by:

Chair of Committee, Toby Marshall Egan

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**ABSTRACT**

Toward a Multilevel Theory of Career Development: Advancing Human Resource  
Development Theory Building. (August 2006)

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Career development (CD) is a multilevel topic involving both the individual and the organization and influencing outcomes at the individual, group and organization level. The established limitations in current CD theory and human resource development (HRD) theory building can be addressed by examining the topic of CD through a multilevel lens. Using multilevel theory building (MLTB) to bridge the theoretical gap between individuals and organizations, this approach to theory building provides an opportunity for HRD professionals to address goals important to both individuals and organizations. Based on the CD and HRD interests described above, the threefold purpose of this study is to develop a multilevel theory of CD as a means of strengthening the theoretical connection between CD and HRD, advancing theory building in HRD, and contributing to meaningful convergence amongst existing CD theory. A new MLTB framework is developed and subsequently used to develop a multilevel theory of CD. Finally, future research options are suggested in order to make the appropriate theory refinements, continue the dialogue about MLTB and multilevel considerations in HRD, and add to the convergence of CD theory by providing a multilevel perspective of CD.

## DEDICATION

This dissertation is dedicated to the love of my life and best friend, my wife Maria. Without her undying support throughout this journey and season of life, I never would have made it through, and I would have relied solely on myself. Thanks to her, I was reminded that my true source of intellect and inspiration is the Lord Jesus Christ. While dedicating this work to her is not the same as giving her expensive gifts, I trust that the true treasure for both of us is the growth we experienced during this season of our lives together. In this season, we had the wonderful privilege of bringing Maxwell Glen Upton into this world and again, Maria was an amazing support as I frantically tried to wrap up my coursework before he was born. So many wonderful memories were made during the course of completing this degree and dissertation.

Maria, thank you for encouraging me to keep pressing on and for never giving up on me. You mean the world to me, and I look forward to the next season of our lives together. May our lives bring glory to the Lord—I love being married to you, and I look forward to continuing to live life together.

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## CHAPTER I

### INTRODUCTION

The days of working for a single employer for a lifetime with the career goal of “moving up the ladder” seem to be nothing more than a distant memory. Replacing those memories and the concept of employee and organizational loyalty are a working world characterized by globalization, downsizing, reorganization, streamlining, contract labor, and outsourcing (domestic and international). In fact, “On average, a student leaving college today can be expected to have three, four, or five careers and 10, 11, or 12 jobs during a work life that will last for 40/50 years” (Birch, 1990, p. 40). As a result, organizations no longer bear the primary responsibility for their workers’ career development, instead expecting each individual to take on that responsibility (Adamson, 1997; Adamson, Doherty & Viney, 1998; Arthur & Rousseau, 1996; Brousseau, Driver, Eneroth & Larsson, 1996; Conlon, 2003; Graham & Nafukho, 2004; Hall, 1996; Hirsch, Jackson & Jackson, 1995; Nicholson, 1996; Nicholson & West, 1989; Viney, Adamson & Doherty, 1997). How then does an employer ensure that the individual’s career development (CD) choices enhance the organization’s ability to accomplish goals? Is CD an “individual-only” issue or does the organization share some responsibility in further developing the individual employee? Scholars and practitioners alike are asking these and related questions in the fields of career development (CD) and human resource development (HRD).

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This dissertation follows the style of *Human Resource Development Review*.

This dissertation examines the intersections between CD, which has a long history and rich theoretical base (Osipow, 1990), and HRD, a relatively young field of study still developing and refining its theoretical base (Lynham, 2000b; Swanson, 2001; Torraco, 2004; Weinberger, 1998). What is the relevance of theory in considering CD in the context of HRD? Theory is a way of organizing thoughts about a phenomenon to aid in human comprehension of that particular phenomenon (Dubin, 1978). Contrary to what many people believe, theory is not intended to be haughty pontification about a scholarly topic. Instead, the development of theory, specifically in emerging fields such as HRD, should lead to explanations that aid practitioners and scholars alike in utilizing and explaining issues that impact people and organizations. The refinement of theory is also an important aspect of theory building and in the established field of CD scholars are now calling for the convergence of existing CD theory into a framework to address the current theoretical inadequacies (Chen, 1998; Patton & McMahon, 1999; Osipow, 1990; Savickas, 1995; Savickas, 2001; Savickas & Lent, 1994; Sharf, 1997; Zunker, 2002).

In response to relatively new workplace dynamics and a clearly identified need in the CD and HRD related literature, the aim of this study is to develop a multilevel theory of CD in order to strengthen the important connection between CD and HRD. Additional goals include, advancing theory building in HRD and contributing to the identified need for convergence of existing CD theories. A summary of the literature reviewed for this study is provided below, followed by the statement of the problem, the purpose of the study, the research process and methodology, the scope and limitations of the study, and the significance of the study.

## Review of the Literature

Reynolds (1971), in his early work in theory development, defined theory as “statements that are considered part of...knowledge in either the set-of-laws, the axiomatic, or the causal process forms” (p. 11) and described two approaches to theory building: a research-to-theory approach and a theory-then-research approach. Dubin (1978), from the social science field of industrial psychology, is also credited with seminal work in theory building and defined theory as “a model of some segment of the observable world...[that] describes the face appearance of the phenomenon [of interest] in such terms as structures, textures, forms and operations” (p. 216). Although specific definitions of theory differ among scholars, most focus on explaining a phenomenon through a systematic approach in an effort to add to our understanding. Consequently, theory and theory building is important to researchers and practitioners alike because theory helps explain phenomena specific to a field of study. Based on the role of theory described above, theory building in emerging fields becomes even more important as a means of advancing the field and its related theory.

In the relatively young field of human resource development (HRD) there continues to be a debate as to the necessity and importance of specifying its core theories (McLean, 1998; Swanson, 2001). No matter which side of the core theories debate one espouses, there is little disagreement that HRD is based on social science theory. Additionally, the *Advances in Developing Human Resources* monograph, “Theory Building in Applied Disciplines” (Lynham, 2002c), and the launch of *Human Resource Development Review (HRDR)*, a journal that serves “as a forum for theoretical work in

HRD” (Torraco, 2004, p. 172), has enhanced and increased the dialogue about theory and theory building in the field. Specific theories that have been considered core to HRD include psychological theory, economic theory, systems theory, philosophical theory, unifying systems theory, performance improvement theory, human performance theory, and organizational performance theory (Weinberger, 1998). Torraco also clarified that the foundational theories of HRD are “constituted by those theories and bodies of knowledge considered to be essential for explaining the distinctive purpose and defining characteristics of the discipline of HRD” (p. 177). Most HRD scholars agree that continued theory development is essential to the advancement of the field as this development aims to add to the understanding of the distinctive purpose and defining characteristics alluded to by Torraco. Additionally, although current HRD theory building falls short of linking the individual, group, and organization levels, instead focusing on one level at a time, future theory building efforts will have to connect levels in order to prevent a widening of the research gap between the individual and the organization (Garavan, McGuire, & O’Donnell, 2004; Wright & Boswell, 2002).

CD theories emerged starting in the 1950s and CD theory development continues today (Chen, 1998). Although attempts to categorize CD theories for integration and research purposes are ongoing, a review of the CD literature reveals that the predominant focus of CD theory is on individual level development. In assessing theory building in CD, Osipow (1990) and other CD scholars (Patton & McMahon, 1999; Savickas, 1995; Savickas, 2001; Savickas & Lent, 1994; Sharf, 1997; Zunker, 2002) have encouraged CD theorists to strive toward convergence of existing CD theory and

Chen (2003) has called for a broadening of the scope of CD to include a more “flexible macro [organization] perspective”. Despite the focus of CD theory on the individual, CD involves all levels of an organization and, therefore, should not be viewed exclusively as a single-level or individualized phenomenon (Upton, Egan & Lynham, 2003). Based on the multilevel nature of CD and the openness to exploring multiple levels, there is an opportunity to develop a theory of CD that addresses both individual and organizational needs. The resulting multilevel theory of CD, which will examine the individual, group and organization level within organizations, also has the potential to serve as a response to the call for convergence of existing CD theories while incorporating the macro perspective encouraged by Chen. An aim of this study is exploring CD theory and how to enhance that theory through multilevel theory building efforts.

An initial exploration of the importance of theory building and the current limitations to theory building will also add to the ability to develop a multilevel theory of CD in HRD. Within the two approaches to theory building highlighted by Reynolds (1971) there are a number of nuanced elements or potential directions the theory building research can take. Regardless of the theory building approach and/or research method used, theory building is important in scholarly research because the resulting theory helps develop and expand “our understanding of and ability to explain, anticipate, and act on related phenomena, issues, and problems” (Lynham, 2002b, p. 224). Current theory building efforts in HRD do not include multilevel considerations though, focusing instead on the individual or organization separately (Garavan, et al., 2004). The result is that theory building in HRD is not being advanced beyond a generic examination of



complex and multilevel issues within the discipline. The overarching purpose of this study is to add to the understanding of the phenomena of CD in HRD through multilevel connections and as a result, advance theory building in HRD. This purpose is accomplished by the development of an improved process for multilevel theory building and the use of this new model in the development of a multilevel CD-HRD theory.

Early contributions to the HRD literature listed career development (CD) as a core area, along with organization development and training and development (McLagan, 1989). Specifically, McLagan defined CD as the area of “human resource practice...assuring the alignment of individual career planning and organizational career management processes to achieve an optimum match of individual and organizational needs” (p. 52). This definition emphasizes a dual responsibility between the individual and the organization. HRD and related research indicates that the responsibility for CD, long seen as an organization’s responsibility when employees remained with a single employer for their entire career, has now shifted to the individual (Adamson, 1997; Adamson, et al., 1998; Arthur & Rousseau, 1996; Brousseau, et al., 1996; Conlon, 2003; Graham & Nafukho, 2004; Hall, 1996; Hirsch, et al., 1995; Jacobs & Washington, 2003; Nicholson, 1996; Nicholson & West, 1989; Viney, et al., 1997). As described in the previous section, this shift in paradigm is in line with the individual focus of CD theory. Although CD has been largely ignored in the HRD literature (Egan, Upton, & Lynham, in press; McDonald & Hite, 2005; Swanson & Holton, 2001), in order for HRD to continue to include CD as a core area, or “loadbearing wall” (Egan, et al.), the theoretical and practice links between CD and HRD need to be strengthened. Having

provided information on HRD and CD theories, this discussion would be incomplete without further examining the theoretical and practical links between HRD and CD and the potential means for strengthening those connections.

HRD scholars and practitioners continue to wrestle with their role in addressing both individual and organizational needs and, as a result, have begun to address questions such as, “should HRD practice focus on the well being of the individual, or should interests of the shareholders predominate” (McGoldrick, Stewart, & Watson, 2002, p. 5)? In supporting the dual responsibility assertion, Jacobs and Washington (2003) pointed out that, “There is much support for the belief that employee [and career] development programs make positive contributions to organizational performance. However, there is limited information beyond this basic relationship” (p. 351). Providing additional support for further exploration of both individual and organizational responsibility for CD, Desimone, Werner, and Harris (2002) stated, “...career development should be designed to fit the responsibilities and needs of both individuals and organizations, providing the opportunities that both need to prosper in a dynamic environment” (p. 455). By exploring both the individual (micro) and organizational (macro) responsibility for CD, HRD can avoid what Wright and Boswell (2002) characterize as the “parallel, yet independent paths” taken by researchers. Wright and Boswell also stated that in conducting organizational research, “organizational processes should be properly aligned to produce synergy and compatibility in organizational direction thus helping to support strategic success...However, it is equally important to consider the degree to which the actual human resources (i.e., employees) are aligned

with and contributing to the organization's strategic goals" (p. 265). Theory building that considers multiple levels within organizations provides the type of insight encouraged by Wright and Boswell to integrate the individual, group, and organization levels of research.

Specifically related to CD, Upton, Egan, and Lynham (2003) explored CD definitions, dependent variables, and theories, identified an overlap "between individual and organizational outcomes" and acknowledged "the interests of both the individual and the organization to engage in CD or the support of CD related activities" with HRD playing "a role in the crossover between individual and organization development agendas" (p. 732). Based on the HRD literature, both individuals and the organization are identified as important to HRD (Swanson & Holton, 2001). However, current HRD theory falls short of supporting or addressing these foundational HRD beliefs, instead focusing only on one level at a time rather than exploring the multilevel perspective (Egan, Upton, & Lynham, 2005; Garavan, et al., 2004;). In the recent influx of published HRD-related articles on theory building (Torraco, 2004), only one published work was identified that focused on developing multilevel theories. Multilevel theories provide a means of exploring levels of an organization, including individuals, because they "span the levels of organizational behavior and performance" (Klein, Tosi, & Cannella, 1999, p. 243). In general theory building, all of the interactions between units are examined at a single level without regard to the influence of units at other levels within the organization (Dubin, 1978), thus ignoring the complexity of multilevel issues and interactions. The need for exploring CD from a multilevel perspective stems from the

need to examine the interaction of units within *and* between levels of organizations (Upton & Egan, 2005). A multilevel examination is also intended to provide a theory building framework that is responsive to the current dynamic environment in CD where theoretical convergence is a priority.

Further support for multilevel explorations in HRD comes from the work of Garavan, et al. (2004) who stated that “there is a significant gap in the current body of HRD theory and research...[that] concerns the investigation of multilevel questions and the adoption of multilevel perspectives” (p. 418). Additionally, having acknowledged “that research and theory within the field need not all be multilevel in focus...the field...is now at a point where it can be more explicit in considering...issues that pertain to different levels” (Garavan, et al., p. 418). From this perspective multilevel theory, and related theory building approaches, is intended to “bridge the micro-macro divide, integrating the micro domain’s focus on individuals and groups with the macro domain’s focus on organizations, environments, and strategy (Klein, Tosi, & Cannella, 1999, p. 243).

Examples of multilevel theory, from the HRD-related fields of industrial/organizational psychology and management, further establish the importance of multilevel research. Waldman and Yammarino’s (1999) research exploring levels-of-management and levels-of-analysis effects in CEO charismatic leadership addresses the importance of examining phenomena at multiple levels. The authors stated “constructs such as leadership are typically associated with the behavior of a single individual or the individual (leader) level of analysis,” but “the manifestation and effects of leadership can

be seen at” (Waldman & Yammarino, p. 267) other levels of analysis. In a similar light, CD research indicates that individuals have the primary responsibility for CD (Adamson, 1997; Adamson, et al., 1998; Arthur & Rousseau, 1996; Brousseau, et al., 1996; Conlon, 2003; Graham & Nafukho, 2004; Hall, 1996; Hirsch, et al., 1995; Jacobs & Washington, 2003; Nicholson, 1996; Nicholson & West, 1989; Viney, et al., 1997), with additional research revealing that CD has a role to play within the organization’s strategic goals and practice (Upton, et al., 2003). The utilization of multilevel theory building (MLTB) provides an additional possibility for theory advancement in HRD and serves as an enhancement to current HRD theory building research and methods.

Since MLTB is intended to “begin to bridge the micro-macro divide” (Klein et al., 1999, p. 243), CD is ideally suited for additional study. Specifically, Klein et al. further emphasized that, “multilevel theory building fosters much needed synthesis and synergy,...connect[ing] the dots, making explicit the links between constructs previously unlinked...[and] illuminat[ing] the context surrounding individual-level process, clarifying precisely when and where such processes are likely to occur within organizations” (Klein et al., p. 243). Reynolds Fisher (2000) also stated, “Multilevel theory is not necessarily one that considers every level within a hierarchical system equally, but rather one that takes into account the effects of levels subordinate and supraordinate to the focal level” (p. 11). Finally, Kozlowski and Klein (2000) provided insight into why multilevel perspectives matter in theory development. “[F]undamental to the levels perspective is the recognition that micro phenomena are embedded in macro contexts and that macro phenomena often emerge through the interaction and dynamics

of lower-level elements” (Kozlowski & Klein, p. 7). As a result of the ever-present interaction between micro and macro levels, MLTB is an important process to undertake in order to further understand the dynamics of individual and organizational life. MLTB provides the means for explicitly linking CD and HRD theoretically and practically. Ultimately, this study seeks to balance two primary aims, 1) the need to address the call from CD scholars for theory convergence while specifically integrating CD into HRD through multilevel theory development; and 2) to improve upon HRD theory building approaches through a framework that acknowledges and is consistent with current HRD literature calling for multilevel considerations.

### **Statement of the Problem**

Current CD theory is limited due to its predominant focus on the individual and CD scholars are beginning to recognize that CD has both individual and organizational implications. As a result, CD scholars are now calling for the integration and convergence of existing CD theory to include the organization’s perspective (Chen, 1998; Patton & McMahon, 1999; Osipow, 1990; Savickas, 1995; Savickas, 2001; Savickas & Lent, 1994; Sharf, 1997; Zunker, 2002). Theory building in HRD has long focused on a single level of interest, primarily the individual or organizational level, and HRD scholars are beginning to recognize the importance of multilevel exploration (Garavan, et al., 2004). Despite this recognition, there has been little multilevel theory and theory development research published in HRD. Additionally, HRD continues to struggle with determining where and how CD should be positioned in the field. Recognizing the problems outlined above, this study aims to address these issues by

providing a possible solution for both CD and HRD scholars while further connecting the two fields in theory and practice.

### **Purpose of the Study**

As identified above, CD is a multilevel topic involving both the individual and the organization. The established limitations in current CD theory (Osipow, 1990) and HRD theory building can be addressed by examining the topic of CD through a multilevel lens. Since MLTB can be used to bridge the theoretical gap between individuals and organizations, this approach to theory building provides an opportunity for HRD professionals to address goals important to both parties. By investigating CD through a multilevel lens, HRD professionals can address the need to explore “employee [and career] development...[as] an issue of increasing importance among organization managers and, as a consequence, among HRD researchers” (Jacobs & Washington, 2003, p. 344) because of the overlapping interests of “individuals, dyads, teams, businesses, corporations, and industries” (Klein et al., 1999, p. 243). Another issue relevant to the field of HRD is the need to “strengthen organizational capacity overall” by “integrat[ing] multiple interests and goals within a given structure” (Upton & Egan, 2005, p. 633), further emphasizing the need to explore CD from a multilevel perspective.

Based on the CD and HRD interests described above, the threefold purpose of this study is to develop a multilevel theory of CD as a means of strengthening the theoretical connection between CD and HRD, advancing theory building in HRD, and contributing to meaningful convergence amongst existing CD theory. The MLTB frameworks developed by Kozlowski and Klein (2000), Morgeson and Hofmann (1999),

and Reynolds Fisher (2000) are synthesized into an improved MLTB process and used to develop a multilevel theory of CD. Finally, future research options are suggested in an effort to set the stage for empirical and qualitative testing of the resulting multilevel theory of CD in order to make the appropriate theory refinements, continue the dialogue about MLTB and multilevel considerations in HRD, and add to the convergence of CD theory by providing a multilevel perspective.

### **Research Process and Methodology**

Because the MLTB methodology developed in this study serves the same purpose as traditional research questions, development of a set of research questions would be redundant. The MLTB methodology developed in this study serves as the guiding research method for the resulting theory development. Asking whether a multilevel theory of CD can be developed seems pointless as this study progresses to the point that an improved MLTB process is being used to develop a multilevel theory of CD. By describing the steps taken to develop a multilevel theory of CD in the following paragraph, the research method undertaken in this study will become clearer.

The methodology for MLTB utilized in this study is the result of systematic analysis, critique and relevant integration of the MLTB work of Kozlowski and Klein (2000), Morgeson and Hofmann (1999), and Reynolds Fisher (2000). Chapter III of this study reviews the three processes listed above, provides a side-by-side comparison of these MLTB processes, discusses the reasoning behind integrating preexisting MLTB approaches, and presents a unique three-phase MLTB method. Phase one is labeled “Theory Components” and specifically addresses issues related to the theoretical



phenomenon of interest and resulting endogeneous constructs, the organizational levels and units involved, the level of the theory, system states of the theory, time cycles in entrained phenomena, and factors that influence divergence in the theoretical outcomes. Phase two is labeled “Levels Components” and focuses on within- and between-level considerations. The final phase, addressing theory specification and operationalization, is likely the most important phase and is included in the improved research process with Kozlowski and Klein providing the most detailed and specific guidelines for this aspect of theory development. An overarching consideration that must also be included in each of the phases above is an explanation of why the theorist did or did not address or include issues relevant to the theoretical phenomena of interest. Although the end result of this study is a multilevel theory of CD, the process for building the multilevel CD theory presented in Chapters III and IV is an innovative process for building multilevel theory that improves upon earlier MLTB processes and advances theory building in HRD.

### **Scope and Limitations**

The focus of this study is limited to developing a unique multilevel theory of CD using an innovative MLTB process developed as a result of careful analysis and refinement of the MLTB processes described by Kozlowski and Klein (2000), Morgeson and Hofmann (1999), and Reynolds Fisher (2000). The intended result is a parsimonious theoretical contribution to HRD associated with CD and a refined MLTB process that is not only an improvement on earlier MLTB processes, but that can be utilized by others engaging theory building and, specific to HRD, advance theory building. Although

empirical and qualitative testing of the resulting multilevel theory is beyond the scope of this study, the results of the study will include an improved MLTB process and a multilevel theory of CD—both of which can be tested and refined in future research. In proposing a MLTB agenda for CD in HRD, Upton and Egan (2005) suggested that the differences between levels must be minimized “[which] may prove a daunting task and thus prevent successful development of a multilevel theory of CD” (p. 638). Another limitation addressed by Upton and Egan is “the generalizability of such a theory” due to “the meaning of CD vary(ing) depending on the organization and individual involved” (p. 638). Although contextual issues are a potential factor in the development of CD theories, the issues faced are similar in the development of any theory. Finally, situating this “multilevel theory of CD...[at the] individual within the group level...may prevent [the] organization’s [leaders] from seeing the utility of such a theory,” therefore veiling the relevance of the theory to HRD practice and “failing to bridge the ‘micro-macro divide’” (Upton & Egan, p. 638).

### **Significance of the Study**

HRD practitioners and scholars that focus on development highlight “the interaction between the enhancement of individual skills and organizational interests” (Upton & Egan, 2005, p. 632). Ruona, Lynham, and Chermack (2003) also emphasized that long-term investment into the development of individual knowledge, skills and abilities generally will not become a priority unless an organizational benefit can also be identified. “With individuals managing and creating their own careers, HRD may be required to accommodate an increasingly modular customer base, providing a variety of

skill-based training and knowledge sharing, and do so while aligning all of them with strategic organization processes” (Chermack, Lynham, & Ruona, 2003, p. 263).

Although CD “has had declining influence in HRD” (Swanson & Holton, 2001, p. 312), developing multilevel theories of CD will assist in strengthening the theoretical link between CD and HRD by exploring the individual and organizational link. Further, since “strategic HRD attempts to integrate multiple interests and goals within a given structure to strengthen organizational capacity” (Upton & Egan, 2005), the development of multilevel theories of CD is a prime opportunity to further integrate individual and organizational interests and provide a model for how that integration works and what it looks like at each level of interest. Although CD scholars point out positive individual and organization outcomes, the research generally fails to move beyond viewing development as an individual responsibility (Adamson, 1997; Adamson, et al., 1998; Arthur & Rousseau, 1996; Brousseau, et al., 1996; Conlon, 2003; Graham & Nafukho, 2004; Hall, 1996; Hirsch, et al., 1995; Jacobs & Washington, 2003; Nicholson, 1996; Nicholson & West, 1989; Viney, et al., 1997). Developing multilevel theories of CD will provide an organizing framework that more accurately reflects the multilevel dynamics associated with current day CD. This dissertation introduces a MLTB process and multilevel CD theory in the context of HRD.

### **Operational Definitions**

#### *Career Development (CD)*

CD can be described as a planned effort between the individual and his or her employing organization (Desimone, et al., 2002; Gilley, Eggland, Gilley, 2002). "CD

focuses on the alignment of individual subjective career aspects and the more objective career aspects of the organization in order to achieve the best fit between individual and organizational needs..." (Boudreaux, 2001, p. 224).

#### *Collective Construct*

"...[T]he structure of any given collective (e.g., a work team) can be viewed as a series of ongoing, events, and event cycles between component parts (e.g. individuals)...the collective action (which is composed of ongoing and events) [then] enables collective phenomena to emerge. Labels then can be affixed to this phenomenon, resulting in what could be termed the emergence of a collective construct" (Morgeson & Hofmann, 1999, p. 252).

#### *Endogeneous Construct*

"The endogeneous construct, or dependent variable, drives the levels, constructs, and linking processes to be addressed by the theory" (Kozlowski & Klein, 2000, p. 12). Combining dictionary definitions for each word separately reveals that an endogeneous construct is "a concept, model, or schematic idea" that is "produced...from within" the phenomena of interest (Dictionary.com, 2005).

#### *Entrainment*

"Entrainment can tightly couple phenomena that ordinarily are only loosely connected across levels. Theories that address entrained phenomena must specify appropriate time cycles and must employ those cycles to structure research designs" (Kozlowski & Klein, 2000, p. 25).

### *Human Resource Development (HRD)*

HRD is the process of developing and/or enabling human expertise and potential through career and lifelong learning, training and development, and organization development for the purpose of improving individual and organizational learning and performance (HRD Faculty, Texas A&M University).

### *Micro*

Refers to the individual and group level of interaction and analysis (Klein et al., 1999).

### *Macro*

Refers to the organization, environments, and strategy level of interaction and analysis (Klein et al., 1999).

### *Multilevel Theory Building (MLTB)*

“The primary goal of the multilevel perspective [i.e. MLTB]...is to identify principles that enable a more integrated understanding of phenomena that unfold across levels in organizations” (Kozlowski & Klein, 2000, p. 7).

### *Multilevel Theory*

Theory that begins “to bridge the micro-macro divide, integrating the micro domain’s focus on individuals and groups with the macro domain’s focus on organizations, environments, and strategy” (Klein et al., 1999, p. 243).

*Theory*

“...a model of some segment of the observable world...[that] describes the face appearance of the phenomenon [of interest] in such terms as structures, textures, forms and operations” (Dubin, 1978, p. 216). “It is no more than a linguistic device used to organize a complex and empirical world” (Bacharach, 1989, p. 496).

*Theory Building*

The task of building “viable models of the empirical world that can be comprehended by the human mind. These theoretical models are intensely practical for the predictions derived from them are the ground on which modern man is increasingly ordering his relationships with the environing universe” (Dubin, 1978, p. 2).

## **CHAPTER II**

### **REVIEW OF LITERATURE**

Over the past few decades, career development (CD) in the organizational context has shifted from being the primary responsibility of the organization to being the primary responsibility of the individual (Adamson, 1997; Adamson, et al., 1998; Arthur & Rousseau, 1996; Brousseau, et al., 1996; Conlon, 2003; Graham & Nafukho, 2004; Hall, 1996; Hirsch, et al., 1995; Nicholson, 1996; Nicholson & West, 1989; Viney, et al., 1997). Interestingly, this shift in responsibility places CD practice in alignment with CD theory which has a rich history and theoretical base (Osipow, 1990) that focuses primarily on the individual responsibility for CD. Furthermore, CD scholars have begun to call for theory convergence, based on “converging themes among major career theories” (Savickas & Lent, 1994, p. 5), to expand the notion of CD beyond the individualistic approach to include organizational factors (Chen, 1998, 2003; Patton & McMahon, 1999; Osipow, 1990; Savickas, 1995; Savickas, 2001; Savickas & Lent, 1994; Sharf, 1997; Zunker, 2002).

In the emerging field of human resource development (HRD), there is a growing recognition that, although considered by many to be a core area, CD is being overlooked as a contributor to HRD (Swanson & Holton, 2001; Desimone, Werner & Harris, 2002; Gilley, Egglund & Gilley, 2002). Additionally, HRD scholars continue to call for theory building efforts to advance this growing field of study (Torraco, 2004). Recent HRD research also indicates that multilevel perspectives, those that consider multiple levels within an organization, are being overlooked as viable areas of exploration (Garavan,

McGuire & O'Donnell, 2004). The resulting aim of this study then is to develop a multilevel theory building (MLTB) approach to be used in the development of a theory of career development (CD) as a means of introducing an opportunity for the strengthening of the connection between CD and human resource development (HRD), advancing theory building in HRD, and contributing to the convergence of existing CD theory.

