Chapter 10
SOCIAL CONTEXTS FOR CAREER GUIDANCE THROUGHOUT THE WORLD. DEVELOPMENTAL-CONTEXTUAL PERSPECTIVES ON CAREER ACROSS THE LIFESPAN

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Since its introduction, the meta-theoretical framework of developmental contextualism (Vondracek, Lerner, & Schulenberg, 1986) has served as a stimulus to researchers and practitioners in career development who care about understanding the developing person in a multitude of ever-changing contexts. At this point it has become widely accepted in the study of career development that behaviour is the result of interactions between person and contexts (Chartrand, Strong, & Weitzman, 1995; Shanahan & Porfeli, 2002). Shanahan and Porfeli (2002, p. 404) pointed out, however, that "the premise that vocational development reflects both person and context is so established that much of the time it is in fact not empirically studied." The integration of both human development and context in career interventions has proved to be no less difficult than it is in the research enterprise. Nevertheless, progress has been made in theory development, empirical investigations, and the applications of these advances in career development intervention strategies.

Background

The developmental-contextual approach to lifespan career development (Vondracek et al., 1986) shares many essential features with Donald Super's lifespan life space approach to career development (Super, 1980, 1990; Super, Savickas, & Super, 1996). Super was influenced by both the life-course perspective of Charlotte Bühler (1959) and the construct of developmental tasks proposed by Havighurst (1951), which was reflected in his commitment to age-related developmental stages and life stage-related developmental tasks. Super found it difficult, however, to reflect the strength of his commitment to a lifespan approach while giving equal attention to

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his conviction that an individual's career development could be understood only when placed within the life space context. Consequently, he introduced his "Archway to Career Development" to reflect his appreciation of both development and context (Super, 1990, 1994). Super clearly favoured a developmental-contextual approach to career development long before that terminology entered the field. For example, in describing his "developmental self-concept approach," he insisted that "person-situation interaction" is central to his overall approach (Super, 1981, p. 36). He believed that segmental theories (like his) were necessary because they served to focus upon central aspects of the life course and life space within work, family, and community contexts. He also believed that his theory risked being an over-simplification of the true, albeit complex and confusing, nature of the whole person within the vast array of relevant contexts. Referring to the developmental-contextual model of lifespan career development proposed by Vondracek et al. (1986), he suggested that "each researcher and practitioner now has a choice between Vondracek's complexity, Holland's simplicity, and this [Super's] multiplicity of simplicities (Super, 1994, p. 72)."

Super's preference for the segmental theories approach was predicated on the theories he knew and utilised in his own work. Specifically, he relied on Baldwin's (1906) theory of maturity, Sarbin's (1952) work on self concepts, Tyler's (1955) contributions on interests (as well as the aforementioned work of Bühler and Havighurst). Sociological studies such as Hollingshead's (1949) and Miller and Form's (1951) were important in informing him and his Career Pattern Study (Super & Bachrach, 1957) regarding the social context of career development. He employed Berlyne's (1954) work on curiosity to extend his model of career development to the childhood years and thereby establish a truly lifespan view of career development. All of these foundational contributions are now more than half-a-century old, conceived and articulated in a world that was stable compared with today's rapid pace of change, community-centred rather than global, disciplinary rather than interdisciplinary, and mechanistic rather than electronic. Social science was operating in a hand-calculated and mainly hand-built world in contrast to today's virtual computer-based social and scientific methodologies. Against this background, it is clear that Super's theory accurately reflected the historical time during which it was formulated. In the present chapter, an effort is made to describe the main features of developmental contextualism, a theoretical framework that is continuing to evolve and that is capable of representing the rapidly changing and complex world of today. Moreover, some of the most promising advances in developmental-contextual thinking as well as their relevance for the design of research and career development interventions will be reviewed.

