

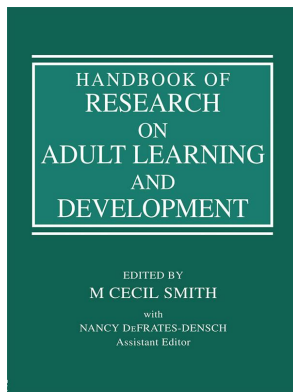
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AND
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Career Development, Work, and Occupational Success

Erik J. Porfeli and Fred W. Vondracek

Introduction

Career development in the 21st century is likely to be quite different than career development in the 20th century, requiring a reconsideration of major career development theories that were initially formulated to explain career development in a less complex world. The globalization of corporations and of regional and national economies has led to massive restructuring and relocation of significant aspects of the first world economy and explosive growth within the third world economy. At the same time, entirely new industries have emerged that include occupational titles that were unknown only two decades ago. Indeed, “the life cycle of many occupations has been shortened and occupational pathways have become much less stable and predictable. A significant number of today’s children will work in occupations that have not yet been invented, and a significant number of today’s workers will need to find new jobs because their current occupations will become obsolete” (Vondracek, 2001, p. 256).

Technological advances and the globalization of most industrial economies and labor markets have combined to produce a “pluralization” of the life course and of career pathways. Advances in logistics and distribution, coupled with inexpensive labor on one side of the planet, have had a profound impact on the nature of industry, with a shift from production to “big box” retail consumption, on the other side of the planet. The textile industry in the United States is one example that readily comes to mind. In the face of radical economic restructuring and/or explosive growth, careers are also becoming less predictable, less stable, and more changeable as economies come “online” and become more connected to the global arena. Thus, theories of career development that postulated adult career development as occurring in predictable phases or stages, have either been significantly revised (e.g., Super, 1980) or they have become less relevant. Original formulations of stage models, such as Erikson’s (1950) stages of ego development, Super’s (1957) stages of career development, or the models proposed by Levinson (Levinson, Darrow, Klein, Levinson, & McKee, 1978) or Schein (1978) may have been applicable to mid-20th-century, White, middle-class males, but today their explanatory power is limited when applied to the enormous variability and unpredictability in the patterns of career development experienced by the women and men who make up the workforce of the future or even the workers of today.

The adequacy of stage models has been questioned on a number of additional grounds by researchers in adult development (e.g., Bromley, 1990b; Thomae & Lehr, 1986), sociology (e.g., Dannefer, 1992), and career development (e.g., Vondracek, 2001). For example, Dannefer (1992) proposed that the normative patterns that are frequently described as stages are more likely a reflection of certain kinds of social and economic patterns that have traditionally channeled the career pathways of individuals. Thomae, Lehr, &

Schmitz-Scherzer (1981), after examining important life events in the biographies of men and women, concluded that the great varieties of pathways that are possible in their lives can be understood only when these lives are placed in context. Bromley (1990a) concluded that stage models tend to require analysis at a very high level of abstraction and generality, leading to a corresponding neglect of the wide differences between individuals and the paths they take in life.

The implications of these changes for workers and for the nature of work itself should not be underestimated. In fact, Super and Knasel (1981) were among the first to recognize that the worker and the aspiring worker must become more open to and prepared for change and must be adaptable to change when it occurs in order to maintain career momentum. More recently, Savickas (1997) has argued persuasively for making career adaptability a central construct in career theory across the entire life span. Clearly, the changed realities of modern careers are beginning to be reflected in life-span career theory, in our understanding of the development and functioning of organizations, and the links between them.

In sum, the 21st century will witness an acceleration of the dramatic changes in the nature of work that are already apparent in most parts of the world. A great deal needs to be learned to: (a) help workers to address their career concerns, (b) enhance the ability of employers to create workplaces that meet their needs and are attractive to workers, and (c) help governments shape policy that enhances the economy and the well-being of all segments of the economy including employers and workers (e.g., Hall, 2004). Fundamental assumptions about what constitutes an occupational career will be challenged. Relative to the last 50 years, instability and change will be the norm, with lifetime careers and life-long employment with a single employer becoming a thing of the past. The “career ladder” concept may be supplanted by more flexible change-related concepts like career acceleration, deceleration, and momentum. Life-long learning, career adaptability, serial careers, and the merging of personal lives with work lives will all be increasingly salient issues for workers of the future. Just as work and careers will be much more varied, variable, and differentiated in the future, so will personal judgments and perceptions of what constitutes occupational success. Clearly, the simple life is a thing of the past for most workers. With good reason, they worry about obsolescence of their occupations or even their industries and hence about the security of their jobs. They also need to be concerned about personal obsolescence, and about being unable to mentally and physically keep up with the ever-changing demands of work as they get older.

Research designed to provide answers to challenging issues bearing on the person and multiple levels of the human ecology must utilize interdisciplinary, comprehensive, and complex models and sophisticated methods for studying simultaneous change and development at multiple levels. The interrelatedness of the personal and work lives of individuals, the interdependence of industries and economies, and the globalization of the labor force demand theories and models that cut across disciplinary boundaries, putting an end to the arbitrary segmentation of fields of research that prevent the integration of essential findings in a timely and meaningful fashion.

A critically important prerequisite to our understanding of career development, work, and occupational success is a sophisticated understanding of how humans change over time, how they function in their multiple contexts, and how they determine whether they are successful or not. Although significant progress has been made, especially in the last two decades, much of the accumulated empirical research has relied on (deliberately) oversimplified theories of human development and human functioning. Often, assumptions about causality have been made on the basis of superficial correlation, and

questionable assumptions about the linearity of complex relationships have been perpetuated without adequate evidence (and sometimes in the face of evidence to the contrary). Assuming that general laws govern human behavior regardless of the context within which such behavior is expressed has led to findings that are often not valid for any particular individual and, therefore, not generalizable.

The basic, underlying assumption of research on career development, work, and occupational success in the decades ahead will be that work represents an activity that is central in human existence across the life span. Consequently, theories of human development must concern themselves with how children learn about work, how adolescents transition from school to work, how workers construct a series of careers, and how adults in their later years disengage from work in a variety of ways that reflect not only their histories as workers, but their histories as whole human beings, who have relationships with others and who have families. It should be clear, therefore, that it makes no sense to separate the study of work from the study of human development or to separate the study of human development from the study of work. A complex conceptualization of “human development in context,” which is capable of incorporating career development, work, and occupational success, is represented by developmental contextualism.