The literature reviewed to provide the necessary support for this study and inform the resulting theory includes a consideration of general theory building and multilevel theory building; a review of CD theories and definitions; and a review of HRD theory, definitions, and theory building approaches utilized in this field. The literature review is presented in five parts as follows: a review of general theory building approaches and models for theory development; the state of HRD and HRD theory building; an examination of CD theory, how CD has been conceptualized, and the multilevel nature of CD; the link between CD and HRD theory and practice; and, finally, a review of MLTB literature. The literature reviewed in the development of the research methodology is then included in Chapter III with the conclusion of that chapter being the resulting methodology.

### **General Theory Building**

A discussion of theory building would be incomplete without first defining and detailing the purposes of theory building. Dubin (1978) defined theory as “a model of some segment of the observable world...[that] describes the face appearance of the phenomenon in such terms as structures, textures, forms and operations” (p. 216).



Similarly, in the field of HRD, Torraco (1997) defined theory as an explanation of “...what a phenomenon is and how it works...by identifying its main ideas, or concepts, and by stating the relationships among these concepts” (p. 115). By attempting to identify the phenomenon and how it works, the theorist is fulfilling what Dubin (1978) called “the ‘need’ for theory (order)” (p. 5). Dubin further asserted that “theories serve human purposes; their creation is motivated and their logic organized by the skills and limitations of human capabilities” (p. 7). Theory building then, as described by Dubin, is “one way to link theory with research” (p. 2). Further,

...a [theory] summarizes what man can apprehend through his [or her] senses or infer from these sensory cues...these sensory cues are not themselves meaningful until organized by the mind...Hence the [theory] operates over the range of received sensory cues to organize them for purposes of human comprehension (Dubin, p. 221).

Drawing from the work of Dubin (1978), Lynham (2000b) defined theory building as “the purposeful process or recurring cycle by which coherent descriptions, explanations, and representations of observed or experienced phenomena are generated, verified, and refined” (p. 161). Lynham (2002b) also stated that the intention of theory building is to be “useful to practitioners, researchers, and educators in learning about, engaging in, and evaluating the traits and outcomes of ...applied theory building endeavors” (p. 115). Although often viewed as the responsibility of researchers, theory building is not limited to researchers and needs input from practice. Referencing several scholars on the topic of theory building, Lynham (2002b) stated, “...it can...be argued that good theory in applied disciplines [such as HRD] is about as realistic as it comes” (p. 222). Swanson (2001) agreed that theory building in HRD is necessary to further the

profession and field of study. Furthermore, the relative youth of HRD provides fertile ground for the development and advancement of HRD related theory.

The theory building literature identified for this study highlighted two primary strategies for conducting theory building (Reynolds, 1971; Lynham, 2002b). Within each of these two strategies, researchers and theorists have the flexibility to use any number of research methods. Reynolds stated that these two strategies “have been under discussion for hundreds of years” (p. 140) and referred to them as the “research-then-theory” and “theory-then-research” strategies. Although other authors (Gall, Gall, & Borg, 2003; Kaplan, 1964) have attempted to describe these two primary strategies for theory building, the descriptions provided by Reynolds present the most comprehensive and complete view. Reynolds’ work is addressed to the social sciences as opposed to the natural sciences and, as a result, Lynham’s theory building work in HRD (2000b, 2002a, 2002b) relied heavily on Reynolds’ work in support of specific connections to HRD. In describing the two strategies for theory building, Reynolds makes reference to Bacon, whose work was conducted in the early 1600s, and Popper, whose work was conducted in the 1960s, respectively, for their seminal contribution to each of the two strategies.

The first strategy is described by Reynolds (1971) as the research-to-theory strategy or “Baconian strategy.” This strategy is based on the work of Francis Bacon, who “suggest[ed] that the ‘true sons of science’ should be using” (Reynolds, p. 140) this strategy to advance their understanding of phenomenon. According to Reynolds, there are two conditions that must be met for this strategy to be “efficient...for developing a useful theory...The first is a relatively small number of variables to measure during data

collection...The second condition is that there be only a few significant patterns to be found in the data” (p. 140). Reynolds then pointed out that “current” knowledge of social phenomena, even during his work in the early 1970s, would prevent scholars from meeting these two criteria. By not meeting these two criteria, the use of this strategy in the social sciences would be difficult, if not impossible, due to the “lack of agreement as to what variables are important for characterizing an event or phenomenon” (Reynolds, p. 141). For examples of the research-to-theory approach to theory building, one would need to turn to the natural sciences and research conducted using the scientific method.

In contrast, the theory-to-research approach focused on “the development of an explicit theory through a continuous interaction between theory construction and empirical research” (Reynolds, 1971, p. 144). Reynolds also suggested that the theory-then-research approach is more suited to the social sciences and names Popper as the scholar credited with the most explicit development of this strategy. The terms used by Popper to describe the development of theory and empirical research and testing were, respectively, “conjectures” and “refutations” (Reynolds, p. 144).

Table 2.1 combines the description of both the research-to-theory and theory-to-research strategy, as provided by Reynolds (1971), into one comparative table. This side-by-side comparison of the two strategies further explicates why the theory-to-research strategy is more suited to the social sciences. In discussing the research-to-theory strategy, Reynolds pointed out “two major drawbacks. First, the amount of data that can be collected is theoretically infinite....Second, the problem of finding substantively interesting patterns among the resulting data is overwhelming; there are just too many

potential relationships to give all of them serious consideration” (p. 142). With these two drawbacks identified, Reynolds then answered why this strategy is still being used by researchers:

The answer seems to be that this strategy is associated with two assumptions about nature and its relationship to science: (1) that there is a ‘real truth’ to be discovered in nature, in the form of discoverable patterns or regularities, and (2) that scientific knowledge should be organized as a set of laws, reflecting the “real truth” (Reynolds, p. 142).

Depending on a given researcher’s epistemological assumptions about how discovery of new knowledge occurs, the research-to-theory strategy is the only one that allows for the “discovery of the true ‘laws of nature’” (Reynolds, p. 142).

Table 2.1 *Comparison of Research-to-Theory and Theory-to-Research Strategies for Theory Building.*

<b>Research-to-Theory</b>	<b>Theory-to-Research</b>
1. Select a phenomenon and list all the characteristics of the phenomenon.	1. Develop an explicit theory in either axiomatic or process description form.
2. Measure all the characteristics of the phenomenon in a variety of situations (as many as possible).	2. Select a statement generated by the theory for comparison with the results of empirical research.
3. Analyze the resulting data carefully and determine if there are any systematic patterns among the data ‘worthy’ of further attention.	3. Design a research project to ‘test’ the chosen statement’s correspondence with empirical research.
4. Once significant patterns have been found in the data, formalization of these patterns as theoretical statements constitutes the laws of nature (axioms, in Bacon’s terminology) (Reynolds, p. 140).	4. If the statement derived from the theory does <i>not</i> correspond with the research results, make appropriate changes in the theory or the research design and continue with the research (return to step 2).
	5. If the statement from the theory corresponds with the results of the research, select further statements for testing or attempt to determine the limitations of the theory (the situations where the theory does not apply) (Reynolds, p. 144).

In contrast, researchers who assume “that there is no ‘real truth’ or ‘laws of nature’ to be discovered, but that science is a process of inventing descriptions of phenomena” (Reynolds, 1971, p. 145) would turn to the theory-to-research strategy for their theory building purposes. This strategy allows for “continuous interplay between theory construction...and testing with empirical research” allowing the theory to “become more precise and complete as a description of nature” (Reynolds, p. 145). Continuing the discussion about the two strategies for theory building, Smith’s (1999) clarification of the differences between these strategies stands out. Although Smith used the terms quantitative and qualitative to describe the research-to-theory and theory-to-research approaches, respectively, his differentiation is clearly connected to the contrasting approaches of research-to-theory and theory-to-research.

Each approach sponsors different procedures and has different epistemological implications. One approach [research-to-theory] takes a subject-object position on the relationship to subject matter; [theory-to-research] takes a subject-subject position. [Research-to-theory] separates facts and values, while [theory-to-research] perceives them as inextricably mixed. [Research-to-theory] searches for laws, and [theory-to-research] seeks understanding (Smith, p. 12).

Based on the differences described by both Reynolds and Smith, both strategies clearly have strengths and weaknesses.

The theory-then-research approach makes theory “explicit through the continuous, reiterative interaction between theory construction and empirical inquiry” (Lynham, 2002b, p. 227). The strength of this approach, therefore, lies in the “continuous, reiterative interaction” that allows theorists to continually revisit the latest empirical data to make revisions to the theory (Lynham, 2002b). This strength is reinforced by Lynham’s (2002a) assertion, based on the work of Reynolds (1971), that

“theories of this nature are never complete and require continual discourse between the theoretical framework of the theory and the theory in use” (Lynham, 2002a, p. 269).

While not specifically stated in the literature reviewed for this study, the literature points to the weakness of this approach—a theorist may have difficulty in staying informed of all the data being generated with regard to the theory, which would lead to incomplete information for theory revisions. In comparing and contrasting the assumptions about nature, their relationship to science, and fields of science (natural or social) particularly suited for each of these two approaches to theory building, the theory-then-research approach is identified as the most suitable for the social sciences and, thus, for this study.

With regard to theory building in HRD, Lynham (2002b) further explored the use of the theory-to-research strategy for theory building in her work to develop a general method for theory building. Using the theory building framework outlined by Dubin (1978), Lynham elaborated on the theory-to-research approach to theory development. A brief exploration of Dubin’s model also provides a framework from which to further our understanding of theory building through this theory-to-research approach. “The first five phases of [Dubin’s] methodology represent the theory-building component of Dubin’s model, and the last three phases represent the process of taking the theory into real-world contexts to conduct empirical research” (Torraco 2002, p. 129). In their simplest form, the eight steps of Dubin’s model are:

1. Units (i.e. concepts) of the theory
2. Laws of interaction (among the concepts)
3. Boundaries of the theory (the boundaries within which the theory is expected to apply)

4. System states of the theory (conditions under which the theory is operative)
5. Propositions of the theory (logical deductions about the theory in operation)
6. Empirical indicators (empirical measures used to make the propositions testable)
7. Hypotheses (statements about the predicted values and relationships among the units)
8. Research (the empirical test of the predicted values and relationships) (Torraco, p. 129).

This model provided a step-by-step process for theory building, the resulting “laws of interaction among units focus upon the processes of interaction at a given [or specific] level of analysis” (Dubin, 1978, p. 121), with “laws of interaction...always intralevel in location” (p. 121). As a result, theory building using this and similar models falls short of addressing issues that are multilevel in nature. As will be examined later in this review, CD is a multilevel issue with implications for HRD practice and theory at the individual, group, and organization level. Developing an additional theory of CD at a single-level of interest would add little new insight to the study of CD and would do little to enhance the theoretical connection between CD and HRD. Thus, MLTB is offered as an approach to theory building that will further connect CD and HRD, advance theory building in HRD, and provide a means for convergence amongst CD theories. The next section focuses on HRD and HRD theory building efforts, followed by a similar review of CD and CD theory.

### **HRD and HRD Theory**

HRD scholars have been discussing the theoretical foundations of HRD as early as 1987 (Torraco, 2004) and a rich debate on the topic has continued since that time. Swanson (2001) contended “that the HRD profession needs...to develop its core theories” (p. 299). Swanson also referenced the work of McLean (1998), who stated that

“there are those in HRD that do not believe that having HRD theory or clearly specifying the underlying theory of HRD is essential to the profession” (p. 299). In the same article Swanson defined HRD and the theories he considered underlying the field, including psychological theory, economic theory, and systems theory. Other examples of foundational HRD theory include philosophical theory, unifying systems theory, performance improvement theory, human performance theory, and organizational performance theory (Weinberger, 1998). Acknowledging the social science foundations of HRD theory, the purpose of this theory building research is “advancing the maturity, credibility, and professionalism of both thought and practice in HRD” (Lynham, 2000b, p. 163) with particular focus on CD in the context of HRD. Swanson reinforced the importance of theory building in his statement, “Theory is particularly important to a discipline such as HRD that is emerging and growing” (p. 299). Acknowledging Swanson’s call for continued theory development in HRD, Torraco (2004) stated “the importance of theory to the development of professional disciplines such as...(HRD) is one of the most frequently discussed topics in the field” (p. 171). He cited nine works (published between 1997 and 2002) from seven HRD scholars as support for the notion that HRD should continue to develop theory.

Following Lynham’s (2000b) and Swanson’s (2001) work on theory building there was an increase in the dialogue regarding theory building in HRD (Torraco, 2004). The *Advances in Developing Human Resources* monograph, “Theory Building in Applied Disciplines” (Lynham, 2002c), also fueled the discussion and subsequent research with the included articles addressing theory building from a number of perspectives and



approaches. Torraco suggested advances in HRD theory building may also be attributed to the launching of a new HRD journal, *Human Resource Development Review (HRDR)*, that serves “as a forum for theoretical work in HRD and related disciplines” (p. 172). Moreover, “theoretical research in HRD has established itself and is now at a point where many avenues exist for further contributions to the field” (Torraco, p. 172). “The goal of just a few years ago for developing more theory-related scholarship in HRD is becoming a reality [with HRD scholars contributing] to the increasing number of theory and conceptual articles...on theory and theory-building research” (Torraco, p. 171).

With the increased level of theory building research being conducted in HRD, Torraco (2004) turned to the question of whether there is a continued need for more theory development in HRD. In answering this question, he concluded that “there is little doubt that more theoretical research is needed to advance our understanding of the human and organizational phenomena of interest in HRD” (p. 172). Torraco also defined the theoretical foundation of HRD as “constituted by those theories and bodies of knowledge considered to be essential for explaining the distinctive purpose and defining characteristics of the discipline of HRD” (p. 177). In addition, Torraco pointed to four areas where more research might be conducted: HRD theory; theoretical foundations of HRD; theory-building processes; and work that includes both the theory-building process and the resulting theory.

While the number of theory building articles has surely increased since Torraco’s (2004), Lynham’s (2000b) and Swanson’s (2001) initial work, current HRD theorists are overlooking the concept of multilevel theory building and exploring issues from an

individual, group, and organization level. Other than the work of Garavan, McGuire, and O'Donnell (2004) who suggested that levels issues are important in HRD theory, there have been no other MLTB efforts identified in any of the recognized HRD journals. In addition, a search for MLTB dissertations coming from the field of HRD resulted in only one (Reynolds Fisher, 2000) being identified.

MLTB research has been conducted primarily in the HRD-related fields of industrial/organizational psychology and management fields (Klein, et al, 1994; Kozlowski & Klein, 2000). In HRD, the need for MLTB arises from a growing recognition that many of the phenomena that occur within HRD involve more than one level of an organization. "The primary goal of the multilevel perspective...is to identify principles that enable a more integrated understanding of phenomena that unfold across levels in organizations" (Kozlowski & Klein, 2000, p. 7). Wright and Boswell (2002), from the human resource management field, pointed to the need to "provide a framework for identifying the intersections of macro [organization level] and micro [individual level]...research and to explore how those intersections can result in more profound research progress" (p. 248). Recent HRD literature recognizes that our field has a similar need to integrate organization- and individual-level issues.

There is an increased confidence within the HRD...community concerning the current standing of HRD and its potential to further develop as a field of study. Notwithstanding this confidence, there is a significant gap in the current body of HRD theory and research. This concerns the investigation of multilevel questions and the adoption of multilevel perspectives (Garavan, McGuire, & O'Donnell, 2004, p. 418).

In their call for multilevel work in HRD, Garavan, et al. (2004) concluded that "If we examine HRD from a multilevel perspective, then it is possible to more fully

understand and allow for a wider variety of theoretical formulations of HRD” (p. 435).

Further,

We...encourage HRD academics to go beyond one particular level, focus on relationships between levels, and study the impact of variables at different levels of analysis...[and] by beginning to focus on multilevel analyses, the field will be able to generate and test theories that provide a better understanding of the impact of HRD interventions (Garavan, et al., p. 435).

The work encouraged by Wright and Boswell (2002) and Garavan et al. is precisely what this study is focused on—generating theory that provides “a better understanding of the impact of HRD interventions,” namely CD. By ignoring or avoiding the task of developing a multilevel theory of CD and other HRD core areas, HRD theory will fall short of addressing individual, group, and organization needs. The specifics of MLTB will be addressed in a subsequent section of this literature review. Before reviewing that literature, the following section provides a review of CD, CD theory, and the multilevel nature of CD, followed by a discussion about the link between CD and HRD.

### **State of CD and CD Theory**

CD theories date back to the early 1950s with the development of new CD theory and convergence and integration of existing CD theory continuing today (Chen, 1998, 2003; Patton & McMahon, 1999; Savickas, 1995; Savickas, 2001; Savickas & Lent, 1994; Sharf, 1997; Zunker, 2002). Although volume alone does not guarantee a rich theoretical base, the review of available CD theories conducted for this study reveals theory rooted in sound research and practice. No categorization of these CD theories can fully represent the scope and reach of this theoretical base, but for the purposes of

developing a multilevel theory of CD, there are some categorizations available in the literature that provide necessary insight into the focus of CD theory.

In conceptualizing “the nature of individuals’ life CD,” Chen (1998) integrated “both the established and emerging [CD] theories into [three categories:] career as life process, career as individual agency and career as meaning making” (p. 437). Review of these categories reveals that the focus of each set of theories is on the individual and her or his movement through a career. For clarification purposes, the notion of career is used broadly “to define and describe the events, experiences, thoughts, actions, etc., which have an impact on one’s worklife, as well as other aspects of personal and social life” (Chen, p. 439). Although the employing organization’s environment is a factor in some CD theory included in Chen’s categorization, the individual is the most often examined and described factor.

In a review of the state of CD theories in the early 1990s, Osipow’s (1990) “analysis reveal[ed] that [CD] theories have remarkable similarities. At the same time, each theory possesses features that are distinctive and lend themselves to different problems and populations with differing effectiveness” (p. 129). Based on these similarities and differences, Osipow called on CD researchers to move forward with the convergence of existing CD theories toward an “integrated theory”. As a means of encouraging this convergence, Osipow suggested four missing links, or limitations of CD theory, which CD theorists could explore in an effort to further integrate CD theories:

1. *When are career choices made?* Each theory should identify important [individual] decision points and account for this identification...

2. *The data base for career decision making or, components of choices.* Each theory should include a way to integrate self- and occupational information into the decision stream, as well as to assess the attitudes and identify the variables that influence their use in career decision making...a similar analysis for the awareness of skills and the impact of that awareness in career decision making is necessary.

3. *Implementation.* The identification of the barriers to the development of the data base described above as well as to the implementation of desirable choices is a necessary step...

4. *Adjustment.* More attention must be paid to what happens to an individual after entry into the work force. Here, issues such as...the identification and implementation of new skills, the impact of the atrophy of old skills..., coping, and how environmental variables interact with worker attributes over time must be appropriately addressed (p. 129-130).

Following Osipow's call for theory convergence a number of CD scholars began examining the concept of theory convergence and integration with the resulting discussion continuing today (Chen, 1998, 2003; Patton & McMahon, 1999; Savickas, 1995; Savickas, 2001; Savickas & Lent, 1994; Sharf, 1997; Zunker, 2002). One such scholar, Chen (2003), indicated in his more recent work that the movement in CD theory building continues to integrate the previously developed CD theories for the purpose of "bridging the gap" (p. 203) between the various approaches to theory in CD. In concluding his examination of theory integration, Chen acknowledged that "Although... differences may remain in the realm of CD theory and practice,...it is time for scholars and practitioners to adopt a more open and broader scope in viewing people's life career development" (p. 214). Obviously CD scholars recognize the urgency and need to continually re-examine existing theory for refinement purposes. Furthermore, they recognize the need to continue theory building efforts in order to maintain the relevance of their discipline's rich theoretical pool and prevent excessive fragmentation in the subject [diversity of thoughts/ideas is considered acceptable, but minus unification

efforts the end result is considered fragmentation of thoughts/ideas] (Savickas & Lent, 1994). Based on the available research, CD is considered a prime example of a field ready for multilevel examination. The following descriptions of specific and general CD theories will further point out the possibility for multilevel examinations of CD.

### *Specific CD Theories*

In exploring identified definitions of CD, Egan, Upton and Lynham (in press) turned to identified CD experts for assistance in identifying core CD theories. Those theories identified included: Brown's Values-Based Theory (1995), Ginzberg and Associates' Developmental Theory of Occupational Choice (1951), Holland's Career Theory (1959), Kram's CD Functions (1985), Krumboltz's Social Learning Theory of Career Choice (1994), Roe's Needs Theory Approach (1956, 1972), Schein's Career Anchors (1990, 1996), Super's Lifespan Theory (1957), and Tiedeman's and O'Hara's Decision Making Model (1963). A summary of each of these theories follows.

*Brown's Values-Based Theory.* According to Brown's Values-Based Theory (1995) the core factor in career decision making is the individual's values orientation because those values guide and direct individual action and reflection on actions of other individuals. This theory also indicates that values-laden messages, which individual's begin to receive early in life, ultimately shape general decision making and, specifically, career decision making. Additionally, six propositions were developed to support Brown's model: 1) only a small number of values are prioritized by individuals; 2) those values that represent the individual's highest priority influence CD related choices; 3) values definition and application are shaped by learned experience in the environment;

4) holistic fulfillment is achieved by having life roles that satisfy all of an individual's core values; 5) the level at which the individual's core values are enacted in a life role determines the prominence of that role; and 6) affective, cognitive, and physical capacities affect the success of the individual's life role and CD. In summary, Brown's model focused on values systems and implied that CD related decisions can be explained by power and relationships in the environment.

*Ginzberg and Associates' Developmental Theory of Occupational Choice.*

Ginzberg and Associates' Developmental Theory of Occupational Choice (1951) resulted from a rigorous empirical study, conducted by Ginzberg, Ginsberg, Axelrad, and Herman (1951), and indicated that career choice occurs through three phases: 1) fantasy, 2) tentative, and 3) realistic. In addition, each of these phases occurs between the ages of eleven and seventeen, although these phases may continue into early adulthood. The fantasy period is characterized by work oriented play that generates specific kinds of occupational role activities, resulting in individual assumptions and preferences about work. The tentative phase was made up of four stages: 1) the interest stage in which specific preferences are decided on; 2) the capacity stage in which the connections between abilities and aspirations are made; 3) the value stage in which occupational style perceptions emerge; and, finally, 4) the transition stage which leads to an actual vocational choice and understanding of the requirements for fulfilling that choice (Ginzberg et al.). The realistic phase is also characterized by substages: a) exploration; b) crystallization, and c) specification.

In exploration, career choices are narrowed in focus as individuals pursue educational and training preparation for an occupation. Crystallization can be described as the period in which the individual commits to a particular job or field. Finally, the selection of a specific job or profession training for a field occurs in the substage termed specification. Later refinements to this theory by Ginzberg et al. expanded this model into a repeating cycle that occurs throughout the individual's lifespan.

*Holland's Career Theory.* Holland's Career Theory (1959) is based on the assumption that an individual's career choice is based on his or her personality and thus, the individual must combine specific career information with self-knowledge to make the appropriate choice. Holland also developed assumptions about how job choice, job satisfaction, and job and career success result from the associated job and work environment. These two aspects of career choice, personality type and work environment, were then combined into six combinations: realistic, investigative, artistic, social, enterprising, and conventional (RIASEC). Holland also indicated that these combinations represent only partial preferences for each individual, but that an individual could have from one to three of these combinations as a dominant preference. Career examples based on this model are numerous, but two are offered by Egan et al. (2005): "1) Realistic persons often prefer working with things, tools and machines and may be best suited for jobs such as mechanical or civil engineer or carpenter; and 2) Investigative individuals like working with theories or abstract ideas like chemist, professors, or teachers" (p. 19). The two primary criticisms of this theory are that it does



not take gender differences into account and that not all individuals or work environments in a specific career are the same and therefore, cannot be grouped together.

*Kram's Career Development Functions.* Kram's career development functions (1985) resulted from her qualitative work exploring mentoring relationships. In this research, Kram identified the protégé's career advancement as a common interest between the protégé and mentor. Five essential activities that assist in the protégé's CD are: 1) challenging work assignments; 2) coaching; 3) exposure and visibility; 4) protection; and 5) sponsorship. Specifically, challenging work assignments help in developing critical learning experiences; coaching results in the development of abilities necessary for success in the work environment; exposure and visibility is described in terms of the protégé's interaction with the organization's leadership; mentors may also be able to provide protection for the protégé when mistakes are made or organizational issues arise; and, finally, sponsorship refers to the mentor supporting the protégé for promotion and advancement.

*Krumboltz's Social Learning Theory of Career Choice.* Krumboltz's Social Learning Theory of Career Choice (1994) resulted from the concept of social learning in which individuals respond to environmental conditions, genetics, and learning experiences to make career choices. Since this theory is based on learning, Krumboltz believed that CD occurs through imitation of others. Rather than one specific learning experience dictating career choice, this model is based on the many learning experiences an individual encounters and is involved in. In order to develop appropriate career skills and behavior, this theory points to the requirement of positive learning experiences and

modeling. According to Krumboltz, this theory is an explanation of career choice origination.

*Roe's Needs Theory.* Roe's Needs Theory approach to CD (1956) was founded on the belief that early experiences, particularly family experiences, affected career definition and satisfaction. The result of this perspective was a division of occupations into two categories: person- and nonperson-oriented, rooted in family experiences. In 1972, Roe modified her theory to also include environmental and genetic factors that may affect career choices. These classifications were later used as a foundation for the *California Occupational Preference System* (Knapp & Knapp, 1985) and the *Vocational Interest Inventory* (Lunneborg, 1981).

*Schein's Career Anchors.* Schein's Career Anchors concept (1996) incorporated individual identity to include three aspects: 1) self-perceived talents and abilities; 2) basic values; and 3) the evolved sense of motives and needs as they pertain to the career. Career anchors result only through work-related and life experiences and are described in eight main anchors: 1) technical/functional competence; 2) general management competence; 3) autonomy/independence; 4) security/stability; 5) entrepreneurial creativity; 6) service/dedication to a cause; 7) pure challenge; and 8) lifestyle (Schein, 1978, 1990). Of these eight anchors, Schein's research indicated that typically one of them becomes "*the anchor*, the thing the person will not give up" (Schein, 1996). The major aim of the Career Anchor concept then becomes to provide a reference point for career and CD related decisions.

*Super's Lifespan Theory.* Donald Super's Lifespan Theory (1957) focused on CD patterns that resulted from socioeconomic factors, mental and physical abilities, personal characteristics and opportunities encountered by individuals. Additionally, career maturity was based on success in age and stage development tasks across the lifespan. This broadened perspective of career allowed transferability of skills to also include experiences outside of the traditional paying job. Super, Thompson and Lindeman (1988), have continued to develop and refine his theory and they described vocational maturity in terms of: 1) awareness of the need to plan ahead; 2) decision-making skills; 3) knowledge and use of information resources; 4) general career information; 5) general world of work information; and 6) detailed information about occupations of preference.

Another refinement to Super's Lifespan Theory, was the *Career Rainbow* (Super, 1980) concept that recognized the integration of nine key life roles including child, student, worker, partner, parent, citizen, homemaker, leisurite, and pensioner with each role situation in a particular "theater". CD challenges therefore result from the interrelationship between personal and situational elements occurring throughout the lifespan. Combining his ideas about self-concept and lifespan, Super has now created a theory that allows for and includes the heterogeneity and variability that an adult typically faces in her or his career.

*Tiedeman's Decision Making Model.* The final specific CD theory identified was Tiedeman's Decision Making Model (1963), and framed CD from a holistic view. This model describes CD as emerging from general cognitive development that results in the constant evolution of career related awareness toward appropriate action at the

appropriate age or time. According to Tiedeman's approach, CD results from a complex and highly individualized process. Although little research exploring this approach has been conducted, the major contribution made by Tiedeman is the focus on the role of evolving self-awareness in the career decision making process.

The descriptions provided for these specific CD theories reveals that the level of interest for each was the individual level. There are three theories that make mention of the impact of group or organization level interactions on the individual: Kram's CD Functions (1985) with regard to mentoring (dyadic level), Krumboltz's Social Learning Theory (1994) with regard to individual learning from others (group level), and Roe's Needs Theory Approach (1956, 1972) that factor in family life influences (group level although not in an employing organization). Despite these references to group and/or organization interactions, these theories remain focused on one primary level of interest—the individual level.

#### *General CD Theories*

General CD theories identified by Egan et al. (in press), again with the help of CD experts, include: cognitive focused CD perspectives, constructivist theory of CD, career decision making theories, personality oriented theories, self-concept theories, socioeconomic perspectives, social network theory, social systems theory, and trait-factor theories. A summary of these nine general theories is provided in the following paragraphs.