Developmental Contextualism

Today more than ever, there is good reason to replace (or at least further connect) the segmental theories approach with approaches that aim to represent both the individual and the multiple contexts within which individuals operate in all of their

complexity and rich diversity. It may be instructive to recall the circumstance surrounding our initial efforts. When we first set out to write about career development from a life-span developmental-contextual perspective (Vondracek & Lerner, 1982), vocational development simply did not fit into the categorisations that main-stream psychologists were accustomed to using. It was not cognition, learning, motivation, emotion, personality, social or biological development, although all of them clearly play a role in vocational development. It simply did not fit, and consequently it was ignored more often than not or bits and pieces were represented as segmental theories. Our intent in presenting the developmental-contextual framework was straight-forward: We wanted to precipitate the abandonment of simplistic notions of career development in favour of a developmental-contextual and life-span perspective, and we wanted to stimulate greater interest in vocational and career development research in the broad community of social and behavioural scientists. Dynamic interaction of the developing individual with various contexts was presented as the paradigm that could, for the first time, adequately account for the complexity of occupational careers, their antecedents, their unfolding, and their consequences.

It is important to stress at this point that the dance between theoretical formulations, methodological advances to test theory, and the accumulation of empirical knowledge supporting or refuting theory is ongoing with each promoting and challenging the other over time. Consequently, it is important to approach one's work with humility and a keen understanding that even the most comprehensive and complex meta-theoretical framework is merely a transitional framework, certain to be replaced by ever more sophisticated conceptualisations of human functioning in context. Moreover, segmental theories and divergent viewpoints on career development enrich the discourse and stimulate innovation in research and intervention. Nevertheless, it is clear that a complex and comprehensive perspective such as the developmental-contextual meta-theoretical framework is a necessary perspective at this point in the development of knowledge about the career development of individuals in their diverse contexts. This sentiment is underscored by Ford and Lerner (1992, p. 231), who stated:

> Without the construction of more integrative and comprehensive frameworks than those that presently exist, we are likely to be increasingly overwhelmed by mountains of data and empirical generalizations. They continue to accumulate as a pile of 'bricks' of knowledge, each of which can contribute toward the construction of a cathedral of knowledge we have not yet built. The role of integrative theorizing is to help decide how to combine those 'bricks' in a way that represents a more accurate and less passive mechanistic view of ourselves and that will help us learn how to construct more humane societies.

Since the introduction of the developmental-contextual meta-theoretical framework to the field of career development, the value of examining career development from a developmental-contextual perspective has been demonstrated. That perspective guided the questions that were asked, as well as the methods that were used. The framework compelled a focus not only on the contemporary functioning of the person but also on the antecedents and long-term consequences of current behaviour. Moreover, it served to sensitise researchers to the need to examine the dynamic

interaction of person characteristics with various levels of context, including the family, the educational system, the institutions of commerce and government, culture, and economic and occupational affordances. The joint consideration of development and context is resonating with researchers on career development, as evidenced, among other things, by a special section on "Career development: A lifespan perspective" published in the *International Journal of Behavioral Development* (Vondracek, 1998), special issues of the *Journal of Vocational Behavior*, entitled "Transition from school to work: Societal opportunities and individual agency" (Heckhausen, 2002), and "Innovating career development using advances in life course and life-span theory" (Vondracek & Hartung, 2002), and a special issue of the *Journal of Vocational Behavior*, entitled "Studies of development in context" (Vondracek, 2007).

The studies represented by these special issues and special sections of influential interdisciplinary and international journals are illustrative of a welcome trend toward "research on career development in a developmental-contextual fashion" (cf. Silbereisen, 2002, p. 310). As Silbereisen (2002, p. 318) noted, however, some studies conducted from this perspective are exceptional with regard to "revealing the interactive fabric of contextual and personal conditions," while others are more focused on the "proximal cognitive and motivational processes." The challenge that remains is to design studies that combine both the macro-perspectives commonly addressed in life course sociology and the individual and process-focused perspective of life-span developmental psychology (Shanahan & Porfeli, 2002; Vondracek & Porfeli, 2002a), and while researchers continue to struggle with this challenge, there are a number of theoretical advances that further refine and elaborate developmental-contextual approaches to career development. Several of these advances will be described in the following sections.

