

Contextual Supports and Barriers to Career Choice: A Social Cognitive Analysis

Robert W. Lent
University of Maryland

Steven D. Brown
Loyola University Chicago

Gail Hackett
Arizona State University

Social cognitive career theory (SCCT; R. W. Lent, S. D. Brown, & G. Hackett, 1994) emphasizes cognitive-person variables that enable people to influence their own career development, as well as extra-person (e.g., contextual) variables that enhance or constrain personal agency. Although the theory has yielded a steady stream of inquiry and practical applications, relatively little of this work has examined SCCT's contextual variables or hypotheses. In this article, several avenues for stimulating study of the contextual aspects of career behavior are considered. In particular, the authors (a) examine "career barriers," a conceptually relevant construct, from the perspective of SCCT; (b) advocate study of contextual supports as well as barriers; and (c) propose additional context-focused research and practice directions derived from SCCT.

Social cognitive career theory (SCCT) represents a relatively new effort to understand the processes through which people form interests, make choices, and achieve varying levels of success in educational and occupational pursuits (Lent, Brown, & Hackett, 1994). Anchored in Bandura's (1986) general social cognitive theory, SCCT focuses on several cognitive-person variables (e.g., self-efficacy, outcome expectations, and goals), and on how these variables interact with other aspects of the person and his or her environment (e.g., gender, ethnicity, social supports, and barriers) to help shape the course of career development. Although the theory has stimulated much research and practical activity (e.g., see Brown & Lent, 1996; Lent, Brown, & Hackett, 1996; Swanson & Gore, in press), most of this work has focused on SCCT's cognitive-person variables alone, in isolation from important environmental (e.g., social, cultural, and economic) variables that are assumed to influence both the cognitive-person variables and other aspects of career behavior.

Recent research on barriers to career development, or career barriers, is clearly relevant to SCCT's environmental hypotheses. Reviews of this literature have examined the

conceptual and measurement status of the barriers construct, and have discussed ways in which SCCT may be used as a framework for studying and modifying barrier effects (Albert & Luzzo, 1999; Swanson, Daniels, & Tokar, 1996; Swanson & Woitke, 1997). In this article, we consider SCCT's account of environmental effects in light of research on career barriers, and attempt to build stronger linkages between these two areas of inquiry. We begin by summarizing SCCT's conceptual statements about the interplay among environmental and person variables in the career choice process. We then briefly critique the recent literature on career barriers from the vantage point of social cognitive theory. Finally, we suggest several areas in which SCCT's analysis of environmental effects may be clarified and elaborated. Our critique and conceptual refinements are intended to stimulate further context-sensitive research and intervention efforts derived from SCCT.

SCCT View of Environmental Effects

Lent et al. (1994) partitioned SCCT into two complementary levels of theoretical analysis. The first level presented cognitive-person variables (self-efficacy, outcome expectations, personal goals) that enable people to exercise agency (i.e., personal control) within their own career development. The second level of analysis considered the paths through which several additional sets of variables—such as physical attributes (e.g., sex and race), features of the environment, and particular learning experiences—influence career-related interests and choice behavior. Drawing on general social cognitive theory assumptions (Bandura, 1986), Lent et al. (1994) hypothesized that person, environment, and behavior variables affect one another through complex, reciprocal linkages. In this section, we briefly revisit SCCT's conceptualization of environmental variables, highlighting their subjective versus objective features, their temporal

Robert W. Lent, Department of Counseling and Personnel Services, University of Maryland; Steven D. Brown, Department of Leadership, Foundations, and Counseling Psychology, Loyola University Chicago; Gail Hackett, Division of Psychology in Education, Arizona State University.

An earlier version of this article was presented as part of the symposium, "Social Cognitive Theory's Extension to Counseling Psychology: Three Domains" (L. M. Larson, Chair), at the 106th Annual Convention of the American Psychological Association, San Francisco, August 18, 1998.

Correspondence concerning this article should be addressed to Robert W. Lent, Department of Counseling and Personnel Services, University of Maryland, College Park, Maryland 20742. Electronic mail may be sent to RL95@umail.umd.edu.

nature, and their presumed causal paths relative to career behavior.

Objective and Perceived Aspects of the Environment

According to SCCT, career development is influenced both by objective and perceived environmental factors. Examples of objective factors include the quality of the educational experiences to which one has been exposed and the financial support available to one for pursuing particular training options. Such objective factors can potentially affect one's career development, whether or not one specifically apprehends their influence. However, the effect of a particular objective factor often depends at least partly on the manner in which the individual appraises and responds to it (Vondracek, Lerner, & Schulenberg, 1986). Hence, in SCCT people are not seen as mere passive repositories of past or present environmental influences. They can certainly be affected adversely or beneficially by events that are beyond their control or awareness; yet, how individuals construe the environment and themselves also affords the potential for personal agency in one's career development.

SCCT's conceptualization of the subjective psychological environment is adapted from Astin's (1984) notion of the perceived "opportunity structure" and from Vondracek et al.'s (1986) "contextual affordance" construct. Both the Astin and Vondracek et al. positions emphasize that the opportunities, resources, barriers, or affordances presented by a particular environmental variable may be subject to individual interpretation. Thus, these positions suggest that it is important to attend to the person's active phenomenological role in processing both positive and negative environmental influences. (We will hereafter use the terms *environmental* and *contextual* interchangeably to refer to career-relevant influences that exist, or are perceived to exist, in the milieu surrounding the person.)

A focus on the perceived environment presents several theoretical and practical challenges. For instance, on the one hand, such a focus seems necessary to account for individual differences in response to similar environmental conditions. Yet, on the other hand, if taken too far, assumptions about contextual effects existing (only) in people's minds can lead to attributions that blame the victim (or, conversely, credit the beneficiary) of received environmental conditions. Many people have encountered persons who achieved great career and life successes despite the environmental odds against them; similarly, there are many stories of people who have failed in life's pursuits despite having every seeming environmental advantage. If environmental conditions like material wealth were the only important consideration, all poor kids would fail and all rich ones would succeed. Yet obviously life is not so simple. Career development theorists, therefore, need to consider multiple, potentially compensatory aspects of the objective environment—such as economic conditions, parental behaviors, and peer influences (cf. Arbona, in press)—as well as how individuals make sense of, and respond to, what their environment provides.

Distal and Contemporary Environmental Influences

In addition to the objective and perceived aspects of the environment, SCCT highlights the temporal period during which particular environmental influences occur. For conceptual convenience, environmental variables are divided into two basic categories according to their relative proximity to the career choice-making process. The first category (shown at the lower left part of Figure 1) contains *distal*, background contextual factors that affect the learning experiences through which career-relevant self-efficacy and outcome expectations develop. Examples include the types of career role models to which one is exposed and the sort of support or discouragement one receives for engaging in particular

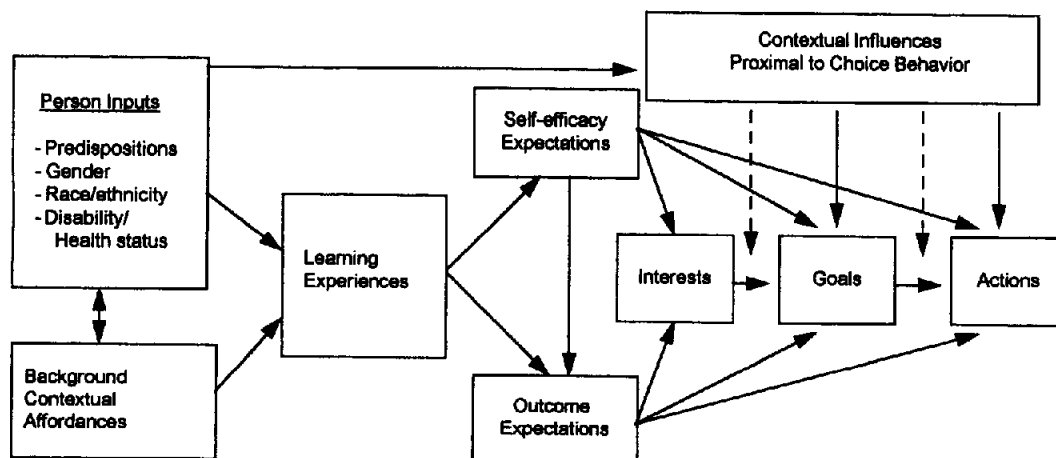


Figure 1. Model of social cognitive influences on career choice behavior. Note that dotted paths indicate moderator effects on interest-goal and goal-action relations. From "Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance" [Monograph], by R. W. Lent, S. D. Brown, and G. Hackett, 1994, *Journal of Vocational Behavior*, 45, p. 93. Copyright 1994 by R. W. Lent, S. D. Brown, and G. Hackett. Reprinted with permission.

academic or extracurricular activities. The second, *proximal*, category of contextual influences is particularly important during active phases of educational or career decision making (see the upper right part of Figure 1). Examples of proximal influences include the adequacy of one's informal career contacts or exposure to discriminatory hiring practices. Figure 2 summarizes the primary ways in which distal versus proximal contextual factors (or affordances) are hypothesized to affect the career choice process.