*Cognitive Focused CD Perspectives.* Cognitive focused CD perspectives included two groups of theories, social cognitive career theories (SCCT) and cognitive

information processing theories. SCCT focused on personal and physical attributes, external environmental factors, and overt behavior (Bandura, 1986). Individual development then, results from the interactions between these three elements. Within CD, SCCT includes three determinants: self-efficacy, outcome expectations, and personal goals. According to Lent, Brown and Hackett (1994) self-efficacy, or beliefs about a specific domain of performance, develops through four types of learning experiences 1) personal performance accomplishments; 2) vicarious learning; 3) social persuasion; and 4) physiological states and actions. Outcomes expectations are those beliefs held by the individual about anticipated career-related results or the significance of those results. The final determinant of SCCT, personal goals, is then described in terms of the role they play in the initiation and maintenance of self-directed behavior.

The second cognitive-based perspective, cognitive information processing theories, is described based on how information is used to make individual CD related decisions (Sampson, Lenz, Reardon, & Peterson, 1993). Since information is viewed to be key to CD related decisions, cognitive ability is identified as a major influence on how much an individual takes control of his or her CD. Additionally, ten assumptions inform this approach to CD: 1) choices about CD are problem solving activities; 2) cognitive processes are key to the emergence of career choice; 3) knowledge and cognitive abilities are used by individuals to address CD problems; 4) high-memory load is necessary to solve CD related problems; 5) CD related success is related to individual motivation; 6) the growth and evolution of cognitive frameworks is required for individual CD success; 7) self-knowledge is vital to CD and career identity; 8) an

individual's ability to solve career problems is directly related to career maturity; 9) when information process skills are facilitated, career counseling/CD is considered successful; and 10) individual problem solving and decision making abilities are considered the ultimate goal of CD related interventions. In summary, cognitive information processing theories frame CD as ongoing learning events that can be influenced by a career counselor/CD professional (Zunker, 2002).

*Constructivist Theory of CD.* Constructivist theory of CD is often associated with CD implementation, coaching and support and was developed by Savickas (1997) and Peavy (1995). These researchers outlined five foundational aspects of constructivist theory: 1) individual identities and environments are created through interpretations used to inform career decisions and actions; 2) individuals self-organize life stories and/or constructs to make meaning; 3) individuals are not relegated to a single meaning or reality—multiple meanings and realities characterize humans; 4) individual critical reflection and the connection between thoughts, assumptions, and actions results in individual fulfillment; and 5) individuals likely have different perceptions of events regardless of differences or similarities with others. Due to the lifespan approach of the five aspects of constructivist CD theory, CD practitioners working from this perspective often work from a life planning or holistic perspective.

*Career Decision Making Theories.* Career decision making theories are broad in scope and are based on the ability an individual has to make career choices from a number of options. Herr and Cramer (1988) listed seven aspects of career decision events: 1) problem definition; 2) generation of scenarios or alternatives; 3) information

gathering; 4) information processing; 5) making plans; 6) goal clarification; and 7) taking action. When opting to take action, an individual may be deciding to make a job or career change, return to school for formal education, or gain additional skills through training. These choices are largely influenced by the individual's awareness of his or her available options (Pietrofesa & Splete, 1975). Gelatt's (1962) career decision making theory utilized a set of career decision steps similar to those described by Herr and Cramer with additional information for career counselors/CD practitioners on how to guide individuals through the decision-making process.

*Personality Oriented CD Theories.* Those CD theories labeled personality oriented theories are based on the assumption that an individual self-selects a job that will satisfy her or his needs; needs that are strongly connected to her or his personality. According to the research behind these theories, job-related experiences also exert an influence on the individual's personality. These theories are wide ranging, from personality type career areas (Holland, 1959) to lists of vocational choice needs (Hoppick, 1957). Personality dimensions have long been the focus of many career and CD related research studies.

Emerging from the work of Super (1957), Samler (1953), Ginzberg (1952); Dudley and Tiedeman (1977); Knepelkamp and Slipitza (1978), and Rogers' (1951) work on client-centered orientations, self-concept theories assume three things. First, that self-concepts are refined with age and changing perceptions of reality. Second, that individuals compare images of the working world with self-images to make decisions.

Finally, that the similarity between career roles and self-concept influence the perception of adequacy of career decisions.

*Socioeconomic CD Theory.* In order to understand socioeconomic CD theory, we need to first define socioeconomics. Bürgenmeier (1992) indicates that socioeconomics is the study of the social and economic impact of products, services, and market interventions on individuals, organizations, and the economy. Socioeconomic CD theory then is described in terms of how social and economic values and identities of individuals, their family background, and other outside factors influence their CD decisions (Alfred, 2001). Further, the assumption that we cannot choose our social and economic status in the pre-adult years, which then strongly influences the career opportunities that are available to us, is based largely on social and economic factors (National Occupational Information Coordinating Committee, 1989).

*Social Network Theory.* According to social network theory, interpersonal relationships impact the individual behavior in organizations and other social institutions (Marsden, 1981). A network results from the interrelationships or links between individuals and/or groups of individuals (Wellman & Wortley, 1990) and mutual benefit for the involved individuals and groups emerges from these networks. From the CD perspective, the resulting networks may ultimately hinder or support career-related decisions, choices and opportunities. Interestingly, these social networks can also develop outside of an individual's workplace and yet have the same impact on the individual as those networks within the workplace. Generally speaking, individuals with active CD-related networks have enhanced CD options (Granovetter, 1974).



*Social Systems CD Theories.* Based on the work of Caplow (1954), Hollingshead (1949), and Miller and Form (1951), social systems theories are based on the assumption that individuals have limited control over life events and societal circumstances. Rather, interacting social systems and individuals largely influence CD and CD-related choices. In an effort to cope with the pre-existing social systems, individuals must therefore continually develop new knowledge and skills. Additional work in social systems theories indicated that individual ambitions and/or aspirations also exert influence on the CD choices made in the existing social system (Sewell & Hauser, 1975; Sweet, 1973).

*Trait-factor CD theories.* The final general CD theories, trait-factor theories, are also the oldest CD related theories. Three theorists, Parsons (1909), Kitson (1925), and Hull (1928), originated these theories and all of them assumed that a successful career match could be made between an individual and a job or career based on personal characteristics and the job/career needs. All CD needs were thus resolved by a successful match between the job and individual characteristics. Parsons also indicated that career choices depended on three things: first, accurate self-knowledge; second, a specific understanding of the requirements of the job; and finally, the ability to connect self-knowledge with job understanding. According to Osipow (1983), trait-factor theories resulted in career and vocational testing, including interest inventories such as the *Strong Interest Inventory* (Strong, 1943) and aptitude tests such as the *Differential Aptitude Test* (Harcourt Inc., 2005). Current day CD continues to be influenced by the two main assumptions of trait-factor theories, 1) that a match between job and individual traits can be made; and 2) that alignment between individual characteristics and job tasks/roles

results in job satisfaction. Having summarized the general CD theory categories, the descriptions of these CD theories and perspectives confirmed that while a few of these theories factor in outside influences, such as family, personality traits, and socioeconomic status, the primary focus of each theory was still the individual.

#### *Limitations of CD Theory*

Current CD theory may focus on the individual, but within the CD field, there is an openness to “adopting a flexible macro perspective” to encourage “many more possibilities...for advancing and enriching [CD] theory and practice” (Chen, 2003, p. 214). This openness to exploring CD levels other than the individual level provides an opportunity in CD theory to develop a multilevel theory of CD that addresses the needs of both the individual and the organization. A multilevel theory of CD also has the potential to address three of the four “missing links” in CD theory convergence as identified by Osipow (1990). The first missing link that can be addressed by developing a multilevel theory of CD is the need for integration of “self- and occupational information into the [career] decisions stream”—meaning the need to integrate individual and organization level information to impact career decisions. The second missing link is the identification of “barriers to the development...and implementation of desirable [career] choices” meaning those issues at the individual, group and organization level that prevent the ability to implement desirable career choices. Finally, the third missing link that can be addressed by developing a multilevel theory of CD is the need to address “what happens to an individual after entry into the work force” (p. 130)—namely, how individuals work and interact to accomplish individual, group and

organization goals. By answering Osipow's call for the aforementioned convergence, a multilevel theory of CD provides the means for avoiding the fragmentation of thoughts/ideas warned against by Savickas and Lent (1994).

With regard to CD interventions, Adamson, et al. (1998) declared "In many cases, senior managers are stating that their organizations no longer offer careers at all, but rather... 'opportunities for development', and that the responsibility for this development now rests more fully with the individual" (p. 252). Similarly, Graham and Nafukho (2004) stated that "most practitioners, and some theorists and scholars are continuing to use a [theoretical] approach [to CD interventions], based primarily on the individual view of...CD" (p. 51). In identifying the selected practices of CD practitioners, Graham and Nafukho discovered that a majority of their study participants (HR executives based in the midwestern United States), much like the Adamson, et al. participants, also "believed the employee was primarily responsible for career development" (p. 53). Both of these examples are indications of the shift from organizational responsibility to individual responsibility for CD.

CD theory and practice has a well-established foundation and CD scholars continue to refine and integrate existing theories. While a majority of CD theory focuses on the individual, the trend toward individual responsibility for CD (Adamson, 1997; Adamson, et al., 1998; Arthur & Rousseau, 1996; Brousseau, et al., 1996; Conlon, 2003; Graham & Nafukho, 2004; Hall, 1996; Hirsch, et al., 1995; Nicholson, 1996; Nicholson & West, 1989; Viney, et al., 1997) justifies this focus. If HRD researchers and practitioners want to continue to include CD as a core area, the theoretical link between

CD and HRD must be strengthened. Current CD theory focuses largely on the individual, while the field of HRD is largely focused on the organization or large system. MLTB can and should be used by HRD scholars to theoretically link CD and HRD. In addition, the advancement of theory building in HRD is dependent upon developing theory that links the micro, meso, and macro levels if the field hopes to avoid what Wright and Boswell (2002) referred to as the “micro-macro divide”. MLTB also provides a means for addressing Osipow’s (1990) and other CD scholars (Chen, 1998; Patton & McMahon, 1999; Savickas, 1995; Savickas, 2001; Savickas & Lent, 1994; Sharf, 1997; Zunker, 2002) call for and efforts toward the convergence of CD theory into an integrated theory and Chen’s (2003) call to broaden the scope of life CD in the field of CD by “adopting a flexible macro perspective” of CD.

*CD as a Multilevel Issue*

The emphasis on strategic approaches to HRD has, according to Desimone, Werner, and Harris (2002), added significantly to the discussion about human learning and performance and, “By definition, strategic HRD attempts to integrate multiple interests and goals within a given structure to strengthen organizational capacity overall” (Upton & Egan, 2005, p. 634). Recognizing the role of individuals and the organization in strategic HRD, Upton and Egan continued, “HRD is a multilevel field and CD can be explored through a multilevel lens” (p. 634) because CD focuses on the individuals who, in turn, make up the organization.

In addition to the multilevel focus in strategic HRD, foundational HRD beliefs outlined by Swanson and Holton (2001) and listed below, also addressed both individuals and organizations as important.

1. Organizations are human-made entities that rely on human expertise to establish and achieve their goals. Organizations have been created by human kind...and HRD is intricately connected to the fate of any organization.
2. Human expertise is developed and maximized through HRD process and should be done for the mutual long- and/or short-term benefits of the sponsoring organization and the individuals involved...[and]
3. HRD professionals are advocates of the individual/group, work process, and organizational integrity. HRD professionals typically have a very privileged position of accessing information that transcends the boundaries and levels of individuals, groups, work process, and the organization... (p.10).

Despite individuals being recognized as important components to explore in HRD theory and practice, current HRD theory does not fully support these beliefs. As stated previously, although HRD-related theory building has increased recently (Torraco, 2004), no specific examples of MLTB have been identified in HRD journals and only one example of a MLTB dissertation (Reynolds Fisher, 2000) has been identified as coming from the HRD field. “Multilevel theories span the levels of organizational behavior and performance” (Klein, Tosi, & Cannella, 1999, p. 243), thus providing researchers and practitioners alike with the impetus for exploring the levels of an organization, including the individual level. As stated previously, Garavan, et al. (2004) have specifically called for expanding multilevel exploration in HRD.

The purpose of this study is to develop a MLTB process and multilevel theory of CD; however, the purpose does not include an attempt to determine a consensus definition of CD and its component parts. What is important to recognize is that a number of HRD scholars describe CD in terms of separate, yet equally important

responsibilities for both the individual and the organization (Desimone et al., 2002; Gilley, Egglund, & Gilley, 2002). Upton et al. (2003), in exploring CD definitions, theories, and dependent variables, were able to identify both individual and organizational outcomes associated with CD (see Table 2.2 below).

Table 2.2 *CD Dependent Variable Categories* (Upton, et al., 2003).

<i>Individual Outcomes</i>	<i>Organizational and Social Outcomes</i>
Achieve Self-Satisfaction	Benefit Society
Achieve Career Objectives	Attract and Retain High Caliber Employees
Make Career Decisions	Increase Individual Employee Job Satisfaction
Develop a Self-Concept	Increase Organizational Performance
Align Individual Needs with Organizational Needs	Align Organizational Needs with Individual Needs

Although existing CD theory focuses largely on the individual, the dependent variables identified by Upton et al. have established CD as a multilevel topic. MLTB then provides the framework and process for “linking individuals, dyads, teams, businesses, corporations, and industries” (Klein et al., 1999, p. 243) to reflect those beliefs in HRD theory.

#### *CD through a Multilevel Lens*

Having established CD as a multilevel topic and identified MLTB as means of further exploring the role of CD in HRD, this section of the literature review is focused on why CD should be explored using MLTB. Whetten (1989) described the “why” of theory development as, “...probably the most fruitful, but also the most difficult” (p. 493). He continued, “It commonly involves borrowing a perspective from other fields,

which encourages altering our metaphors and gestalts in ways that challenge the underlying rationales supporting accepted theories” (Whetten, p. 493). With regard to CD, MLTB is a means of “altering our metaphors and gestalts” in HRD to more fully integrate the individual and organizational aspects of our practice and research. CD has a strong theoretical base (Upton et al., 2003) that focuses on the individual and can further inform the field of HRD to provide insight from which to borrow other perspectives. Whetten also stated (p. 491), “The mission of...theory-development...is to challenge and extend existing knowledge, not simply rewrite it.” Although “CD responsibilities [have shifted] from organizations to individuals” (Conlon, 2003, p. 489), there is a need to “challenge and extend” this knowledge in HRD. Researchers should not simply discount the individual focus of CD theory by focusing on the organization but rather, should extend understanding by exploring CD through a multilevel lens.

In an effort to better understand how multilevel theory can inform an area of research and practice, theorists, scholars, and practitioners must address why MLTB is a better option than single-level theory building. The HRD-related fields of management and industrial/organizational psychology have been conducting multilevel research for a number of years and specific examples of multilevel theory establish the importance of multilevel research. One such example is Waldman and Yammarino’s (1999) research exploring levels-of-management and levels-of-analysis effects in CEO charismatic leadership. Their study addressed the importance of examining phenomena at multiple levels by stating “constructs such as leadership are typically associated with the behavior of a single individual or the individual (leader) level of analysis,” but “the manifestation

and effects of leadership can be seen at” (Waldman & Yammarino, p. 267) other levels of analysis. CD can be viewed in a similar light since research indicates that individuals have the primary responsibility for CD (Adamson, 1997; Adamson, et al., 1998; Arthur & Rousseau, 1996; Brousseau, et al., 1996; Conlon, 2003; Graham & Nafukho, 2004; Hall, 1996; Hirsch, et al., 1995; Nicholson, 1996; Nicholson & West, 1989; Viney, et al., 1997), with additional research revealing that CD has a role to play within the organization’s strategic goals and practice (Upton, et al., 2003). As mentioned previously, a multilevel theory of CD also contributes to the convergence of existing CD theory into a more integrated CD theory and utilizing MLTB further advances theory building in HRD.

### **Linking CD and HRD Theory and Practice**

A number of core areas within HRD have been identified by scholars. A sampling of these areas are listed by Upton and Egan (2005) and include “training and development, organization development, and CD (McLagan, 1989); psychology, economics, and systems theory (Swanson, 1995); organizational learning and performance (Holton, 2002); work-based knowledge, expertise, productivity, and satisfaction (McLean & McLean, 2001); person-centered, production-centered, and principled problem solving (Kuchinke, 2000); capabilities, psychological contracts, and learning organization/organizational learning (Garavan, Gunnigle, & Morley, 2000); or social benefits and ethics (Hatcher & Aragon, 2000)” (p. 633). By addressing the “perspectives and discussions regarding the purpose and focus of HRD” (Upton & Egan, p. 633), scholars have begun to answer the question of whether HRD practice should



focus on “the individual, or...the shareholders [within the organization]...” (p. 633). Furthermore, in the field of HRD, CD “has had declining influence in HRD in recent years” (Swanson & Holton, 2001, p. 312) and is often viewed as the responsibility of the individual within organizations. Despite this declining influence, CD remains a relevant aspect of HRD as will be demonstrated in the following paragraphs.

One of the earliest and most explicit connections between CD and HRD was written by McLagan (1989) in her definition of HRD:

HRD can...be viewed as a subset of the human resources discipline. Specifically, it consists of three...areas of human resource practice. The three areas that use development as their primary process are: 1. training and development (T&D)...2. organization development (OD)...[and] 3. CD: [with CD] assuring the alignment of individual career planning and organizational career management processes to achieve an optimum match of individual and organizational needs (p. 52).

Citing support from McLean (2002), Upton and Egan stated, “Although McLagan has revised her position regarding the interrelationships between HRD and HRM related areas, an emphasis on CD as a...key issue in the exploration and implementation of HRD remains” (p. 633). Swanson and Holton (2001) also recognized CD as an “area of practice” within HRD, saying they “tend to think that CD is being overlooked as a contributor to HRD” (p. 312).

#### *Theoretical Connections of CD and HRD*

As discussed previously, CD has a strong theoretical base and the inclusion of theoretical foundations of CD as a means for connecting CD and HRD are highlighted by Upton, Egan, and Lynham (2002):

...Behavioral [CD] theories present overlapping assumptions common to those found in HRD, such as learning theory...Additionally, social systems theories

support the examination of external or environmental factors associated with learning, development, and performance. HRD studies that include CD perspectives provide opportunities for integrative research that examine systems dimensions of learning and performance (p. 733).

The authors added that the “systems theory approach to conceptualizing and implementing HRD (as cited in Weinberger, 1998) supports the relationship between micro [CD, individual] and macro [HRD, organization] elements at the theoretical level” (Upton & Egan, p. 633). Additional support for exploring the connections between and within individual and organization level issues is echoed in recent HRD scholarship discussing multilevel issues in HRD (Garavan et al., 2004).

#### *Practice Connections of CD and HRD*

Addressing the practice level implications of CD, Swanson and Holton (2001) stated, “career development theories that describe adult career development are important contributors to HRD practice because they describe adult progression through work roles—a primary venue for HRD practice” (p. 312). Upton et al. (2003) also identified overlap “between individual and organizational outcomes” within CD and identified “the interests of both the individual and the organization to engage in CD or the support of CD related activities...It is at this intersection that HRD plays a role in the crossover between individual and organization development agendas” (p. 732). Additionally, “There is much support for the belief that employee [and career] development programs make positive contributions to organizational performance” (Jacobs & Washington, 2003, p. 351). Additional support for the inclusion of CD in HRD is provided by Desimone, Werner, and Harris (2002), who stated, “In our view, what should change, and what is changing, is that organizational CD should be designed

to fit the responsibilities and needs of both individuals and organizations, providing the opportunities both need to prosper” (p. 455).

In the related field of human resource management, macro organizational research informs the idea of integrating individual and organizational goals. The underlying assumptions of macro organizational research are “that organizational processes should be...aligned to produce synergy...in organizational direction thus helping to support strategic success...[and should] consider the degree to which the actual human resources [i.e. employees] are aligned with and contributing to the organization’s strategic goals” (Morgeson & Hofmann, 1999, p. 265). Additionally, “organizational behavior theorists are recommending taking traditionally micro-oriented theories and applying them to macro level phenomena” (Waldman & Yammarino, 1999, p. 266) in an effort to examine organization issues at multiple levels.

The examples provided above reveal “important links between the practice and theory of CD and the practice and theory of HRD. In addition, the link between the individual and the organization provided a key area of interaction within HRD with CD playing a vital role in exploring both the individual’s and the organization’s goals” (Upton & Egan, 2005, p. 633). Recognizing that CD has a role to play in the theory and practice of HRD, the focus becomes determining a means of connecting the individual and organization within HRD with the added challenge of developing a practical theory that recognizes “the relevance of both the parts [individuals] and the whole [organization]” (Upton & Egan, p. 632). The previous discussion about CD and CD theory also highlights the need for multilevel connections and explorations. The

following section provides an explanation of MLTB and how it can be utilized to advance theory development in HRD and assist with the integration of existing CD theory.

### **Multilevel Theory Building**

Having established a theoretical and practice link between CD and HRD and recognizing CD as a multilevel issue, this portion of the literature review specifically addresses MLTB. The information contained in this section is presented in three subsections: definitions of MLTB (Klein, et al., 1999; Reynolds Fisher, 2000); challenges and barriers associated with MLTB (Klein et al.; Klein, Dansereau, & Hall, 1994); and considerations scholars must take when engaging in MLTB (Klein et al., 1994; Klein et al., 1999; Morgeson & Hofmann, 1999). Discussion about specific approaches to MLTB is reserved for the development of the research methodology used in this study and is provided in detail in Chapter III.

#### *Defining Multilevel Theory Building*

Theory building researchers often focus only on a single level although theory building can be aimed at understanding multiple levels. Why then conduct theory building at multiple levels if the theory development can be done at each individual level? Specific explanation of the importance of MLTB to researchers and practitioners is provided by Klein et al. (1999):

Multilevel theories span the levels of organizational behavior and performance, typically describing some combination of individuals, dyads, teams, businesses, corporations, and industries. Multilevel theories, thus, begin to bridge the micro-macro divide, integrating the micro domain's focus on individuals and groups with the macro domain's focus on organizations, environment, and strategy. (p. 243)

Reynolds Fisher (2000) provided additional clarification in stating that multilevel theory “is still a simplified view of the complexity of organization [life] in the real world” (p. 16). The reader may recall Dubin’s (1978) definition of theory building from a previous section: theory is “...a model of some segment of the observable world...[that] describe the face appearance of the phenomenon [of interest] in such terms as structures, textures, forms and operations” (p. 216). A comparison of Dubin’s definition of theory building to Reynolds Fisher’s definition of MLTB revealed that theory building, whether at a single level or at multiple levels, has the same purpose, but that by utilizing the multilevel process there is the potential to glean additional insight and capture a more systematic or layered perspective regarding the focal phenomenon. Klein et al. (1999) also stated that “multilevel theory building fosters much needed synthesis and synergy, ...connect[ing] the dots, making explicit the links between constructs previously unlinked...[and] illuminat[ing] the context surrounding individual-level processes, clarifying precisely when and where such process are likely to occur within organizations” (p. 243). Finally, “multilevel theory is not necessarily one that considers every level within a hierarchical system equally, but rather one that takes into account the effects of levels subordinate and supraordinate to the focal level” (Reynolds Fisher, p. 11).

#### *Barriers and Primary Challenge to Multilevel Theory Building*

MLTB literature is rich in its description of why scholars might engage in this type of work and informed the reader that “...the barriers to [MLTB] are substantial, yet...the benefits are real” (Klein, et al., 1999, p. 243). Specifically, they identify four barriers to MLTB. Klein, et al. (1999) stated that the first barrier to MLTB, resulting from the fact

that “multilevel theories span the levels of the organizational discipline,” is “...the mass of potentially relevant research and theory available to the would-be theorist” (p. 244). The second barrier “is the barrier of interests, values, and heuristics” (Klein, et al., 1999, p. 244) with regard to other theorists and scholars in the field. “A third barrier to...development...is the difficulty in determining the appropriate scope for such a theory...The appropriate middle ground—not too simple, yet not too complex—may be difficult to find” (Klein, et al., 1999, p. 244). The final barrier to MLTB occurs because, “Rigorous tests of multilevel theories may require the researcher to gather data from multiple individuals across multiple units and organizations. [Thus], the single-organization study...may not suffice” (Klein, et al., 1999, p. 244) and the complexity of validating the resulting theory becomes quite challenging.

The primary challenge that exists and must be faced by theorists engaging in MLTB is the challenge presented by capturing the intricacies that occur in the various levels. “Individuals work in dyads, groups, and teams within organizations that interact with other organizations both inside and outside the industry. Accordingly, levels issues pervade organizational theory and research. No construct is level free” (Klein et al., 1994, p. 198). Further, “Levels issues create particular problems when the level of a theory [the target that a theorist or researcher aims to depict and explain], the level of measurement [describing the actual source of data], and/or the level of statistical analysis [describing the treatment of the data during statistical procedures] are incongruent” (Klein et al., 1994, p. 198). Levels considerations provide a daunting, yet vital, area of exploration and explanation.

*Scholarly Considerations*

Having identified the barriers and primary challenge to MLTB, there are a number of special considerations identified by scholars (Klein et al., 1994; Klein et al., 1999; Morgeson & Hofmann, 1999; Reynolds Fisher, 2000) that must also be addressed. Researchers recognized that the purpose of theory building, whether at a single level or at multiple levels, is similar no matter what phenomenon is being studied. Based on that knowledge, Klein et al. (1994) provided theory-building implications—four general and one specific to MLTB. The first guideline stated, “Theory building is enhanced by explicit specification and explication of the level of a theory and its attendant assumptions of homogeneity, independence, or heterogeneity...increas[ing] the clarity of organizational theories” (Klein et al., 1994, p. 206-207). Second, “Theory building may be enhanced by specification and discussion of the sources of the predicted homogeneity, independence, or heterogeneity of the constructs...increas[ing] the depth and comprehensiveness of organizational theories” (Klein, et al., 1994, p. 207). Third, “Theory building may be enhanced by explicit consideration of alternative assumptions of variability...increas[ing] the creativity of organizational theories” (Klein, et al., 1994, p. 208). Fourth, “In clarifying and explicating the level or levels of their theories, organizational scholars may discover a new synergy among the diverse subtopics of the field” (Klein, et al., 1994, p. 208). Finally, the implication specific to MLTB stated, “When the assumptions of variability...for both the independent and dependent variables...are conceptualized to vary solely between groups (homogeneity), or solely within groups (heterogeneity), or both within and between groups (independence or an

interaction effect), the precision and rigor of multiple-level theories, and tests of such theories, are enhanced” (Klein, et al., 1999, p. 223).

Morgeson and Hofmann’s (1999) work, “derived from...and reflect[ing] issues that arise when multilevel theories are developed,” (p. 256) provided additional insight for multilevel theorists. Their guidelines specifically addressed the development of “collective constructs” in multilevel theories. The eleven guidelines they proposed center “around how constructs emerge in collectives and how these collective structures influence the interaction of individuals and collectives” (Morgeson & Hofmann, p. 251). The authors differentiated the guidelines into three categories: implications of structure (Guidelines 1, 2, and 3); implications of function (Guidelines 4 and 5); and integrating structure and function in multilevel research and theory (Guidelines 6, 7, 8, 9, 10, and 11). In addition to addressing the need to define collective constructs, Morgeson and Hofmann indicated that their guidelines, combined with a functional analysis of the constructs, offer “a general model for the development and testing of multilevel theories” (p. 250). Since Morgeson and Hofmann’s work is designed to be a model for multilevel theory development, their study will be explored in greater depth as one of three specific processes for developing multilevel theory detailed in Chapter III, which includes information on the development of the research methodology used to build a multilevel theory of CD.

#### *Multilevel Theory Examples*

Although MLTB is a new area of research in HRD, the use of it in related disciplines such as industrial/organizational psychology and management gained



research prominence in the early- to mid-1990s (see Klein et al., 1994; Klein & Kozlowski, 2000). Theories, regardless of whether they are single- or multilevel in form, are designed to be "...a model of some segment of the observable world...[that] describes the face appearance of the phenomenon [of interest] in such terms as structures, textures, forms and operations" (Dubin, 1978, p. 216). In an effort to better understanding what constitutes multilevel theory, four examples of multilevel models, selected to represent a variety of multilevel topics, are offered: multilevel considerations of personnel selection psychology (Schneider, Smith & Sipe, 2000); a multilevel examination of CEO leadership (Waldman & Yammarino, 1999); a multilevel analysis of performance appraisal and performance management (DeNisi, 2000); and a multilevel approach to training effectiveness (Kozlowski, Brown, Weissbein, Cannon-Bowers & Salas, 2000).