Developmental Contextualism

Developmental contextualism is a meta-theory of human development derived from contextualism and organicism (Vondracek, Lerner, & Schulenberg, 1986). The contextualism position argues that individual-level development and interindividual differences in developmental pathways are primarily a product of the environment. In other words, human development proceeds in accordance with human history and social institutions. Given the unpredictable nature of human history and events, the plasticity of intraindividual change and the variability of interindividual differences in intraindividual change is theoretically infinite (Ford & Lerner, 1992), but is apparently bounded in part by the relative stability of human social structures. Organicism, in contrast, assumes that humans are the product of biological predispositions and psychological constructions, and human development proceeds along a predetermined, stage-like trajectory leading toward an end state (e.g., Piaget’s (1960) theory of cognitive development). Progress toward the end state can be accelerated or retarded, but the end state and the general pathway leading to it cannot be fundamentally transformed by the context. Developmental contextualism adopts aspects of both, contextualism and organicism, by conceiving of humans as complex multi-level systems which engage in, move between, and are “embedded” within multiple contexts (Vondracek & Fouad, 1994). Vondracek and his colleagues (Vondracek & Kawasaki, 1995; Vondracek & Porfeli, 2002) have concluded that researchers and practitioners who employ theoretical models that account for interacting and linked contexts and that take a systems approach to person-level functioning (e.g., Ford, 1987; von Bertalanffy, 1968) are likely to improve our understanding of the complexity of human development and lay the groundwork for developing techniques that make possible meaningful and durable person- and group-level changes.

The developmental-contextual approach supports the assertion that human development proceeds within a context in a “probabilistic epigenetic” fashion (Vondracek et al., 1986). Development is “probabilistic” because humans at any given point during the life span exhibit bio-psycho-social coherence that limits but does not entirely constrain human action and development in context; hence, we can predict, but not perfectly, how a person will react to any given event. Moreover, human history is subject to difficult-to-

predict events that can have a dramatic impact on the human ecology. For example, a “little ice age” occurred from as early as the 10th to as late as the 19th century that had a profound impact on the human ecology and the human life span (Fagan, 2000). The probabilistic feature of human development is made obvious when well-designed, executed, and tested interventions produce unanticipated outcomes across diverse groups of people, contexts and/or time.

Implicit in developmental contextualism is the assumption that both human agency and social forces operate to affect person-level functioning and context-level contingencies and that all research questions involving human development should define the unit of analysis as the person embedded within his or her array of contexts (Vondracek & Porfeli, 2002). Thinking in terms of a system (von Bertalanffy, 1968), stimuli directed at one level of analysis affect to varying degrees all other levels of the system either directly, indirectly or both. The developmental contextual meta-model suggests that researchers should enter a research question by employing person-level functions and social structural features (Shanahan & Porfeli, 2002). This way of thinking is consistent with, for example, advances in the identity theory literature, suggesting that social roles shape identity and identity shapes and guides the selection of social roles (Stryker & Burke, 2000). The developmental contextual-perspective challenges the researcher to at least consider collateral effects and associations and to realize that the effects at one level are not as insulated from other levels or aspects as some models or statistical procedures may suggest.

Drawing from Bronfenbrenner’s (1979) ecological model of human development, the application of developmental contextualism to career development asserts that contexts, like members of a family or elements in a system, are linked to one another and hierarchically arranged (Vondracek et al., 1986). Linkages may or may not be readily apparent or intentional and the effect of a linkage may be direct and/or indirect. Rather than consider work, the family, and the neighborhood contexts as distinct, developmental contextualism urges the researcher to view all of these contexts as embedded within and defined by the host community and the person as an occupant of a constellation of differing but interconnected contexts. One important distinguishing feature of the systemic nature of a community is the nature and strength of the linkages between subcontexts and the extent to which these connections benefit their citizens. A popular example of context linkage in the vocational literature that varies across communities and nations is research and discussion on the transition from school to full-time work (Grant Foundation, 1988; Hamilton & Hamilton, 1999; Reitzle, Vondracek, & Silbereisen, 1998; Stern & National Center for Research in Vocational Education, 1995). This literature clearly acknowledges that people navigate career pathways on the basis of person and situation characteristics and the nature and strength of their linkages.

Developmental contextualism has made a major contribution by bringing into focus the inescapable fact that individual development and behavior can be understood only when individuals are recognized to function within a complex tapestry of interconnected contexts and people. Developmental contextualism, being essentially a meta-theory, has little to say about the content and processes of human development. That shortcoming has been addressed, however, by two conceptual advances that are based, in part, on the foundation of developmental contextualism. The first of these, Developmental Systems Theory (Ford & Lerner, 1992), integrates Ford’s (1987) Living Systems Framework with developmental contextualism. The second is Baltes’ (1997) Theory of Selection, Optimization, and Compensation (SOC). We will briefly discuss some of the major implications of these conceptual advances for understanding career development, work, and occupational success.

Developmental Systems Theory

Developmental Systems Theory (DST) is particularly useful because it integratively defines development as:

incremental and transformational processes that, through a flow of interactions among current characteristics of the person and his or her current contexts, produces a succession of relatively enduring changes that elaborate or increase the diversity of the person's structural and functional characteristics and the patterns of their environmental interactions while maintaining coherent organization and structural-functional unity of the person as a whole. (Ford & Lerner, 1992, p. 49)

DST thus distinguishes its integrative conceptualization of development from other ways of defining change processes in human development, such as growth, maturation, learning, and socialization. Thus, growth has traditionally been associated with a permanent increase in the total mass of the body; maturation has been defined as the progressive differentiation and elaboration of both biological structures and functional capabilities; learning is a process through which knowledge and skills are acquired, and socialization is a process through which individuals acquire the behaviors, beliefs, and values characteristic of their culture (Ford & Lerner, 1992, p. 52). All of these conceptualizations can be viewed as subcategories of development as defined by DST, thus illustrating the integrative nature of this theory. Finally, DST offers a comprehensive articulation of the implications of adopting a developmental contextual/developmental systems approach for framing the most important questions for research, intervention, and social policy. Applied to career development, these implications may be summarized as follows (adapted from Ford & Lerner, 1992, pp. 50–51).

1. Career pathways are not bound by the past, but they are shaped by it.
2. Career pathways can exhibit incremental and transformational change.
3. Career pathways can make unexpected and abrupt changes that are bounded by the bio-psycho-social unity of the person.
4. Career development is an adaptive process. The process is responsive to changes in a person's productive capabilities and it serves to elaborate those capabilities. A person with more elaborate productive capabilities is better able to respond to changing and diverse work opportunities and constraints. The career adaptability construct has become a focus within career development theory (Savickas, 1997) and is a necessary personal characteristic in the pursuit of Hall's (1996, 2004) protean career.
5. Career development occurs in a multidimensional fashion and prepares people for probable work demands as opposed to planned and determined work demands.
6. Career development creates and constrains potentials along the way. Choosing one alternative during the course of a career may limit the possibility that another career alternative can occur in the future.
7. Career development is open-ended, but is constrained through a process of selective-optimization with compensation (SOC, discussed below).
8. We add that career development is associated with aging and aging leads from bio-psycho-social elaboration to decline as a function of biological maturation and learning.