Direct and Moderating Effects of Environmental Variables

According to SCCT, proximal environmental variables can moderate and directly affect the processes by which people make and implement career-relevant choices. Specifically, proximal (and anticipated) contextual factors may *moderate* the relations of (a) interests to choice goals, and (b) goals to actions. As shown in Figure 1, one's primary interests are likely to prompt corresponding goals (e.g., social interests lead to intentions to pursue a social-type career); goals, in turn, promote choice-relevant actions (e.g., applying for a training program related to one's goal). However, contextual influences help determine how these processes unfold. It is posited that people are less likely to translate their career interests into goals, and their goals into actions, when they perceive their efforts to be impeded by adverse environmental factors (e.g., insurmountable barriers or inadequate support systems). Conversely, the perception of beneficial environmental factors (e.g., ample support, few barriers) is predicted to facilitate the process of translating one's interests into goals and goals into actions.

In addition to their moderating effect on the choice process, contextual factors may assert a *direct* influence on choice making or implementation. For example, particularly in collectivist cultures and subcultures, the wishes of

influential others may hold sway over the individual's own personal career preferences. In a recent test of this hypothesis within a sample of Asian American college students, two contextual variables (family involvement and acculturation) and self-efficacy were stronger predictors of an index of career choice than were personal interests (Tang, Fouad, & Smith, 1999). In individualistic cultures as well, career interests or goals often need to be subjugated to economic or other environmental presses. Thus, SCCT posits that, when confronted by such presses, an individual's choice behavior may be guided less by personal interests than by other environmental and person factors (e.g., availability of acceptable if nonideal options, coupled with self-efficacy and outcome expectations related to these options).

Career Barriers: A Complementary Construct

Unfortunately, owing partly to a lack of theory-derived measures for assessing contextual factors, SCCT's environmental hypotheses have generally received limited inquiry to this point. However, career barriers, a construct that is conceptually related to SCCT, has received a surge of renewed interest among researchers in recent years (see Albert & Luzzo, 1999; McWhirter, Torres, & Rasheed, 1998; Swanson et al., 1996; Swanson & Woitke, 1997). In this section, we examine the recent career barriers literature from the perspective of SCCT, considering ways in which these two lines of inquiry may be strengthened through their closer linkage.

Swanson and her colleagues have documented the evolution of research on career-related barriers, noting that this construct emerged largely from the literature on women's career development (Swanson et al., 1996; Swanson & Woitke, 1997). In particular, barriers were seen as a mechanism for explaining the restriction of women's career aspirations and the oft-noted gaps between their abilities and

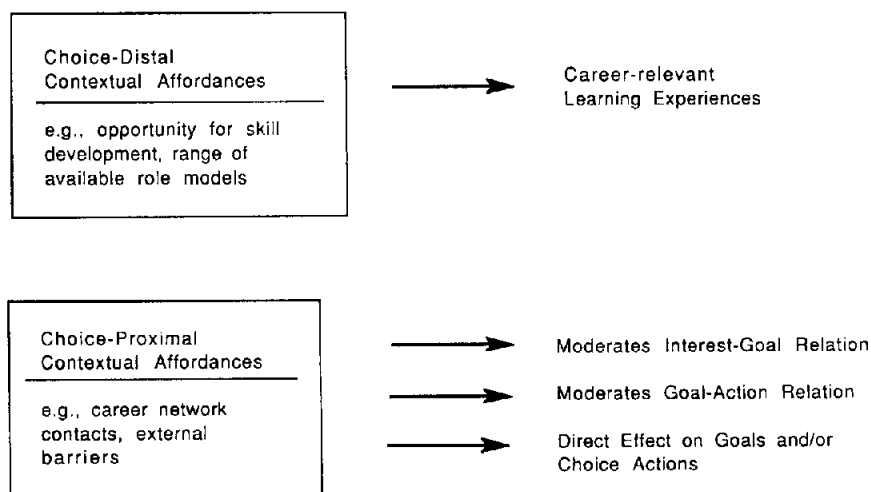


Figure 2. Hypothesized effects of distal versus proximal contextual factors (or affordances) on the career choice process. Copyright 1998 by R. W. Lent, S. D. Brown, and G. Hackett. Printed with permission.

their achievements. The barrier construct has subsequently been extended to the study of men's and racial-ethnic minority group members' career development. Although several theorists have considered the role of barriers in career development (e.g., Farmer, 1976) and research on career barriers has increased noticeably in recent years, Swanson et al. (1996) have suggested that inquiry on barriers has been beset by two major problems:

- (a) The barriers construct has lacked a firm theoretical framework into which research findings could be incorporated and from which subsequent research hypotheses could be derived, and (b) most of the empirical research has been conducted with measures that have been idiosyncratic to the investigators' particular studies. (p. 220)

Our reading of this literature led us to concur with Swanson et al.'s assessment, and we attempt to build on their thoughtful critique of barriers research by highlighting a select group of topics that may engender refinements in the conceptualization and assessment of career barriers.

Barriers as Intrapersonal Versus Environmental Impediments

Swanson and Witke (1997) defined barriers as "events or conditions, either within the person or in his or her environment, that make career progress difficult" (p. 434). This definition derives from the intuitively appealing notion that barriers represent *both* intrapersonal (e.g., self-concept) and environmental (e.g., workplace discrimination) factors that hinder career development (Crites, 1969). Most career barrier researchers have implicitly adopted this omnibus definition and, consequently, have often treated intrapersonal and contextual barriers as conceptually equivalent (e.g., Luzzo, 1993; McWhirter, 1997). In addition, career development researchers have typically studied the effects of perceived, as opposed to objectively defined, barriers (cf. Swanson & Witke, 1997).

One justification for classifying all types of adverse events and conditions—intrapersonal and contextual—as career barriers is that such influences often occur together and can be intimately intertwined (Swanson & Tokar, 1991a; Swanson & Witke, 1997). For example, research participants often list a combination of person and contextual hindrances when asked to indicate the career barriers they have encountered (e.g., Lent et al., 1998), and researchers' efforts to classify particular participant-generated barriers into internal versus external categories can require a bit of interpretation (Swanson & Tokar, 1991a; Swanson & Witke, 1997). Swanson and Witke (1997) have noted that external or environmental barriers are particularly difficult to classify "primarily because the locus of the barrier often could reside either in the person or in the environment" (p. 433).

Although the decision to combine both person and contextual hindrances under the larger rubric of career barriers is understandable, we believe that such a nondifferentiated view of barriers may muddy the conceptual waters, obscuring the potentially differing paths through which different factors impede career development. From the perspective of SCCT, it is advantageous to distinguish,

conceptually, between the person (e.g., low self-efficacy) and contextual (e.g., disapproval of significant others) factors that hamper career progress. Although person and contextual variables are seen as being in continual, reciprocal interplay over the course of an individual's career development (e.g., environmental conditions help to shape self-efficacy beliefs, which, in turn, affect one's response to environmental challenges), this does not mean that person and contextual variables represent a single, monolithic source of influence.

Efforts to distinguish person and contextual factors that constrain career development may have several theoretical and practical benefits, such as helping to (a) clarify the processes through which contextual barriers, such as bias in opportunities for skill development, become internalized; (b) suggest novel counseling and developmental strategies for coping with, or compensating for, environmentally imposed barriers; and (c) identify differing intervention targets and roles for counselors (e.g., social advocacy, system-level change), depending on the person or contextual location at which a given negative influence is seen as occurring. In SCCT, *barriers* generally refers to negative *contextual* influences, with the understanding that contextual barriers are often functionally related to, yet conceptually distinct from, detrimental person factors (e.g., adverse learning conditions can diminish self-efficacy).