*Personnel Selection Psychology.* Schneider and colleagues (2000) stated, "From its inception, personnel selection psychology has focused on individual differences as determinants of individual performance, assuming that individual performance translates neatly into organizational performance" (p. 92). While this focus on individual differences has been fruitful, the results limited "the conclusions that can be reached with regard to organizational differences and organizational performance" (Schneider, et al., p. 115). Personnel selection psychologists realized that by not studying the individual and organizational context and levels of analysis jointly that the subject and discipline would be in danger of marginalization and decline. As a result, Schneider and colleagues presented a "multilevel model explicating various linkages among individual

differences, individual performance, organizational differences, and organizational performance” (p. 105) to suggest additional research to reclaim the relevance of personnel selection psychology.

*CEO Leadership.* Waldman and Yammarino’s (1999) research exploring levels-of-management and levels-of-analysis effects in CEO charismatic leadership stated “constructs such as leadership are typically associated with the behavior of a single individual or the individual (leader) level of analysis,” but “the manifestation and effects of leadership can be seen at” (Waldman & Yammarino, p. 267) other levels of analysis. As a result of the individual focus of leadership, little research has been conducted to examine the multilevel implications of CEO or other forms of leadership. Waldman and Yammarino’s model offered a way of examining these multilevel implications and enhancing the understanding of the multilevel topic of CEO leadership.

*Performance Appraisal and Performance Management.* DeNisi (2000) focused on the issue of performance appraisal and performance management and points to the multilevel nature of this topic. “Traditionally, performance appraisal and...management research...have focused on the individual level of analysis. Although [researchers] have occasionally ventured onto the level of the team or the group..., [they] have not paid much attention to organization-level performance” (DeNisi, p. 151). By pointing out the traditional focus of performance appraisal and management research (the individual level), DeNisi highlighted the problem with examining a single-level in a multilevel subject. He also pointed out that “Scholars interested in performance at higher levels of analysis, especially at the level of the organization, have been equally guilty of ignoring

the importance of performance at lower levels and the importance of understanding relationships among performance at different levels of analysis” (DeNisi, p. 151).

Researchers interested in both sides of performance must engage in an examination of “how and why [performance-based] programs result in performance at each level of analysis” (DeNisi, p. 152). Although DeNisi does not outline a model for multilevel performance appraisal and management, he offered suggestions for future research that will encourage micro-oriented researchers “to consider how their models of individual performance might translate into performance at higher levels of analysis” (p. 152), and macro-oriented researchers to “give more thought to how HR programs aimed at individuals can lead to team-level and,...corporate-level performance” (p. 152).

*Training Effectiveness.* The final example of multilevel theory examined for this study, regarding a multilevel approach to training effectiveness (Kozlowski, et al., 2000), is also the most explicit. The premise of this study is “that training effectiveness, with few exceptions, has been conceptualized and researched at the individual level, and yet training effectiveness is ultimately determined by the degree to which training contributes to strategic organizational objectives that manifest at higher levels” (Kozlowski, et al., p. 198). Their multilevel model of training effectiveness is based on two basic principles, 1) that “training effectiveness is not isolated as a self-contained system; rather, training is embedded in a broader organizational context, and so models of training effectiveness must be sensitive to the multiple...linkages...for...horizontal transfer [within a single level]; and 2) that “training effectiveness is not solely a micro phenomenon based on individual-level transfer...; rather, training effectiveness involves

the linkage between micro training outcomes and macro objectives...that emerges vertically across levels [called vertical transfer]" (Kozlowski, et al., p. 199).

The contribution of the resulting multilevel model of training effectiveness (Kozlowski, et al., 2000) is an "effort to articulate models for the implicitly assumed linkage between individual-level skills...and higher-level organizational outcomes. Indeed, the conceptual issues [they] address, although focused on training, are relevant to the link between all human resources interventions...and organizational effectiveness" (p. 202). Furthermore, their model "makes salient the need to consider how individuals contribute to organizational outcomes, the need to model how those contributions combine, and the need to apply that knowledge to the development of an integrated...system—a system predicated on influencing organizational effectiveness" (Kozlowski, et al., p. 203).

#### *Multilevel Theory Building Critique*

In order to provide a comprehensive picture of the methodological process involved in MLTB, there must be a critique of the use of MLTB in exploring CD. In their exploration of CD, Upton et al. (2003) suggested the use of MLTB to further explore CD. Referencing Klein et al. (1999), they pointed to the role of MLTB in bridging the "micro-macro divide" in CD. From a critical standpoint though, Upton and colleagues stated, "Too much variability or heterogeneity between the levels or units [being explored in CD] will diminish the likelihood for the development of a cohesive multilevel theory" (p. 733). Therefore it is critical that any multilevel exploration of CD involve minimizing variability between groups. From a critical standpoint, controlling

the variability between levels or units may prove a daunting task and thus prevent successful development of a multilevel theory of CD. Another critique of using MLTB to explore CD arises when one considers that CD has so many meanings depending on the organization and individual involved. As a result, the generalizability of such a theory may be limited. Finally, depending on where the multilevel theory of CD is situated, individuals and/or organizations may not see the utility of such a theory. If that occurs, the proposed theory, though possibly offering some insight into the utility of CD to both individuals and organizations, may be viewed as failing to bridge the “micro-macro divide” as described above.

### **Conclusion**

The call for theory development that addresses multiple levels has recently appeared in the HRD literature (Garavan et al., 2004) and is sure to result in a number of intriguing studies. With CD identified as a multilevel issue with practice and research connections to HRD, developing a multilevel theory of CD is imperative to the advancement of HRD theory and theory building. Existing and new theory building efforts in HRD that focus on a single-level will continue to be relevant because the field is young and some HRD “phenomena of interest...have been little explored in the organizational literature,” thus making “multilevel models...unnecessary” (Kozlowski & Klein, 2000, p. 14). As pointed out previously though, linking CD and HRD theoretically requires a multilevel approach. The MLTB literature describes a number of issues to consider in conducting levels research with insights from MLTB scholars informing the process for conducting research in this area. Multilevel research presents

an opportunity to enrich HRD research and practice and begin to provide insight into additional means for connecting the needs of both the individual and the organization.

CD clearly provides both individual and organizational outcomes. As such, MLTB provides a new means of exploring the levels created by the interaction of individuals within organizations. Although there are obstacles that may arise in developing such a model, CD and its rich theoretical base and long history of theory development and refinement holds too much promise for improving individuals and organizations to be ignored. Developing a multilevel theory of CD has the potential to re-establish the importance of CD within the field of HRD and continue the advancement of theory building in HRD, as well. Furthermore, a multilevel theory of CD has the potential to add some insight into the continued convergence of existing CD theory.

### **CHAPTER III**

#### **METHODOLOGY**

In the previous chapter, CD was posited as having both individual and organizational outcomes and MLTB was offered as a process for examining the resulting levels issues. Despite the challenges associated with developing a multilevel theory of CD, the well-established theoretical base for CD provides much insight into the resulting multilevel interactions of individuals within organizations. As stated previously, the purpose for conducting this study is to develop a multilevel theory of career development (CD) as a means of further connecting CD to human resource development (HRD), developing theory that most accurately reflects CD and HRD contexts and environments, advancing theory building in HRD, and contributing to the further convergence of existing CD theory. By developing a multilevel theory of CD, the goal is to explore levels issues in the context of CD and HRD and to explicitly connect these levels for future research in HRD. Before examining MLTB methods, the current state of theory building in HRD must be explored in order to provide the reasoning for using a multilevel approach. That examination is followed by a summary and comparison of the MLTB methods of Kozlowski and Klein (2000), Morgeson and Hoffman (1999), and Reynolds Fisher (2000). The chapter continues with a discussion of the need to integrate MLTB methods into an improved process for MLTB. Finally, a new and improved model for MLTB is presented for use in developing a multilevel theory of CD.

### **State of HRD Theory Building**

Theory building in HRD is a relatively new area of research Lynham (2000b) stated that “The topic only began to draw attention in HRD since the early 1990s, and somewhat increasingly so since 1996” (p. 160). In her initial examination of theory building, Lynham also discussed the associated implications of theory building in HRD and provided much needed insight into the resulting challenges of this research. A recent comparison of the theory building research methods of Dubin (1978), Lynham (2002), and Van de Ven (2003) indicated that “Future theory building in HRD will be well served by using [Lynham’s and Van de Ven’s] theory building research methods as a roadmap for theories that are relevant in today’s organizational environment” (Storberg-Walker, 2003, p. 221). Storberg-Walker’s recommendation is based on the assumption that Dubin’s framework is insufficient for HRD theory building because his model was framed within the positivistic paradigm and thus has limited utility in the multi-paradigm field of HRD. She also stated that Dubin’s method “lacks the flexibility to address the complex, multidimensional, contextual, and temporal social phenomena that HRD theoreticians are often faced with today” (Storberg-Walker, p. 218). Essentially, Storberg-Walker’s critique is that Dubin’s model is too methodical, stepwise and positivistic to add value to continued theory building in HRD.

Focusing specifically on the comparison between Dubin’s (1978) and Lynham’s (2002b) models, Storberg-Walker (2003) indicated that the flexibility allowed in Lynham’s method comes from its generic nature. Since it does not provide a stepwise process to follow for theory building, the assumption is that it allows for flexibility in



examining the issues that face HRD scholars and practitioners. Although Lynham's method has clear merit and has served the purpose of increasing the dialogue about theory building in HRD, it does not advance HRD theory building beyond a compressed, consolidated and generic examination of issues in the field. Although providing a more succinct, process oriented perspective on general theory building, Lynham's generic theory building model provides no unique insights into theory building beyond Dubin's earlier model. Storberg-Walker is correct in identifying Lynham's ambitious stance that theory building should be shaped by more than on epistemological perspectives as unique and offering new potential for theory building beyond the positivistic orientation presented by Dubin (1978); however, Lynham fails to clearly resolve foundational issues associated with theory building outside of the positivistic paradigm. Additionally, by failing to clearly articulate a systems or multilevel perspective on theory building Dubin and Lynham lead theorists away from practicality, particularly in HRD related theory building, by perpetuating micro-macro divisions.

Multilevel theory building is the alternative for advancing HRD theory building—one that allows for the examination and explanation of the rich interaction that occurs within and between individuals, groups, and organizations. The cost for ignoring multilevel examination as a feasible option for advancing our discipline is that HRD scholars will likely divide into the micro versus macro competition that Wright and Boswell (2002) warn against. The resulting “micro-macro divide” is counter productive for a systems oriented field such as HRD and may limit the practicality and relevance of the theories developed. Although Lynham does not overtly advocate micro or macro

level theoretical development, the absence of an intentional integration of multilevel perspectives perpetuates a micro-macro divide and is antithetical to the espoused development of theory unique to HRD. Furthermore, failure to manage overtly the importance of multilevel theory development undermines the frequently stated importance of systems perspectives in HRD research, practice, and theory building (Lynham, 2002b; Swanson & Holton, 2001).

Storberg-Walker (2003) indicated that many HRD research agenda topics “contain complicated...processes that are embedded with multiple forces acting upon the human learners/performers in the organization” (p. 221). The reality of multiple forces, from multiple levels, impacting individuals in an organization is further support for multilevel theory development in HRD. In support of theory building, Lynham (2000b) stated “that the development of good HRD theory and theory-building methods are essential for advancing the maturity, credibility, and professionalism of both thought and practice in HRD” (p. 163). Few would disagree with Lynham’s assertion that good theory and theory building is essential to HRD, but there must also be an acknowledgement that current theory and approaches to theory building research in HRD remain vulnerable to engaging in myopic examination of the individual or organization. According to Garavan, McGuire, and O’Donnell (2004), “The HRD field is characterized by a predominance of the individual- and organizational-level contributions” (p. 418). Further, “relatively few [research] contributions propose a multilevel conception of HRD” and this represents “a significant gap in the current body

of HRD theory and research” (Garavan, et al., p. 418). Specifically the gaps are related to three areas of multilevel research:

First..., a lack of compositional or integrated models that examine a variable at multiple levels of analysis...Second,...few cross-level models that investigate relationships between independent and dependent variables at different levels of analysis. Finally,...few studies focus on examining relationships among variables generalized across two or more levels (Garavan et al., p. 418).

Recognizing “that research and theory, within the field need not all be multilevel in focus” (Garavan et al., p. 418), continuing to explore phenomenon from a generic perspective with levels consolidated for a single-level examination by utilizing theory building methods, such as Dubin’s (1978), Lynham’s (2002b) and Van de Ven’s (2003), that do not account for multiple levels of analysis is insufficient for advancing theory building in HRD.

The cyclical and reiterative aspect of theory building pointed out in Lynham’s (2002b) general method for theory building is also true for MLTB, but her model does not advance HRD theory building to the point of being able to attempt explanations of the nuanced issues faced in examining a multilevel issue. This limited perspective on theory building is especially problematic given that Lynham, Swanson, Storberg-Walker and many others advocated a systems level approach to HRD (Lynham, 2000b; 2002b; Swanson, 2001; Storberg-Walker, 2003).

Looking outside of HRD specific literature to Van de Ven’s model (2003), it similarly provides no guidance for examining the complexity of multilevel issues, but rather maintains the position that multilevel issues should be explored in the same manner as single-level phenomena. Although previous theory building models in HRD

did not preclude layered levels of theorizing or analysis, the absence of clear consideration and elaboration fails to advance the systems level perspective identified as central to the HRD field. It would appear that failure to advance to MLTB would reduce HRD to asystemic or siloed considerations and move it away from Garavan, McGuire and O'Donnell's (2004) call for multilevel viewpoints in HRD. Having identified the lack of explicit connections between CD and HRD; recognized CD as a multilevel issue; and supported the need to go beyond a consolidated or single-level view of theory building in HRD, MLTB is offered as an important advancement in HRD theory building and the best approach to developing a multilevel theory of CD.

### **Comparison of MLTB Methods**

Due to the evolving nature of multilevel research in which “no single source exists to cut across [the theoretical framework] differences and to guide the interested researcher in the application of multilevel concepts” (Kozlowski & Klein, 2000, p. 4) this section examines three specific studies that informed the methodology used to develop a multilevel theory of CD (Kozlowski & Klein, 2000; Morgeson & Hofmann, 1999; Reynolds Fisher, 2000). Each of these works detail principles, guidelines, and processes for use in multilevel theory development. Following this comparison and summary, an argument for a refined MLTB model will be presented.

According to Kozlowski and Klein (2000), Lewin's interactionist perspective originated efforts to “conceptualize and study organizations as multilevel systems” (p. 9) with organizational psychology advancing the development of multilevel research frameworks from the 1950s onward. “Although interest in the development and testing

of multilevel theoretical models has increased dramatically in the past decade [1990s], there have been relatively few efforts to provide [specific] multilevel theoretical frameworks” (Kozlowski & Klein, p. 11) for utilization by multilevel researchers for theory development. In reviewing the multilevel research literature, the works of Kozlowski and Klein, Morgeson and Hoffman (1999), and Reynolds Fisher (2000) were identified as the primary examples of developed guidelines or synthesized models for developing multilevel theory.

Kozlowski and Klein (2000) pointed out that “the maturation of the multilevel paradigm...has not proceeded without pain. The roots of the multilevel perspective are...obscured by the barriers of jargon, and confused by competing theoretical frameworks and analytic systems” (p. 4). While the work in this dissertation is unlikely to overcome all of these obstacles, each of the three identified MLTB approaches has strengths and weaknesses that inform our understanding of MLTB. The following three subsections will highlight the guidelines and/or process suggested by these three scholars. Following the presentation and critique of each approach, a newly developed model will be presented as a clear improvement over previously identified MLTB approaches. This model will subsequently be used to develop a multilevel theory of CD.

#### *Kozlowski and Klein’s Multilevel Approach*

Recognizing that the existing multilevel theory development frameworks were scattered across disciplines, the focus of Kozlowski and Klein’s work (2000) was to “synthesize and extend existing frameworks, and identify theoretical principles to guide the development and evaluation of multilevel models” (p. 11). Their work highlighted 21

principles to guide the work of multilevel theorists. These principles are categorized into those that guide the process of developing a multilevel theory and those that guide the specification and operationalization of the developing theory and are explored in more detail in the following two sections.

*Process.* The first 11 guidelines for MLTB presented by Kozlowski and Klein (2000) are directed toward the multilevel theoretical process. The principles provided by Kozlowski and Klein may at first seem to be a step-by-step process for developing multilevel theory. While such an approach would simplify the process, each of these first eleven principles does not necessarily provide a process driven action for developing multilevel theory. As such, Kozlowski and Klein's work cannot be divorced from the other examples of MLTB addressed in this chapter. However, their work does provide much needed insight into the process of developing multilevel theory.

The first guideline offered by Kozlowski and Klein (2000) addressed the necessity of "careful explication of the phenomenon of interest" (p. 12) in order to avoid developing "a trivial or misspecified theory" (p. 12). This guideline focuses on the dependent variable(s) as the driving force of "the levels, constructs, and linking processes to be addressed by the theory" (Kozlowski & Klein, p. 12) and aids the theorist in avoiding the typical pratfall of focusing on "the antecedents of interest" (p. 12) rather than the phenomenon itself. As stated by Kozlowski and Klein, the first principle is: "Theory building should begin with the designation and definition of the theoretical phenomenon and the endogeneous construct(s) of interest" (p. 13).

The guiding question behind the second principle provided by Kozlowski and Klein (2000) is whether multilevel theory is always needed and/or better than single-level theory. As pointed out by Kozlowski and Klein, some theorists may find that processes within their particular field do not change across contexts or levels or that multilevel models may not be particularly well-suited for explaining “processes, relationships, and outcomes new to organizational science” (p. 13). These insights resulted in the second principle, “...Multilevel models may...be unnecessary if the central phenomena of interest (a) are uninfluenced by higher-level organizational units, (b) do not reflect the actions or cognitions of lower-level organizational units, and/or (c) have been little explored in the organizational literature...” (Kozlowski & Klein, p. 14). Having established the initial step for developing multilevel theory and having provided the reason why multilevel theory is important to the organizational sciences, the authors then addressed the remaining processes for multilevel theory development.

Having established the dependent variable(s) of interest, the theorist must also “specify how phenomena at different levels are linked” (Kozlowski & Klein, 2000, p. 14). The authors categorized the links as either “top-down processes” (also referred to as “contextual influences”) or “bottom-up processes” (also referred to as “emergence”) and indicated that theories may have processes that fit both categories. “Top-down processes describe the influence of higher-level contextual factors on lower levels of the system” (Kozlowski & Klein, p. 14) through either “a direct effect on lower-level units, and/or...shap[ing] or moderat[ing] relationships and processes in lower-level units” (Kozlowski & Klein, p. 14). The emerging principle follows these effects by suggesting

that “Relevant contextual features and effects from the higher level should be incorporated into theoretical models” (Kozlowski & Klein, p. 15).

Additionally, levels may be linked through bottom-up processes, or emergence, that “describe[s] the manner in which the lower-level properties emerge to form collective phenomena” (Kozlowski & Klein, 2000, p. 15). Processes that fall into this category are further organized into “composition” and “compilation” processes and are described below. Composition processes describe “phenomena that are essentially the same as they emerge upward across levels...that is, the convergence of similar lower-level characteristics to yield a higher-level property that is essentially the same as its constituent elements” (Kozlowski & Klein, p. 16). Compilation processes describe “phenomena that comprise a common domain but are distinctively different as they emerge across levels...that is, the configuration of different lower-level characteristics to yield a higher-level property that is functionally equivalent to its constituent elements” (Kozlowski & Klein, p. 16). Possibly the most important reason for explaining this process in theory development is provided by Kozlowski and Klein: “Despite the challenges...precise explication of these emergent processes lays the groundwork for operationalizing the construct...” (p. 18); this statement further informs the principle outlined in this section. “Conceptualization of emergent phenomena at higher levels should specify, theoretically, the nature and form of these bottom-up emergent processes” (Kozlowski & Klein, p. 18). Thus, the importance of examining and explaining the links between levels in multilevel theory is established.



Kozlowski and Klein (2000), having established the links between levels, next turned to explaining the importance of specifying the “organizational levels, units, or elements [that are] relevant to theory construction” (p. 19). According to Kozlowski and Klein, the process of specifying levels can be simplified into designating “formal and informal units,” but that “...unit specification is [often] based on expedience rather than on careful consideration...[and thus] can be problematic when the phenomena of interest are examined within formal units but are driven by informal processes that yield nonuniform patterns of dispersion” (p. 19). The resulting principle outlined by the authors stated, “Unit specification (formal versus informal) should be driven by the theory of the phenomena in question. Specification of informal entities that cut across formal boundaries or that occur within formal units and lead to differentiation, requires careful consideration” (Kozlowski & Klein, p. 20). Another principle relevant to multilevel theory development, bond strength (Simon, 1973), is described below.

The concept of bond strength originated with Simon (1973) and is described by Kozlowski and Klein (2000) in the context of theory development as “the greater the implications of one unit’s actions for another unit, the greater the strength of the bond linking the two units. Therefore, meaningful linkages increase in strength with proximity and inclusion, and they decrease in strength with distance and independence” (p. 20). The insight provided by the concept of bond strength informed the principle stated by Kozlowski and Klein, “Linkages across levels are more likely to be exhibited for proximal, included, embedded, and/or directly coupled levels and entities” (p. 21). In addition to the bond strength principle described above, Kozlowski and Klein also

stated, “Linkages are more likely to be exhibited for constructs that tap content domains underlying meaningful interactions across levels” (p. 21). These two principles, along with the preceding principle regarding unit specification, address the aspect of theory development involving where the phenomena of interest are emerging.

The next three principles highlighted by Kozlowski and Klein (2000) in the MLTB process, “explore three ways in which time may be incorporated into a multilevel model, increasing the rigor, creativity, and effectiveness of multilevel theory building” (p. 22). The first time-oriented principle addressed the need for the theorist to make his or her “assumptions about the current time point in a stream or cycle of events...for the phenomenon in question” (Kozlowski & Klein, p. 22) explicit. The guiding principle was thus stated as follows: “The temporal scope, as well as the point in the life cycle of a social entity, affect the apparent origin and direction of many phenomena in such a way that they may appear variously top-down, bottom-up, or both. Theory must explicitly specify its temporal reference points” (Kozlowski & Klein, p. 23).

The second time-oriented principle addressed by Kozlowski and Klein (2000) was the issue of “time-scale variations across levels” (p. 23). Following what may seem like common sense to some, especially those with experience at the organizational level, Kozlowski and Klein indicated that changes in the dynamics of lower-level entities are easier to detect than those of higher-level entities due to the “more rapid dynamics” of lower-level entities. The principle outlined by this discovery is, “Time-scale differences allow top-down effects on lower levels to manifest quickly. Bottom-up emergent effects manifest over longer periods. Research designs must be sensitive to the temporal

requirements of theory” (Kozlowski & Klein, p. 23). The resulting implication may be “that phenomena at different levels may manifest at different points in time” (Kozlowski & Klein, p. 24).

The final time-oriented principle described by Kozlowski and Klein (2000) addressed the concept of entrainment, or “changing linkages over time” (p. 24). The principle outlined by the authors provides the most explicit explanation of this consideration. “Entrainment can tightly couple phenomena that ordinarily are only loosely coupled across levels. Theories that address entrained phenomena must specify appropriate time cycles and must employ those cycles to structure research designs” (Kozlowski & Klein, p. 25). By addressing the appropriate time cycles, the precision of the resulting theory will likely be increased (Kozlowski & Klein).

The final principle for guiding the MLTB process as described by Kozlowski and Klein (2000) addressed the essentiality of explaining phenomena through “argument by logical analysis and persuasion—argument that explains why” (p. 25). The primary reason for explaining “why” provided by the authors is that “organizational multilevel theory building spans organizational subdisciplines” (Kozlowski & Klein, p. 25) and thus, requires explicit specification to provide the necessary insight to those scholars interested in the new multilevel theory, regardless of their field of expertise or study (Kozlowski & Klein). The question of “why not?” is also offered as an interesting and essential aspect of the MLTB process. The possible result is that “theorists may refine their models, incorporating important insights and nuances...add[ing] diversity and depth to theory” (Kozlowski & Klein, p. 26). In summary, the principle outlined here

states, “Multilevel theoretical models must provide a detailed explanation of the assumptions undergirding the model. Such explanations should answer not only the question of why but also the question of why not” (Kozlowski & Klein, p. 26).

The eleven principles described above answer what Kozlowski and Klein (2000) described as the “what, how, where, when, why, and why not” (p. 26) of MLTB. These guidelines provide the essential framework for developing a multilevel theory, as will the work of Morgeson and Hofmann (1999) and Reynolds Fisher (2000). The next section will address Kozlowski and Klein’s principles for the portion of theory building described as the operationalization of the theory—the alignment of research designs and analytical strategies with levels specific to the theory of interest (Dubin, 1978; Kozlowski & Klein).

*Specification.* The last ten guidelines for MLTB presented by Kozlowski and Klein (2000) are considered to be part of the model specification process. Although full operationalization and testing of a multilevel theory of CD is beyond the scope of this study, of the three studies used to develop the methodology for building a multilevel theory of CD, Kozlowski and Klein’s work provides the most explicit information on model specification of the MLTB process. As a result, this study provided the most comprehensive examination of MLTB and will be explored in the following sections to assist in developing a more comprehensive methodology for building a multilevel theory of CD.

The first aspect of model specification addressed by Kozlowski and Klein (2000) concerns specifying the level of each construct in the developing theory. “The level of a

construct is the level at which it is hypothesized to be manifest in a given theoretical model” (p. 27). Additionally, the level of each construct included in the theory must be defined, justified, and explained (Kozlowski & Klein). Klein et al. (1994) are also mentioned as suggesting the explicit specification of the level of each construct. Thus, the first model specification principle is, quite simply, that “the theorist should explicitly specify the level of each construct in a theoretical system” (Kozlowski & Klein, p. 28). The second principle in model operationalization, which follows closely with the need to specify levels of constructs, is stated as follows, “When higher-level constructs are based on emergent processes, the level of origin, the level of the construct, and the nature of the emergent process must be explicitly specified by the theory” (Kozlowski & Klein, p. 28). The purpose of doing so is to determine “an appropriate means of assessing and representing the emergent higher-level construct” (Kozlowski & Klein, p. 28).

Kozlowski and Klein (2000) followed their explanation of the reasoning behind explicating and justifying the level of the constructs with detailed information on measurement implications for three types of higher-level constructs: global unit properties, shared unit properties, and configural unit properties. In brief, “global unit properties originate and are manifest at the unit level...[and] are single-level phenomena. In contrast, shared and configural unit properties originate at lower levels but are manifest as higher-level phenomena...[and] span two or more levels” (Kozlowski & Klein, p. 29).

Global unit properties are the easiest to explain and “pertain to the relatively objective, descriptive, easily observable characteristics of a unit that originate at the unit

level” (Kozlowski & Klein, 2000, p. 29). Shared unit properties are described as those constructs that are shared, or common to, individual members of the unit. These properties “are based on composition models of emergence” (Kozlowski & Klein, p. 30) as described in a previous section. Finally, configural unit properties are also intended to describe constructs that emerge from the individual level, but these properties “are not assumed to coalesce and converge among the members of a unit” (Kozlowski & Klein, p. 31), and emerge based on compilation models as described in a previous section. Configural unit properties are further categorized into descriptive characteristics, which reference manifest and observable features, and latent constructs, which reference hypothetical and unobserved properties of the unit in question. In sum, the principle outlined by Kozlowski and Klein to address the types of unit-level constructs states, “Theorists whose models contain unit-level constructs should indicate explicitly whether their constructs are global unit properties, shared unit properties, or configural unit properties. The type of unit-level construct should drive its form of measurement and representation for analyses” (p. 32).