On the basis of these implications, we propose that adaptive career development involves expanding, refining, and integrating constellations of mental processes (including

cognition, emotion, and learning), biological maturation, and observable behaviors in the pursuit of (1) relevant, lucrative, and satisfying career interests, values, and skills, (2) a sufficient and effective understanding of the world of work, and (3) the means to translate the two into progress toward and through a rewarding career (or series of careers) through the identification and attainment of socially, occupationally, and self-defined intermediate vocational goals in family, school, work, and other community contexts.

Selective Optimization with Compensation

Propositional models like Selective Optimization with Compensation (SOC; Baltes, 1997, 2003; Baltes & Baltes, 1990) aid in the translation of meta-theoretical concepts like context and human agency into testable hypotheses. The SOC model assumes that human behavior and choice-making is rooted in an organismic theory of human agency (Ford, 1992; Little, 2002; Ryan, Sheldon, Kasser, & Deci, 1996) or the human tendency to select experiences and goals (i.e., selection in SOC) on the basis of one's strengths and weaknesses and opportunity structure. In the moment of experience, humans aim to optimize (in SOC terms) their strengths while compensating (in SOC terms) for the impact of their weaknesses or, in other words, plan and enact efficient and effective behavioral strategies. As applied to career development, adults presumably select and pursue short- and long-term work goals on the basis of personal strengths and weaknesses and contextual conditions facilitating and constraining opportunities in the employment milieu. Although the SOC model seems fairly simplistic, complexity arises in its application.

The elements of the SOC model can only be faithfully applied when the human context is comprehended because SOC mechanisms spring from the human actor interacting with human contexts. How does the present set of environmental contingencies influence whether and to what extent an aspect of a person's bio-psycho-social repertoire is adaptive or maladaptive in the present moment? An exceptionally adaptive vocational behavior or orientation in the present moment can become catastrophically maladaptive under a unique set of contextual conditions in the next moment. This has been observed with great frequency, for example, as soldiers return from war or business people decompress during the evening commute to quickly learn that their occupational bio-psycho-social repertoire that kept them alive or secured the next big contract may be the same repertoire that now threatens their happiness and survival in the family setting. Ruthlessness, for example, may be an adaptive characteristic yielding success in certain business and war-time contexts, but may lead to turmoil and devastation in the family setting.

Combining the distinction between learning, maturation, and development (Ford & Lerner, 1992) with work by Baltes (1997) leads to the proposition that career development is associated with human adaptation in the face of a curvilinear maturation function (see Figure 14.1) and SOC offers a mechanism to account for how humans respond to the direction and level of this function. Early in life, career development proceeds from the vantage of bio-psycho-social elaboration and selective optimization. Later in life, career development occurs from the vantage of bio-psycho-social maintenance and eventually compensation in the face of decline and a more or less supportive work context. SOC has its limits, and all humans face a critical threshold (see Figure 14.1) where SOC fails to further human development, i.e., the developmental gain-loss ratio becomes negative (Smith, 2003), the "coherent organization and structural-functional unity of the person" (Ford & Lerner, 1992, p. 49) disintegrates, and death follows. For some, abrupt injurious events and, for others, the gradual decline in biological functioning lead to the threshold. The developmental functions could, therefore, represent gradual

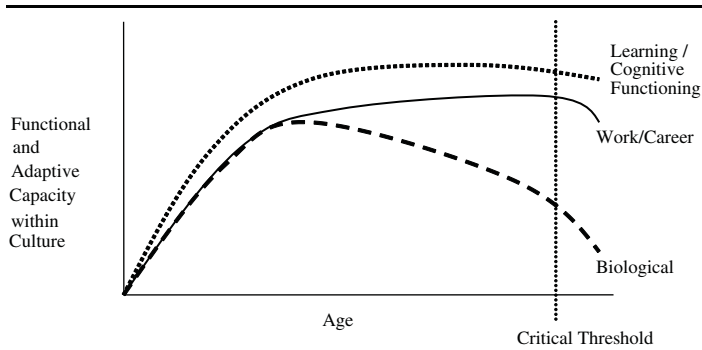


Figure 14.1 The impact of biological and cognitive functioning on career development.

decline across many years or fairly abrupt change caused by an event with the time scale in Figure 14.1 changing in a commensurate fashion.

Although this depiction of career development aids in the understanding of how biology, learning, and career development interact across the life span, it is limited in several important ways. The figure addresses the general change in the gain-loss proportion in functional capacity on a holistic level across the life span, and therefore does not represent the conceptually and empirically supported position that functional gains can yield functional losses and vice versa (Baltes, 2003; Smith, 2003). Figure 14.1 also does not account for potentially abrupt changes in the nature and amount of support afforded to the worker by the work, family, peer, and broader social context. Abrupt adaptive or maladaptive changes in support would lead to sharp changes in the depicted functions because they are all embedded within the human ecology. Sharp changes in these functions could in turn lead to rapid or delayed changes in the supportive nature of the context that may moderate or completely negate detectable changes in one's functional capacity. This possibility then suggests a difficulty in studying the depicted functions in context when the interval between occasions of measurement is a year or longer. Although rapid changes in career adaptive capacity probably occur for a large number of people, relatively resource intensive time series analyses may be necessary to fully apprehend such changes (Molenaar, 2004). Finally, Figure 14.1 does not depict the presumed increasing variability of these career-related functions across the life span (e.g., omnipotentiality) and is therefore limited in the same way that the average number of children in a family (e.g., 1.9 children) does not represent the number of children in any family.

Figure 14.2 is a response to the latter limitation by demonstrating the potential variability of career-related functions across different occupations. The mathematician demonstrates rapid career advancement and innovation through the early 30s and then a slow and steady decline across the remainder of the life span. The philosopher demonstrates a relatively slow incline in work functioning and capacity with a peak relatively late in life. Like the mathematician, the athlete demonstrates rapid career development with a peak relatively early in life, but the athlete demonstrates a much more rapid decline in career functioning and the termination of this career. Like many workers in the 20th century who have lost careers to the massive shifts in the global economy, the professional athlete typically pursues a second career (e.g., coach, sportscaster, or spokesperson) upon the "death" of their career as a professional athlete (see dotted line). As stated earlier in describing Figure 14.1, Figure 14.2 reflects very stereotypical career