Barriers as Generalized Versus Task-Specific Variables

Research on career barriers has frequently sidestepped the somewhat subtle, but crucial question: Barriers to what? That is, what is a given barrier deterring an individual from doing? Obviously, barriers may impede virtually any aspect of *career progress* (the term used in Swanson & Witke's, 1997, definition of career barriers). Yet, for theoretical and practical reasons, it seems important to consider barriers in relation to the more specific developmental tasks that comprise career progress, such as career choice formulation, choice implementation, or career advancement.

Although certain barriers may be generalized or pervasive (e.g., negative family influences), the presence and effects of most barriers are likely to depend both on the developmental task facing the individual and on the specific choice options he or she is entertaining. Consider a hypothetical college student who chooses to major in art history, and promptly discovers that his or her parents vehemently oppose this choice, threatening to remove their monetary support. The social and financial barriers with which this student must contend are not generalized to all aspects of his or her career progress, but rather are linked to a particular developmental task (major choice) and choice option (art history).

Swanson and Tokar (1991a) found that college students listed somewhat different barriers, depending on the nature of the developmental task (e.g., "choosing a major or career" versus "getting the first job"). Nevertheless, most barriers research, using either open-ended questions (e.g., Luzzo, 1993) or structured questionnaires (Swanson & Tokar, 1991b), has not specified either the developmental

task or the content of the option that is being thwarted (e.g., students are asked to list barriers they have overcome or those they expect to encounter in the future in relation to their career development generally). This omission may be based on implicit uniformity and trait assumptions about perceived barriers—namely, that barriers are generic and ever-present, transcending particular choice domains and developmental considerations (e.g., an individual would experience the same barrier regardless of the developmental tasks or choice options he or she faces).

In its current form, SCCT deals primarily with contextual variables related to making (formulating) and implementing (pursuing) career choices (Lent et al., 1994). These phases of the choice process are distinguished, in part, because different environmental conditions may become salient in formulating a career goal than in actually pursuing the goal. For example, goal pursuit may expose the individual to monetary problems or discrimination that he or she had not anticipated when setting the goal. Moreover, barriers are assumed to be domain and context specific. Because most adults either must work or choose to do so, barriers do not usually prevent their pursuit of all options. Rather, certain barriers typically constrain pursuit of some courses of action but allow for the pursuit of other options or back-up plans. It may, therefore, be useful to consider such questions as, what types of barriers, encountered by which persons and at which stage of the choice process, will have what kinds of impact? Although admittedly complex, this view reflects the considerable variation that exists with respect to whether, how, and when particular barriers are experienced, and with what effects.

Locating Barriers Along a Temporal Dimension

Along with an effort to “contextualize” barriers (e.g., to consider the specific phase of the choice process and the nature of the options facing the individual), a social cognitive analysis would also “temporalize” barriers by differentiating between barriers encountered in the past, those hampering the person in the present, and those anticipated in the future. As we noted previously, Lent et al.’s (1994) initial theoretical statement divided contextual factors into two broad categories, based on their relative proximity to active career choice-making:

(a) more distal, background influences that precede and help shape interests and self-cognitions (e.g., differential opportunities for task and role model exposure; emotional and financial support for engaging in particular activities; cultural and gender role socialization processes), and (b) proximal influences that come into play at critical choice junctures (e.g., personal career network contacts; structural barriers, such as discriminatory hiring practices.) (p. 107)

Within this scheme, historically distal versus contemporary (or proximal) contextual factors serve somewhat differing functions. The distal factors affect the learning experiences through which personal interests and other influences on career choice are forged, whereas choice-proximal factors help form the opportunity structure within which career plans are made and implemented.

Career barriers research has generally explored barriers at differing points along the temporal continuum. For example, Swanson and Tokar’s (1991a) thought-listing study presented participants with several different scenarios (e.g., barriers to “choosing a major or career,” to “getting the first job,” and to “advancing in career”), which, for their undergraduate participants, represented present and future career tasks. Luzzo’s (1993, 1995, 1996; Luzzo & Hutcheson, 1996) thought-listing task asked students to list separately the past barriers they have encountered and the future barriers they expect to face. McWhirter (1997) and her colleagues (McWhirter, Hackett, & Bandalos, 1998; McWhirter & Luzzo, 1996) assessed the barriers that high school students anticipated in relation to future jobs and college attendance.

These studies have assessed barriers within somewhat differing time frames, although the emphasis has been on relatively nonspecific beliefs about future barriers. For example, the Career Barriers Inventory (CBI) has participants rate the degree to which a number of potential barriers “would hinder your career progress,” without specifying when the barriers might be encountered (although the approximate time frame is implicit in some items; Swanson & Daniels, 1995). By contrast, there has been relatively little effort to study either the distal contextual barriers that precede and help shape interests and initial career choices, or the effects of proximal barriers on the pursuit of chosen options (e.g., Schaefer, Epperson, & Nauta, 1997)—yet, both of these temporal locations are central to SCCT’s environmental hypotheses. The study of distal and proximal barriers might usefully be approached from several methodological directions, such as qualitative interviews and longitudinal research that tracks the emergence of particular barriers, and people’s response to them, over time. In a later section, we provide some examples of recent studies of proximal barriers.

Barrier Perceptions and Related Constructs

Just what is being measured by the various structured inventories (McWhirter, 1997; Swanson et al., 1996), thought-listing tasks (Luzzo, 1993; Swanson & Tokar, 1991a), and interviews (Lent et al., 1998) that have been used to assess career barriers? The answer to this question bears importantly on the construct validity of career barriers and has important implications for theories, such as SCCT, within which the barrier construct resides.

At first blush, the above question may appear naive. Barriers measures, regardless of their specific format, seem to have obvious face validity. They generally ask research participants to indicate the barriers they have experienced (Luzzo, 1993) or to rate the potential impact of various adverse conditions on their future career behavior (Swanson et al., 1996). In responding to such tasks, one might suspect that research participants simply supply their perceptions of past or future barriers. However, given that barrier perceptions represent, at least in part, people’s phenomenological

constructions of reality, there is potential for such perceptions to be affected by certain qualities of the perceiver. In essence, barrier perception measures can engage beliefs about the self or environment that extend beyond the mere presence or absence of particular barriers. We, therefore, briefly consider career barriers vis-à-vis a few other potentially relevant theoretical constructs: coping efficacy, dispositional affect, and outcome expectations.

Coping efficacy. In general, career barrier assessment devices may confound two conceptually distinct constructs: barrier perceptions and coping efficacy. Barrier perceptions have been operationally defined by inventories that ask participants to rate the likelihood that they will encounter certain conditions that most people would find as aversive (McWhirter, 1997) or by having them rate how much these conditions would hinder their career progress, should the conditions actually materialize (Swanson et al., 1996). It is possible that people's responses to both of these rating tasks, and especially the latter, are influenced by their sense of coping efficacy, that is, beliefs about their ability to manage or negotiate the obstacles that appear on the inventories (cf. Bandura, 1986, 1997; Hackett & Byars, 1996; Lent et al., 1994). Swanson et al. (1996) have also considered this conceptual overlap between coping efficacy and barrier hindrance ratings.

To clarify, it is unlikely that people have "immaculate conceptions" about barriers in their environments. Instead, their prospective expectations about encountering particular hurdles are likely to reflect, in part, barriers they have personally experienced, those they have learned about vicariously, and beliefs about whether they could cope successfully with these hurdles. Presumably, if one perceives oneself as being able to cope effectively with a given event or environmental condition, one would be less likely to define it as a barrier. Hence, asking how much a particular barrier would hinder or disrupt one's career progress may be confounding perceptions of the barrier with the individual's confidence in his or her ability to cope with it. Although this confound is apparent in the CBI's "hindrance" format (Swanson et al., 1996), it is also likely to be a consideration, albeit more subtle, in barrier "likelihood" formats (McWhirter, 1997) or, for that matter, in thought-listing or interview assessments (e.g., Luzzo, 1993; Lent et al., 1998).