The next principle provided by Kozlowski and Klein (2000) addresses the need to specify the level of measurement of each construct. While this study will not proceed through gathering data on the resulting theory, an exploration of issues of measurement will allow for a more thorough and thoughtful multilevel theory of CD. This process will also be useful in future attempts to verify and validate the resulting theory. For each of the unit properties described in the preceding section, Kozlowski and Klein provide

examples of approaches to gathering data appropriate to the level of the construct. The resulting principle summarized their findings most succinctly and is provided below:

There is no single best way to measure unit-level constructs. The type of a unit-level construct, in addition to its underlying theoretical model, determines how the construct should be assessed and operationalized. As a general rule, global properties should be assessed and represented at the unit level. Shared and configural properties should be assessed at the level of origin, with the form of emergence reflected in the model of data aggregation, combination, and representation. (Kozlowski & Klein, p. 35)

According to Kozlowski and Klein (2000), “the assumption of isomorphism...central to...shared constructs” requires that theories with shared unit properties take into consideration the establishment of the measurement model and the evaluation of the theoretical model. By examining these two issues, the theorist is able to consider “both within-group and between-group variance [which] is critical” (p. 36). In other words, “The assumption of isomorphism of shared unit properties should be explicitly evaluated to establish the construct validity of the aggregated measure. The selection of a consensus- or consistency-based approach should be dictated by theory and data; no approach is universally preferable” (Kozlowski & Klein, p. 36).

In the next principle for multilevel theory specification, Kozlowski and Klein (2000) pointed out “the distinction between the data source...and the level of the construct and its measurement” (p. 36) with regard to the use of “individuals as sources of data” (p. 36). This principle explained when the use of individuals as data sources is most appropriate, stating:

Individuals may serve as expert informants for higher-level constructs when they can directly observe or have unique knowledge of the properties in question. As a general rule, expert informants are most appropriate for the measurement of global unit-level properties and observable (manifest) configural properties. They

are least appropriate for the measurement of shared properties and unobservable (latent) configural properties. (Kozlowski & Klein, p. 37)

The final four principles provided by Kozlowski and Klein (2000) related specifically to sampling in multilevel research. With the focus of this study being on developing a multilevel theory of CD, these four principles provide insight for future study, but will not be incorporated into the final methodology. Each principle is listed below in Table 3.1 and will prove useful in the verification and validation process reserved for future research. These principles will be addressed more fully in Chapter V of this study.

Table 3.1. *Principles for Guiding Sampling in Multilevel Research* (Kozlowski & Klein, 2000).

<b>Sampling within and across units</b>	“In the evaluation of unit-level or mixed unit-level and individual-level theoretical models, the sampling strategy must allow for between-unit variability at all relevant levels in the model. Appropriate sampling design is essential to an adequate test of such models” (p. 47)
<b>Sampling across time</b>	“Time-scale differences allow top-down cross-level effects to be meaningfully examined with cross-sectional and short-term longitudinal designs. Bottom-up emergent effects necessitate long-term longitudinal or time-series designs” (p. 47).
<b>Time cycles and entrainment</b>	“Entrainment tightly links phenomena that are ordinarily only loosely connected across levels. Sampling designs for the evaluation of theories that propose entrained phenomena must be guided by theoretically specified time cycles, to capture entrainment and its absence” (p. 48).
<b>Analytic strategies</b>	“There is no one, all-encompassing multilevel data-analytic strategy that is appropriate to all research questions. Particular techniques are based on different statistical and data-structure assumptions, are better suited to particular types of research questions, and have different strengths and weaknesses. Selection of an analytic strategy should be based on (a) consistency between the type of constructs, the sampling and data, and the research question; and (b) the assumptions, strengths, and limitations of the analytic technique” (p. 51).



The principles highlighted by Kozlowski and Klein (2000) included in depth information and insight into the MLTB process. Although Kozlowski and Klein (2000) are not the only contributors to multilevel research, the principles they outlined are largely generated by their research on multilevel theory. Their work reveals that although MLTB may be new to the field of HRD, the focus on multilevel research is far from being “new.” From the “what, how, where, when, why and why not” (Kozlowski & Klein) to model specification designed to align constructs, measures, models, design, and analyses, Kozlowski and Klein detail the MLTB process and their work has largely influenced the resulting methodology for developing a multilevel theory of CD. The next study reviewed for developing the methodology for this study is by Morgeson and Hofmann (1999) and focuses primarily on the structure and function of what they term “collective constructs.”

*Morgeson and Hofmann’s Structure and Function of Collective Constructs*

Morgeson and Hofmann (1999) described the term collective as “any interdependent and goal-directed combination of individuals, groups, departments, organizations, or institutions” (p. 251). Accordingly, they also stated that since their work focused on these combinations, “the model to be outlined is applicable to any set (or grouping) of entities and, thus, represents a general model for developing multilevel theories” (Morgeson & Hofmann, p. 251). Citing other scholars, Morgeson and Hofmann then defined constructs as “hypothetical concepts that are not directly observable” and “abstractions used to explain some apparent phenomenon” (p. 250).

Combining the two concepts, they describe what they mean by collective constructs and, in so doing, describe how theorists can identify these constructs”

...[T]he structure of any given collective (e.g., a work team) can be viewed as a series of ongoings, events, and event cycles between component parts (e.g. individuals)...the collective action (which is composed of ongoings and events) [then] enables collective phenomena to emerge. Labels then can be affixed to this phenomenon, resulting in what could be termed the emergence of a collective construct. (Morgeson & Hofmann, p. 252)

Finally, the authors discussed the function of describing collective constructs.

“Within the organizational sciences, a number of researchers have discussed constructs that exist at both individual and collective levels. In multilevel research, questions often arise with respect to what characteristics these constructs have in common” (Morgeson & Hofmann, 1999, p. 254). It is at this intersection of collective constructs at the individual and organizational level that MLTB may provide additional information about CD.

Having defined what they meant by collective constructs, Morgeson and Hofmann (1999) stated that their purpose in “focus[ing] on structure and function...[is to] provide a useful mechanism for discussing collective phenomena and integrating constructs across levels, thereby facilitating the development of multilevel theories” (p. 256). The work conducted by these scholars “is critically important for multilevel theories...[but] focusing on structure and function does not preclude other perspectives on collective phenomena” (Morgeson & Hofmann, p. 256). Their work concluded by providing eleven guidelines for issues to be considered in MLTB, further categorized into implications of structure, implications of function, and integration of structure and function. This final “joint consideration of structure and function is perhaps the most

useful when developing multilevel theory” (Morgeson & Hofmann, p. 259) and provides some limited information on the operationalization of the theory. Each of the eleven guidelines related to collective constructs is summarized in Table 3.2 below.

In concluding their article, Morgeson and Hofmann (1999) stated that “the most important insight in this article is that constructs can be described in terms of their structure and function...[but that] these are not mutually exclusive ways of examining collective constructs” (p. 262). By addressing both structure and function, the researcher is able “to provide a fuller articulation of the construct” (Morgeson & Hofmann, p. 262). They also pointed out that the structure and function of collective constructs should only be explored “to the extent that it is useful and helps solve some of the problems that arise when developing and testing multilevel theories” (Morgeson & Hofmann, p. 262). Accordingly, the guidelines presented by Morgeson and Hofmann are integrated into the methodology used in this study to develop a multilevel theory of CD.

#### *Reynolds Fisher’s Integrated Model of Multilevel Theory Building*

Although Garavan et al. (2004) pointed out that levels issues are an important area of research that needs to be explored within HRD, only one example of MLTB was identified in the HRD literature. The sole example of MLTB found specifically in the HRD literature was conducted by Reynolds Fisher (2000) and emerged from, “...the insights gleaned from...multilevel scholars...synthesized with Dubin’s (1978) framework” (p. 55). The MLTB model proposed by Reynolds Fisher utilized “the first five of Dubin’s theoretical components...as a foundation [with augmentation] by more recent scholarship...” (p. 55). The more recent scholarship was from the work of

Table 3.2. *Implications of Structure and Function of Collective Constructs* (Morgeson & Hofmann, 1999).

<b>Summary</b>	<b>Implications of Structure</b>
<i>Interaction</i>	1. "...begin with an understanding of the interaction of organizational members...focusing on the interactions that define and reinforce the collective phenomena..." (p. 257).
<i>Emergence</i>	2. "...accounts of collective constructs...should specify the processes through which the constructs emerge..." (p. 257).
<i>Limitations</i>	3. "...the structure of a collective construct...context limits the range of potential interaction..." (p. 258).
<b>Summary</b>	<b>Implications of Function</b>
<i>Integration</i>	4. "...consideration of a construct's function may allow scholars to integrate functionally similar (but structurally dissimilar) constructs into broader nomological networks of constructs..." (p. 258).
<i>Persistence</i>	5. "...identify the role the outcome [of the construct] plays in the collective...provid[ing] insight into why the construct exists and why it persists (or fails to persist) over time" (p. 259).
<b>Summary</b>	<b>Integration of Structure and Function</b>
<i>Identify structure at each level</i>	6. "...Identify commonalities across levels that could be used to provide insight into the construct's structure at a particular level... then...articulate the structure of the constructs at each...level" (p. 259).
<i>Identify function structures</i>	7. "...identification and acknowledgement of the different structures or processes that account for the function should become a high priority" (p. 260).
<i>Divergence</i>	8. "...it is important for scholars to understand the factors that influence divergence in outcomes...for an adequate understanding of the phenomena" (p. 260).
<i>Measurement</i>	9. "...the measurement of collective phenomena is [not always] the same as the measurement of analogous individual-level phenomena... important factors...such as interaction, integration, [and] coordination...must [be taken] into account..." (p. 261).
<i>Individual-level data collection</i>	10. "...researchers may...collect individual-level data [but]...Inferences at the collective level will [only] be facilitated by focusing on...the role of individuals in terms of the...collective" (p. 261).
<i>Operationalization</i>	11. "Researchers should be clear in how they operationalize their constructs...[as] failure to do so may result in inadequate construct operationalization" (p. 262).

Rousseau (1985), Klein et al. (1994), Morgeson and Hofmann (1999), and Chan (1998). Since Dubin's (1978) framework has been explored in HRD literature, a side-by-side comparison of the theory development portion of Dubin's original framework and that of the multilevel framework developed by Reynolds Fisher is presented in Table 3.3. Note that Reynolds Fisher's model stops short of detailing steps for the validation and verification, or operationalization, of the resulting theory, leaving that process to future research. Since her work did not involve the operationalization phase of theory development, Reynolds Fisher did not synthesize multilevel research with Dubin's framework to include those steps.

Table 3.3. *A Comparison of Dubin's Model of Theory Building and Reynolds Fisher's Multilevel Theory Building Model.*

<b>Dubin's Model of Theory Building (1978)</b>	<b>Reynolds Fisher's Multilevel Theory Building Model (2000)</b>
Units of the theory	Definition of theoretical units and collective constructs
Laws of interaction	Specification of levels including boundaries
Boundaries of the theory	Determination of theoretical boundaries
↓	Identification of laws of interaction among units or constructs
	Specification of functional relationships among levels
	Specification of sources of variability among levels
System states of the theory	Definition of system states
Propositions of the theory	Statement of propositions

Although similar in many ways, Reynolds Fisher (2000) indicated that the additional work in the MLTB process comes in defining collective constructs (Morgeson

& Hofmann, 1999), and in specifying levels, functional relationships, and sources of variability among levels (Klein et al., 1994), resulting in a total of eight steps as compared to five in Dubin's original model. Each step of Reynolds Fisher's (2000) process is described below, incorporating Dubin's framework into the description for added insight and clarification. Although Dubin's (1978) original work was referenced in this process, Lynham's (2002b) presentation of the material from the HRD perspective was most useful in providing an appropriate understanding of the theory-to-research strategy for theory building in HRD and is utilized frequently in the following descriptions. For the purposes of this study, the descriptions below will follow the process presented previously in Table 3.3.

The first step in the Reynolds Fisher's (2000) model is to define the theoretical units and collective constructs. Defining the theoretical units follows directly from Dubin's (1978) model with the units "represent[ing] the things about which the researcher is trying to make sense and...informed by literature and experience" (Lynham, 2002a, p. 247). In essence these units are the "basic building blocks from which the researcher-theorist constructs the theory..." (Lynham, 2002a, p. 247). These units can also be categorized into five types: enumerative, associative, relational, statistical, and summative (Dubin, 1978). To further validate the process taken in this step, Dubin identified five criteria against which to consider the development of the units: rigor and exactness, parsimony, completeness, logical consistency, and degree of conformity. One final consideration emerged with regard to identifying units of the theory: "What units the researcher-theorist decides to use...therefore influences the

kinds of studies that can later be used to gather and study data on the theory and...be used to verify and refine the theory” (Lynham, 2002a, p. 248).

The next part of the first step in Reynolds Fisher’s (2000) model, defining collective constructs, involves additional work as outlined by Morgeson and Hofmann (1999). As has been described in a previous section, Morgeson and Hoffman presented eleven guidelines for the use of defining collective constructs in MLTB. Although Reynolds Fisher (2000) integrated Morgeson and Hofmann’s research into her multilevel framework, the latter intended for their work to “offer a general model for the development and testing of multilevel theories” (p. 250). Based on that intent, the work of Morgeson and Hofmann was considered and explored as a MLTB model in the preceding section.

The second step in the MLTB model proposed by Reynolds Fisher (2000) involves specifying the levels of the theory, including boundaries. For additional insight into this step of the process, Klein et al. (1994) provided much needed insight based on their work on levels issues in theory building. Specifying levels of the theory is important because “Levels issues create particular problems when the level of theory, the level of measurement, and/or the level of statistical analysis are incongruent” (Klein, et al., 1994, p. 198). Thus, theorists must ensure the congruency of these three areas (theory, measurement, and statistical analysis) to avoid committing a “fallacy of the wrong level.” With regard to a multilevel theory of CD, this step requires that the theorist determine the level of the theory before determining the level of measurement or analysis. In order to specify the level of the theory, the theorist must “implicitly or

explicitly predict that members of a group are homogeneous, independent, or heterogeneous with respect to the constructs of the theory” (Klein et al., 1994, p. 199).

The following information provides detail as to the theorist’s decision:

- Homogeneous – “predicts that group members are sufficiently similar with respect to the construct in question that they may be characterized as a whole” (Klein et al., 1994, p. 199).
- Independent – “specifies that the level of a theory is the independent individual...with respect to the constructs of interest, individual members of a group are independent of that group’s influence” (Klein et al., 1994, p. 200).
- Heterogeneous – “The level of some theories is neither the individual, nor the group, but the individual within the group” (Klein et al., 1994, p. 201).

As stated previously, it is vitally important for the theorist to determine the level of the theory before determining the level of measurement or analysis if there is to be any chance of successful validation of the resulting theory.

In Reynolds Fisher’s (2000) process, step three in exploring any phenomenon from a multilevel perspective is establishing theoretical boundaries as a means of clarifying the domains in which the theory should apply (as originally identified by Dubin, 1978). “The boundaries of a theory therefore establish the real-world limits of the theory and in so doing distinguish the theoretical domain of the theory from those aspects of the real world not addressed or explained by the theory” (Lynham, 2002a, p. 253). With regard to determining boundaries, Lynham (2002a) stated, “When using a theory-to-research strategy for theory building,...the boundaries of a theory are



determined not by empirical data but rather through the use of logic” (p. 253). As for types of boundaries, Dubin identified two types: an open boundary for “exchange over the boundary between the domains” and a closed boundary when “exchange does not take place between the domains” (Torraco, 1994, p. 162). In terms of verification criteria, Dubin listed homogeneity and generalization as the two criteria by which boundaries of the theory are judged. Homogeneity refers to the requirement for theory units and interaction laws to meet the same “boundary-determining criteria” (Dubin, p. 127). Generalization of the theory is dependent upon the “domain size” of the theory; in other words, the larger the domain, the more generalizable the theory (Dubin, 1978).

The fourth step in Reynolds Fisher’s (2000) model is identification of laws of interaction among units or constructs that also govern the units of theory, and thus, the theory itself. “The laws of interaction describe the interaction among the units of the theory...[and] make explicit and specific the manner in which the units of the theory interact with one another” (Lynham, 2002a, p. 249). As with units of the theory, Dubin (1978) also categorized laws of interaction into three broad areas: categoric, sequential, and determinant. Further categorization by Dubin differentiated these laws based on their level of efficiency: “(1) presence-absence (lowest level of efficiency); (2) directionality; (3) covariation; and (4) rate of change (highest level of efficiency)” (Dubin, p. 109). Finally, the criteria of excellence for establishing laws of interactions are called parsimony, which “relates to the degree to which the theory contains a minimum of complexity and assumptions” (Lynham, 2002a, p. 252).

Step five in Reynolds Fisher's MLTB model (2000) requires specification of functional relationships among levels. Specifying the functional relationship among individuals in groups requires that the function of constructs identified by the theorist also be specified (Morgeson & Hofmann, 1999). "Scholars could begin multilevel theory development with a functional analysis, examining the output of a given construct. This would identify commonalities across levels that could be used to provide insight into the construct's structure at a particular level...The theorist then could articulate the structure of the constructs at each hierarchical level" (Morgeson & Hofmann, p. 259). By articulating the structure of the constructs at each level, this step of the process is complete.

The sixth step in the model by Reynolds Fisher (2000) requires the specification of sources of variability among levels. Klein et al. (1994) discuss this in more detail in their section on levels of measurement. The level of the proposed theory is what determines where to look for sources of variability among levels. For example, a theory situated at the level of "individuals within the group" would want to look at variability at the same level.

The seventh step in the Reynolds Fisher model (2000) is specifying the system states of the theory and comes from Dubin's model (1978). A system state represents a specific condition of the system when all units in that system take on characteristic values and actual persist for a meaningful period of time (Dubin, 1978). As for criteria by which to verify this step, Dubin identified three important criteria: inclusiveness, meaning "the need for all the units of the system to be included in the system state of the

theory”; persistence “requir[ing] that the system state persist through a meaningful period of time”, and; distinctiveness meaning “that all units take on...measurable and distinctive values for the system state” (Dubin, 1978; Torraco, 1994, 2000, as cited in Lynham, 2002a, p. 256).

Step eight of the Reynolds Fisher (2000) model requires specification of the propositions of the theory and follows directly from Dubin’s (1978) model. At this point in Dubin’s method, the literature is split between those scholars who categorize the fifth step as the final stage in the theory development side (Torraco, 1997) and those who categorize the fifth step as the first stage in the research operation side (Lynham, 2002a). Regardless, this step is considered the “first and necessary step to operationalizing the theory, or in getting the theory ready to be put to the test. [In addition], propositions enable the researcher-theorist to begin to make predictions from the theoretical framework about the values of the units of the theoretical framework in the real world” (Lynham, 2002a, p. 261). Dubin also stated that the propositions of a theory should be “constructed logically and intellectually by the theorist” (p. 164). Types of proposition statements include those made “about the values of a single unit of the (theoretical framework),” those “about the continuity of a system state that in turn involves a predication about the conjoined values of all units in the system,” and those “predictions about the oscillation of the system from one state to another” (Dubin, as cited in Lynham, 2002a, p. 262). Finally with regard to this step, the criteria for consideration that must be made by the researcher-theorist are “consistency in specifying the propositions of a theory,” accuracy in “the propositions follow[ing] logically from the

theoretical framework to which they apply,” and parsimony meaning “the use of what Dubin called ‘strategic propositions’” (Lynham, 2002a, p. 263).

The three studies highlighted above detail principles to guide the process and theory operationalization of developing a multilevel theory. Insights from a systematic analysis and critique of each study inform the improved methodology developed in the following section for use in developing a multilevel theory of CD. Table 3.4 is a side-by-side comparison of the three sets of guidelines discussed above and also outlines the steps for each model described in the preceding section (Kozlowski & Klein, 2000; Morgeson & Hofmann, 1999; Reynolds Fisher, 2000).

Each set of guidelines presented in the comparison table is organized in a manner that at times combines principles presented individually in the authors’ original works based on commonality of purpose. Further, two of Kozlowski and Klein’s (2000) guidelines are excluded from this comparison because neither provides specific guidance for a process of developing, specifying, or operationalizing a multilevel theory. These guidelines state a cautionary guideline that the theorist may want to consider. In the next section, the why and how of the integration of these three studies into an enhanced MLTB process will be described.

Table 3.4. *Comparison of Multilevel Research Principles Developed by Kozlowski & Klein (2000), Morgeson & Hofmann (1999), and Reynolds Fisher (2000).*

Kozlowski & Klein (2000) Principles for Multilevel Research	Morgeson & Hofmann (1999) Structure and Function of Collective Constructs	Reynolds Fisher (2000) Multilevel Theory Building Model
<b>Process</b>	<b>Process</b>	<b>Process</b>
Designate and define theoretical phenomenon of interest and constructs/dependent variables	Identify collective phenomena that emerge from collective action of individuals/groups/departments/organizations/institutions (collective constructs)	Specify and define theoretical units and collective constructs (from Morgeson & Hofmann)
Specify how the phenomenon is linked at different levels <ul style="list-style-type: none"> <li>• Top-down process – influence of higher-level contextual factors on lower levels</li> <li>• Bottom-up process – lower-level entities emerge to form collective phenomenon either through composition or compilation processes</li> </ul>	Identify systems of ongoing and events which leads to understanding interactions that define and reinforce the collective phenomena	Specify levels of the theory, including boundaries <ul style="list-style-type: none"> <li>• Must ensure congruency amongst level of the theory, level of measurement, and level of statistical analysis, but must specify level of the theory first</li> <li>• Level of theory considerations predict whether members are: homogeneous, independent or heterogeneous</li> </ul>
Specify organizational levels, units, or elements relevant to theory construction; specify whether units are formal or informal	Specify the emergence process of collective constructs recognizing that the context of operation may limit interaction possibilities resulting in influence on emergence of a construct	Establish theoretical boundaries (through logic) <ul style="list-style-type: none"> <li>• Open boundary – exchange over the boundary between domains</li> <li>• Closed boundary – exchanged does not take place</li> </ul>
Specify temporal reference points as time may make phenomenon appear top-down, bottom-up, or both at various times	Specify construct function to allow for integration of functionally similar constructs into broader networks of constructs	Identify laws of interaction among units or constructs
Take temporal requirements into account <ul style="list-style-type: none"> <li>• Top-down effects on lower levels manifest quickly</li> <li>• Bottom-up emergent effects manifest over longer periods of time</li> </ul>	Identify the role the outcome of the construct plays in the collective with regard to goal accomplishment to explain why the construct persists/fails to persist	Specify functional relationships among levels and function of related constructs
Specify time cycles in entrained phenomenon	Identify commonalities of a given construct across levels using a functional analysis of the construct	Specify sources of variability among levels by focusing on the level of the theory to determine where to look for sources of variability

Table 3.4 continued.

<p>Kozlowski &amp; Klein (2000) Principles for Multilevel Research</p>	<p>Morgeson &amp; Hofmann (1999) Structure and Function of Collective Constructs</p>	<p>Reynolds Fisher (2000) Multilevel Theory Building Model</p>
<p><b>Process</b></p>	<p><b>Process</b></p>	<p><b>Process</b></p>
<p>Answer the “why” and “why not” of the model by explaining the assumptions that undergird the model</p>	<p>Specify the structure of a construct at each levels to provide an accounting of the function and identify contextual factors/structural properties that regulate the divergence of outcomes in the theory</p>	<p>Specify system states of the theory in which units take on characteristic values that persist over a given time Verification criteria:</p> <ul style="list-style-type: none"> <li>• Inclusiveness – all units included</li> <li>• Persistence – over a meaningful period of time</li> <li>• Distinctiveness – unit take on measurable/distinct values</li> </ul>
<p><b>Specification and Operationalization</b></p>	<p><b>Specification and Operationalization</b></p>	<p><b>Specification and Operationalization</b></p>
<p>Specify the level of each construct in the theory at which it is hypothesized to manifest and include the definition of the level with justification of why it is specified at that level</p>	<p>Account for interaction, integration, coordination and interdependence to gain a fuller understanding of the collective constructs.</p>	<p>Specify propositions of the theory; types include:</p> <ul style="list-style-type: none"> <li>• About values of a single unit of the theory</li> <li>• About continuity of a system state</li> <li>• About the oscillation of the system</li> </ul>
<p>For emerging higher-level constructs specify the level of origin and of the construct, and the nature of the emergent process</p> <ul style="list-style-type: none"> <li>• Global unit properties – originate and manifest at the unit (org/group) level; are single-level phenomenon</li> <li>• Shared unit properties – based on composition models of emergence and are shared/common to individual members of the unit</li> <li>• Configural unit properties – based on compilation models of emergence; do not coalesce/converge among members of a unit</li> </ul>	<p>Individual-level data can be collected to inform collective phenomena; must focus on collective phenomena and frame questions in collective terms</p>	

Table 3.4 continued.

Kozlowski & Klein (2000) Principles for Multilevel Research	Morgeson & Hofmann (1999) Structure and Function of Collective Constructs	Reynolds Fisher (2000) Multilevel Theory Building Model
<p><b>Specification and Operationalization</b></p> <p>Specify the level of measurement of each construct using the following guidelines:</p> <ul style="list-style-type: none"> <li>• Global properties – assess/represent at the unit level</li> <li>• Shared properties – assess at the level of origin</li> <li>• Configural properties – assess at the level of origin</li> <li>• For shared and configural properties – represent the form of emergence in the model of aggregation, combination and representation</li> </ul>	<p><b>Specification and Operationalization</b></p> <p>In theory operationalization, specify whether assessing the constructs' structure or function to facilitate appropriate operationalization</p>	<p><b>Specification and Operationalization</b></p>
<p><b>Sampling in Multilevel Research</b></p> <p>Data collection/Sampling            Individuals as informants            Sampling within and across units            Sampling across time            Time cycles and entrainment            Analytic strategies</p>	<p><b>Sampling in Multilevel Research</b></p> <p>Not addressed in this model</p>	<p><b>Sampling in Multilevel Research</b></p> <p>Not addressed in this model</p>

## **Refinement**

In reviewing the work of Kozlowski and Klein (2000), Morgeson and Hofmann (1999), and Reynolds Fisher (2000) each approach provides important insights regarding theory building in general and MLTB in particular; however, there is a clear opportunity for refinement and improvement of the MLTB process by systematically analyzing, critiquing and integrating the strengths of each approach and, simultaneously, the specific guiding principles essential for MLTB. The reason for refining the theory building methods described in these three studies resulted from Kozlowski and Klein's previously cited assertion that "no single source exists to cut across [the theoretical framework] differences and to guide the interested researcher in the application of multilevel concepts" (p. 4) Although their work was intended to cut across those differences, integrating these three methods results in an improved approach to theory building overall and MLTB in particular.

As a means of further support for a refined MLTB approach, the following critique of the work of Kozlowski and Klein (2000), Morgeson and Hofmann (1999) and Reynolds Fisher (2000) is provided. Kozlowski and Klein offer the most thorough MLTB process as their purpose was to provide a thorough summary of MLTB process as developed to date. This is accomplished by thoroughly detailing the MLTB process from specifying the phenomenon of interest and dependent variables to specifying within and between levels components to outlining guidelines for specifying and operationalizing the resulting theory. The primary weakness of their approach is the lack of inclusion of Morgeson and Hofmann's work concerning collective constructs. The



critique of Morgeson and Hofmann's work is that it focuses almost exclusively on the meso level or interaction of individuals in dyads, triads, teams, etc. Their methodology also stops short of thorough guidelines for theory specification and operationalization, instructing the theorist only to specify whether assessing the structure or function of the identified collective constructs. Finally, Reynolds Fisher provides an integration of seminal theory building (based on Dubin, 1978) and more recent MLTB research (based on Morgeson & Hofmann, 1999 and Chan, 1998). The primary critique of her work is that it relies heavily on Dubin's seminal theory building work and only moderately incorporates the MLTB research. Due to the fields each study emerged from, each study is largely aimed at quantitative verification, often overlooking the potential for qualitative evaluation.

The methodology developed through the analysis and critique of these three MLTB methods is an improvement because it addresses the critiques provided above. First, this new MLTB process takes the thoroughness of Kozlowski and Klein's (2000) approach and expands it. The expansion occurs as a result of the appropriate integration of Morgeson and Hofmann's (1999) research on specifying collective constructs into Kozlowski and Klein's emergence processes (specifying whether collective constructs emerge as the result of top-down or bottom-up emergence processes). Additionally, this improved MLTB process is left open for qualitative evaluation and thus, the validation process for both the process and resulting theory is expanded beyond the quantitative-focus of the three identified studies.

In an effort to provide clarification, the following example of the relevant integration of the work of Kozlowski and Klein (2000), Morgeson and Hofmann (1999) and Reynolds Fisher (2000) is provided. Building on Morgeson and Hofmann's (1999) call to specify collective constructs and their function within each level of the resulting theory, Kozlowski and Klein (2000) assert the importance of specifying how these collective constructs emerge and the type of unit level constructs that emerge. Reynolds Fisher (2000) also utilized Morgeson and Hofmann's collective construct work to inform her research methodology and added that boundary specification, included by Kozlowski and Klein, should detail whether the boundary is open or closed. By integrating these three works into one "new and improved" MLTB approach, the intention is to enhance the theory building and, specifically, the MLTB process for this and future research.

