The social cognitive career theory (SCCT) (Brown & Lent, 1996; Lent, 2005, 2013; Lent & Brown, 2002, 2006; Lent et al., 1996; Lent, Brown, & Hackett, 2002) provides a conceptual framework for understanding how people develop career-related interests, make (and remake) occupational choices, and achieve career success and stability. SCCT builds upon the assumption that cognitive factors play an important role in career development and career decision making. SCCT is closely linked to Krumboltz’s learning theory of career counseling, or LTCC (Mitchell & Krumboltz, 1996). Lent et al. (1996) noted, however, that SCCT differs from Krumboltz’s theory in several ways. For example, in comparison to LTCC, SCCT “is more concerned with the specific cognitive mediators through which learning experiences guide career behavior; with the manner in which variables such as interests, abilities, and values interrelate; and with the specific paths by which person and contextual factors influence career outcomes.” It also emphasizes the means by which individuals emphasize personal agency” (p. 377). Lent (2013) views SCCT as a model that is complementary to trait-factor and developmental models of career behavior.

SCCT also draws heavily from Albert Bandura’s (1986) social cognitive theory. Specifically, SCCT incorporates Bandura’s triadic reciprocal model of causality, which assumes that personal attributes, the environment, and overt behaviors “operate as interlocking mechanisms that affect one another bidirectionally” (Lent et al., 1996, p. 379). Within this triadic reciprocal model, SCCT highlights self-efficacy beliefs, outcome expectations, and personal goals. Thus, SCCT also incorporates research, applying self-efficacy theory to the career domain (Hackett & Betz, 1981; Lent & Brown, 2002; Lent & Hackett, 1987).

Bandura (1986) defines self-efficacy beliefs as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (p. 391). Self-efficacy beliefs are dynamic self-beliefs and are domain specific. Self-efficacy beliefs provide answers to questions pertaining to whether we can perform specific tasks (e.g., Can I make this presentation? Can I pass the statistics exam? Can I learn person-centered counseling skills?). Our beliefs about our abilities play a central role in the career decision-making process. We move toward those occupations requiring capabilities we think we either have or can develop. We move away from those occupations requiring capabilities we think we do not possess or that we cannot develop.

Four sources shape self-efficacy beliefs: (a) personal performance accomplishments, (b) vicarious learning, (c) social persuasion, and (d) physiological states and reactions (Bandura, 1986). The most influential of these sources is the first (personal performance accomplishments). Successful accomplishments result in more positive or stronger domain-specific, self-efficacy beliefs, and failures lead to more negative or weaker domain-specific beliefs.

Outcome expectations are beliefs about the outcomes of performing specific behaviors (e.g., “What is likely to happen if I apply for an internship at the university counseling center? What job opportunities am I likely to have if I earn a doctoral degree in counseling?”). Outcome expectations include our beliefs about “extrinsic reinforcement (receiving tangible rewards for successful performance), self-directed consequences (such as pride in oneself for mastering a challenging task), and outcomes derived from the process of performing a given activity (for instance, absorption in the task itself)” (Lent et al., 1996, p. 381). Outcome expectations influence behavior to a lesser degree than self-efficacy beliefs (e.g., Even though I might like to have more job options, I
am not likely to enroll in a doctoral program in counseling if I think there is a low probability that I will be successful in this program of study). Thus, outcome expectations are what we imagine will happen if we perform specific behaviors.

Personal goals also influence career behaviors in important ways. Personal goals relate to our determination to engage in certain activities to produce a particular outcome (Bandura, 1986). Goals help to organize and guide our behavior over long periods of time (e.g., I will persist in my research course because it is an important step along the way toward earning my master's degree in counseling and obtaining a job as a counselor).

The relationship among goals, self-efficacy, and outcome expectations is complex and occurs within the framework of Bandura's (1986) *tragic reciprocal model of causality* (i.e., personal attributes, external environmental factors, and overt behavior). In essence, this model describes how person inputs (e.g., predisposition, gender, and race) interact with contextual factors (e.g., culture, geography, family, gender-role socialization) and learning experiences to influence our self-efficacy beliefs and outcome expectations. Self-efficacy beliefs and outcome expectations in turn shape our interests, goals, actions, and, eventually, our attainments (Lent, 2013). However, these are also influenced by contextual factors (e.g., job opportunities, access to training opportunities, financial resources).

For example, our client Ronald stated that as a young child he was athletically gifted and large for his age (person inputs). Because he lived in the United States and because his father had been an outstanding football player (contextual factors), Ronald was encouraged to play football at an early age (persuasion). His physical size and talents led to success as a football player (positive reinforcement). He came to believe he was good at this sport (self-efficacy beliefs) and that if he continued playing it, he would continue to do well (outcome expectations). His interest in this activity led him to develop the goal of playing football in college at a major university (personal goal). To achieve this goal, Ronald continued to practice hard and develop his skills as a football player (actions). His family could financially afford to send him to the best football camps, where Ronald was able to further develop his skills and to be exposed to football coaches from the best university football programs (proximal contextual factors). Eventually, Ronald was awarded a football scholarship to a major university (performance attainment).