Developmental Systems Theory

Developmental systems theory has recently been described as a "superordinate frame for several different models of human development," which share rejection of the nature-nurture duality and, instead, adopt a relational and "integrated or fused conception of the multiple levels of organisation involved in the ecology of human development" (Lerner, Theokas, & Jelicic, 2005, p. 31). Developmental Systems Theory (Ford & Lerner, 1992) actually emerged as a synthesis of developmental contextualism and D. H. Ford's (1987) seminal work describing the Living Systems Framework (LSF) that characterises humans as self-constructing living systems. The (LSF) represents a comprehensive model of human functioning, based on an exhaustive, multidisciplinary review of theory and research on human behaviour and personality (D. H. Ford, 1987). Consequently, it is complex, inclusive, and requires immersion (rather than superficial reading) by those who wish to utilise it. D. H. Ford (1987, p. 145) justified this by stating:

> Behavior patterns differ because people vary in what they want, how they decide to go about producing the desired consequences, what they actually do, the ways they anticipate and evaluate their progress, the emotions that are aroused in relationship to the activity, the conditions of their biological functioning, the kinds of environments in which they interact, and the attributes of those environments upon which they selectively focus their transactions. If any of those functions are ignored, a person's behavior cannot be fully understood.

Developmental Systems Theory (DST; Ford & Lerner, 1992) is a significant advancement over the meta-theoretical developmental-contextual perspective because it includes an operational model that addresses the content, organisation, and dynamics of the developing person. The model casts human functioning into four classes: (a) transactional functions that serve to exchange information and energy with the environment, (b) arousal functions that fuel behaviour and cognition, (c) governing functions that are responsible for behavioural and cognitive coordination and control, and (d) biological functions that sustain, promote, or inhibit behavioural and cognitive functioning. The person-in-context is represented as the focal unit of interest in this operational model. Person-in-context is then represented as an open system that is capable of elaborating itself by growing and becoming more complex and specialised, because it can obtain resources from the environment and alter the content and organisation of its environment. Moreover, the person-in-context unit is described as a self-regulating, open system. Self-regulation is achieved via positive and negative feedback processes, which are complemented by feedforward processes that are forward-looking, future-oriented, and proactive. It is the latter that capture the goal-directed and future-oriented behaviours that characterise humans and that enable DST to describe key processes of human development. This is an important point because DST presumes that a person's actions today can be influenced by reflections on the past, assessments of the present, and constructions of the future; hence, past, present, and projected future opportunities and constraints within and outside the person influence current actions. The operational model of DST includes one additional key feature, namely, the recognition that the person-in-context is not only self-organising but also self-constructing. These self-constructing processes represent both biological and psychological/behavioural self-constructing capabilities. Viewing the person-in-context as the proper unit of analysis quickly leads to the conclusion that the very existence, functioning, and development of individuals require continual exchanges with their context.

Ford and Lerner (1992, p. 130) suggested that the human living system can be conceptualised as being composed of three persons: the biological, psychological, and action person. The biological person sustains life, the psychological person constructs it and the action person "carries out the actual environmental transactions that make the individual's life, learning, and accomplishments possible" (Ford & Lerner, 1992, p. 130). Parsons' (1909) was among the first to establish the link between the psychological and action persons in career choice and development and Super (1957; Super et al., 1996) and empirical researchers employing his life-span life space theory firmly established the dynamic between psychological processes and work behaviour across the twentieth century. During the later part of the

century, Vondracek et al. (1986) underscored the need for conceptualising the psychological and action persons as being embedded in multiple contexts.