### **Research Questions**

Due to the nature of this theory building research, a set of traditional research questions will not provide the same guidance as those questions might provide in other research arenas. The process for developing a multilevel theory encompasses and serves the same purpose as a set of traditional research questions and, as such, the methodology developed in this study serves as the guiding research process for the study. The following description of the process utilized for developing a multilevel theory of CD provides details about the resulting improved methodology.

### **Research Process**

The multilevel theory development process can be a complex task and an appropriate methodology for developing such theory can also be quite challenging.

Based on the integration of MLTB processes by Kozlowski and Klein (2000), Morgeson and Hofmann (1999), and Reynolds Fisher (2000), an improved process for MLTB was developed for this study. The resulting methodology is represented pictorially in Figure 3.1 in two phases with phase one addressing theory components and phase two addressing levels components. An additional phase that addresses theory specification and operationalization is not included in Figure 3.1, but is addressed in the following discussion. Due to the nature of synthesizing three unique models into one, there is a need to clarify the terms used to describe particular aspects of the improved MLTB methodology developed in this study and terms used in describing the three models reviewed in the previous sections. As a result, every attempt was made to remove language from the descriptions that would misrepresent the process of developing a theory that is to be verified in the future. Thus, terms such as “laws of interaction” were excluded, opting instead for the less statistically charged terms as “within and between level interactions.” Figure 3.1 attempts to provide a somewhat simplified visual representation of the new MLTB methodology developed in this study. A more detailed explanation of the newly developed methodology follows in the next section. Although the end result of this study is intended to be a multilevel theory of CD, the process for building that theory is designed to be viewed as an improved process for building multilevel theory, developed for the purpose of synthesizing existing MLTB processes into an enhanced MLTB method and advancing theory building in HRD.

## PHASE ONE: THEORY COMPONENTS



## PHASE TWO: LEVELS COMPONENTS



### Theory Foundation considerations:

- Define the theoretical phenomenon of interest and the associated endogenous constructs/dependent variables
- Specify organizational levels and accompanying units and/or elements
- Specify the level of the theory and predict whether members are: Homogeneous, Independent, or Heterogeneous
- Establish theoretical boundaries and specify whether open or closed

### Considerations about the theory:

- Specify system states of the theory
- Specify time cycles in entrained phenomena
- Identify contextual factors and structural properties that regulate the divergence of outcomes in the theory
- When specifying about the theory, within levels, or between levels, explain why or why not with regard to assumptions about the theory

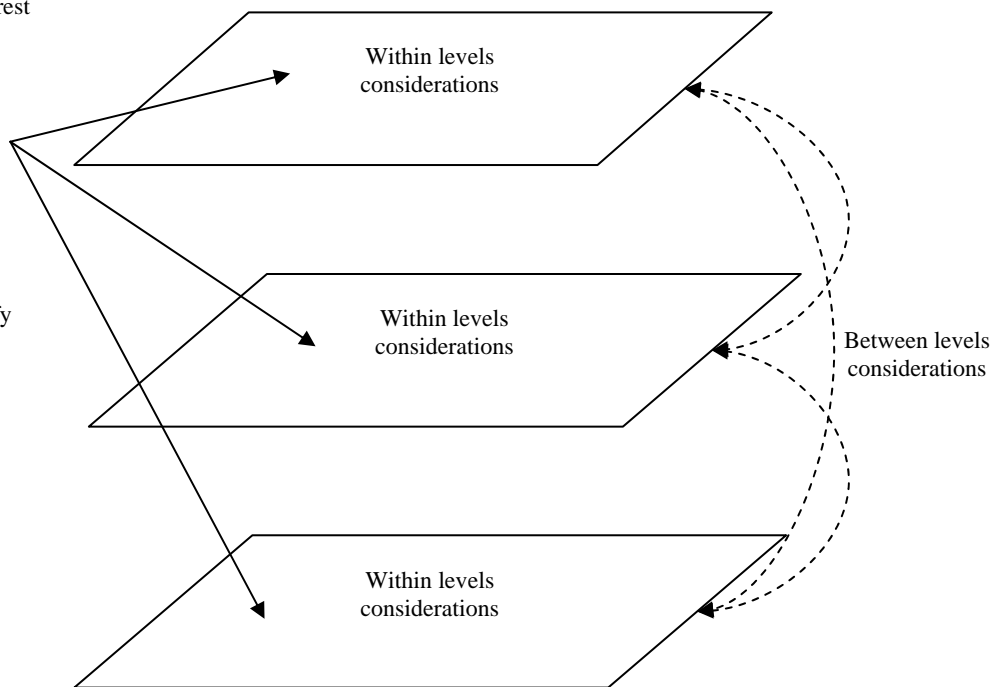


Figure 3.1. A *Multilevel Theory Building Model for HRD*.

In the improved MLTB methodology, there are three distinct components or aspects of the theory that must be established in the theory development process: theory components; levels components, consisting of within level considerations and between level considerations; and theory specification and operationalization components. Theory specification and operationalization generally follow the theory development process (Dubin, 1978; Kozlowski & Klein, 2000; Lynham, 2000a; Morgeson & Hofmann, 1999; Reynolds Fisher, 2000) since specification and operationalization focuses on readying the developed theory for research study. Theory specification and operationalization is thus also considered in a separate section for this study. It should also be noted that the specification and operationalization processes and guidelines included in the improved methodology come primarily from the work of Kozlowski and Klein although Morgeson and Hofmann and Reynolds Fisher did embed aspects of this portion of the theory development process into their models.

### *Process*

Although each of the processes within the three components of MLTB does not have to be conducted in an absolute stepwise manner, the components are presented in the logical order arrived at through this research study. The following description of the process utilized in this study will further explain why this particular process order was followed and why it is likely the most appropriate order for future MLTB endeavors. The theory components represent the foundation of the theory and are the most important aspects of the process as all else rests on the strength of this base (Kozlowski & Klein, 2000). As such, the first aspect of the theory to be determined in the improved

methodology is the theory's specific components. The foundation of the theory includes: 1) describing the theoretical phenomenon of interest and the resulting endogenous constructs and/or dependent variables (Kozlowski & Klein); 2) then specifying organizational levels, units, or elements relevant to theory construction (Kozlowski & Klein; Reynolds Fisher, 2000); 3) specifying the level of the theory by predicting whether members of the organization are homogeneous, independent, or heterogeneous (Klein et al., 1994; Reynolds Fisher); and 4) establishing and/or specifying theoretical boundaries, either open or closed, through logic (Reynolds Fisher).

Having laid the foundation for the multilevel theory, the next set of considerations provide a means for addressing specific aspects of the developing theory within each of the identified levels of the theory, which may include the individual, group, organization, industry, or other relevant levels. Identifying the collective constructs that result from collective action of organizational players at each level of analysis is of utmost importance (Morgeson & Hofmann, 1999). In addition to identifying the collective constructs, Kozlowski and Klein (2000) indicated that the theorist should specify how these constructs emerge through either top-down contextual influences or bottom-up emergent processes. Additionally, the theory must include specific temporal reference points that may make the constructs appear top-down or bottom-up at various times (Kozlowski & Klein). As described earlier in this chapter, top-down processes refer to the influence of higher-level factors on lower levels and the effects of these processes generally manifest quickly through either direct or moderating effects (Kozlowski & Klein). Additionally, bottom-up processes refer to lower-level

entities emerging to form constructs and generally manifest over longer periods of time through either compilation or composition processes (Kozlowski & Klein). Composition processes result in constructs that are essentially the same as they emerge upward across levels and compilation processes result in constructs that comprise a common domain, but are different as they emerge upward (Kozlowski & Klein). In specifying the emergence of any higher-level constructs, the theorist should begin by specifying the level of the construct's origin, the current level of the construct and the emergence process as described above (Kozlowski & Klein). In general, the type of unit-level construct drives the form of measurement and representation for analyses. Specific unit type categories include global unit, shared unit, and configural unit properties and are described below:

- Global unit properties originate and are manifest at the unit level and are single-level phenomenon;
- Shared unit properties are based on composition models of emergence and are shared/common to individual members of the unit; and
- Configural unit properties are based on compilation models of emergence, but do not coalesce/converge among members of a unit (Kozlowski & Klein).

Within each level, the theory development process must also specify the function of each identified construct in an effort to integrate functionally similar constructs into networks of constructs (Morgeson & Hofmann, 1999). Identifying the role that the outcome of the construct plays in the overall organization may also provide insight into why that construct persists or fails to persist over time (Morgeson & Hofmann).

Additionally, specifying the structure of each construct at each level provides for an accounting of the function of the construct (Morgeson & Hofmann). Within each level, the theorist will find it useful to identify interactions among units, specified in the foundation of the theory, and may want to utilize Reynolds Fisher's (2000) nomenclature of labeling those interactions as categoric, sequential, or determinant although this labeling may not be helpful in all MLTB efforts. Finally, specifying the level of each construct in the theory will allow the theorist to specify the level of measurement of each construct (Kozlowski & Klein, 2000). Guidelines for representing the level of measurement are as follows: global unit measurement should be assessed at the unit level; and shared unit and configural unit measurement should be assessed at the level of origin. Additionally, for shared unit and configural unit properties the form of emergence should also be represented in the model of aggregation, combination, and representation (Kozlowski & Klein).

The final piece of the multilevel theory development process relates to aspects of the theory that are interacting. Having established the foundation for the theory and the aspects of the theory within each level, the attention now turns to what occurs between those levels. Kozlowski and Klein (2000) indicated that the theorist must specify how the constructs and theoretical phenomenon of interest are linked at different levels of the theory. Identifying commonalities of a construct across levels using a functional analysis of the construct may also result in the articulation of the structure of the construct at each level (Morgeson & Hofmann, 1999). In multilevel theory development the researcher also wants to specify the functional relationship among levels and function of the



constructs to better understand the interaction between those constructs and levels (Reynolds Fisher, 2000). Finally, sources of variability among levels must be identified by focusing on the level of the theory (Reynolds Fisher). Doing so allows the theorist to prepare for assessment of the theory through specification, operationalization, and analysis.

#### *Specification and Operationalization*

As mentioned previously, the theory specification and operationalization is considered separately from the theory development process in the improved MLTB methodology developed for this study. Also based on the work of Kozlowski and Klein (2000), Dubin (1978), and Reynolds Fisher (2000), this aspect of theory development is made up of two processes and is guided by an additional data collection guideline. All other principles and guidelines specified by Kozlowski and Klein, Morgeson and Hofmann, and Reynolds Fisher as part of theory specification and operationalization have been incorporated into either phase one or phase two of the improved MLTB process described in the previous section of this chapter. The first process in theory specification and operationalization is to specify propositions of the theory (Dubin, 1978; Reynolds Fisher). These propositions may be specified to be about one of three of the following things: about values of a single unit of the theory; about continuity of a system state that predicts conjoined values of all units; or about the oscillation of the system from one state to another (Dubin; Reynolds Fisher). Additionally, the theorist must specify whether assessing the construct's structure or function facilitates appropriate operationalization (Morgeson & Hofmann, 1999). The data collection

guideline included in theory specification and operationalization provides guidance for collecting individual-level data to inform collective phenomena. This guideline states that individual-level data can be collected in these circumstances as long as the data: originates from collective phenomena and frames the questions in collective terms; treats individuals as collective process informants; and focuses on the role of individuals in terms of the collective (Morgeson & Hofmann).

The result of the theory development process and specification/operationalization of the newly developed MLTB approach and described above is intended to be a thorough multilevel theory. The next chapter, Chapter IV, will focus on using this methodology for developing a multilevel theory of CD. After conducting the MLTB process for this study, future research will likely include a review of the improved methodology developed in this study and continued refinements of both the resulting methodology and resulting multilevel theory of CD.

## CHAPTER IV

### MULTILEVEL THEORY BUILDING PROCESS

In the methodology for multilevel theory building (MLTB) developed in Chapter III, three primary components were outlined. These three components are theory components, levels components, and theory specification and operationalization components. Although the three primary components should be developed in a stepwise fashion, processes within each component do not necessarily require the same stepwise approach. In developing a multilevel theory of career development (CD), this chapter is written following the order of the three primary components, starting with an exploration of the theory components as a foundation for the remainder of the theory development process. Levels components and theory specification and operationalization components will follow. The aim of this chapter is to present a multilevel theory of CD, complete with theory components, levels components, and theory specification and operationalization components. Future research will be explored in the final chapter and will include recommendations to test and further refine the resulting multilevel theory of CD.

#### **Theory Components**

Developing a multilevel theory of CD is initiated by first establishing the foundation of the theory, also called theory components. Describing the theory components involves four steps or processes: specifying the theoretical phenomenon of interest and the resulting endogenous constructs and/or dependent variables (Kozlowski & Klein, 2000); specifying organizational levels, units, or elements relevant to theory

building (Kozlowski & Klein; Reynolds Fisher, 2000); specifying the level of the theory by predicting whether members of the organization are homogeneous, independent, or heterogeneous (Reynolds Fisher); and establishing the theoretical boundaries, either open or closed, through logic (Dubin, 1978; Lynham, 2000a; Reynolds Fisher). The process for developing a multilevel theory of CD follows.

*Theoretical Phenomenon and Endogeneous Constructs*

The theoretical phenomenon of interest for this study is CD for individuals in the context of an employing organization. CD can be described as a planned effort between the individual and his or her employing organization (Desimone, et al., 2002; Gilley, Egglund, Gilley, 2002) and, for the purposes of this theory building effort, "career development focuses on the alignment of individual subjective career aspects and the more objective career aspects of the organization in order to achieve the best fit between individual and organizational needs..." (Boudreaux, 2001, p. 224). As described in Chapter II of this study, an exploration of the definitions, theories, and dependent variables of CD by Upton, Egan and Lynham (2003) categorized the resulting dependent variables, or endogenous constructs, into individual and organizational or social outcomes. Within these two categories, ten dependent variable groups were identified in total, five for each of the categories. Table 4.1 highlights those ten dependent variable groups.

Table 4.1 *CD Dependent Variable Categories* (Upton, et al., 2003).

<i>Individual Outcomes</i>	<i>Organizational and Social Outcomes</i>
Achieve Self-Satisfaction	Benefit Society
Achieve Career Objectives	Attract and Retain High Caliber Employees
Make Career Decisions	Increase Individual Employee Job Satisfaction
Develop a Self-Concept	Increase Organizational Performance
Align Individual Needs with Organizational Needs	Align Organizational Needs with Individual Needs

The theoretical phenomenon of interest for this MLTB study is CD for individuals in the context of an employing organization with the resulting endogenous constructs categorized into individual and organizational or social outcomes and specified in Table 4.1 above.

#### *Organizational Levels and Units*

Having specified CD for individuals in the context of an employing organization as the phenomenon of interest, along with the resulting endogeneous constructs, the next theory components to describe are the organizational levels and units. “All but the smallest organizations are characterized by differentiation...and integration...yield[ing] myriad entities, unit, or levels” (Kozlowski & Klein, 2000, p. 19). Furthermore, “In organizational research, levels of theoretical interest focus on humans and social collectivities. Thus individuals, dyads, groups, subunits, and organizations are relevant levels...of conceptual interest” (Kozlowski & Klein, p. 19). Since CD is posited as a multilevel issue, spanning both individual and organizational levels, the specified levels for a multilevel theory of CD are logically derived as the individual, group, and organizational level although additional levels may be considered in future research. For

quantitative research purposes, it should also be noted that these levels would be considered hierarchical or nested, rather than orthogonal, levels because the levels are considered to be overlapping (and the underlying assumption of orthogonal levels is that groups be non-overlapping).

With regard to units, Kozlowski and Klein (2000) caution that unit specification must be based on careful consideration of the phenomenon of interest rather than expedience and encourage specification of both formal and informal units. Within each of the three specified levels (individual, group, organization) there can be any number of units. Based on an understanding of the hierarchical nature of organizations though, specifying units becomes somewhat easier. At the individual level, the basic unit is the individual worker (Cummings & Worley, 2001). At the group level, units may be composed of dyads, triads, teams, departments or divisions (Kozlowski & Klein). At the organization level the units may again be composed of individuals or groups described above, but the individuals who make up these units have a particular focus on broader organizational issues such as strategy, structure and process that aid in achieving organizational goals (Cummings & Worley). Addressing the need to specify whether units are formal or informal, Kozlowski and Klein provided an example of a formal unit by indicating that “leadership research typically defines the ‘leader’ as the formal unit manager” (p. 19). Thus, at the group level, where individuals are grouped together, there may be formal dyad, triad, team, department or division groupings as well as informal groupings based on personality, personal/career interests, or interaction. A similar situation may exist at the organizational level, with formal individuals or groups focused

on organizational accomplishment. As for informal units, groupings of individuals may arise based on personality, personal/career interests, or interaction in any of the organizational levels. Specifying informal units will be much easier when applying the multilevel theory of CD to a real world organization or industry in future research to test the resulting theory.

#### *Level of the Theory*

Although Reynolds Fisher (2000) addressed the need to specify the level of the theory, her research originated from the writing of Klein and colleagues (1994). They indicated that the importance of specifying the level of the theory results because the level of the theory, the level of measurement and the level of statistical analysis must be congruent to avoid a “fallacy of the wrong level” (p. 198). Since this study is focused on developing a multilevel theory of CD with measurement and analysis being left for future research, establishing the level of the theory is of utmost importance so as to guide that future research and avoid incongruence between the theory, measurement and analysis. Specifically “in specifying a level of theory, one implicitly or explicitly predicts that members of a group are homogeneous, independent, or heterogeneous with respect to the constructs of the theory” (Klein et al., 1994, p. 199). According to Klein et al. (1994), specifying the level of the theory as the group level predicts that members of the group as homogeneous meaning “that group members are sufficiently similar with respect to the construct in question that they may be characterized as a whole” (p. 199); specifying the level of the theory as the individual level predicts that members of a group are independent “[with] individual members of a group...independent of that group’s

influence” (p. 200); and specifying the level of the theory as the individual within the group predicts that members of a group are heterogeneous meaning that the focus is “neither the individual, nor the group, but the individual within the group” (p. 201). Based on the description of a homogeneity provided above, a multilevel theory of CD would not be positioned at the group level since the CD process and individual needs can vary greatly from person to person. Similarly, since the multilevel theory of CD being developed in this study is attempting to integrate both individual and organizational outcomes, viewing the level of the resulting theory as the individual level does not make sense either. Based on the impact of the individual and organization on outcomes, as described by Upton et al. (2003) in their explanation of the resulting CD dependent variable outcomes, a multilevel theory of CD is most appropriately positioned at the individual within the group level with members predicted to be heterogeneous because individuals function within groups to achieve the desired goals of both.

#### *Theoretical Boundaries*

The final theory component to be determined in the MLTB process is done so by establishing opened or closed theoretical boundaries through logic (Dubin, 1978; Lynham, 2000a; Reynolds Fisher, 2000). In a multilevel exploration of CD, logic leads to the designation of two primary boundary types: levels boundaries and organizational or system boundaries. Levels boundaries exist at each of the three designated levels of the multilevel theory of CD, allowing for interaction within and between the three levels. Thus, levels boundaries define each of the three domains as follows:



1. The individual level boundary includes the individual worker who has primary responsibility for achieving individually determined CD goals and outcomes.
2. The group level boundary includes individuals grouped into the aforementioned dyads, triads, teams, departments, or divisions who then interact to affect both individual and organizational goals and outcomes (including CD).
3. The organization level boundary typically includes team, department, division or organization leaders who are focused on achieving organizational goals and outcomes (including CD).

Due to the interactionist nature of organizations, the boundaries described below would be described as open boundaries because they allow for “some kind of exchange” (Dubin, 1978, p. 126) between and within each of the levels and the overall organization. It should be noted that despite these open boundaries, individuals and groups within the organization may still encounter obstacles to the exchange mentioned above.

The organizational or system boundary identified through a logical examination of an organization and the overarching industry association actually serves a dual purpose. The first purpose of the boundary frames the organization as a single entity focused on accomplishing organization outcomes as determined through strategic planning and goal setting. The second purpose of the boundary frames the organization in the larger industry association, within which it is assumed that individual workers may move from organization to organization. Again, due to the interactionist nature of organizations, the organizational or system boundary established in a multilevel theory

of CD is an open boundary with regard to both the single organization and within the larger industry context.

Figure 4.1 is a representation of the theory components of a multilevel theory of CD. In summary, the theoretical phenomenon of this study is CD for individuals in the context of an employing organization and the resulting dependent variables are drawn directly from the definitions of CD and point to both individual and organizational or social outcomes associated with CD (Upton et al., 2003). The three organizational levels specified in this study, followed by the units that make up the level, are the individual level, made up of the individual workers focused on their personal CD goals; the group level, made up of any interaction of individuals in the form of dyads, triads, teams, departments or divisions; and the organization level, made up of organizational leaders focused on organizational goals and outcomes. While there may in fact be other units within organizations, those identified in the theory components portion of the MLTB process are those that specifically advance the development of a multilevel theory of CD. The next theory component specified in the MLTB process is the level of the theory which, in this case, is specified as the individual within the group because individuals work within groups to achieve both individual and organizational goals. Finally, the boundaries of the theory are established in two broad categories: levels boundaries and organizational or system boundaries. The levels boundaries frame each of the three specified organizational levels and the organizational/system boundary frames the organization as a single entity focused on organizational goals and also within the larger industry context that focuses largely on organizational and social outcomes.

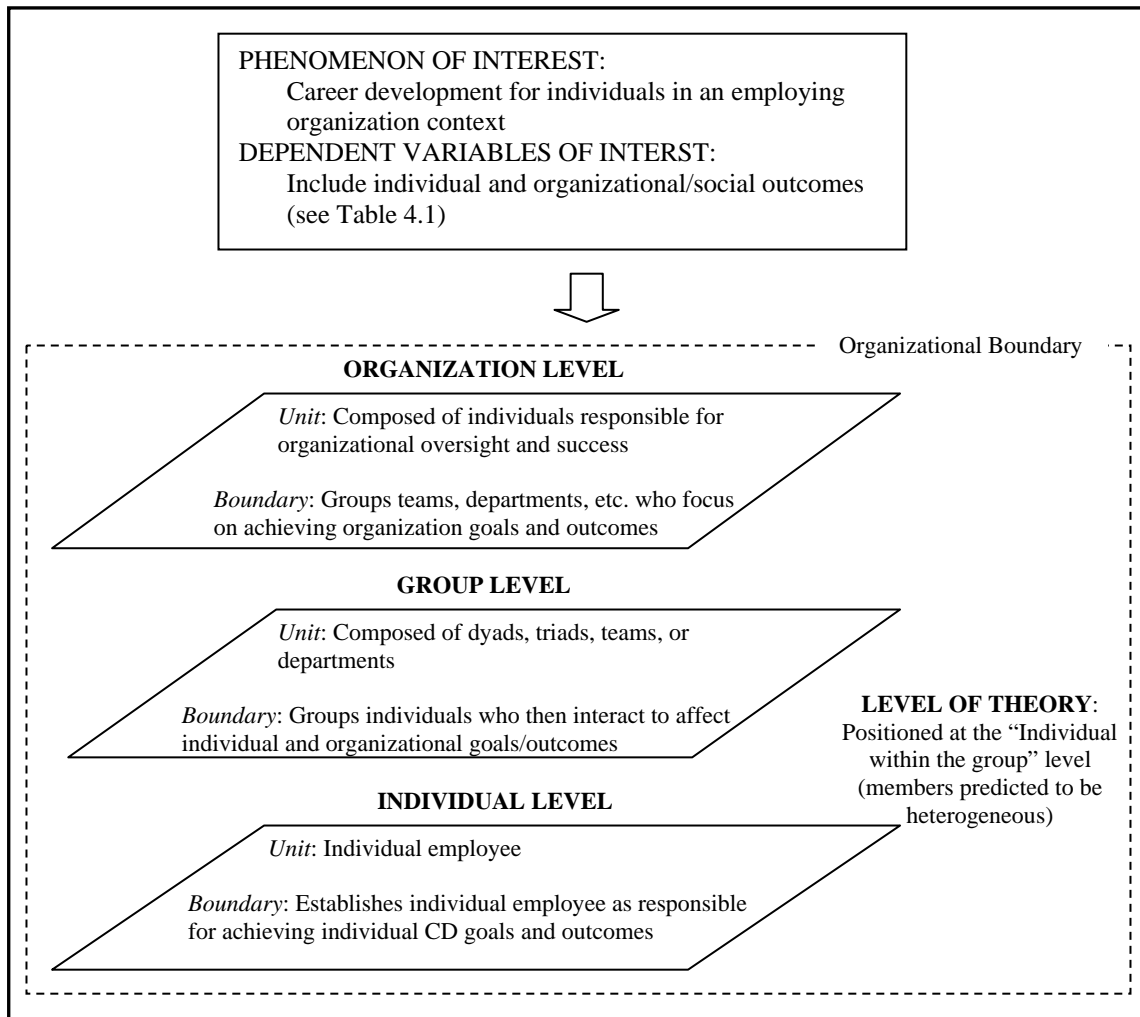


Figure 4.1. *Theory Components of a Multilevel Theory of CD.*

### Levels Components

The next step in developing a multilevel theory of CD is specifying and examining levels components of the theory. The levels components specified in this theory include both within levels and between levels components.

*Within Levels Components*

The first set of levels components, within levels considerations, are specified by determining and explicating the collective constructs that result from the action of units within the organization (Morgeson & Hofmann, 1999). These collective constructs referred to “abstractions used to explain some apparent phenomenon” that result from the action of “any interdependent and goal-directed combination of individuals, groups, departments, organizations or institutions” (Morgeson & Hofmann, p. 251; Kozlowski & Klein, 2000) and that have an impact on the outcomes or dependent variables of the phenomenon of interest. To further clarify, collective constructs are “conceptual notions whose existence must be inferred from more observable actions or features of an entity” (Morgeson & Hofmann, p. 250). Another point of clarification is that these collective constructs are not the dependent variables of interest in the theory building process, but rather are those constructs that influence the outcomes/dependent variables identified in the theory components phase.

In order to determine the collective constructs relevant to CD in HRD, a careful review of the CD information contained in three well-known HRD volumes (Desimone, Werner & Harris, 2002; Gilley, Egglund & Gilley, 2002; Swanson & Holton, 2001) was conducted which resulted in potential constructs being identified. Based on the meaning of each construct and on Morgeson and Hofmann’s definition of collective constructs, redundant concepts and those that did not meet the definition of collective construct were eliminated leaving the final list of seven collective constructs. Although other constructs may be identified through other CD-related research, these seven constructs

were selected because of their connection to previously identified research and theory and the potential to impact the previously identified CD dependent variables. Those seven collective constructs are: individual career planning, organizational career management/succession planning (Desimone, Werner, & Harris, 2002; Gilley, Egglund, Gilley, 2002; Swanson & Holton, 2001); commitment, productivity (Desimone, et al.; Gilley, et al.); organizational flexibility (Desimone, et al.); employee growth and development, and morale and motivation (Gilley, et al.). After identifying the collective constructs, the theorist must also specify aspects of each of the collective constructs as described in the improved MLTB process.

In describing the seven collective constructs that emerge in the developing multilevel theory of CD, the theorist must address four aspects of each construct: (1) how these constructs emerge through top-down or bottom-up processes and, if relevant, temporal reference points that make the constructs appear top-down or bottom-up at different times, (2) the construct's level of origin and current level (Kozlowski & Klein, 2000), (3) the function of each construct (Morgeson & Hofmann, 1999), and (4) the unit type of the construct (Kozlowski & Klein). Kozlowski and Klein do point out that "collective phenomena may emerge in different ways under different contextual constraints and patterns of interaction. Emergence is often equifinal rather than universal in form" (p. 59). As such, the emergence process of each of the collective constructs described below is specific to the multilevel theory of CD being developed in this study

and adjustments may be necessary when evaluating the resulting theory in future research. It is also important to point out that the demonstration of the new MLTB approach presented in Chapter III is as important as the theory developed and presented here. The theory developed in this chapter is “a” multilevel theory and will likely be refined through testing and further elaboration. Table 4.2 summarizes the four aspects of each CD collective construct listed above followed by additional discussion about the emergence process for each construct.