This critique suggests that it may be difficult to disentangle barrier perceptions from coping efficacy beliefs. One possible solution is to develop separate measures of coping efficacy, for use along with barrier perception measures. Examining the effects of barrier perceptions on career choice or implementation, while controlling for coping efficacy, might offer a clearer understanding of barrier perception-criterion relations. It is noteworthy that McWhirter (1997) developed a generalized measure of coping efficacy as part of her Perception of Barriers instrument, finding that this measure was negatively related to barrier perceptions. McWhirter and Luzzo (1996) also developed a Coping With Barriers (coping efficacy) scale. However, research has yet to examine the potentially complex relations among barrier perceptions and coping efficacy beliefs relative to particular choice outcomes (cf. Albert & Luzzo, 1999).

The emergence of separate coping efficacy measures is a welcome sign, from the perspective of SCCT. Such measures can be used to address research questions that are both theoretically and practically important. For example, are barriers less likely to be perceived—or, when perceived, are they less likely to be harmful to choice behavior—under conditions of high versus low coping efficacy? Later, we suggest some additional theory-derived research questions involving coping efficacy that warrant empirical scrutiny.

Dispositional affect. Another variable that needs to be distinguished from barrier perceptions is dispositional affect. In outlining SCCT, Lent et al. (1994) suggested that tendencies to experience negative or positive affect might influence the way in which people process efficacy-relevant information. For example, those inclined toward high negative affect may tend to discount their success experiences and, thereby, fail to profit from what would ordinarily be an efficacy-enhancing event. Likewise, it is possible that affective tendencies may color perceptions of environmental conditions. For example, high negative-affect experiencers may be likely to perceive more barriers and fewer supports than do those who experience low negative affect or high positive affect. Dispositional affect could also conceivably influence appraisals of coping efficacy, for example, with high negative affect leading to diminished beliefs about one's ability to cope with particular barriers. Although speculative, such possibilities suggest the value of studying dispositional affect both in relation to barrier perceptions and coping efficacy.

Outcome expectations. In their theoretical discussion of career barriers, Swanson et al. (1996) astutely noted that SCCT is unclear about how barriers differ from outcome expectations. The latter refers to personal beliefs about the consequences of performing particular behaviors ("if I do this, what will happen?"). In an example intended to illustrate the differing effects of self-efficacy and outcome expectations, Lent et al. (1994) had suggested that a person with high self-efficacy for mathematics might choose to avoid science-intensive career fields "if she or he anticipates negative outcomes (e.g., non-support of significant others, work/family conflict) to attend such options" (p. 84). Swanson et al. (1996) observed that the examples of negative outcome expectations we had used resembled certain barrier scales on the CBI. They further suggested that our example implies that "barriers either influence one's outcome expectations or may be considered as synonymous with outcome expectations" (p. 239).

We think that Swanson et al.'s (1996) argument is very well-taken. In essence, there is a need to clarify the nature of the relationship between barriers and outcome expectations. Are they merely different names for the same latent construct? Or are they different, with one influencing the other? We return to these questions in a later section, but offer a brief preview of our response here: Barriers may usefully be conceived and operationalized as a particular form of outcome expectation related to one's perception of the environment.

Career Supports: A Missing Environmental Ingredient

From an SCCT perspective, one class of variables has received far less study than it deserves within research on contextual influences on career behavior: environmentally supportive conditions or resources. Supports or support systems are conceived within SCCT as environmental variables that can facilitate the formation and pursuit of individuals' career choices. Such supportive or enabling environmental conditions have long been recognized in the career development literature (e.g., Tinsley & Faunce, 1980), but have not often captured sustained research attention.

Several recent studies have examined the role of perceived support variables relative to a variety of career and academic outcomes. For example, rural adolescents' perceptions of parental support for pursuing certain Holland theme fields were predictive of their interest, self-efficacy, and valuing of these fields (Lapan, Hinkelman, Adams, & Turner, in press). Perceived support from fathers was found to relate to the educational plans and career expectations of Mexican American high school girls (McWhirter, Hackett, et al., 1998). Faculty support or encouragement has been associated with engineering students' academic performance (Hackett, Betz, Casas, & Rocha-Singh, 1992) and persistence (Schaefer et al., 1997). Supportive influences from teachers, parents, and friends were found to relate to self-reported positive academic experiences in high school (Fisher & Stafford, 1999). Several qualitative-interview studies have also explored career support dimensions in adult workers (Blustein, Phillips, Jobin-Davis, Finkelberg, & Roarke, 1997; Richie et al., 1997).

This important group of studies notwithstanding, it is understandable that contextual career support mechanisms have been underexplored relative to barriers. Interest in barriers stemmed largely from a desire to explain factors that stymie women's career development. Because the issues were framed in terms of roadblocks to the pursuit of particular career options or to the realization of personal potential, it made sense to focus on barriers. Yet such a barrier-focused purview may have also constricted research on contextual effects. If one is interested in restoring previously blocked or discarded options, it also seems essential to study those aspects of the environment—and of the individual's appraisal of, and response to, the environment—that can *facilitate* career choice and development. Hence, complementing the focus on barriers, one might pose such questions as, what contextual conditions *support* women's choice of nontraditional careers? What conditions *enable* members of particular racial-ethnic minority groups to pursue certain major or career options in the face of deterring conditions?

Answers to such questions may have useful implications for counseling and preventive interventions. For example, although a focus on barriers suggests the design of barrier-coping strategies (Brown & Lent, 1996), a spotlight on facilitative conditions would suggest complementary, support-enhancing efforts, such as helping individuals (a) to marshal the contextual assets that are available to them

(e.g., identifying role models or funding sources in one's existing support system), or (b) to shift from, or alter, their environments in order to access currently unavailable resources (e.g., developing new peer support systems). This change in perspective, from deficits (barriers) to assets (supports), is consistent with the long-held intervention philosophy of counseling psychology (Super, 1955).

Study of contextual supports would add a few new theoretical conundrums, such as the question of how supports and barriers interrelate. Betz's (1989) important treatise on the "null environment" implies that support is not simply the absence of barriers, or leaving the individual alone. In other words, support is not a neutral condition; rather, it involves factors that actively promote career behavior. Thus, one might infer that supports and barriers represent largely unique constructs. For example, an individual may recognize distinct barriers (e.g., family disapproval, limited savings) and supports (e.g., peer approval, access to scholarship funding) relative to a given choice option. Alternatively, one might contend that support and barrier perceptions are inversely related or reflect opposite poles on a positive-negative continuum.

Although there is little research in the career literature addressing this issue, one recent interview study found that college students listed somewhat different, yet overlapping categories of supportive and hindering influences on their choice behavior (Lent et al., 1998). For example, 68% of respondents listed financial concerns as a barrier, whereas 20% listed financial resources as a support. Access to social support and to role models were reported as supportive influences by 87% and 33%, respectively, of the sample. Absence of support or role models were not specifically mentioned as barriers, but 42% of participants cited negative social or family influences as a hindering factor. Clearly, more research is needed on the dimensionality of, and nature of the relationship between, perceived supports and barriers.

Prevalence and Impact of Barrier Perceptions

The study of career barriers raises at least two fundamental questions: Do people, in fact, perceive particular barriers to their career progress? Assuming that they do, to what extent does the presence of these barriers relate to, or affect, their choice behavior or other important outcomes?

Our reading of this small but growing literature leads us to concur with the assertion that "college students clearly do perceive the existence of barriers" (Swanson & Witke, 1997, p. 441). Likewise, high school students (males and females of different racial-ethnic groups) have been found to perceive barriers to their future college attendance and work lives (McWhirter, 1997; McWhirter, Hackett, et al., 1998), young adults have reported barriers in making the transition from school to work (Blustein et al., 1997), and highly achieving women have cited barriers to their career progress (Richie et al., 1997). Such barrier perceptions are apparent across diverse assessment formats, such as thought-listing (Luzzo, 1993, 1995, 1996; Swanson & Tokar, 1991a), interviews (Lent et al., 1998), and ratings on structured

barriers inventories (McWhirter, 1997; Swanson et al., 1996).