Of the three persons, the biological person in work contexts has received relatively little attention in the career development literature. The literature devoted to the biological person can be divided into research examining the impact of disability, occupational health, and genetics on career development and work behaviour. A massive amount of research in the rehabilitation counselling literature has demonstrated how disabilities can impair career development, and asserted that although disabilities can lead to career handicaps, many interventions can mitigate these handicaps (e.g., Fabian & Liesener, 2005; Levinson, 2002; Szymanski, Enright, Hershenson, & Ettinger, 2003; Szymanski & Hershenson, 2005; Szymanski & Parker, 2003). The occupational health literature has established that work experiences and biological functioning are dynamically associated by establishing, for example, that work experiences, hormones, mood, and other biological aspects of the person are interrelated (e.g., Aronsson & Rissler, 1998; Davydov, Shapiro, Goldstein, & Chicz-DeMet, 2005; Rintala, Pukkala, Paakkulainen, & Vihko, 2002). Moreover, some researchers have investigated the impact of in-utero hormone exposure on children's career aspirations and suggested that hormone exposure has little or no direct effect (Ehrhardt, Ince, & Meyer-Bahlburg, 1981; Sandberg, Ehrhardt, Ince, & Meyer-Bahlburg, 1991). Hormone exposure may, however, increase "tomboyism" in girls and tomboyism appears to be associated with more male-dominated career aspirations (Ehrhardt et al., 1981). In contrast, emerging research suggests that in-utero testosterone exposure is associated with differences in the academic discipline chosen by university faculty (Brosnan, 2006). Finally, the genetics literature has established that career preferences and interests are partially heritable (Betsworth, Bouchard, Cooper, & Grotevant, 1994; Ellis & Bonin, 2003; Gottfredson, 1999; Grotevant, 1979; Harris, Vernon, Johnson, & Jang, 2006; Lykken, Bouchard, McGue, & Tellegen, 1993; Moloney, Bouchard, & Segal, 1991; Roberts & Johansson, 1974; Vandenberg & Stafford, 1967). Employing a range of research designs of varying sophistication, these studies converge around the finding that between 30% to 50% of the variability in career preferences and interests can be attributed to genetic factors.

Vondracek and Porfeli (2002b) have employed the theory of selective optimisation with compensation (SOC) (Baltes, 1997) and DST to demonstrate how biological decline influences career development. Using illustrations first presented by Marsiske, Lang, Baltes, and Baltes (1995), they noted, for example, that pianist Arthur Rubinstein employed SOC by playing a smaller repertoire of pieces later in life (selection), practising more as he got older (optimisation), and slowing his performance before fast movements to heighten contrast (compensation). It is apparent, therefore, that the use of selection, optimisation, and compensation is capable of enhancing and prolonging the career performance of individuals as they experience age-related biological declines that affect, for example, speed and stamina in completing certain tasks.

Although the theory of SOC has been proposed as a universal model of development, the breadth and depth of DST offers an even more comprehensive vantage to

examine the role of biology in career development. Given that persons over the age of 55 will represent 34% of the population by 2010 (Wegman & McGee, 2004) and a growing fraction of people are delaying retirement or returning to paid employment after retiring from their principal career (Watanabe Muraoka, Kawasaki, & Sato, 1998), we must develop a better understanding of the factors that enhance and mitigate successful aging of the workforce. Toward that end, future investigations into the impact of the biological person on career development could continue to examine how biological maturation and decline as influenced by genetics, hormones, and the accumulation of healthy and unhealthy life experiences promote or hinder favourable career development across the lifespan.

In addition to presenting an operational model of the person-in-context, DST addresses the "how" of development by describing and explaining the basic change processes and dynamics that are capable of producing the incredible diversity of developmental outcomes in humans. Thus, DST clearly goes beyond the usual description of normative patterns of developmental outcomes or stages of development. Specifically, Ford and Lerner (1992, p. 151) proposed that there is a convergence in various fields, such as evolutionary and developmental biology, genetics, learning, and psychological and behavioural development around the notion that there are three basic, change-related processes in human development: stability maintenance, incremental change, and transformational change.