Four of the seven collective constructs emerge through bottom-up emergent processes although organizational factors such as promotion, HR needs, reorganization and/or downsizing can make these constructs appear top-down. For the purposes of this theory, the system state of the theory assumes a stable organization with no major reorganization and/or downsizing taking place and thus, the constructs emerge through bottom-up processes. These four collective constructs are morale and motivation, individual career planning, commitment, and employee growth and development. In each construct, the bottom-up emergence occurred through compilation processes in which constructs comprise a common domain, but are different as they emerge upward. In other words these constructs “occupy essential the same role in models at different levels, but they are not identical” (Kozlowski & Klein, 2000, p. 16).

Table 4.2. *CD Collective Constructs: Emergence, Levels, Function and Unit Type.*

<b>Collective Construct</b>	<b>Emergence process with specified temporal reference points</b>	<b>Level of Origin/ Current Level</b>	<b>Construct Function</b>	<b>Construct Unit Type</b>
<i>Morale and motivation</i> (Gilley, et al., 2002)	Bottom-up based on compilation processes (common domain is morale & motivation); may appear top-down during times of reorganization and/or downsizing when employee morale and motivation are low	Individual/ Organization	Overall attitude toward and drive to make the organization successful	Configural unit
<i>Individual career planning</i> (Desimone, et al., 2002; Gilley, et al., 2002; Swanson & Holton, 2001)	Bottom-up based on compilation processes (common domain is career planning); may appear top-down during times of reorganization and/or downsizing when management support for career planning is lessened	Individual/ Individual	Individual takes responsibility for career-related decisions by being aware of and seeking out career opportunities	Configural unit
<i>Commitment</i> (Desimone, et al., 2002; Gilley, et al., 2002)	Bottom-up based on compilation processes (common domain is commitment); may appear top-down during times of reorganization and/or downsizing when employee concern for job security is heightened	Individual/ Individual	Individual supports and upholds organization's goals and mission	Configural unit
<i>Employee growth and development</i> (Gilley, et al., 2002)	Bottom-up based on compilation processes (common domain is growth and development); may appear top-down during times of reorganization and/or downsizing when management support for employee development is lessened	Individual/ Individual	Individual expands skill set and ability to adapt to a variety of situations and environments	Configural unit
<i>Organizational career management/ succession planning</i> (Desimone, et al., 2002; Gilley, et al., 2002; Swanson & Holton, 2001)	Top-down, unlikely to ever appear bottom-up since organizational needs decisions ultimately come from organizational leadership	Organization/ Organization	Meeting the organization's anticipated HR needs through career development support.	Global unit
<i>Productivity</i> (Desimone, et al., 2002; Gilley, et al., 2002)	Top-down assuming the organization has productivity standards; in the absence of productivity standards this construct may appear to emerge through bottom-up processes based on individual productivity	Organization/ Organization	Maintain necessary levels of output for organizational success	Global unit

Table 4.2 continued.

<b>Collective Construct</b>	<b>Emergence process with specified temporal reference points</b>	<b>Level of Origin/ Current Level</b>	<b>Construct Function</b>	<b>Construct Unit Type</b>
<i>Organizational flexibility</i> (Desimone, et al., 2002)	Top-down based on management response to changing environment; may appear bottom-up at times when individual employees exhibit flexibility in job responsibilities with the aim of achieving organizational goals and mission	Organization/ Organization	Organization is able to adapt to changing and uncertain environment.	Global unit



The remaining three CD collective constructs, organizational career management/succession planning, productivity, and organizational flexibility, all emerge through top-down processes. Organizational career management/succession planning is unlikely to ever appear to result from bottom-up emergence since human resource (HR) needs decisions are ultimately made by organizational leadership. Productivity, on the other hand, may appear to emerge through bottom-up processes when there are no organizational productivity standards and individuals are left to be “productive” on their own. Organizational flexibility may also appear to emerge through bottom-up processes when employees exhibit flexibility with the aim of achieving the organizational goals and mission. The next steps in the theory building process involve utilizing information about the collective constructs function, level of origin and current level, and unit construct type.

Based on the identified functions of the seven identified CD collective constructs the theorist is now able to do two things: (1) integrate any constructs that are functionally similar into networks of constructs and (2) address whether the specified function plays a role in the overall organization which may inform why that specific construct persists or fails to persist in the organization. Out of the seven CD collective constructs identified, two networks of constructs can be identified based on the similarities of the collective construct functions identified in Table 4.2. The first network of functionally similar constructs consists of individual career planning and employee growth and development. The second network of functionally similar constructs consists of the following collective constructs: morale and motivation and commitment.

Recognizing these two networks of collective constructs now may “serve as an integrative mechanism in multilevel research and theory” (Morgeson & Hofmann, 1999, p. 258) for this and future studies. With regard to the identified function of each of the CD collective constructs, all but one of the seven specifies a role in the overall organization, thus indicating persistence of each of those constructs. The one collective construct that does not specify a role in the overall organization is individual career planning which may indicate why individuals and organizations alike continue to struggle with how and why career planning is to function in employing organizations.

The next within levels consideration to make requires specifying interaction among units. The theoretical foundation established at the beginning of this chapter included the following levels and units within those levels: the individual level with the basic unit being the individual employee (Cummings & Worley, 2001); the group level with units composed of dyads, triads, teams, departments or divisions (Kozlowski & Klein); and the organization level with units composed of individuals or groups focused on broader organizational issues such as strategy, structure and process that aid in achieving organizational goals (Cummings & Worley). At the individual level, unit interaction occurs any time individual workers interface in formal or informal work situations. Formal work interactions occur when individuals are paired in a dyad or work as part of a triad, team, department, or division. Informal work interactions occur when individual workers interface through training sessions, organizationally-sponsored social events, or any number of informal interactions that occur in a workplace. Unit interactions at the group level consist primarily of formal work interactions consisting of

dyads, triads, teams, departments, or divisions collaborating to complete work projects and/or accomplish organizational goals. Although these group level interactions typically occur in a formal work context they may also occur in informal interactions as described at the individual level. Finally, organization level unit interactions again occur when those individuals or groups focused on broader organizational issues interface in formal and informal work situations. Although similar to the individual level interactions in formal interactions, informal organization level interactions may occur either more or less frequently depending on the organization's culture and the resulting amount of informal work interactions (i.e. senior management is less likely to attend training sessions, but may interact more or less formally both in and outside of work).

The final within levels consideration requires specifying the level of measurement for each of the nine CD collective constructs. The construct unit type of each collective construct identified in Table 4.2 drives the level of measurement of each construct (Kozlowski & Klein, 2000). The first four CD collective constructs (morale and motivation, individual career planning, commitment; and employee growth and development) emerge through bottom-up compilation processes and thus, the construct unit type for each is the configural unit type. The level of measurement for configural units is then specified as the level of origin (Kozlowski & Klein) and since the level of origin for each of these four constructs is the individual, the individual level is also the level of measurement. The final three CD collective constructs (organizational career awareness/succession planning, productivity, and organizational flexibility) emerge through top down processes and thus, the construct unit type for each is the global unit

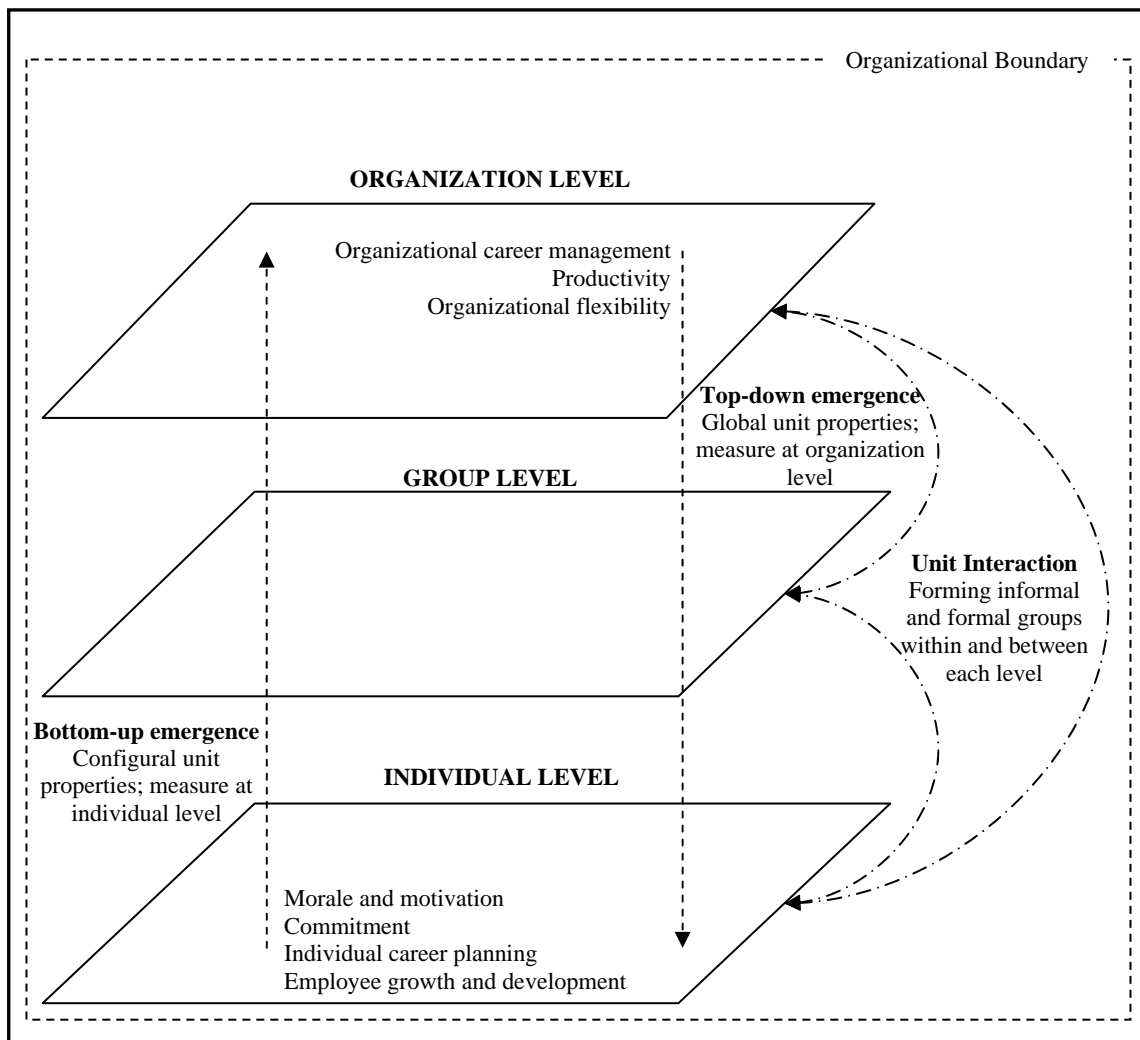


Figure 4.2. *Within Levels Components of a Multilevel Theory of CD.*

type. The resulting level of measurement for global units is the unit level (Kozlowski & Klein) and for each of these constructs, the unit level is the organization level. Figure 4.2 represents the within levels components developed in this phase of the MLTB process. It should be noted once again that the three specified levels for this multilevel theory of CD are considered to be hierarchical or nested, rather than orthogonal, levels. Having

specified within levels components, the next section focuses on between levels components.

#### *Between Levels Components*

In specifying between levels components of a multilevel theory of CD, the theorist must address four issues: (1) specifying how the seven identified collective constructs and CD for individuals in the context of an employing organization (the theoretical phenomenon of interest) are linked at different levels of the theory (Kozlowski & Klein, 2000); (2) articulating the structure of the construct at each level (Morgeson & Hofmann, 1999); (3) specifying the functional relationship among levels and function of the constructs to understand the interaction between the seven constructs and three levels (Reynolds Fisher, 2000); and (4) identifying sources of variability among the three levels of the developing theory by focusing on the level of the theory to determine where to look for sources of variability (Reynolds Fisher). Each of these components will be addressed in the following section.

The first between levels considerations involves specifying how each of the seven identified collective constructs and the theoretical phenomenon of interest, CD for individuals in the context of an employing organization, are linked at the three levels of the developing theory (Kozlowski & Klein, 2000). By examining this linkage, the impact and/or influence of the collective constructs on the dependent variables of CD will become clearer. Figure 4.3 provides a visual representation of this first between levels component. The first three collective constructs, individual career planning (Desimone, et al., 2002; Gilley, et al., 2002; Swanson & Holton, 2001), commitment (Desimone, et

al., Gilley, et al.), and employee growth and development (Gilley, et al.), are closely related and the resulting linkages between each of these constructs and CD for an individual in the context of an employing organization are identical. Taking into account the operational definition of CD, namely the individual subjective career aspects, and the level of origin for each of these constructs (the individual level), the linkage between these three constructs and CD becomes apparent. In other words these constructs, originating at the individual level, primarily impact the individual outcomes of CD. The group level linkage for each construct results from the interaction of group members which may in turn support, motivate, or enhance any of these constructs. Those group level interactions may also have the opposite effect and result in lack of support, motivation, or enhancement for career planning, commitment, and employee growth and development. Although the linkages between the organizational level and these constructs are not always evident, organizational success may depend on individuals taking responsibility for their career planning, maintaining a certain level of commitment to the employing organization, and utilizing opportunities for growth and development. When individuals fulfill the expectations mentioned above, organizational success is enhanced and thus, the linkages between these constructs and CD at the organizational level are specified.

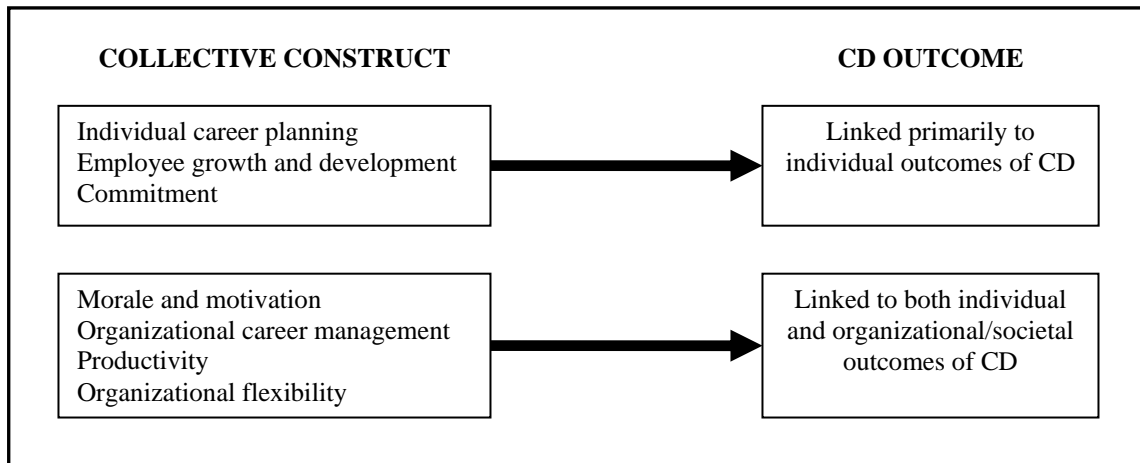


Figure 4.3. *Between Levels: Construct and Dependent Variable Linkages.*

Organizational career management/succession planning (Desimone, et al., 2002; Gilley, et al., 2002; Swanson & Holton, 2001), while originating from the organization level, is linked to CD for an individual in the context of an employing organization at the individual level. Unfortunately, in many organizations every employee is not afforded the same career management/succession planning opportunities. As a result, the organization may overlook some individuals who are ideally suited for advancement and/or for receiving additional development. Whether recognized by the organization for additional development, organizational career management is linked to the phenomenon of CD at this level because it impacts both individual and organizational outcomes. With regard to the linkage between organizational career management and CD at the group level, the reality of being selected for additional development may be the most apparent during these interactions. The resulting impact of an individual becoming aware of his or her development potential as determined by the organization, whether at the individual or group level, may have an effect at each level of the organization. The result of

knowing he or she has not been selected for development may include that individual becoming unmotivated, disengaged, and/or dissatisfied in the organization. In the situation where the individual knows he or she has been selected for development, the result may be added motivation, engagement, and/or satisfaction in the organization. Lastly, the link between organizational career management and CD at the organizational level is easily identified since the function of organizational career management is to meet the organization's anticipated human resource needs through CD support.

The linkages between productivity (Desimone, et al., 2002; Gilley, et al., 2002) and CD for an individual in the context of an employing organization at each level are identical to those between morale/motivation and CD with one exception—productivity has a unique organizational impact. At the individual level, productivity and morale/motivation may be impacted by the amount of support an individual receives for CD. Although other factors impact these two collective constructs, the focus of this theory is on individual CD and thus, external factors, such as family life are not included in this examination. The group level linkage results, again, from the interaction of individuals and the resulting motivation and/or encouragement to enhance productivity or morale. Interactions between individuals at the group level will likely play a major role in individual productivity and morale/motivation and organizational productivity. The organizational level linkage between these constructs and CD follows from the organization's need to maintain necessary levels of output for organizational success. Unique to productivity is the direct connection between individual productivity and



organizational productivity, and thus CD for an individual in the context of the employing organization is of utmost importance.

The final collective construct and resulting linkages that the theorist examined for this study is the construct of organizational flexibility (Desimone, et al., 2002). The function of organizational flexibility is to ensure that the organization is able to adapt to an ever changing and unstable environment (Desimone, et al.). With the function in mind, the reader can deduce that the individual, group, and organizational level linkages between flexibility and CD arise from whether the organization supports CD initiatives at the individual and group levels, respectively. In the case of support for CD at both levels, individuals and groupings of individuals are better prepared to adapt to a changing environment and thus, the organization is also able to adapt. Having specified the linkages between each of the seven CD collective constructs and the theoretical phenomenon of interest, CD for an individual in the context of an employing organization, the theorist now turns to the next between levels consideration—identifying commonalities of each construct across levels to articulate the structure of the construct at each level.

The purpose of articulating the structure of each of the seven CD collective constructs at each level is to add to the overall understanding of each construct. Doing so allows identification of the unique process and structure of each construct. Two of the identified collective constructs were similar in structure and were thus combined in the explanation of the structure at each level. That pair of collective constructs includes individual career planning and employee growth and development. At the individual

level, the structure of these two constructs can be described in term of resources available to an individual for managing his or her own development (Desimone, et al., 2002; Gilley, et al., 2002; Swanson & Holton, 2001). The group level structure also includes group leader support for development since that leader may also have to provide time-off for development purposes in addition to the allocation of financial resources. At the organizational level, the structure must also factor in support for individual development regardless of whether there is a direct organizational benefit (Desimone, et al., Gilley, et al., Swanson & Holton).

Despite some similarities, the remaining collective constructs did not share the same level of similarity as the first two and thus, are addressed individually. The structure of commitment at the individual level can be described in terms of the employee's willingness to support and uphold the organizations' goals and mission. At the group level, the structure is similar to the individual level structure, with the added influence of group leader support for the organization's goals/mission. The organizational level structure of commitment represents the influence of organizational level leadership support for employee development programs which are intended to enhance commitment.

The structure of morale/motivation at the individual level can be described in terms of events and programs to enhance morale/motivation (Rothwell, et al., 2005). The structure at the group level follows a similar pattern as commitment in that the group level structure mirrors the individual level structure with the added impact of group leader influence on morale and motivation. At the organizational level, morale and

motivation can again be described in terms of events and programs to enhance these constructs, but also involves organizational level support for the aforementioned programs. In addition, the structure of morale/motivation at both the group and organizational level is likely influenced positively when a group and/or organizational leader has successfully managed her or his own career development (Rothwell, et al.).

Regarding organizational career management, at the individual level the structure can be described in terms of accomplishing organizational goals by supporting individual career planning and development (Desimone, et al., 2002; Gilley, et al., 2002; Swanson & Holton, 2001). The group and organizational level structures can then be explained in terms of accomplishing organizational goals through the support of individual and group goals. The individual level structure of the next collective construct, productivity, can be detailed in terms of retention, satisfaction, morale and commitment (Rothwell, et al., 2005). The additional factor that must be considered at the group level is the influence of group leaders on the aforementioned retention, satisfaction, morale, and commitment. Lastly, at the organizational level, the structure must include the influence of organizational leaders on the included structural considerations of productivity. Finally, the structure of the last collective construct, organizational flexibility, is explained below. At the individual level the structure is explained in terms of individual adaptability to change and instability (Rothwell, et al., 2005). The group and organizational level structure are described similarly with the focus on group and organizational adaptability to change, respectively. Figure 4.4 provides a visual review of the construct structure for each of the seven collective

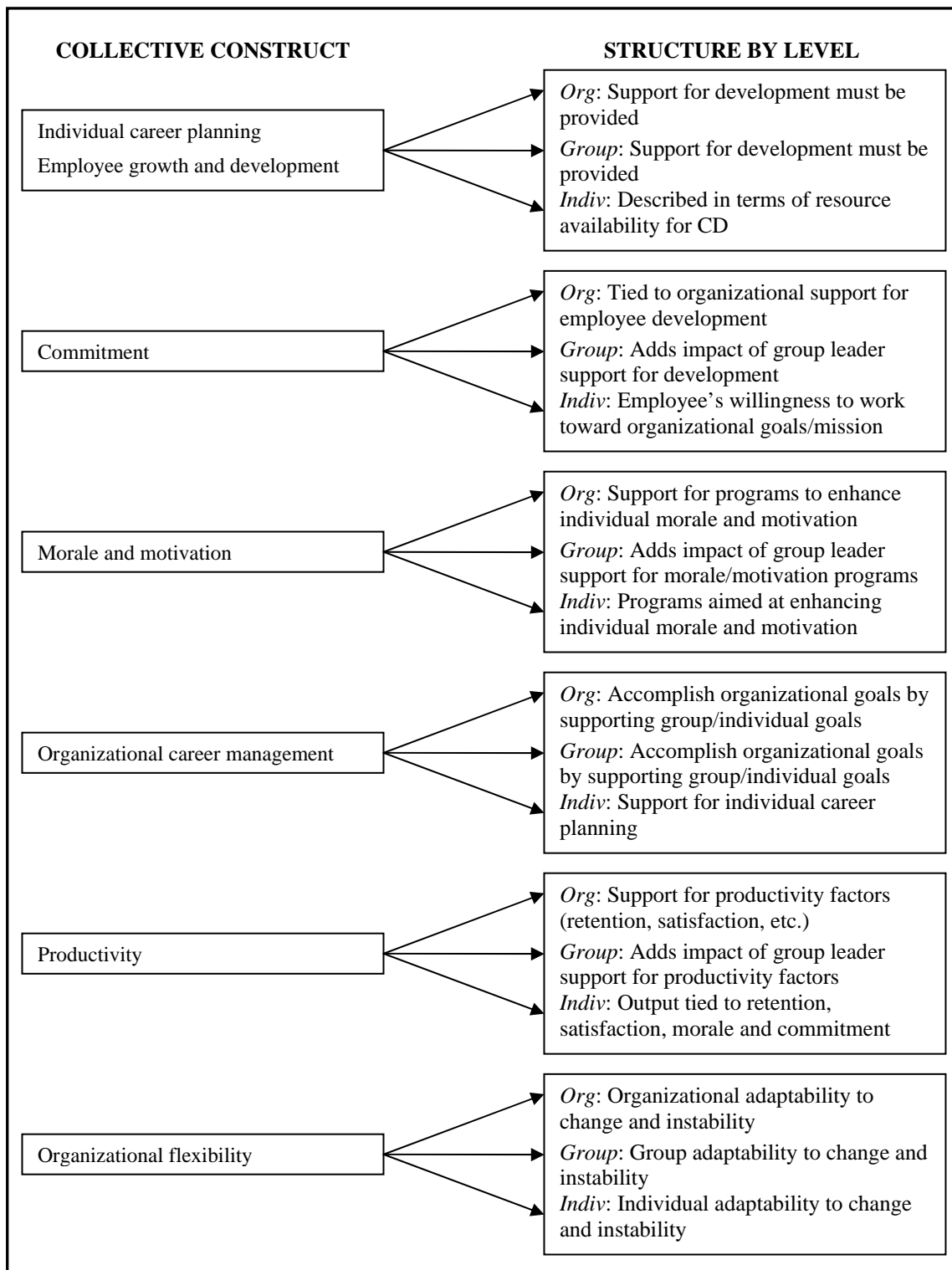


Figure 4.4. *Between Levels: Construct Structure at Each Theoretical Level.*

constructs at each level. Following an articulation of the structure of the seven collective constructs at each level, the next section details the functional relationship between the levels of the theory.

Since the construct functions were specified at each level in the first between levels consideration, the third consideration, detailing the functional relationship between levels and the function of the constructs (Reynolds Fisher, 2000), only requires that the theorist detail the functional relationship between levels. Therefore, the functional relationship between levels, while variable in different organizations, is established as a hierarchy. Individual employees, who compose the individual level, are grouped together into dyads, triads, teams, departments, and divisions at the group level. The individual work, or output, of each employee, while important, has additional meaning when in the context of a working group and ultimately impacts the organization at the highest level, the organizational level. The organizational level function focuses on achieving the organization's mission and goals and is solely dependent on the work output of both individuals and groups. The explanation provided above details the functional relationship between levels of the theory and the final between levels consideration is explained in the following paragraph. Figure 4.5 provides a visual representation of the final two between levels components: the functional relationship between levels and the sources of variability in the multilevel theory of CD.

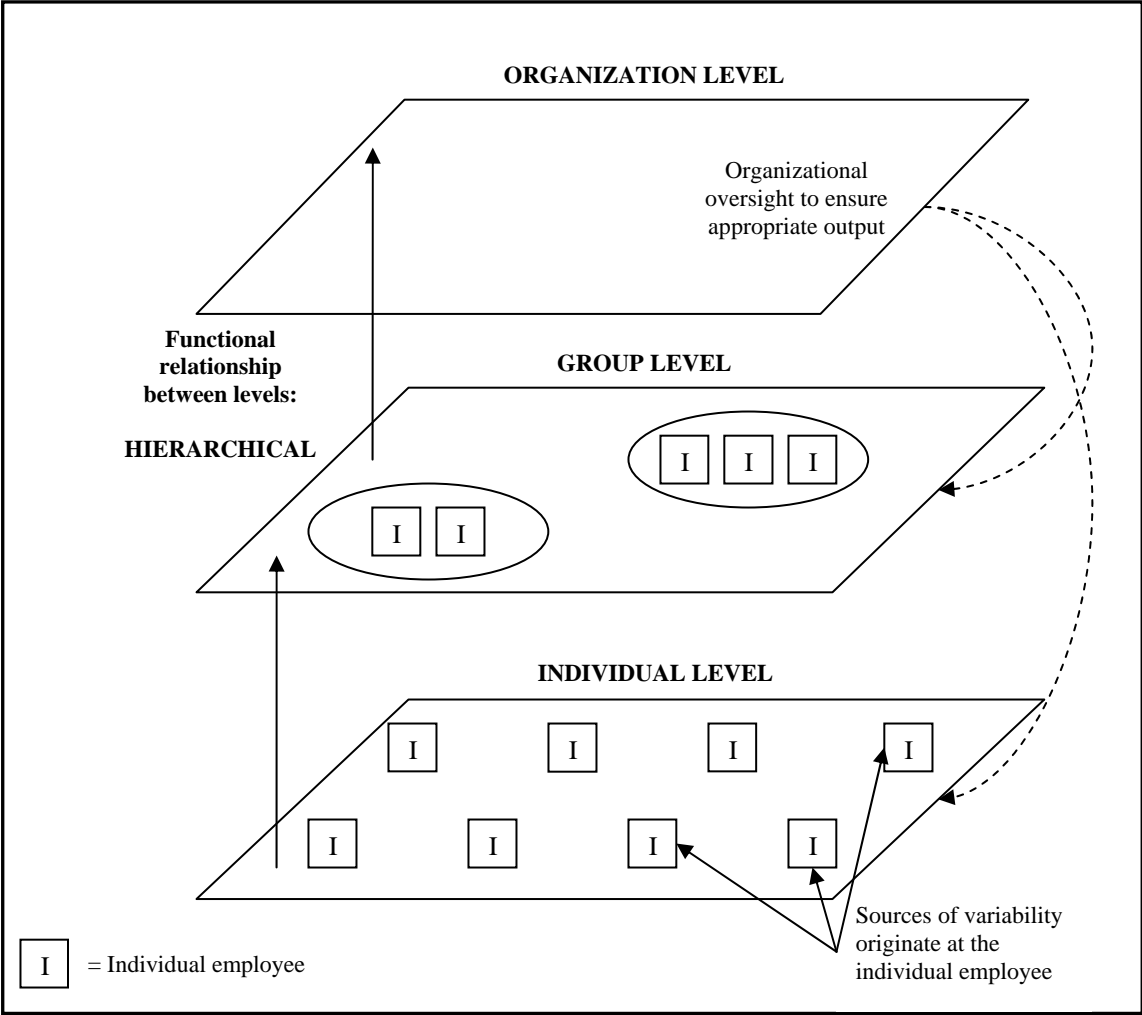


Figure 4.5. *Between Levels: Functional Relationships and Sources of Variability.*

Finally, the last between levels consideration requires identifying sources of variability in the developing theory by focusing on the level of the theory (Reynolds Fisher, 2000). Since the level of the multilevel theory of CD is considered to be the individual within the group, the sources of variability are the individual employees. Although variability may occur between groups, the origin of the variability is the

individual. Factors that may lead to variability include whether the employee is selected for career management/succession planning purposes and the employee's level of morale and motivation, commitment, and productivity. Each of the four between levels considerations addressed above adds to the understanding within the developing multilevel theory of CD. The final considerations relate to theory specification and operationalization and are described below.