The evidence suggests that various groups do perceive career barriers; however, it also raises some questions about the prevalence and magnitude of barrier effects, at least in high school and college students. Swanson and Woitke (1997) noted that there are substantial individual differences in how barriers are perceived. Indeed, qualitative assessment methods reveal that certain barriers (e.g., financial) are reported by many persons, whereas others are perceived by relatively few (e.g., Lent et al., 1998; Luzzo, 1993; Swanson & Tokar, 1991a). Such methods also suggest that there is considerable variation in how many total barriers participants list, although some findings suggest that most participants report relatively few barriers. For example, Luzzo and Hutcheson (1996) found that most of their participants listed fewer than two past or anticipated barriers.

Research employing structured barriers questionnaires suggests that although some students use the full scale range, obtained mean ratings are generally fairly modest, suggesting that most participants view most potential barriers as either not terribly likely to be encountered or to pose a threat, if encountered (McWhirter, 1997; Swanson et al., 1996). Not surprisingly, racial-ethnic and male-female differences have emerged with respect to the rating of certain barriers (e.g., sex and racial discrimination; see Swanson et al., 1996) or in total numbers of barriers perceived (McWhirter & Luzzo, 1996). However, the magnitude of intergroup differences has frequently been smaller than expected, and differences have not always been in the expected direction (McWhirter, 1997; McWhirter & Luzzo, 1996; Swanson et al., 1996).

Studies exploring the relations of perceived barriers to other career variables have produced somewhat mixed findings. For example, Swanson et al. (1996) reported that CBI scales were relatively unrelated to variables such as career indecision and vocational identity in college students, although there was some evidence that gender moderated CBI-criterion relations (e.g., higher CBI-indecision correlations were found for men than for women). McWhirter, Hackett, et al. (1998) found that barrier perceptions did not explain significant variance in high school students' educational plans or career expectations. Other studies have found few or minimal statistical relations between career barriers and measures of career attitudes (Luzzo, 1996; Luzzo & Hutcheson, 1996) or job satisfaction (Blustein et al., 1997). However, Luzzo (1996, 1998) found significant, negative relations between future barrier perceptions and career decision-making self-efficacy.

Luzzo and Hutcheson (1996) also reported that barrier-criterion relations may be moderated by certain attributional style variables: students who saw career decision-making as an externally caused and uncontrollable process exhibited significant, negative correlations between future barrier perceptions and career maturity; however, those with an internal, controllable attributional style did not show such a pattern. The authors suggested that persons who feel in control of career decisional tasks are more likely to believe they can surmount occupational barriers; hence, their perception of barriers is less likely to be disruptive to their career

development. This interpretation, derived from attribution theory (Weiner, 1986), recalls our earlier discussion of coping efficacy. Indeed, there appear to be some conceptual similarities between the internal-controllable attributional style and coping efficacy—though a key difference is that the former is viewed as traitlike, whereas the latter is seen as a context-specific construct.

Summary

The foregoing review of the career barriers literature presents a mixed picture. On the one hand, students and workers do perceive barriers to their career progress; but on the other hand, barrier ratings are often found to be somewhat modest in size and have not been shown to be consistently related to important career outcome or process variables in the mostly student samples in which they have been studied. This is not to say that barriers are not consequential for many individuals. Indeed, they are likely to be especially salient for those who have been victimized by various forms of oppression. However, several conceptual and methodological issues—such as the manner in which barriers have been defined, failure to consider the context and temporal specificity of barriers, noncorrespondence between barriers and outcome criteria (in terms of content and developmental task), infrequent attention to mediating and moderating variables, understudy of nonstudent samples, and use of designs that do not explore potential causal effects of barriers—may have partly obscured the impact of perceived barriers and the mechanisms through which they affect career behavior.

Despite these considerations, recent career barriers research has constructed an important conceptual and methodological foundation for further inquiry, and the programmatic research of Swanson, McWhirter, and Luzzo and their colleagues has been particularly pivotal. In the remainder of this article, we attempt to build on this foundation, offering a modest set of suggestions for future research on career barriers and their conceptual partner, career supports. These suggestions are premised on the need to clarify or elaborate certain aspects of SCCT having relevance for the conceptualization and assessment of contextual variables.

Extending SCCT's View of the Environment

Citing a "lack of clarity and cohesiveness" in previous conceptual and empirical approaches to career barriers, Swanson et al. (1996) asserted that future barrier research might profit from "the application of an appropriate theoretical framework" (p. 221). In particular, they suggested that a theory-based approach might help to (a) identify "background factors and mechanisms" affecting the development of barrier perceptions, (b) offer hypotheses about barrier effects, and (c) organize and integrate research findings. Swanson and Woitke (1997) also noted that a theoretical framework could assist in the design of barrier-coping interventions. SCCT was cited as a "particularly promising model for understanding career-related barriers" by Swan-

son et al. (1996, p. 221), who sketched several ways in which the theory may be adapted to the study of barriers.

We agree with Swanson et al.'s (1996; Swanson & Woitke, 1997) points about the value in taking a theory-based approach to the study of barriers, and are pleased that they saw SCCT as relevant to this challenge. At the same time, their commentary and our own critique of the barriers literature suggests that several aspects of SCCT are ripe for theoretical clarification or expansion. In this section, we offer some recent thoughts about how SCCT might be further extended to the study of contextual effects on career choice behavior. In particular, we (a) revisit the relation of barriers and supports to outcome expectations, (b) consider various ecological layers within which individuals' career behavior is embedded, (c) suggest several possible roles for coping efficacy relative to barrier perceptions, and (d) ponder the phenomenological lenses through which people interpret particular environmental elements as barriers or supports.

Process Expectations and the Proximal Environment

Earlier, we discussed Swanson et al.'s (1996) observation about the conceptual overlap between perceived barriers and outcome expectations. In particular, they had noted that barriers seem to represent negative outcome expectations (e.g., a person's beliefs about receiving adverse outcomes from the environment contingent on performing particular career-related actions). Indeed, the apparent relationship between barriers and outcome expectations deserves further comment, which we hope may clarify the nature of the outcome expectations construct and offer some useful implications for conceptualizing and assessing barrier (and support) perceptions.

Bandura (1986) distinguished several classes of outcome expectations, such as the anticipation that certain physical (e.g., monetary), social (e.g., approval of significant others), or self-evaluative (e.g., self-satisfaction) outcomes will follow particular actions. These expected positive outcomes operate as potent motivators that, along with other variables (e.g., self-efficacy), help to determine whether people will undertake certain actions. Naturally, however, not all outcome expectations are positive. People may well expect that pursuit of a given course of action will produce either neutral or negative outcomes, making them less likely to choose such activities. Outcome expectations may thus be classified along several dimensions, such as their valence (positivity vs. negativity), locus (self-administered versus other-administered outcomes), or relative importance to the individual.

For the purposes of clarifying SCCT's conception of barriers, it may also be useful to add consideration of a temporal dimension along which outcome expectations may vary. In particular, outcome expectations generally reflect beliefs about a future state of affairs linked to one's taking certain prospective actions—but some consequences may be expected over the short run (i.e., proximally), whereas others may be anticipated in the more distal future. Adolescents and adults facing complex life decisions, such as career-related

choices, typically realize that long-term payoffs may entail short-term sacrifices. Envisioning the career choice process as a path leading to a given destination, it may be useful to distinguish between (a) the distal future outcomes that people expect to receive upon attaining a particular career (i.e., the ultimate payoffs that presumably help orient them toward this destination to begin with) and (b) the more proximal outcomes or conditions that they expect to encounter in their pursuit of this option (i.e., the hurdles and supports that line the path toward their destination).

Beliefs about proximal outcomes comprise a specific type of outcome expectation that might be termed "process expectations" because they include the sorts of supports and barriers that people envision encountering while in the process of pursuing a particular course of action (i.e., proximal to the career decision-making process). These process expectations are, one might expect, related to yet distinct from the sort of larger payoffs (or distal outcome expectations) that incline people toward a particular goal. For example, a person might wish to become a physician partly because he or she is attracted by the prestige and opportunity to help others that this option is perceived as offering. These anticipated payoffs constitute ultimate, distal outcome expectations. However, the individual's willingness to embark on this path will, presumably, also be affected by the contextual conditions that he or she expects to encounter enroute (e.g., "will I have enough financial or family support to make it through medical school?").