Bio-psycho-social elaboration during the earlier years of life and decline during the latter years presumably prompt stability maintenance, incremental change, and transformational change processes. All three change-related processes are clearly reflected in action theories like selective optimisation with compensation (SOC) and they are exhibited in the career development literature. The earlier years tend to be characterised by incremental and transformational elaboration of the bio-psycho-social repertoire. For example, incremental increases or decreases in the salience of a work value (e.g., Porfeli, 2007) or vocational interest could occur across the lifespan, but such changes must be precipitated by a transformational change, namely the establishment of the work value system (Hales & Fenner, 1973; Wijting, Arnold, & Conrad, 1977) and career interests (Holland, 1997; Savickas, 1999; Tracey, 2002). Historically, transformational changes in career development were generally confined to the childhood and young adult periods (e.g., Super, 1957). In the twenty-first century, however, job loss, career change, and post-retirement jobs or careers are becoming more common as the labour market becomes more competitive through globalisation and large sectors of the economy die and other sectors are born. Increasingly, workers are facing career changes that may call for transformations to their occupational competencies, interests and values. Moreover, many retirees are facing second careers in the face of inadequate retirement benefits and income. Constructs like career establishment and maintenance become less important and constructs like serial careers, lifespan career exploration, and adaptability become more applicable in such an environment (Savickas, 1997). In other words, stability maintenance from mid-career onward may give way to ongoing incremental and transformational career changes in the global, technological, and increasingly changeable work context.

The foregoing obviously represents a greatly abbreviated version of a very complex and comprehensive theoretical framework. The framework is capable, in principle, of accounting for every aspect of human functioning, including the complex person-in-context processes that make up career development. Why should it be used by those interested in understanding and facilitating career development? It is firmly grounded in a convergent and integrative, interdisciplinary model of human functioning that is derived from an exhaustive review of accumulated scientific evidence regarding the living system we know as *homo sapiens*, and it offers the best opportunity for scientific study of and scientific intervention upon any and all aspects of human functioning in context. Does this mean that one should abandon the "Big Five" career theories or disregard efforts that focus on narrow features or very specific processes of vocational behaviour such as social reinforcement or self-efficacy? Clearly, one should not follow that path. Scientific progress is made in many, often unanticipated ways at different levels of analysis. If the study of vocational behaviour and career development is, however, to be more than a boutique enterprise at the far edge of applied science, it must get beyond antiquated theories or narrow adaptations of circumscribed or segmental models from psychology, sociology, or anthropology. It needs to seek and eventually embrace a unifying model that fully captures and organises the complexity of human functioning and development in context. None other than Super (1981, p. 36) reached this conclusion more than a quarter century ago:

> The very scope of the ideas and data that need to be synthesized if one is to understand and guide career development seems to preclude any possibility of achieving the desired synthesis. But perhaps it has only seemed to preclude it, for now that multivariate statistical methods and computers make it possible to treat masses of data in complex ways the analysis and synthesis of data from economics, education, psychology, and sociology bearing on the lifelong development of people has at last become possible….

Before moving on, it is important to acknowledge that developmental-contextualism or DST are not the only frameworks that have been suggested as comprehensive and integrative conceptualisations of career development. For example, Blustein (2006) proposed two alternative meta-perspectives as organising frameworks for theory and research related to a psychology of working, namely, social constructionist thought and emancipatory communitarian perspectives. The former is described as a "radical" transformation of scientific discourse that involves abandoning the search for "universal truths" via objective methods (judged to be an impossible task) and instead using a "more manageable" approach that is based on "the complex and relativistic nature of human experience (p. 199)." The second framework described by Blustein (2006; Blustein, McWhirter, & Perry, 2005) is the emancipatory communitarian perspective proposed originally by Prilleltensky (1997). The primary features of this framework include the focus on social injustice and inequality and an emphasis on having psychologists use moral and ethical values in the conduct of their work.