### **Theory Specification and Operationalization**

The multilevel theory building methodology developed for this study describes two primary phases, a theory components phase and a levels components phase. Having completed both of those phases, the final aspect of theory development that will be addressed in this study is theory specification and operationalization. The purpose of specification and operationalization is to ready the resulting theory for measurement, analysis, and refinement (Kozlowski & Klein, 2000; Reynolds Fisher, 2000) which will be left to future research. There are two steps to specification and operationalization: (1) specifying propositions of the theory (Reynolds Fisher, 2000); and (2) in an effort to ensure appropriate operationalization, specifying whether the researcher is assessing the constructs structure or function (Morgeson & Hofmann, 1999). Assessing both structure and function are important, but appropriate operationalization requires the specification of assessment details (Morgeson & Hofmann). Otherwise, focusing on construct function “may result in loss of some descriptive richness that would be gained by considering the construct's structure” (Morgeson & Hofmann, p 262); and focusing on construct structure “often entails the loss of generalizability across levels” (p. 262).

Details about the resulting insight from the two steps to specification and operationalization follow.

Specifying propositions of the theory derives directly from the work of Dubin (1978) whose theory building work is widely recognized as aimed toward quantitative measurement and analysis through a positivistic frame. Since measurement, analysis, and refinement of the multilevel theory of CD is left for future research and since the researcher conducting this study does not want to limit that refinement to quantitative measures or a positivistic frame, a limited number of proposition examples will be provided. Propositions of a theory can address the following: propositions about values of a single unit of the theory; propositions about the continuity of a system state that predicts conjoined values of all units; or propositions about the oscillation of the system from one state to another (Dubin; Reynolds Fisher, 2000). Furthermore, “propositions represent theoretical assertions in need of research evaluation” (Kozlowski, et al., 2000, p. 161). To aid the future researcher who works to analyze and refine this multilevel theory of CD in the future, an example of each type of proposition is proposed below in Table 4.3. These propositions are intended to lead to the examination of aspects of the multilevel theory of CD developed throughout this chapter, but are not intended to be an exhaustive list of theoretical propositions offered for validation.



Table 4.3. Specified Propositions of a Multilevel Theory of CD.

TYPE OF PROPOSITION	PROPOSITION
About values of a single unit of the theory	The overall retention rate of individuals in an organization is directly related to the level of organizational resources provided for the individual's CD.
About the continuity of a system state that predicts conjoined values of all units	In times of organizational stability (i.e. no downsizing and/or reorganization), employees will maintain a level of job satisfaction and motivation to continue working toward organizational goals.
About the oscillation of the system from one state to another	The priority given to individual and organizational goals accomplished through CD will increase and decrease in times of stability and instability, respectively.

Although no studies have been found that specifically support the propositions suggested above, the multilevel model of training effectiveness (Kozlowski, et al., 2000) described in Chapter II, follows a very similar process offering a total of 19 propositions regarding training transfer effectiveness.

In specifying whether to assess structure or function of the collective constructs of the multilevel theory of CD, the theorist turns to Morgeson and Hofmann (1999). Interest in the underlying structure of CD would likely be best assessed by examining the support structure and programs related to providing CD for an individual in the organization. On the other hand, research interest in the outcomes of CD might find that a structural analysis provides information that is too specific (Morgeson & Hofmann). Such is the case with CD, and the development of a multilevel theory of CD evolved from a research interest into the outcomes of CD at each level. Based on that knowledge, the construct function of the seven CD collective constructs should be assessed in future measurement, analysis, and refinement instead of focusing on a structural analysis of the seven collective constructs. Function assessment includes determining whether the intended function of the construct and the actual function of the construct are congruent.

The intended outcome of focusing on the function of the collective constructs, rather than the structure, is that CD scholars will be better able to explain the impact of the collective constructs on CD outcomes by explicating the specific collective construct functions.

Considered as a whole, the information presented in this chapter represents a multilevel theory of CD and Figures 4.1 through 4.5 are intended to represent the theory and levels components visually. Although the theory is complex, the reader is reminded that the goals of developing this theory are to further connect CD to human resource development (HRD), advance theory building in HRD, and contribute to the further convergence of existing CD theory. Although not undertaken in this study, the measurement, analysis and refinement of this theory are paramount to moving closer to accomplishing the purposes outlined above. Chapter V will provide conclusions drawn from the multilevel theory of CD and the MLTB process; and implications for future research. Additionally, further MLTB may be undertaken to develop additional multilevel theories emphasizing CD-HRD connections.

## CHAPTER V

### CONCLUSIONS AND FUTURE RESEARCH

The aims for this dissertation were twofold 1) to develop a multilevel theory of career development (CD) as a means of strengthening the connection between CD and human resource development (HRD) and 2) to advance theory building in HRD through the development of a new and improved approach to multilevel theory building. Chapter II consists of a review of the HRD, CD and theory building literature used to inform this study. The third chapter consists of a review of additional theory building literature and, specifically, multilevel theory building (MLTB) literature which was analyzed and critiqued to inform the development of the methodology for this study. Through exploration and critique of MLTB processes developed by Kozlowski and Klein (2000), Morgeson and Hofmann (1999) and Reynolds Fisher (2000), an improved MLTB process was developed for the purpose of developing a multilevel theory of CD and was followed in Chapter IV with the end result being a multilevel theory of CD. In the end, all three purposes of the study outlined in the first chapter were accomplished. Whether the primary purpose outlined in the introduction or one of the secondary purposes is seen as most relevant will depend largely on the reader and scholars from the fields of HRD and CD. From the author's perspective, all three purposes have relevance although the contribution to the advancement of theory building through an improved MLTB approach seems to hold the most promise. The remainder of this chapter will be a discussion of how the three purposes mentioned above were accomplished and

recommendations for future research including advancing theory building and validating the resulting multilevel theory of CD.

### **Implications**

Based on the three purposes outlined for this study and mentioned at the beginning of this chapter, there are three implications that resulted from this study. In addition, there are implications for CD and HRD practitioners. A review of the CD literature revealed that the focus of most CD theory is on the individual employee level and a review of the HRD literature revealed that HRD as a field focuses largely on the organization level with limited exploration of the individual employee level. Both disciplines seem to be ignoring the interactions of individuals that occur at the group level in the form of dyads, triads, teams, or departments and at the organization level. The endogenous constructs or dependent variables that surfaced from the definitions of CD (Upton et al., 2003) point to both individual and organizational outcomes of CD, in turn calling for shared responsibility for CD between the levels of an organization. In addition, the seven collective constructs that emerged from the collective action of individuals within the employing organization influence CD at all three levels of interest—the individual, the group and the organizational level. As a result, the multilevel theory of CD that was developed in this study helps further connect CD and HRD by explaining the relevant collective constructs of CD that emerge in organizations and that influence CD at each level of the organization.

The second implication of this study relates to the advancement of theory building in HRD. In his research on the need for additional theory building research in

HRD Torracco (2004) outlined four areas where theory building might be conducted in the field. Of those four areas of theory building research, a multilevel theory of CD addresses the need to research theory building processes and the resulting theory. Chapter III details a multilevel theory building (MLTB) process that was developed in this study. Chapter IV then followed with the end result being a multilevel theory of CD that expands the notion of CD from an individual's sole responsibility to being a shared responsibility between the individual and the organization. Furthermore, Garavan et al. (2004) have called for HRD to begin to address levels issues in order to more fully address individual, group and organization needs. A multilevel theory of CD does just that by examining the concept of CD through a multilevel lens. Further advancement of HRD theory building depends on developing theory that links the micro, meso and macro aspects of an organization if the field is to avoid the "micro-macro divide" (Wright & Boswell, 2002). Although Lynham's (2002b) generic theory building method has merit and has served to increase the dialogue about theory building in HRD, this method does little to advance HRD theory building beyond a compressed examination of issues that do not take into account the influence of various levels within an organization. It and similar theory building approaches overlook the widely supported importance of systems level exploration in HRD. The result is that HRD has continued to focus largely on the organization with limited exploration into the individual implications of issues. Ultimately, the field of HRD must expand its research and theory building to explicate multilevel considerations.

The third set of implications that resulted from the development of a multilevel theory of CD relate to the call for convergence of current CD theories. A noted CD scholar, Osipow (1990), called for the convergence of existing CD theory into an integrated CD theory in an effort to avoid fragmentation of scholars and research that does not allow for a diversity of views, but rather segments scholars into “enemy” camps within the discipline. Although a number of CD scholars (Chen, 1998; Patton & McMahon, 1999; Savickas, 1995; Savickas, 2001; Savickas & Lent, 1994; Sharf, 1997; Zunker, 2002) have answered Osipow’s call for theory convergence by working together, the need for continued theory convergence and integration continues and continues to be called for by Chen (2003) and others in an effort to maintain the vitality of CD theory. Based on the literature reviewed for this study, a multilevel theory of CD has the potential to aid in the convergence and integration of CD theory by addressing three of the four missing links in CD theory as outlined by Osipow: (1) integration of “self- and occupational information into the [career] decisions stream”; (2) identification of “barriers to development...and implementation of desirable [career] choices; and (3) the need to address “what happens to an individual after entry into the work force” (p. 129-130). A more detailed examination of each of these three missing links in CD theory and how the developing multilevel theory of CD addresses each is provided below.

With regard to the integration of “self- and occupational information into the [career] decisions stream” (Osipow, 1990, p. 129), five of the seven identified collective constructs are related to this missing component. Those five constructs include: morale and motivation, individual career planning, employee growth and development,

organizational career management/succession planning, and organizational flexibility. Each of these constructs has the potential to influence an individual's career decisions stream and thus, a multilevel theory of CD addresses this missing link described by Osipow.

The second missing link described by Osipow (1990), identification of “barriers to the development...and implementation of desirable [career] choices” (p. 129), can be tied to five of the seven collective constructs of a multilevel theory of CD. Those five constructs include: morale and motivation, commitment, employee growth and development, organizational career management/succession planning and organizational flexibility. Similar to the influence of the collective constructs on the first missing link, each of these collective constructs has the potential to help identify “barriers to the development and implementation of desirable [career] choices” and, as a result, a multilevel theory of CD addresses this missing link in CD theory pointed out by Osipow.

Lastly, the third missing link addressed by a multilevel theory of CD is the need to address “what happens to an individual after entry into the work force (Osipow, 1990, p. 130). Each of the seven collective constructs that emerged in the multilevel theory of CD can be examined with regard to post-workforce entry. For example, morale and motivation is tied to individual career planning goals; affects the commitment from the individual and organization; and impacts employee growth and development opportunities, organizational career management/succession planning, productivity demands and organizational flexibility. A multilevel theory of CD has the potential to

address this and the other two missing links outlined by Osipow and, thus contribute to the convergence amongst and integration of current CD theory.

The final set of implications of the multilevel theory of CD to HRD and CD practitioners are also important to point out. Practitioners must begin to ask questions such as: “do organizations recognize and identify the organizational and societal outcomes of CD they are working toward?”; “how to individual and organizational interactions impact the outcomes of CD?”; “are the collective constructs identified in this study representative of all of the collective constructs that emerge in their particular organization or are there unique constructs that emerge internally?”; and, finally, “do individuals recognize the individual outcomes of CD they are working toward?” These questions are vital to improving the HRD and CD practices of organizations to encourage and support CD initiatives.

The original purposes for conducting this study, as described in the first chapter, were three-fold:

1. To develop a multilevel theory of CD;
2. To advance theory building in the field of HRD; and
3. To contribute to the convergence and integration of existing CD theories.

The resulting multilevel theory of CD evolved from the development and completion of an improved MLTB process. The development process resulted in an alternative to the widely accepted and used generic HRD theory building process (Lynham, 2002b) thus allowing for the inclusion of levels issues that are important to future research in our field (Garavan et al., 2004). The development of this process was necessary to advance



HRD theory building and to provide a means for examining multilevel issues that pervade the discipline. Finally, a multilevel theory of CD addresses three of the four missing links in existing CD theory that are outlined by Osipow (1990) in his call for CD theory convergence and integration. The final section of this chapter will focus on describing future research related to the three research purposes outlined in the introduction and additional ideas for future multilevel theory and CD/HRD research. Recommendations for research to validate the resulting multilevel theory of CD from both quantitative and qualitative perspectives, to continue to advance theory building efforts in HRD and to examine the role of this multilevel theory of CD in CD theory convergence are provided.

### **Future Research**

The future research recommendations made in this section are aimed at beginning the validation process for the resulting multilevel theory of CD from both quantitative and qualitative perspectives, to continue to advance theory building efforts in HRD and to examine the role of this multilevel theory of CD in CD theory convergence. While much of the research utilized for this study comes from the quantitative-heavy fields of industrial/organizational psychology, management and career development, it is important that future research to validate the developing multilevel theory of CD not be limited to quantitative validation. Both qualitative and quantitative methods of research are useful and important to research involving individuals in an organizational context and in a field such as HRD. Swanson, Watkins and Marsick (1997) acknowledged that "...laboratory methods [i.e. quantitative

methods] alone are not much help in producing practical theoretical knowledge about many challenges today because they ignore the significant, complex influence of the organizational context. Multiple methods [including qualitative methods] and multiple data sources are needed to capture this complexity” (p. 91). Additionally, because quantitative analysis allows for generalizability of data within, between, and across levels, quantitative data may seem to be easier to utilize in multilevel explorations. Regardless, qualitative exploration of multilevel issues may provide deeper insight into individual, group, and organization decisions.

The process of validating a developing theory is quite daunting to a novice theory builder because the initial thought behind validation is to answer all of the potential questions and concerns about the theory. In his statement regarding theory validation Kaplan (1963) helped alleviate that concern though.

The problem of validation of a theory is too often discussed in the context of convincing even the most hardened skeptics, as though the problem is that of silencing critics...It is not moral support which is in question here, but concrete help in specific tasks—sharing findings, techniques, ideas. A theory is validated, not by showing it to be invulnerable to criticism, but by putting it to good use, in one’s own problems or in those of coworkers. Methodology...should say no more than this about a questionable theory: if you can do anything with it, go ahead. (Kaplan, p. 322).

By recognizing that theory validation is about putting the theory to use, the theorist can then focus on various approaches to testing the theory in a real world environment. Additionally, research that has already been conducted on any of the ten dependent variables (making career decisions, developing a self-concept, increasing individual employee job satisfaction, etc.) or seven collective constructs (individual career planning, productivity, organizational flexibility, etc.) may serve as partial validation for

the multilevel theory of CD developed in this study. For the purposes of this study though, a review of such research was not conducted but is suggested as a first step in the future validation and refinement of this theory. The following two paragraphs address potential quantitative and qualitative methods that might be useful in theory validation.

As mentioned previously, much of the multilevel literature comes from the quantitative-focused field of industrial and organization psychology. As a result, the literature is much more specific about quantitative techniques that can be used to analyze multilevel data. Options suggested by Kozlowski and Klein (2000) included: analysis of covariance (ANCOVA) and contextual analysis using ordinary least squares (OLS) regression...; cross-level and multilevel OLS regression; WABA [within-and-between analysis]...; multilevel random-coefficient models (MRCM), such as hierarchical linear modeling...; and multilevel covariance structure analysis...” (p. 48). Another option that is not specifically mentioned in the multilevel literature, but which may be helpful is the use of meta-analysis research to evaluate existing multilevel theory building research (Yang, 2002). As with choosing any validation methods, “Selection of an analytic strategy should be based on (a) consistency between the type of constructs, the sampling and data, and the research question; and (b) the assumptions, strengths, and limitations of the analytic technique” (Kozlowski and Klein, p. 51). Specific to the multilevel theory of CD developed in the previous chapter, ANCOVA and OLS regression for contextual analysis, cross-level and multilevel regression, and within-and-between analysis (WABA) seem well-suited to quantitatively validating the theory. Any researcher

wanting to further explore the multilevel theory of CD may develop research questions that would best be answered by any of the aforementioned analytic strategies though.

Specifically, ANCOVA could be

...used to determine whether there is any effect on an individual-level dependent variable [in this theory identified by Upton et al., 2003] that is attributable to the unit, beyond the effect accounted for by individual differences. Essentially, this approach treats the individual-level variables as covariates and then uses unit membership as an independent variable to determine how much variance is attributable to the unit. Unit membership as a variable accounts for all possible remaining differences across units (Kozlowski & Klein, p. 49).

The assumptions associated with using ANCOVA may preclude the use of ANCOVA in future research though. Those assumptions include:

1. Randomization.
2. Homogeneity of within-group regressions.
3. Statistical independence of covariate and treatment.
4. Fixed covariate values that are error free.
5. Linearity of within-group regressions.
6. Normality of conditional Y scores.
7. Homogeneity of variance of conditional Y scores.
8. Fixed treatment levels (Huitema, 1980, p. 98).

Depending on the organization in which the research is being conducted and one's familiarity with and understanding of ANCOVA, future research utilizing this tool may not be recommended in all cases. As such, future research utilizing ANCOVA should be approached with great care to address these assumptions.

Similar to using ANCOVA, the "regression approach...typically uses aggregation and/or disaggregation to specify contextual constructs of interest...This approach generally explains less variance than ANCOVA because the substantive unit variables are usually a subset of the total group composite effect..." (Kozlowski & Klein, p. 49). Cross-level and multilevel regression uses OLS regression and treats

“aggregation as an issue of construct validity...so that a model of emergence is first evaluated before individual-level data are aggregated to the group level...Once the measurement model of the higher-level (aggregated) constructs is established, the analysis proceeds to test substantive hypotheses” (Kozlowski & Klein, p. 49-50). Finally, within-and-between analysis is used to examine “bivariate relationships, assumes measures at the lowest level of analysis for all constructs, and proceeds in two phases. The first phase, WABA I, establishes the level of the variables. The second phase, WABA II, evaluates the level of relations between all the variables in the analysis...” (Kozlowski & Klein, p. 50). Since the constructs identified in the multilevel theory of CD primarily originate at the individual-level, conducting a WABA would allow the theorist to verify whether each construct is an individual-level, unit, level, or heterogeneous construct. This is because

WABA I is designed to assess whether measures, treated one at a time, show variability in the following ways: both within and across units (as...with individual-level constructs), primarily between units (as...with a unit-level construct), and primarily within units (as with a...heterogeneous construct). WABA II is designed to assess whether two measures covary in the following ways: both within and across units (...individual-level relationships), primarily between units (...unit-level relationships), and primarily within units (...heterogeneous relationships) (Kozlowski & Klein, p. 50).

Each of these means of quantitatively validating the developing multilevel theory of CD would require much additional work, but each method represents a feasible means of further exploring the developing theory.

Since qualitative research includes a number of research methodologies there is a need to define what is meant by the term “qualitative research”. Denzin and Lincoln (1994) offer the following definition: “Qualitative research is multimethod in focus,

involving an interpretive, naturalistic approach to its subject matter...[and] involves the studied use...of...materials: case study, observational, historical, interactive, and visual texts that describe routine and problematic moments and meanings in individuals lives” (p. 2). Within HRD, Marsick (1990) suggested that qualitative approaches are most appropriate “(1) for building new theory rather than imposing existing frameworks on existing data and (2) for exploring uncharted territory” (Swanson, et al., 1997, p. 92). Additionally, “When combined with quantitative data, qualitative data can help to elaborate on the meaning of statistical findings. They also add depth and detail to findings” (Swanson, et al., p. 93). In approaching research in HRD from a qualitative perspective, Swanson et al. suggest using a system of qualitative inquiry developed by Patton (1990) which includes ten potential strategies. Of those ten, six of the strategies seem well-suited to examining a multilevel theory of CD: naturalistic inquiry to examine real world situations; holistic perspective to examine the phenomenon as a complex system; qualitative data in which detailed description is collected; personal contact and insight where the researcher has personal contact with participants; dynamic systems that views the object of the study as dynamic and changing; and design flexibility that allows the process to be adaptive with the potential to change as the research process is conducted. Specific qualitative data collection methods that can be used in each of these inquiry strategies include individual and group interviews, open-ended questionnaires, observation and organization records including strategic plans, performance appraisals, etc. (Swanson et al.). Validation of a multilevel theory of CD can be enhanced by

utilizing these qualitative methods to gain additional insight into CD through the identified dependent variables and collective constructs.

Multilevel theory building (MLTB) is a complex task and simplifying the process into a step-by-step method, while helpful to some, is unlikely to answer all of the resulting theory building questions that arise from researchers. Instead, future research into MLTB in HRD should involve staying abreast of MLTB advancements in fields such as industrial and organizational psychology and management and putting the processes identified and developed in this study to use in examining additional multilevel phenomena. HRD scholars must work collectively to improve upon MLTB processes and the development of cogent multilevel theories. Only then will HRD theory building advance beyond the generic and myopic view of complex issues. Whether utilizing the improved MLTB process developed in this study or the twenty-one guidelines offered by Kozlowski and Klein (2000), future research into multilevel issues in HRD must continue if we are to avoid the “micro-macro divide” warned against by Wright and Boswell (2002) and begin to address multilevel issues as encouraged by Garavan et al. (2004).

With regard to CD theory convergence future research may involve gathering data to explain how the collective constructs identified in the multilevel theory of CD address three of the four missing links in CD theory as identified by Osipow (1990). Both quantitative and qualitative data can be collected to determine if the collective constructs identified in this study do relate to the missing links as identified in the implications section of this chapter. By providing that information, CD and HRD

scholars alike will be able to determine if a multilevel theory of CD does indeed contribute to the convergence of CD theory. Additionally, with the shift from lifelong employment with a single employer to a more dynamic working world where employees move from organization to organization in an effort to maintain career vitality (Adamson, 1997; Adamson, et al., 1998; Arthur & Rousseau, 1996; Brousseau, et al., 1996; Conlon, 2003; Graham & Nafukho, 2004; Hall, 1996; Hirsch, et al., 1995; Jacobs & Washington, 2003; Nicholson, 1996; Nicholson & West, 1989; Viney, et al., 1997), future studies examining individual CD from a multiple organization experience may add further insight into contemporary CD and aid in theory convergence.

Future research suggested to this point in the study focuses on validating the multilevel theory of CD that was developed in Chapter IV and utilizing that theory to further connect CD and HRD and aid in CD theory convergence. As with any theory building study, decisions are made by the aspiring theorist that move the resulting theory in a specific direction while purposely overlooking other potential areas for exploration and examination. As a result, seven additional areas of examination, specifically related to the CD/HRD connection, CD theory convergence and multilevel theory building, have been identified and are described below.

The multilevel theory of CD built in this study focused on three levels: the individual, the group and the organization levels. Future study and expansion of the multilevel theory may also take into account addition levels such as the industry level for an examination of individuals moving between organizations within a specified industry or sector. Another example could be to view a single organization as the “lower”



hierarchical level within a study. For example, a multilevel theory of CD within public schools might outline the individual school as the micro level, the school district as the meso level and the statewide school system as the macro level. Depending on the interest of the scholar or practitioner conducting additional research, the variety of levels to consider in specific fields, industries, or situations is open for specification.

The next area that might be considered for future research is concept of levels congruency. Klein et al. (1994) specified that the level of the theory, the level of measurement and the level of statistical analysis must be congruent to avoid a levels fallacy. For the purposes of this study, the level of the theory was identified as the individual level because the sources of variability are the individual workers. As a result measurement and statistical analysis must also be conducted at the individual level. A scholar interested in examining the overall industry approach to CD may position the level of the theory at the industry level and thus, the level of measurement and statistical analysis would need to match the level of the theory.

Another research consideration to make with regard to CD in a multilevel context is also one of the practice implications described previously in this chapter. Namely, whether the seven collective constructs identified in this study are representative of the constructs that emerge in all organizations or within an organization of interest. Future research may reveal that additional collective constructs emerge or that some of the seven constructs identified in this study do not emerge in various organizations. As a result, descriptive information on each additional collective construct would need to be specified (including as described in the MLTB process in Chapter III) to prepare those

constructs for verification. Furthermore, the impact of those collective constructs on individual and organizational/societal outcomes would also need to be specified. Should any of the seven constructs specified in this study be found to be irrelevant in a certain organization, the impact they have on CD outcomes would obviously need to be removed from consideration.

Details about the seven collective constructs specified in the multilevel theory of CD developed in this study are provided in Table 4.2. These details include the emergence process and the level the construct originated from. Kozlowski and Klein (2000) pointed out that “Emergence is often equifinal rather than universal in form though” and thus, “collective phenomena may emerge in different ways under different contextual constraints and patterns of interaction” (p. 59). The theory developed in this study assumes a stable environment with no major shifts in job, organization and industry stability. A brief glimpse at the newspaper reminds us that organizations are not always stable though and that the stability, or lack thereof, within a job, organization or industry may very well impact the emergence of collective constructs within organizations. Scholars would be wise to consider the contextual constraints and patterns of interaction that occur within specific organizations.

As outlined in Chapter IV, Morgeson and Hofmann (1999) indicate that in specifying collective constructs, the theorist must make a decision about whether to assess the resulting constructs’ structure or function. As previously stated, a structural analysis of the support structure and programs related to providing CD for an individual within the organization would likely provide information that is too specific for outlining

a broad-based multilevel theory of CD. Based on that insight, and the desire to examine CD outcomes (dependent variables), time would be better spent assessing the collective construct function to determine if the intended and actual construct outcomes are congruent. Future research that addresses this issue will be invaluable in making revisions to a multilevel theory of CD that has implications across a variety of organizations.

The last suggestion for future research consideration that can contribute to a better understanding of the CD/HRD link and CD theory convergence is the specification of additional propositions of a multilevel theory of CD. Examples include:

1. A group (dyad, triad, team, department, etc.) and/or organization environment that supports the CD goals of individual employees will positively impact the organization's CD and other strategic organizational goals.
2. Individual workers who are required to demonstrate organizational benefit to CD support will make strategic CD choices that have a positive impact on both their personal and the organization's goals.
3. The perceived disparity or gap between individual and organizational CD outcomes will change depending on the continuity of support, or lack thereof, within the organizational system.
4. A prolonged period of organizational instability will negatively impact the organization's ability to support individual CD outcomes.
5. A prolonged period of organizational stability may inflate the organization's perception about support for individual CD outcomes.

6. The effects of oscillation from a state of stability to a state of instability, and vice versa, will impact the emergence of collective constructs within the organization and thus change the impact of these collective constructs on the identified individual and organizational/societal outcomes of CD.

These six additional propositions result from an examination of the three types of propositions outlined by Dubin (1978) and represent additional considerations that may be made in explicating a multilevel theory of CD. Other scholars may identify other propositions based on specific individual, group, organization or industry/sector interests and information.

### **Conclusion**

Developing a multilevel theory of CD to strengthen the connection between CD and HRD, advance theory building in HRD and contribute to the convergence of existing CD theory required an extensive, although unlikely to be exhaustive, examination of CD, HRD and theory building research. Future research will be aimed at verifying the successful accomplishment of each of these research goals, but regardless, the research conducted in this study clearly shows that CD has both individual and organizational implications as seen in the dependent variables (Upton et al., 2003) and collective constructs identified in the multilevel theory of CD. Furthermore, the improved MLTB methodology developed in this study aims to advance theory building in HRD beyond the generic individual and/or organizational theory building efforts that pervade HRD. Finally, CD theory convergence is aimed at reinvigorating and revitalizing the utility of CD perspectives in individual and organizational settings and a multilevel theory of CD

does just that by providing a multilevel examination of individual CD in the context of an employing organization. Continued progress on the development of multilevel theories of CD can invigorate both CD and HRD and provide theory that is rigorously constructed and validated in a manner that has both scholarly and practical relevance.

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