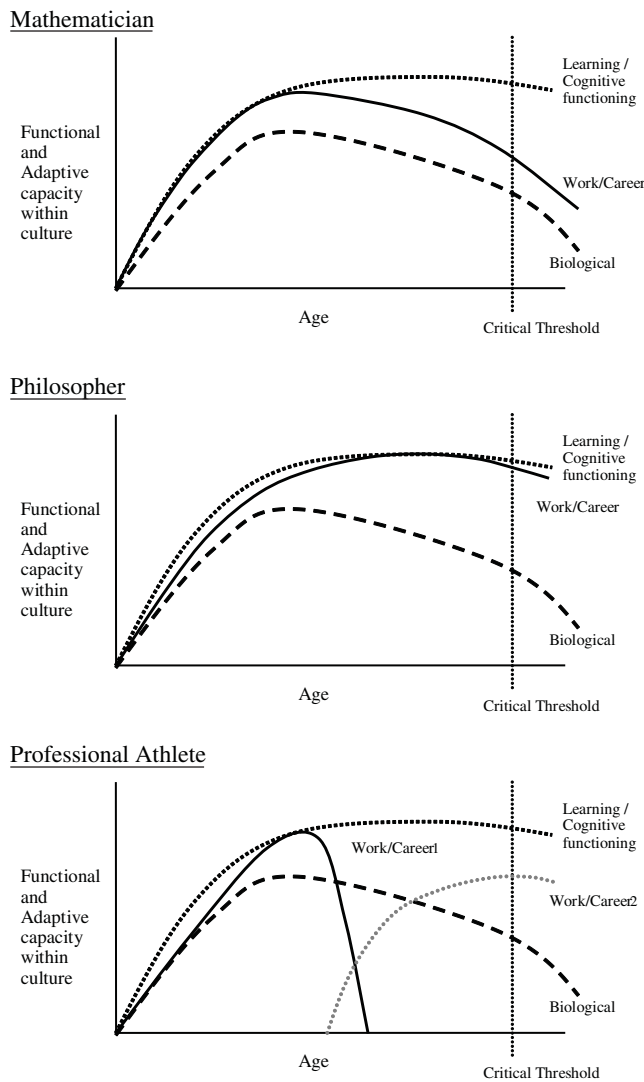


Figure 14.2 Variability in career development functions across occupations.

development functions and exceptions certainly exist in professional sports, mathematics, and philosophy.

Research directly bearing on these theoretically derived functions is mixed. In a review of the literature, Hansson, Dekoekkoek, Neece, and Patterson (1997) found some evidence suggesting that work performance declines across a variety of occupations including technical fields and professional sports, but occupational well-being appears to increase with age. They argue that the changing nature of work across age and cohorts from more to less physically demanding tasks may mask declines in the physiological capacity to work. Other work within the same review suggests that the mechanisms associated with the SOC model appear to be more active and appropriate during the later working years and for those people who engage in work that affords more self control over work tasks and scheduling. Research also suggests that the use of SOC strategies is

positively associated with subjective indicators of work success (Wiese, Freund, & Baltes, 2000) and predictive of subjective success at work and job satisfaction across a three year interval (Wiese, Freund, & Baltes, 2002). Finally, some research supports the optimization mechanism by suggesting that the accumulation of work experience across the life span may moderate the impact of a negative maturation function with age, thus mitigating the impact of maturation on work functioning (Warr, 1994). In sum, future research could further examine the link between work functioning and adaptive capacity as a function of age.

SOC theory would predict much more modest declines in work functioning but greater declines in the capacity to make significant career changes because selection and optimization with compensation presumably moderates the impact of biological decline on functioning through a process of increasing specialization rather than generalization of functioning. Future research could look at the capacity of workers to adapt to significant career changes at different points during the life span. The interaction of the theoretical functions suggests that older workers generally have a diminished capacity to make a significant career change necessitating the development of a different skill set (e.g., a 50-year-old office clerk becoming a coal miner or vice versa) because they have presumably selected and optimized certain work skills and capacities at the expense of others while younger workers have not had the time to do so. Older and younger workers may not, however, differ in their capacity to be productive within their respective career fields, with the edge going to older or younger workers depending on the career field (see Figure 14.2).

Issues and Trends Bearing on the Nature of Work and the Structure of Careers

The theoretical and methodological advances we have discussed thus far will be essential tools to help researchers advance our understanding of work and career in the 21st century. Advances in logistics and distribution coupled with inexpensive labor from developing countries has led to a profound shift in developed countries from production to information and service industries and from mom-and-pop retailers to “big box” retail consumption. The applicability of the career construct as reflecting life-span occupational continuity has begun to be revised in the face of rapid and profound economic, social-structural, and cultural changes during the past century (Storey, 2000; Young & Collin, 2000). A much greater fraction of workers and aspiring workers must become more open to and prepared for routine incremental and discontinuous career change, which past generations only rarely experienced, and they must be adaptable to change when it occurs in order to maintain momentum toward at least equally if not more favorable work situations. The pluralization of career and the increasing incidence of serial or boundaryless careers (Arthur & Rousseau, 1996; Littleton, Arthur, & Rousseau, 2000) will have a considerable impact on how we conceptualize, study, and intervene upon work-related phenomena. The employer-employee contract, recurring job loss, lifelong career and job exploration, and retirement are likely to undergo significant changes in the face of significant disintegration and transformation of normative career pathways.

The Employer-Employee Contract

As the labor market becomes more flexible in response to changing market conditions, adults must become more prepared to change jobs and careers. The plasticity of the

market hinges in part on a decoupling of the implicit contract whereby the employer pledges a lifelong job and the employee pledges lifelong loyalty. The modern contract will require workers to be more connected to the developmental trajectory of their career field rather than to their employer (Littleton et al., 2000), more adaptable and willing to engage in ongoing learning to keep pace with technological advances and thus ultimately to remain of value to the employer (Hall & Mirvis, 1995). The modern contract may also prompt adults to identify, pursue, and successfully navigate a series of careers akin to the concept of a protean career (Hall, 1996).

In the face of rapid and accelerating technological advances, occupations are becoming obsolete in the space of years rather than decades. Like humans, the modern organization may experience development akin to childhood, adolescence, and adulthood. Moreover, terms associated with maturation like birth, growth, decline, and death may also be aptly applied to organizations because they are increasingly being built with a finite life span in mind or at least implied on the basis of the technology employed to support it. As stated by Hesketh (2000, p. 471), “with the rapid changes facing industry, organizations no longer want to be left feeling responsible for the careers of their employees. Rather, individuals are expected to take personal responsibility for their progress within organizations.”

The needs and adaptability of humans and organizations must be considered with respect to notions like timing during the life span to assess when and for how long the needs and resources of both will yield an adaptive synergy and when the organization and/or the worker must acknowledge that the relationship has become imbalanced in some way favoring the organization or the worker, leading to abrogation of the relationship by one or the other. Littleton et al. (2000) aptly depict these issues in their description of the career context of Silicon Valley. Within “the Valley,” the formal and informal networks that cut across high tech firms act as a “tacit road map” (p. 106) for situating and projecting one’s career within the context of rapidly emerging, developing, and failing firms. Valley employees demonstrate more commitment to their social network and their profession than they do to their present employer, because the network and the profession tend to be less transitory than the employer and/or their fleeting needs. Organizations inside and outside “the Valley” will certainly want to keep abreast of market conditions that may prompt large-scale discontinuities in careers, because at these junctures organizations, particularly those in their growth period(s), have the opportunity to secure expertise that may be hard to come by at other times. Correspondingly, people will want to keep abreast of rapid technological shifts that will prompt a pressing labor demand that may lead to opportunities for rewarding work.