Obviously, it is impossible to do justice to these proposals within the confines of the present chapter. It is worth noting, however, that both of these approaches are presented as reactions to "traditional" positivistic scientific paradigms, which are

often criticised as representing efforts to describe middle-class white, Western patterns of behaviour without regard to the constraints placed on individuals by social policy and institutional and structural factors that severely limit their opportunities to make decisions, to have choices, and to pursue occupational careers. At this time, it will suffice to note that while these criticisms of traditional paradigms may have some merit, they are less applicable to the developmental-contextual and DST perspectives. For example, the influence of D. H. Ford's (1987) Living Systems Framework on the formulations of DST and developmental contextualism has been acknowledged. In this framework, Ford devoted considerable attention to moral development within the context of discussing cognitive regulatory functions of the living, human system. Moreover, efforts to examine the social policy and social structural constraints on career development abound in research guided by the developmental contextual framework (e.g., Reitzle & Vondracek, 2000; Reitzle, Vondracek, & Silbereisen, 1998; Silbereisen, Vondracek, & Berg, 1997; Vondracek, 2000, 2007; Vondracek, Reitzle, & Silbereisen, 1999a; Vondracek, Silbereisen, Reitzle, & Wiesner, 1999b); and by the life course sociological perspective (e.g., Gustafson & Magnusson, 1991; Shanahan, 2000; Shanahan & Porfeli, 2002). Clearly, advancing social justice and making advances in science are two separate objectives. It is a beautiful thing when they converge, as in cases where science dispassionately reveals injustice or social justice movements spur scientific inquiry, but we should remember that they are not interchangeable.

In the meantime, it should be noted that the authors of DST explicitly acknowledged that they were keenly aware of the fact that one's assumptions about human nature and one's relationships with the world in which one lives powerfully influences what one does, how one lives, how one deals with others, and the social policies, attitudes, and institutions one constructs (Ford & Lerner, 1992). DST represents one, admittedly imperfect, theoretical framework or construction that has the potential for helping scientists to develop a shared understanding of people in all their diversity and the varied and complex levels of context within which they live. Universal human truth exists amidst the many human perspectives and constructions of this truth. Quitting the pursuit of human truth because it is too complex or obscured would be a tragic failure of the social sciences which include counselling and vocational psychology. Theoretical formulations that come ever closer to the true complexity of the world and the varying perspectives that humans share continue to be sought. One such formulation is Motivational Systems Theory (MST).

Motivational Systems Theory

One elaboration of D. H. Ford's (1987) Living Systems Framework that is particularly well-suited to application in the field of career development is Motivational Systems Theory (MST; M. E. Ford, 1992). MST describes how motivation provides the psychological foundation for the development of human competence and achievement, resulting in effective person-in-context functioning

in everyday life (M. E. Ford, 1992). Effective person-in-context functioning is arguably the single most important ingredient in successful career development across the lifespan. Effective functioning is defined in MST in terms of two concepts that have substantial face validity in career development theory and practice, namely, achievement and competence. M. E. Ford (1992) suggested that when behaviour is examined at the situational level of analysis, effective functioning is, in fact, achievement, that is, "the attainment of a personally or socially valued goal in a particular context" (p. 66). At the personality level of analysis, however, effective functioning is defined as competence, that is, "the attainment of relevant goals in specified environments using appropriate means and resulting in positive developmental outcomes" (p. 67). Achievement and competence reflect goal satisfaction with the former being constrained to a particular context and time (i.e., an episode) and the latter reflecting a course of achievement across contexts and time within a particular life domain (e.g., work, family, and leisure). For example, a person may meet their sales quota for a particular month but be considered an incompetent salesperson given his/her history of ongoing failure to do so. Moreover, the distinction suggests that achievement is the pathway to competence; a worker cannot become competent in the absence of a series of achievements.