We think this proximal-process versus distal-outcome distinction is potentially important for several reasons. In particular, it acknowledges that people do not simply pursue a career because of its ultimately foreseen payoffs. Rather, they also consider the conditions they are likely to face in its pursuit (e.g., "medical school will be impossibly hard on my relationships and my bank account"), among other important factors, like self-efficacy regarding the occupation's requisite skills. Thus, two individuals with similar distal outcome expectations regarding a career in medicine may hold quite different process expectations about the proximal barriers and supports they would encounter in pursuing this goal.

Another reason for identifying process expectations as a particular form of outcome expectation is that they offer a unique way to conceptualize and assess the psychological environment surrounding the career decision-making process. That is, temporally proximal supports and barriers can be recast as process expectations about what will happen socially, financially, and so forth, in the near term if one chooses to pursue a particular career path. This recasting will, hopefully, help to clarify the conceptual relations between perceived barriers and outcome expectations (cf. Swanson et al., 1996) and also suggest some new research questions, such as whether proximal-process expectations are empirically distinct from distal-outcome expectations.

We are currently studying these process expectations to see if they, in fact, are different from distal outcome expectations and how they fare as indexes of the proximal environment in tests of SCCT's contextual hypotheses. In an initial qualitative study, Lent et al. (1998) found that

participants often cited factors such as anticipated working conditions and reinforcers (i.e., distal-outcome expectations) as reasons for selecting a particular career option; they also cited the absence of such favorable conditions, or the presence of negative ones, as bases for rejecting options they had previously considered. However, when asked about what had supported and hindered pursuit of their chosen option (i.e., proximal-process supports and barriers), they generally mentioned such factors as their current financial conditions and the responses of persons in their immediate social support systems.

In another recent study, Lent et al. (1999) administered structured measures of outcome and process expectations to college students. These measures were linked to beliefs about the outcomes (near term versus long term) that could accrue from majoring in a math or science-related field. The outcome expectations measure included positively and negatively valenced distal outcomes, such as, "getting a degree in a math or science-related field would allow me to earn a good salary." The process expectations measure contained positive/support and negative/barrier contextual conditions that students expected to encounter while in college (e.g., "receive negative comments or discouragement about your major from family members"). Preliminary findings indicate that the outcome and process variables represent relatively distinct sets of expectations. In combination with the findings of our qualitative study, these results also suggest, albeit tentatively, that distal-outcome expectations and proximal barrier/support perceptions may play somewhat different roles in the career choice process.

Parenthetically, it seems important to note that not all process expectations relate to the environment: Just as anticipated self-evaluation (e.g., self-satisfaction accruing from the ultimate achievement of one's goal) constitutes a key type of distal-outcome expectation, self-evaluative process expectations may also be an influential source of motivation, apart from the barriers and supports one imagines encountering in the environment. For instance, an individual may expect to derive a great deal of self-satisfaction from attaining proximal subgoals that lead to one's ultimate goal (e.g., being accepted to medical school enroute to becoming a physician) or from performing well at short-range milestones, such as particular courses. Such intermediate, self-evaluative expectations help to sustain one along the arduous path toward one's long-term goals (e.g., career entry).

A Concentric Model of Environmental Influences

Another potentially useful way to conceive of the environment is as a series of embedded layers, or concentric circles (see Figure 3). The person can be envisioned as residing in the innermost circle, surrounded by his or her immediate environment (e.g., family, friends, financial condition), which is, in turn, encircled by the larger societal context (e.g., institutionalized racism and macroeconomic conditions). This conception of people as embedded within a multilayered environment draws on developmental-contextualist models. Figure 3 portrays a simplified version

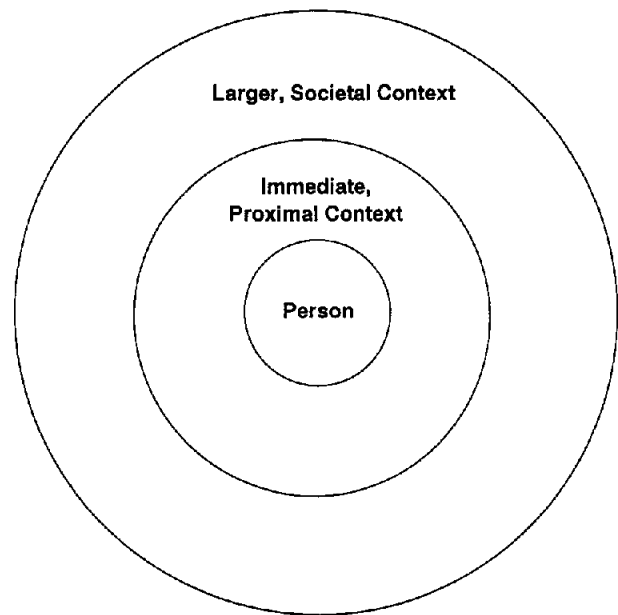


Figure 3. A concentric model of environmental layers that surround the person and form the context for his or her career behavior. Copyright 1998 by R. W. Lent, S. D. Brown, and G. Hackett. Printed with permission.

consisting of only two surrounding environmental layers; more complex models contain additional ecological structures, such as microsystems, mesosystems, exosystems, and macrosystems (Vondracek et al., 1986).

Individuals are invariably affected by aspects of the objective and perceived larger environment (i.e., the societal layer). For example, they observe the demographic features of people who are employed in different occupations and learn vicariously about other people's experiences with particular barriers. However, individuals are likely to differentiate beliefs about whether certain barriers exist in society generally from their beliefs about how such barriers will affect the self, should they be encountered directly. It is one thing to know, for example, that racism exists "out there" and another to anticipate how one will deal with it personally (K. A. Gainor, personal communication, July 29, 1998).

Certain features of the inner layer of the environment (e.g., one's immediate circle of significant others, interactions with mentors) may both serve as a filter that distills perceptions of structural barriers in the larger environment and a source of information about how one might cope with such barriers. For example, a young Black woman may perceive that racial and gender bias pose formidable obstacles to Black women's pursuit of careers in engineering, yet her access to potent role models, adequate financial resources, and significant others who share her dream may help her to persist despite the expectation of encountering such bias.

This potential buffering (or hampering) role of the inner environmental layer relative to career choice behavior is speculative but deserves empirical scrutiny. In Lent et al.'s (1998) interview study, participants were most likely to cite

inner (vs. outer) layer factors, such as immediate social and family influences, as supporting or hindering their pursuit of a preferred career option. Whether such findings will generalize to larger and more diverse samples is an open question. If such results are replicable, they might offer useful implications for developmental interventions. For example, students could be encouraged to (a) discuss common structural barriers, along with beliefs about whether such barriers will be experienced personally in relation to preferred career paths; (b) prepare coping strategies relative to high-probability barriers; and (c) identify, access, and expand career choice support systems in their immediate environments. Such strategies may offer practical, proactive ways to cope with environmental conditions that might otherwise seem abstract or entirely beyond students' personal control.

Functions of Coping Efficacy

Earlier, we implied that when confronted with adverse contextual conditions, persons with a strong sense of coping efficacy (i.e., beliefs regarding one's capabilities to negotiate particular environmental obstacles) may be more likely to persevere toward their goals than will those who view themselves as less able to manage anticipated obstacles or to assemble necessary coping resources. We also noted that career barrier assessment devices have tended to confound perceived barriers with coping efficacy, but that recent development of separate measures of barrier-coping efficacy (e.g., McWhirter & Luzzo, 1996) may enable the disentangling of barrier and coping efficacy perceptions.

Bandura (1997) has increasingly emphasized the importance of people's perceptions about their ability to handle particular barriers or obstacles. Coping efficacy may be seen as somewhat distinct from task or content-specific self-efficacy. The latter is typically assessed as perceived capability to perform particular behaviors required for success

within a given activity domain under ordinary, optimal, or unspecified performance conditions. Coping efficacy, on the other hand, reflects one's perceived capability to negotiate particular situational features that obstruct or complicate performance. For example, a pianist may feel that he has outstanding technical mastery of his instrument but doubt his ability to perform in front of large audiences; a student may believe she has strong math and science capabilities yet lack confidence at withstanding gender bias or negative peer pressure linked to pursuing a math or science-related major. Both of these examples point to the potentially complementary role of coping efficacy relative to task self-efficacy in enabling performance and persistence at complex skills under adverse conditions.