In spite of the predicted decrease in the commitment extended to the worker by the organization, industrial/organizational and vocational psychologists (Riketta, 2005) continue to focus upon constructs like organizational commitment, attitudinal organizational commitment, and the nature of mentoring. These domains essentially focus upon the degree to which workers are psychosocially and behaviorally congruent with the goals and values of their work setting and its leadership. Littleton et al. (2000) argue that the boundaryless career will become much less dictated by the career ladder of the organization and much more governed by workers’ personal agency and professional communion across rather than necessarily within organizations. Given the increasingly changeable workforce, what was once thought to be an adaptive quality like, for example, attitudinal organizational commitment, may in fact become generally maladaptive or at least so in certain particularly unpredictable and tenuous sectors of the workforce. The meaning of organizational commitment may change from an enduring partnership to

a time-bound but meaningful consultancy like that emerging in Silicon Valley. Moreover, if mentorship is like other human relationships in its dependence on trust and predictability, then the depth of and commitment to emotionally meaningful mentorship (Gibson, 2004; Scandura & Williams, 2004) may become more a function of the mentor and protégé's ties to a shared social network than their commitment to a shared work setting or employer. The relationship may become more focused upon the development of the protégé with respect to not only the immediate needs of the organization but also the career pathways of the protégé and mentor. This relationship may focus upon the enduring needs of the protégé like lifelong learning, marketability, social networks, and career momentum that may, and probably will, translate into the protégé pursuing other jobs in other organizations in the future.

The pluralization of careers and the finite life span of organizations (cast into years rather than decades) may also prompt people to seek and employ role models (e.g., idealized real or imagined figures) rather than mentors to guide their careers, given that this generally involves little or no investment on the part of the role model and the worker can maintain reliance on these role models in the face of changing careers and work contexts (Gibson, 2004). Clearly, the proliferation of the serial career and the disintegration of career boundaries will prompt a serious revision to research and practice bearing on the world of work and career development (Savickas, 2000).

Job Loss and Career Change

Changes in the life span of the modern organization will not only have a bearing on the implicit and explicit employer-employee contract, but it will also have a profound impact on the incidence of job loss and the duration of unemployment during the working years of one's life and the timing and nature of retirement. Research from the late 1990's supports this predicted trend by demonstrating that the incidence of involuntary job loss has increased since 1980 and white collar workers and middle management have experienced the greatest increase in job loss (Hanisch, 1999). This trend may lead to an amendment to the theoretical view of unemployment from being one almost exclusively associated with loss and dysfunction (Jahoda, 1982; McKee-Ryan, Song, Wanberg, & Kinicki, 2005) to one that casts certain forms of job loss, like that associated with industry shrinkage or collapse (as opposed to a person being fired) as normative aspects of a person's working life. This changed perspective may then be most akin to the theoretical view associated with the transition from school to work during the adolescent period. Both involve exploration and career choice and, in the case of re-training for the unemployed, both involve a transition from school to work. Nevertheless, the preponderance of evidence suggests that job loss and unemployment will continue to be a distressing experience (Hanisch, 1999), but the severity of the distress may change in the face of the anticipated change in normative trends. Some research supports this prediction by demonstrating that job loss can have a favorable impact on people when the loss is viewed as an opportunity to make a positive career change (Hanisch, 1999).

With the increasing prevalence of workers pursuing serial careers, career counselors must become prepared for the positive and negative consequences of job and career mobility. A three year-long longitudinal study of 12,140 workers from the Netherlands, which compared a group of workers who changed jobs and employers with a group that did not change jobs, identified a series of antecedent and consequent conditions surrounding a job change (Swaen, Kant, van Amelsvoort, & Beurskens, 2002). Prior to a job change, workers tended to exhibit more strained relationships with supervisors,

emotional strain related to work conditions, greater job insecurity, and less job satisfaction relative to those who did not change jobs. On a positive note, those who changed jobs tended to exhibit increased autonomy and task diversity and decreased role ambiguity a year later in their new job relative to those workers who did not change jobs. Those who changed jobs also tended to exhibit improved relations with their new supervisor and coworkers, decreased job insecurity, increased job satisfaction, and a more favorable ratio of income to effort. Interestingly, organizational commitment increased by 33.4% in the group that changed jobs and decreased by 3% for those who did not change jobs. This finding was replicated in more recent research (Kondratuk, Hausdorf, Korabik, & Rosin, 2004). In sum, prior to a job change, workers experience conditions that place them at risk for serious emotional strain on the job, but after the change these workers tend to rebound and actually surpass those who do not change jobs during the same interval.

Relative to job mobility research, much less work has been done to understand the antecedent and consequent conditions surrounding a career/profession change. Theory in this literature is largely based on job mobility theory and suggests that the intent to change careers is largely influenced by external, work-related, and personal factors (Blau & Lunz, 1998). This research suggests, for example, that job satisfaction and the degree of professional commitment predict a worker's intent to change careers (Blau & Lunz, 1998).

A developing body of research suggests that work should be considered on a continuum ranging from full employment to unemployment, with underemployment being the construct situated in between (Dooley, 2003). Handy (1994) conceives of employment in the form of three concentric rings with essential full-time employees representing the smallest inner ring and part-time and subcontracted workers representing the larger outer two concentric rings. The incidence of underemployment is much higher than the incidence of unemployment reported by the U.S. Bureau of Labor Statistics, and data suggests that the incidence of underemployment continued to climb from the 1980s to the early 1990s in spite of a sizeable decrease in the official unemployment rates (Dooley, 2003). This research also suggests that adverse effects of underemployment are more akin to those that spring from unemployment. In the context of serial careers and job loss and the changing nature of the implicit employer-employee contract, this research suggests that underemployment may become the next major threat facing the health of the modern labor force.

Lifelong Job Exploration and Career Redefinition

The notion of a serial career leads to the expectation that adult career development will become more salient in vocational and industrial-organizational psychology in response to ongoing recycling through exploration and choice making (akin to Super's and Erikson's notion of recycling through life stages or crises) across the adult years and the organizational response to the changing nature of those looking for work. The traditional job fair at the local community college or university may be supplemented with increasing efforts by recruiters to track market shifts that may signal the availability of mature, yet transferable talent needing to make career changes. Vondracek (2001) predicted that the rapid creation of new jobs and the proliferation of serial career pathways will prompt a greater demand for the expertise of vocational psychologists. In terms of intervention, it is becoming increasingly clear that vocational psychologists and career counselors must look to constructs like career adaptability (Savickas, 1997; Super, Savickas, &

Super, 1996) and career construction (Savickas, 2005) as constructs that will gain greater meaning as serial careers become more normative. Those individuals who choose, or by necessity pursue, serial careers must not only be ready and able to adapt to meaningful changes in their current work opportunities and constraints, they must also be able to construct a career that can be responsive to anticipated changes in the labor market. At the same time they must strive to remain consistent with salient lifelong career themes and passions that are tied to early developmental periods when the foundations are laid for later career development (Hartung, Porfeli, & Vondracek, 2005).