Again, it is noteworthy that terminology such as "particular context" and "specified environments" is included in the definitions of competence and achievement, indicating that these are not to be viewed as generalised traits that cut across all life domains (an error that is unfortunately common in career interventions). Experienced career counsellors know that competence and achievement must always be addressed with reference to the smaller and larger contexts within which a given person is operating. This underscores the importance of employing a comprehensive theoretical and conceptual framework that explicitly acknowledges and accounts for the person-in-context as the preferred unit of analysis.

Motivation is identified as one of the critical elements that influence achievement and competence. M. E. Ford (1992) asserted that motivation springs from the interaction of emotions, goals, and personal agency beliefs. Emotions serve as a force promoting or inhibiting behaviour, goals channel that energy into behaviour aimed to achieve a desired endpoint, and personal agency beliefs shape our confidence in achieving our goals. MST (M. E. Ford, 1992) addressed the difficulty of jointly considering person and context via the construct of personal agency beliefs (PAB), which consist of *capability beliefs* and *context beliefs*. Capability beliefs are judgments individuals make concerning whether they have the skills needed to achieve a particular goal or set of goals (i.e., to function effectively), while context beliefs represent individuals' judgments regarding whether and to what extent the environment is supportive of their efforts to achieve their goal(s). It should be noted that capability beliefs, as defined in MST, are similar to Bandura's (1977, 1982) construct of self-efficacy expectations, whose relevance for career development has been convincingly demonstrated starting with the pioneering work of Hackett and Betz (1981). M. E. Ford (1992, p. 128) has argued, however, that capability beliefs, context beliefs and PAB are

preferable for three reasons. First, capability beliefs can reflect beliefs pertaining to many aspects of the self presumably involved in goal pursuit and attainment and the propositional and conceptual elements of these aspects are well articulated in DST. For example, a person may believe that they possess the motor skills necessary to achieve a goal but lack the emotional energy. DST not only includes an elaborate discussion on the nature and operation of motor and arousal functions, but also how the two directly and indirectly influence each other. Although social learning theory has been enhanced to broaden the capacities considered when estimating one's capability to achieve a goal, the conceptual and propositional models of these capacities are far narrower and less refined than the propositional model offered by DST. Second, PABs can include goals associated with many different aspects of the self (including self development and enhancement) and tasks pursued in the environment while the self-efficacy construct tends to focus on tasks. Finally, the *joint* contribution of capability and context beliefs in the form of PABs offers a powerful means for understanding motivational patterns of individuals in context as they relate to their goals in life and in career. General self-efficacy formulations include verbiage about context beliefs but rarely operationalise them (M. E. Ford, 1992). Recent advances in social cognitive career theory (Lent et al., 2001, 2005; Lent, Hackett, & Brown, 1999) and some empirical research (Ali & McWhirter, 2006; Creed, Patton, & Bartrum, 2004; Lindley, 2005) suggest that self-efficacy and beliefs about the context independently predict career outcomes, which suggests that capability and context beliefs need to be jointly considered. Capability beliefs, context beliefs, and their interaction in the form of PABs is, therefore, a promising construct that is distinguished from other similar constructs in terms of its congruence with the person-in-context unit of analysis.

Some illustrations may be helpful. Take someone who has very favourable context beliefs and strong capability beliefs. M. E. Ford (1992, p. 134) would characterise the resulting motivational pattern as "robust," but corresponding negative context- and weak capability beliefs would result in a "hopeless" pattern. More complex patterns also occur very frequently and can also be labelled. For example, a "fragile" pattern would be one defined by positive context beliefs and weak capability beliefs; a "discouraged" pattern would be defined by negative context beliefs and moderate capability beliefs, and a "vulnerable" pattern would be defined by moderate context beliefs and moderate capability beliefs. In each of these examples, the individual's judgment about having the requisite skill needed to function effectively (capability beliefs) represents only one of the two key ingredients that determine the resulting motivational pattern. Equally important is the person's assessment of whether the kind of responsive environment needed for effective functioning is also present.