Although content-specific self-efficacy has been found to serve as a good predictor of academic persistence (e.g., Multon, Brown, & Lent, 1991), there is a need to study the unique and additive effects of coping efficacy on choice- and performance-related outcomes. Bandura (1997) has posited that

Strong belief in personal efficacy to surmount major hurdles is a different aspect of efficacy that contributes to success and level of perseverance beyond that of belief in one's capability to master particular subjects. . . . Including more facets of efficacy beliefs as they operate in a given endeavor increases their predictive power . . . (p. 424)

In addition to examining the role of coping efficacy vis-à-vis task self-efficacy, there is a need to explore the nature of the relationship between coping efficacy and barrier perceptions. We delineate several plausible theoretical scenarios involving the latter two constructs. First, as depicted in Figure 4 and suggested earlier, negative process expectations, or proximal barriers, result jointly from coping efficacy beliefs, past personal barrier experiences, and barrier information acquired through vicarious learning. The negative sign on the path between coping efficacy and

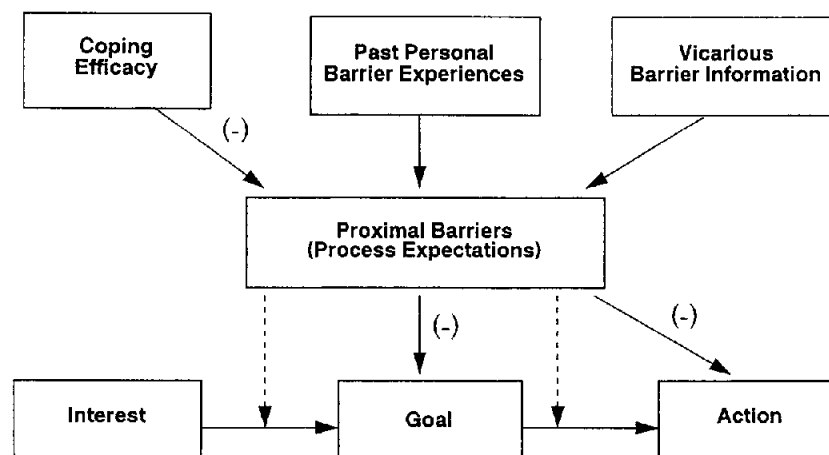


Figure 4. Theoretical antecedents and consequences of career barriers (or negative process expectations). Note that minus signs indicate negative relationships (paths without signs depict positive relationships), and dotted paths indicate moderator effects on interest-goal and goal-action relations. Copyright 1998 by R. W. Lent, S. D. Brown, and G. Hackett. Printed with permission.

barriers connotes an inverse relationship: Those with high versus low coping efficacy within a particular domain may be likely to perceive fewer barriers to their pursuit of this domain, to judge expected barriers as less imposing, and to be less vulnerable to encountered barriers (cf. Hackett & Byars, 1996). Barriers, in turn, are hypothesized to weaken choice behavior by attenuating interest-goal and goal-action relations (the dotted paths in Figure 4) and by directly prompting choice rejection.

Alternatively, it is possible that perceived barriers influence coping efficacy beliefs, which, in turn, affect choice behavior. In this scenario, coping efficacy might mediate the relationship of barrier perceptions to choice. Bulger and Mellor (1997) found support for this sequence of relationships in a study of factors that promote or inhibit female workers' participation in labor union activities. However, these authors used a measure of content-specific rather than coping efficacy.

Of course, it is also possible that coping efficacy beliefs and barrier perceptions affect one another bidirectionally. Although we suspect that the predominant directional path is from coping efficacy to barrier perceptions, there may well be circumstances in which appraisals of coping efficacy are affected by the anticipated magnitude of particular barriers. For example, where people lack direct experience in a given performance context, their coping efficacy beliefs may be informed by vicarious information about the formidability of particular barriers. Accordingly, a role model may convey the message to a child that a given career option is not attainable because of environmental barriers. The child may infer that the obstacles are too great, and that he or she does not possess sufficient ability to cope with them—unless, of course, the child has access to other sources of vicarious information, support, or personal coping experience that counteract this message.

Another theoretical possibility is that coping efficacy may moderate the relation of perceived barriers to choice behavior. That is, people may perceive barriers to their choices, but these perceptions might not hinder their behavior if they see themselves as equipped to cope with the anticipated barriers. Thus, barriers would be expected to relate more strongly and negatively to choice goals and actions (e.g., the greater the perceived barriers, the less likely one is to pursue the option) under conditions where coping efficacy is weak. The barrier-choice relation may, conversely, be smaller or nonexistent where coping efficacy is strong. The latter scenario implies that coping efficacy may buffer the adverse effects of barrier perceptions. Interestingly, Bulger and Mellor (1997) also found support for such a moderator relationship, albeit using a measure of content-specific self-efficacy.

Finally, in a variation on one of our earlier environmental hypotheses (Lent et al., 1994), it is also possible that barrier perceptions would weaken the relation of interest to choice goals and goals to actions but only where coping efficacy beliefs are weak. Conversely, under conditions of strong coping efficacy, barrier perceptions would not materially affect the translation of interests into goals, or goals into actions, because individuals would see themselves as capable of negotiating these barriers. Importantly, most of the

above possibilities imply that coping efficacy could have a salutary effect on barrier-appraisal and coping processes.

Apart from its theoretical value, research on perceived barriers and coping efficacy may have practical utility for career counseling. In one anecdotal case, Brown and Lent (1996) described the process of counseling a woman who was reluctant to choose and pursue a career option that might require her to make a geographical move, taking her away from her romantic partner. The intervention focused on helping her to consider various ways of managing this obstacle. The client ultimately developed a sophisticated plan that enabled her to implement the option that she valued most, rather than sacrificing it because of anticipated barriers. Although this case presentation did not involve formal assessment of the client's coping efficacy, it is likely that the barrier-coping intervention worked, in part, by helping to strengthen the client's belief in her coping capabilities. Such counseling possibilities warrant research attention.

Barriers as Deterrents Versus Challenges: Phenomenological Considerations

Research is also needed to explore the phenomenological aspects of supports and barriers. It is likely that "supports, opportunities, and barriers—like beauty—lie at least partly in the eye of the beholder" (Lent et al., 1994, p. 106). This suggests the possibility that depending on the perceiver's perspective a given environmental demand may be viewed alternatively as an insurmountable barrier, a minor obstacle, a character-building opportunity, or even a personal contest or challenge. Such differing constructions may prompt quite different reactions, such as rejection of a particular choice option or, conversely, added motivation to pursue it. Barrier researchers have acknowledged that research participants may hold differing views on the nature and function of barriers (e.g., Luzzo, 1995; Swanson et al., 1996). It thus seems important to study the bases for these differing perceptions, using diverse (qualitative and traditional) research methods.

SCCT might suggest that how individuals view a particular contextual factor, and whether it deters or motivates their choice behavior, may partly depend on such factors as their faith in their coping efficacy and content-specific self-efficacy (cf. Albert & Luzzo, 1999), and the strength and nature of their various process expectations. Citing "the power of efficacy belief to influence construal processes," Bandura (1997, p. 141) has suggested that those with high coping efficacy are likely to view new social realities as a challenge, whereas those with low coping efficacy may view the same events as a threat.

Likewise, we believe that certain process expectations may promote perseverance in the face of challenging conditions. Some such expectations may be relatively common, such as the belief that one's efforts will be supported by significant others. Others may be more idiosyncratic, yet no less beneficial. For example, casual observation suggests that some individuals ascribe to the belief that, by achieving a particular goal, they will be able to dispel the negative

expectations of important others (e.g., a former teacher, school counselor, or would-be employer). This "I'll show them!" or "getting even" stance can, presumably, provide a potent source of motivation and self-satisfaction. Qualitative research methods may be particularly helpful in ferreting out such personally enabling constructions.