Retirement

Supported by the tradition of guilds, friendly societies, and fraternal organizations that supported craftsmen who could no longer work, spurred by the Great Depression and bolstered most directly by the social insurance movement first established in Germany in 1889 (Social Security Administration, 2006), the government argued that government-sponsored retirement was preferred to large segments of the population being forced into squalor. As President Roosevelt (1912) stated:

We must protect the crushable elements at the base of our present industrial structure...it is abnormal for any industry to throw back upon the community the human wreckage due to its wear and tear, and the hazards of sickness, accident, invalidism, involuntary unemployment, and old age should be provided for through insurance. (www.ssa.gov/history/trspeech.html, accessed 7/10/06)

Although P. B. Baltes' (1997) position concerning the incomplete cultural supports available to people in their later years is particularly applicable to the world of work, in certain ways cultural institutions may provide more support than is needed. During the 20th and into the 21st century, the face of retirement has changed from being almost universally defined as the crisp cessation of paid work to a blurred continuum ranging from complete cessation to the beginning of a new career (Hansson et al., 1997; Tempest, Barnatt, & Coupland, 2002). Clearly, this shift in the institution of retirement has been prompted by improved health care that has sustained a much higher quality of life and more adaptive functioning into the later years and has ultimately served to steadily increase life expectancy and population aging. Moreover, the conditions in the labor market have improved to the extent that a large fraction of the human capital of the labor force enters retirement with relatively intact facilities to be productive (Hansson et al., 1997). The image of industrial human wreckage has been replaced with the notion of successful aging and an air of optimism fanned by research suggesting that aging can involve further human development as reflected by the pursuit of personal meaning and the mitigation of cognitive decline through a healthy lifestyle (M. M. Baltes & Carstensen, 2003). Further cause for optimism comes from research suggesting that successive cohorts of older people across the 20th century are exhibiting greater cognitive functioning (Schaie, 2002).

Returning to Figure 14.1, the critical threshold of likely occupational decline has clearly been shifted to later years of the human life span and may no longer coincide with the state instituted retirement age (65 years) that is common in Europe or with the normative expectations of the generation that preceded the Baby Boomers in the United States.

This leads to the reality that within certain human domains and periods of modern

societies, cultural supports may overshoot their intended objectives. Many experts believe that the legislated age of retirement is too young given the productive capacity of the labor force at this age. The fraction of the U.S. population over 55 years old is expected to grow to become a projected 34% of the U.S. population by 2010 and only exhibit modest declines toward 28% of the population by 2050 (Wegman & McGee, 2004). Based upon employment exit trends from the 1980s to the present, survival analysis was used to predict at what age certain workers will exit the labor force and work less than 100 hours per year (Wegman & McGee, 2004). The results suggest that blue collar workers are more likely to exit the labor force relative to their white collar age mates even though the latter group is more likely to have the financial assets to support a more comfortable retirement into old age.

In another series of studies, those workers in less prestigious and lucrative occupational sectors were found to exhibit poorer general health, mental health, and physical health and more disabilities than their age mates from more prestigious and lucrative occupations. Adding injury to insult, three of the top four occupational sectors of the U.S. economy with the largest percentage of older workers are predicted to demonstrate decline or weak growth through 2010 (Wegman & McGee, 2004). These results suggest that the modern economy must promote and tap the productive capacity of the older segment of the population. This is particularly true of the blue collar workforce, which contains the largest share of older workers with more rapidly diminishing capacities to pursue their work and it is also true of older workers in declining sectors of the economy because modern societies cannot afford to support their retirement in the face of the relative decline in the number of younger workers who would support them (mainly through taxes they pay).

Reactions to these current and predicted circumstances within the labor market include delaying or staggering the retirement age, with early retirement yielding fewer benefits than later retirement. While large numbers of workers delay retirement, many of those who have already retired seek and successfully pursue occupational careers after they retire from full-time work (Watanabe Muraoka, Kawasaki, & Sato, 1998). Research suggests that older workers are more susceptible to catastrophic injury; and many workers and employers are attempting to alleviate this risk through staggered retirement ages in order to mitigate risk exposure associated with certain occupations (Wegman & McGee, 2004).

For a meaningful fraction of the “retiring” labor force, capabilities developed during the pre-retirement years, such as career adaptability and career exploration skills, may become increasingly important assets during the later working years. These capabilities may be particularly important for those workers who have insufficient retirement income and benefits. Moreover, the impact of unemployment and job loss during the “retirement” years may also take on a meaning traditionally ascribed to the pre-retirement years as “retired” workers develop a growing dependence on gainful employment as a result of the reduction or loss of retirement benefits. The impact of job loss and underemployment for post-retirement workers may be particularly profound given the adverse effects of these circumstances that have been identified in younger workers (e.g., physical and psychological health problems and substance abuse) (Hanisch, 1999). In addition, health problems may be amplified in older workers given that they typically exhibit reduced biological fitness at this point in the life span.

Whether or not a culture is incomplete with respect to institutional structures that support development of its population may partly hinge on abrupt shifts in the size of birth cohorts. During these quick population shifts, a culture may become more or less

complete with respect to human development for certain periods during the life span. The population of retirees is expected to increase two to four times its present size in the next 30 years (Tempest et al., 2002). This anticipated quick shift in the size of the retiree population is likely to exacerbate the incomplete nature of modern cultures with respect to health care, living facilities, and financial support. Assuming simple economic principles related to supply, demand, and the availability of capital, the wealth of this cohort is likely to spur development and expansion of the cultural resources needed to meet the demand. As this cohort declines and dies, the cultural resources available to the next (and smaller) cohort of older people will be akin to the infrastructure (e.g., parking, restaurants, and shopping) of a college town during the summer, namely, accessible and abundant. Although this is a rosy picture, the projected high and growing proportion of retirees to working adults is likely to place a greater strain on the overall economy (Tempest et al., 2002) and may lead to clashes between working and retired people with regard to the allocation of cultural resources.

Quick population shifts occur on a smaller but still meaningful scale in communities experiencing rapid increases in certain segments of the life span. For example, many communities in the southeastern U.S. have experienced profound increases in people of childbearing age as they move to seek job opportunities and a more desirable climate. This migration has contributed to a serious teacher and school administrator shortage in states like North Carolina, and local governments in places like the Charlotte community have been unable to build schools fast enough to keep pace with population growth. In such school districts, mobile classrooms are installed before new schools come online because the capacity of the school house has been exceeded before the new schools can be opened. In such places, the culture is incomplete in its capability to support the academic development of children, and legislative efforts are underway to train and attract more qualified teachers. These smaller, but common, population shifts underscore the strain placed on a community to support rapidly growing segments of the life span.