This typological approach may be useful for career practitioners as they aim to characterise their clients' presenting concerns and match them to established interventions. A client with a "robust" motivational pattern clearly would benefit from a counsellor who acted as a career facilitator while a "discouraged" or "self doubting" client may benefit from the counsellor adopting a coaching approach.

Implications of Developmental-Contextual Approaches for Career Guidance

Developmental contextualism, Developmental Systems Theory, Motivational Systems Theory, and a host of other conceptualisations frequently referred to as Action Theory (e.g., Baltes, 1997; Brandtstädter, 1998; Heckhausen & Schulz, 1995; Valach, Young, & Lynam, 2002) share (to varying degrees) a number of features that have important implications for career guidance. They may be summarised as follows.

Career development is a lifelong process that is part of human development in general. It is inextricably intertwined with cognitive and social development, with biological development, the development of self and identity, and all other aspects of development which is made manifest in a bio-psycho-social repertoire. The antecedents of adult careers emerge during early childhood (Hartung, Porfeli, & Vondracek, 2005) when children begin to explore the world of work vicariously through their parents' experiences and exposure to media-based work representations (Patton & Porfeli, in press). Based upon an extensive review of the literature, these antecedents include career exploration, awareness, interests, adaptability, expectations and aspirations (Hartung et al., 2005). On the other end of the career lifespan, the idea of disengagement from work at retirement is progressively losing credence in first-world labour forces today (Porfeli & Vondracek, in press). The widespread establishment of employer- and state-sponsored retirement systems in first world economies led to one's work life ending at a preordained retirement age that was determined on the basis of population-level life expectancy and productivity estimates. Substantial gains in public health coupled with substantial decreases in the health risks associated with work over the past several decades have increased the life expectancy and abated the historical decline seen in the aging work force. Moreover, the viability of employer- and state-sponsored retirement systems has, for a variety of reasons, been threatened to the point of extinction in the US. The confluence of these two tides has disrupted the normative transition to retirement for many workers and caused the term to take on a relative meaning. Retirement may now represent the cessation of work, the transition to a new career, the transition to a part-time job, or the transition to a new unpaid vocation (e.g., volunteer work).

Career development cannot be fully understood without placing the developing individual in context (Vondracek et al., 1986). One's contexts are defined by physical, social, and temporal parameters. Relevant contexts include the full compliment of contexts described by Bronfenbrenner (1979) in his ecology of human development and range from the proximal context of the family of origin to the macro-contexts of the labour market and global economic conditions. How individuals regulate their complex relationships with the multiple historical, current, and anticipated contexts that affect them has been identified as a key problem of developmental science (D. H. Ford, 1987; Ford & Lerner, 1992; Lerner et al., 2005), and Baltes' model of Selection, Optimisation, and Compensation (SOC) represents a notable effort to elucidate the processes by which person-context relations occur (Baltes &

Baltes, 1990; Baltes, Lindenberger, & Staudinger, 1998). DST more fully accounts for how the past, present, and future influence the person-in-context by asserting that what people anticipate is as influential as what they are experiencing and have experienced.

Developmental-contextual approaches reflect an optimistic view of human potential and the ability of individuals to shape their own development by selecting and shaping the contexts within which they operate, and by making choices that optimize their chances of living rewarding and successful lives. Individuals are active contributors to their own (career) development via their behaviours (actions), which affect their multiple contexts. Those, in turn, provide feedback based on the individual's behaviours that result in alterations in the individual's ideas about context and self and thus in development. We originally referred to this as "dynamic interaction" (Vondracek et al., 1986) to reflect the mutual impact of individual on context and context on individual.

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