Conclusions

We have summarized SCCT's environmental hypotheses, reviewed the career barriers literature from the perspective of SCCT, and highlighted several new directions for research on contextual influences on career choice behavior. Our critique suggests a number of ways in which barriers research may be approached. In particular, it may be valuable to (a) assess barriers in relation to specific developmental tasks and choice options, rather than as global, trait-like beliefs, (b) differentiate proximal and distal aspects of the environment, (c) consider the relation of barriers to other conceptually relevant variables, (d) ensure that barriers correspond appropriately with outcome criteria in terms of such dimensions as content and time frame, and (e) complement study of barriers with that of positive environmental conditions, or supports.

Finally, in the last part of this article, we examined aspects of SCCT that have thus far received limited inquiry, offering several theory-derived ideas for conceptualizing and assessing the psychological environment. One suggestion involves studying barriers and supports as process expectations, that is, individuals' beliefs about what they will encounter in the process of pursuing a particular option. A second suggestion involves study of how particular ecological structures facilitate or impede individuals' career choice behavior. A third focuses on exploring several possible ways in which barrier perceptions and coping efficacy may interrelate. A fourth involves study of the phenomenological processes by which individuals construe particular factors as supports or barriers. We hope these theoretical elaborations and speculations will stimulate further research on contextual supports and barriers, particularly involving more diverse samples (e.g., in terms of age, educational level, employment status and type, socioeconomic background, sexual orientation, health or disability status, and race-ethnicity) than those that have traditionally been studied.

References

- Albert, K. A., & Luzzo, D. A. (1999). The role of perceived barriers in career development: A social cognitive perspective. *Journal of Counseling and Development*, 77, 431-436.
- Arbona, C. (in press). The development of academic achievement in school aged children: Precursors of career development. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed.). New York: Wiley.
- Astin, H. S. (1984). The meaning of work in women's lives: A sociopsychological model of career choice and work behavior. *The Counseling Psychologist*, 12, 117-126.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Betz, N. E. (1989). Implications of the null environment hypothesis for women's career development and for counseling psychology. *Counseling Psychologist*, 17, 136-144.
- Blustein, D. L., Phillips, S. D., Jobin-Davis, K., Finkelberg, S. L., & Roarke, A. E. (1997). A theory-building investigation of the school-to-work transition. *Counseling Psychologist*, 25, 364-402.
- Brown, S. D., & Lent, R. W. (1996). A social cognitive framework for career choice counseling. *Career Development Quarterly*, 44, 354-366.
- Bulger, C. A., & Mellor, S. (1997). Self-efficacy as a mediator of the relationship between perceived union barriers and women's participation in union activities. *Journal of Applied Psychology*, 82, 935-944.
- Crites, J. O. (1969). *Vocational psychology*. New York: McGraw-Hill.
- Farmer, H. S. (1976). What inhibits achievement and career motivation in women? *Counseling Psychologist*, 6, 12-14.
- Fisher, T. A., & Stafford, M. E. (1999). Reliability and validity of the Career Influence Inventory: A pilot study. *Journal of Career Assessment*, 7, 187-202.
- Hackett, G., Betz, N. E., Casas, J. M., & Rocha-Singh, I. A. (1992). Gender, ethnicity, and social cognitive factors predicting the academic achievement of students in engineering. *Journal of Counseling Psychology*, 39, 527-538.
- Hackett, G., & Byars, A. M. (1996). Social cognitive theory and the career development of African American women. *Career Development Quarterly*, 44, 322-340.
- Lapan, R. T., Hinkelman, J. M., Adams, A., & Turner, S. (in press). Understanding rural adolescents' interests, values, and efficacy expectations. *Journal of Career Development*.
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance [Monograph]. *Journal of Vocational Behavior*, 45, 79-122.
- Lent, R. W., Brown, S. D., & Hackett, G. (1996). Career development from a social cognitive perspective. In D. Brown, L. Brooks, & Associates (Eds.), *Career choice and development* (3rd ed., pp. 373-421). San Francisco: Jossey-Bass.
- Lent, R. W., Brown, S. D., Suthakaran, V., Talleyrand, R., Davis, T., Chopra, S. B., & Brenner, B. (1999, August). *Contextual supports and barriers to math-related choice behavior*. Paper presented at the 107th Annual Convention of the American Psychological Association, Boston.
- Lent, R. W., Brown, S. D., Veerasamy, S., Talleyrand, R., Chai, C.-M., Davis, T., Chopra, S. B., & McPartland, E. B. (1998, July). *Perceived supports and barriers to career choice*. Paper presented at the meeting of the National Career Development Association, Chicago.
- Luzzo, D. A. (1993). Ethnic differences in college students' perceptions of barriers to career development. *Journal of Multicultural Counseling and Development*, 21, 227-236.
- Luzzo, D. A. (1995). Gender differences in college students' career maturity and perceived barriers in career development. *Journal of Counseling and Development*, 73, 319-322.
- Luzzo, D. A. (1996). Exploring the relationship between the perception of occupational barriers and career development. *Journal of Career Development*, 22, 239-248.
- Luzzo, D. A. (1998). *Correlates of Mexican American college students' perceptions of career-related barriers*. Unpublished manuscript.

- Luzzo, D. A., & Hutcheson, K. G. (1996). Causal attributions and sex differences associated with perceptions of occupational barriers. *Journal of Counseling and Development, 75*, 124-130.
- McWhirter, E. H. (1997). Perceived barriers to education and career: Ethnic and gender differences. *Journal of Vocational Behavior, 50*, 124-140.
- McWhirter, E. H., Hackett, G., & Bandalos, D. L. (1998). A causal model of the educational plans and career expectations of Mexican American high school girls. *Journal of Counseling Psychology, 45*, 166-181.
- McWhirter, E. H., & Luzzo, D. A. (1996, August). *Examining perceived barriers, career interest-aspiration and aspiration-major congruence*. Paper presented at the 104th Annual Convention of the American Psychological Association, Toronto, Ontario, Canada.
- McWhirter, E. H., Torres, D., & Rasheed, S. (1998). Assessing barriers to women's career adjustment. *Journal of Career Assessment, 6*, 449-479.
- Multon, K. D., Brown, S. D., & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology, 38*, 30-38.
- Richie, B. S., Fassinger, R. E., Linn, S. G., Johnson, J., Prosser, J., & Robinson, S. (1997). Persistence, connection, and passion: A qualitative study of the career development of highly achieving African American-Black and White women. *Journal of Counseling Psychology, 44*, 133-148.
- Schaefer, K. G., Epperson, D. L., & Nauta, M. M. (1997). Women's career development: Can theoretically derived variables predict persistence in engineering majors? *Journal of Counseling Psychology, 44*, 173-183.
- Super, D. E. (1955). Transition: From vocational guidance to counseling psychology. *Journal of Counseling Psychology, 2*, 3-9.
- Swanson, J. L., & Daniels, K. K. (1995). *The Revised Career Barriers Inventory*. Unpublished manuscript, Southern Illinois University, Carbondale.
- Swanson, J. L., Daniels, K. K., & Tokar, D. M. (1996). Measuring perceptions of career-related barriers: The Career Barriers Inventory. *Journal of Career Assessment, 4*, 219-244.
- Swanson, J. L., & Gore, P. A. (in press). Advances in vocational psychology theory and research. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed.). New York: Wiley.
- Swanson, J. L., & Tokar, D. M. (1991a). College students' perceptions of barriers to career development. *Journal of Vocational Behavior, 38*, 92-106.
- Swanson, J. L., & Tokar, D. M. (1991b). Development and initial validation of the Career Barriers Inventory. *Journal of Vocational Behavior, 39*, 344-361.
- Swanson, J. L., & Witke, M. B. (1997). Theory into practice in career assessment for women: Assessment and interventions regarding perceived career barriers. *Journal of Career Assessment, 5*, 431-450.
- Tang, M., Fouad, N. A., & Smith, P. L. (1999). Asian Americans' career choices: A path model to examine factors influencing their career choices. *Journal of Vocational Behavior, 54*, 142-157.
- Tinsley, D. J., & Faunce, P. S. (1980). Enabling, facilitating, and precipitating factors associated with women's career orientation. *Journal of Vocational Behavior, 17*, 183-194.
- Vondracek, F. W., Lerner, R. M., & Schulenberg, J. E. (1986). *Career development: A life-span developmental approach*. Hillsdale, NJ: Erlbaum.
- Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.

Received January 19, 1999

Revision received May 17, 1999

Accepted May 20, 1999 ■