Occupational Success

Throughout this chapter, we have argued for an inclusive, comprehensive, and complex perspective of career development, work, and occupational success. Yet, the very terminology employed suggests a degree of dualism between career, work, and occupation on the one hand and non-work concerns on the other. Although work and non-work distinctions have typically been quite categorical, a progressive blurring of these boundaries has been observed in recent years (Olson-Buchanan & Boswell, 2006). The blurring of the distinction between work and non-work is particularly germane when one addresses occupational success. Some would argue that occupational success is meaningful only when it is achieved as part of a careful balancing act between work and family. Others would maintain that occupational success needs to be defined in relation to one's work values or work aspect preferences (Pryor, 1981). In other words, if a person values money and security above other work outcomes, the measure of that person's occupational success would be money and security. If, on the other hand, a person valued altruism and self-development, then these would be the proper indicators of occupational success.

Hall (2004, p. 3) reported that he asks his students to reflect on the messages about work and careers that they received early in life from their parents and families, and he recounted that one of the messages that he received was that "the success that matters

is subjective, how satisfied you feel with your life and work” (p. 3). Is there any reason to abandon this common-sense approach to occupational success at this point in time? Individuals will continue to struggle with finding balance between work and other aspects of life. Their satisfaction and subjective experience of success, however, will not only be determined by the whole of their experience in the work setting, but also in relation to their families, their communities, and the larger environment. If anything has changed in the past 50 years and if anything is to be different in the next 50 years, it will be the multitude of ways in which people can structure their work so that it can be a harmonious part of their lives. Increasingly, people will be able to pursue what Hall (2004) has called a protean career, one in which the person, not the organization, is in charge, where career decisions are guided by the person’s core values, and where the criteria for success are subjective. If that model of career development prevails in the future, one of the key issues that must be addressed successfully is the relationship between work and family.

Work-Family Conflict and Work-Family Balance

Much of the research on work and family has been based on the assumption that they necessarily are in conflict with one another. Although this research has been increasingly sophisticated, focusing on both family-to-work and work-to-family conflict, the recognition that family and work influence each other reciprocally has been slow to emerge in industrial/organizational and organizational behavior research (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). This is surprising in view of well-known, explicit conceptual formulations that recognize “dynamic interaction” and reciprocal relationships between work and family (Vondracek et al., 1986). Nevertheless, several meta-analyses of research on the relationships between work and family have been conducted in recent years (e.g., Allen, Herst, Bruck, & Sutton, 2000; Eby et al., 2005; Ernst-Kossek & Ozeki, 1998), demonstrating the importance of the topic.

There is reason to believe, however, that future researchers are much more likely to examine work-family balance rather than work-family conflict. The aim of work-family balance is to be engaged in both the worker and family member roles with similar levels of energy, commitment, attentiveness, care, and concern (Greenhaus, Collins, & Shaw, 2003). Research demonstrates that individuals with low involvement in work and family tend to have a lower predicted quality of life than those exhibiting more involvement in both work and family. Interestingly, Greenhaus et al. (2003) found that an involved but imbalanced role structure favoring family over work yielded the highest perceived quality of life. Nevertheless, an involved and balanced approach to work and family is commonly presumed to buffer people from the maladaptive experiences that may occur within one role by virtue of the adaptive nature of the other roles. Moreover, the balanced approach to living permits people to capitalize on the benefits of multiple domains, as they present themselves, when such benefits may not be routinely available in any one role. Although some authors refer to balance in terms of committed time, family functioning clearly hinges more on the nature and amount of interaction than it does on the time spent together (Greenhaus et al., 2003). Finally, it should be noted that time not committed to work or family may be committed to other life fulfilling pursuits like volunteer work in the community or recreational activities that promote individual development, which ultimately serves to improve a person’s capacity to make the most of the time committed to work and family.

The Future of Work and Career

Thus far, we have argued for using a more complex, comprehensive, and integrative conceptual model to describe, study, and understand career development, work, and occupational success. We have stressed that the career trajectory and work life of individuals cannot be separated from their overall developmental trajectory and their total life experience, and we have proposed that biological and cognitive development over the life course impact work and career in profound but highly differentiated ways depending on the occupation chosen. We have also stressed that the meaning of work and career has been changing much more rapidly in recent years than in the past, largely due to globalization and technological advances. As a consequence, multiple proposals to advance new conceptualizations and new paradigms for studying work and careers have been published in little more than a decade (Arthur & Rousseau, 1996; Hall & Associates, 1996; Jackson, Arnold, Nicholson, & Watts, 1996; Rifkin, 1995; Young & Collin, 2000).

There is little doubt that the significance and meaning of work, career, and occupational success in the 21st century will be quite different from what it has been in most of the previous century. Individuals will adopt different perspectives on work and family, resulting in different motivations and expectations. Organizations are already in the process of fundamentally changing in the global economy, and theory and research on work, career, and occupational success will experience paradigm shifts that include new methodologies for studying individuals in multiple, rapidly changing contexts (e.g., P. B. Baltes & Smith, 2003; Cairns, Berman, & Kagan, 1998; Molenaar, 2004; Wiese et al., 2000, 2002). While it is clear that the future of work and careers will be very different from the past, making specific predictions is difficult considering the complexity of contributing factors. Nevertheless, some emerging directions for the future of work, career, and occupational success are difficult to ignore and may very well persist for the foreseeable future.

One possible scenario is one in which career development gives way to a series of vocational projects, which “constitute the person’s intrinsically oriented and intentional needs to seek outlets through a relationship with the world” (Riverin-Simard, 2000, p. 121). According to Riverin-Simard (2000), these vocational projects play an essential role in the continual redefinition of vocational identity, required by the numerous upheavals and uncertainties of the job market of the 21st century. From a primary and secondary control perspective (Heckhausen & Schulz, 1995), people may aim to influence their social networks to achieve their goals (primary control strategy) and in the face of little or no peer network or an inability to influence it, individuals may develop and manipulate their career pathways in order to achieve their goals (i.e., secondary control strategy). Career may become less characterized by upward mobility through a series of well-defined positions within an organization and more defined by movement through and up the ranks of a peer network that cuts across organizations and may or may not be neatly tied to a clearly hierarchical series of positions. For example, a person may make a lateral or downward move to another organization through connections within the peer network in order to obtain a skill or body of knowledge that may distinguish him/her within the peer network and therefore improve the chances of obtaining more favorable work through the network in the future. A significant aspect of career research may then become a science of peer networks akin to the body of literature on peer networks during the adolescent years. Such theory and research would argue that the career construct is not dead in the face of serial careers (Riverin-Simard, 2000; Young & Valach, 2000), but rather that the conditions that define the career roadmap have changed from being

determined by the employer's hierarchical management structure to being defined by one's relative position/standing within professional networks that cut across employers. If true, then what appear to be chaotic career changes (Riverin-Simard, 2000) on a roadmap defined by work organizations and their management hierarchy, may in fact be quite orderly and predictable when the pathway is overlaid on the professional social network. Akin to Kanter's (1989) professional career, the professional social network would not only reveal patterns of socialization, but also possible avenues (linguistically, career = road) for mobility. This research would be informed by empirical studies of adolescent peer networks and cliques and studies of how children navigate within and between these networks.

Although some have criticized the notion of career development as being too centered on the individual (Kanter, 1989), clearly the linguistic source of the word suggesting a roadway connotes that people may choose to turn left or right, but they must remain on a roadway in order to travel. The roadway constrains the possible career routes that one can take. At the risk of abusing the metaphor, entrepreneurs would represent people who have created new roadways. The 21st-century economy may force people to choose alternative markers (like the social network) to define the boundaries of the roadway. The context of these social networks may shift from the pub or club to the virtual world as websites like *myspace.com* and *facebook.com* become a part of adults' lives in the way that they have become a central part of adolescents' and young adults' social lives. One's virtual presence may thus become intimately connected with one's occupational opportunities and standing.

Like social networks, the Internet has the potential to blur the boundaries between personal and professional lives. Websites like *myspace.com* and *facebook.com* are large, web-based venues for people to develop relationships and reveal the personal side of their lives. As this aspect of the Internet continues to grow, the general public may have the capacity to track the lifestyles of people from childhood to old age. As adolescents today make the transition to the adult world, many of them are finding that their personal lives, as they and others depict them on the Internet, are impacting their chances of securing and maintaining a job. Recent research conducted by Execunet and reported in a variety of online periodicals (e.g., Flesher, 2006) suggests that 75% of recruiters surveyed employ the Internet to learn about the personal lives of prospective employees, and 26% have screened out candidates on the basis of the information they obtained. These sources also suggest that employers are actively searching such web venues to ensure that their employees are not inadvertently disclosing company secrets and/or representing the organization in an unfavorable manner. Reportedly, terminations have been prompted by such material. As a consequence, online periodicals and some universities are warning adolescents and adults to be wary of what they reveal online (Conlin, 2006) and encouraging industry to tap this information to learn more about job seekers and keep tabs on current employees (Baker & Green, 2005). What consequence this new trend will have on the actions of organizations and the vocational and personal behaviors of adults seeking to secure and maintain a job is yet to be seen, but the early signs suggest that profound changes are on the horizon.

Conclusion

The early 21st century is an exciting yet challenging period for the workforce and for those who study it. The rapid and sometimes chaotic changes in the global economy challenge employers and employees to fundamentally revise the implicit employment

contract in order to survive and this, in turn, has led to meaningful changes in the content, structure, and course of career development across adulthood and into the retirement years. Researchers have forwarded new theoretical models in an effort to capture the changing ecology of human development and how people define and are defined by their unique array of contexts. These models, as applied to career development, have undergone almost constant revision and expansion in order to explain the apparent transformation in the role of work in people's lives. Current indications and trends suggest that the only constant within the workforce over the next few decades will be change and that we will have to become more adaptive in order to keep up with the pace of change.

Coupling meta-theoretical models like developmental contextualism, meso-theoretical models like developmental systems theory, and propositional models like selective-optimization-with-compensation, yields enough specificity to establish important research questions without becoming so constrained as to risk rapid obsolescence. In this chapter, we have proposed linkages across the three models and demonstrated how they can be employed to predict functional and adaptive career capacity across the life span and how these capacities are influenced by the variability in occupational demands. We further identified what we believe will become more salient issues in career development like the changing nature of retirement and career pathways as defined more by social networks than by organizational structure. Coupling the theoretical model with the salient issues yields a multifaceted agenda for future research.

One of these salient issues may very well be the issue of how social policies and programs may help or hinder individuals as they continually adapt their careers and their work to the brave new world of the 21st century. Any research agenda that aims to answer these questions, if it is based on a developmental-contextual framework, will incorporate individual differences, multiple contexts, and the sociocultural institutions within which individuals function. As Lerner and Simi (2000) note:

The goal of developmental contextual explanatory research is to understand the ways in which variations in ecologically 'valid' person-context relationships account for the character of actual or potential trajectories of human development, that is, life paths enacted in the 'natural laboratory' of the 'real world.' (Lerner & Simi, 2000, p. 425)

Moreover, from this perspective, policy development and the design, implementation, and evaluation of interventions do not represent secondary or derivative applications after research evidence has been compiled. Instead, developmental contextual research, conducted from a multidisciplinary perspective, considers policies and (intervention) programs as the experimental tools of such research. Applied to career development and work, such research could be instrumental in enhancing our understanding of the role of career and work in the life trajectories of individuals, and in enhancing the career development and work satisfaction of individuals who may experience special challenges because of normative developmental problems associated with aging and risks associated with the larger socioeconomic environment at any given historical moment (Lerner & Simi, 2000, p. 426).

Another salient issue to be included in any agenda for future research on career development and work has to do with the question of what constitutes success in these areas, especially as individuals age and adapt to changing personal capabilities as well as constantly changing work requirements, economic conditions, and life circumstances.

Previously, we introduced the model of selective optimization with compensation (SOC), which was specifically developed to examine and promote successful aging (Baltes & Baltes, 1990). The basic proposition of the model is that selection, optimization, and compensation represent lifelong processes in development that converge around the objectives of maximizing gains and minimizing losses (Baltes, Lindenberger, & Staudinger, 1998). Understanding these processes and helping people to use them effectively could very well represent a major thrust of research in the years to come, primarily because it is becoming evident that the emerging landscape of work and careers demands the development and acquisition of skills in making good decisions (selections), optimizing internal and external resources, and compensating for losses, deficits, declines in capabilities, or changes in the environment throughout the life span into old age.

Selection will be an increasingly important and increasingly frequent task in the environment for career development that is likely to prevail in the decades to come, primarily because of the accelerating pace of change in occupations, industries, and economies. Optimization in career development is likely to be focused on identifying and seeking environments that enhance one's chances for advancement or one's chances of attaining job-related goals or preferences. Optimization could also involve the investment of time and energy in the acquisition of new occupational skills or being able to delay gratification (e.g., in the pursuit of entrepreneurship). In the challenging and rapidly changing occupational environment that is likely to be the norm in the future, optimization in the domains of cognition and intellectual development will be a prerequisite for advancement. Finally, compensation within the SOC model becomes necessary when individuals encounter internal or external limits or losses. Clearly, it is an essential strategy in adult career development and in the maintenance of satisfactory work performance. Adults who used SOC strategies are more likely to maintain a feeling of competency and of successful goal attainment in the occupational domain (Abraham & Hansson, 1995).

At this time, it would be presumptuous to attempt to present a comprehensive agenda for research on career development, work, and occupational success. A constantly recurring theme throughout this chapter has been that the multiple contexts within which individuals will actualize their careers are changing at an ever quicker pace. The conditions of work three or four decades into the future are unknown. At best, we can speculate about what they will be, and thus we can only speculate about the specific questions that will need to be answered by research. More important at this point is to develop and use emerging theoretical formulations that are capable of accommodating the incredible complexity of human development in context and to utilize methodologies that can handle both, complexity and change. It is our hope that we have succeeded in describing some of these and in demonstrating how they can significantly enhance our understanding of career development, work, and occupational success in a future that is exciting and promising, as well as challenging.

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