Obviously, Ronald's path may have been very different if he had possessed different person inputs (e.g., lacked athletic ability, been born a girl), had different contextual influences (e.g., been born in Europe), and experienced different learning experiences (e.g., received no support for participating in athletics, performed poorly as a football player). No doubt these differences would have resulted in different efficacy beliefs, outcome expectations, interests, goals, actions and performance attainments.

### Applying SCCT

SCCT is particularly useful in addressing two areas of career concern: performance attainment and persistence at overcoming obstacles. Performance is influenced by ability, self-efficacy, outcome expectations, and goals. Ability affects performance both directly and indirectly through influencing self-efficacy beliefs and outcome expectations. According to Lent and Brown (1996) "Higher self-efficacy and anticipated positive outcomes promote higher goals, which help to mobilize and sustain performance behavior" (p. 318). Problems in career development emerge when individuals prematurely foreclose on occupational options due to inaccurate self-efficacy.
beliefs, outcome expectations, or both, and when individuals forego further consideration of occupational options due to barriers they perceive as insurmountable (Lent, 2013).

For example, given Ronald's early and intense commitment to becoming a professional football player, it is possible that he did not fully explore a wide range of occupational possibilities prior to selecting professional football. His recent difficulties as a football player have caused him to realize that he has not explored other career options. In fact, Ronald reports feeling overwhelmed by the prospect of engaging in career exploration. He even questions whether there are occupations that will allow him to experience success and satisfaction. Thus, career development interventions in SCCT are often directed toward self-efficacy beliefs and outcome expectations.

To examine premature foreclosure on occupational options, Brown and Lent (1996) recommend that counselors encourage their clients to discuss those options that they have eliminated from further consideration. Specifically, in discussing occupations of low interest, counselors should analyze the experiences and beliefs upon which their clients' lack of interest is based. Here counselors focus on identifying any inaccuracies in their clients' self-efficacy beliefs and occupational information. Brown and Lent also state, “The basic processes for facilitating interest exploration are, therefore, fairly straightforward and include assessing discrepancies between self-efficacy and demonstrated skill and between outcome expectations and occupational information” (p. 357).

One approach used by Brown and Lent (1996) for facilitating interest exploration involves the use of a card sort exercise. In this exercise, clients sort occupations according to (a) those they would choose, (b) those they would not choose, and (c) those they question. Clients are then instructed to focus on the latter two categories by identifying occupations in these categories that they might choose if they thought they had the skills (self-efficacy beliefs), those they might choose if they thought the occupation offered them things they value (outcome expectations), and those they definitely would not choose under any circumstances. Occupations placed in the first two categories (relating to self-efficacy beliefs and outcome expectations) are then examined for accuracy in skill and outcome perceptions.

To analyze obstacles or barriers to their clients' career development, Lent (2005) recommends adapting Janis and Mann's (1977) decisional balance sheet procedure. Their adaptation of this procedure involves asking clients to first list their preferred career option(s) and then to identify the negative consequences they imagine will occur in pursuing any specific option. Negative consequences are explored as possible career-choice-implementation barriers by asking clients (a) to consider the probability of encountering each barrier and (b) to develop strategies for preventing or managing the barriers that clients are most likely to encounter.

For example, in career counseling, Ronald noted that he would be interested in becoming a math teacher but was reluctant to do so because teachers have to deal with a lot of "grief from students and parents." He also stated that teachers do not make a salary that is sufficient for raising a family. The counselor suggested to Ronald that much of the "grief" encountered from students represented opportunities to help them deal with difficulties in their lives (Ronald placed a high value on helping others). It was also suggested that teachers can receive skills training to learn how to respond effectively to many student and parent concerns. To explore the issue of salary, the counselor encouraged Ronald to conduct information interviews with teachers in several local school districts (his parents were employed in a district that was known for having below-average teaching salaries). When he learned that there can be significant salary differences between school districts, Ronald began to think that it might be possible to earn a decent wage as a teacher. Ronald also began to identify ways he could eventually increase his salary (e.g., coaching, moving into administration) if he were to become a teacher.
Clients can be helped to modify their self-efficacy beliefs in several ways. When ability is sufficient but self-efficacy beliefs are low due to factors such as racism and sex-role stereotyping, clients can be exposed to personally relevant, vicarious learning opportunities. For example, a woman who is African American and who possesses ability sufficient for a career in engineering, but has low self-efficacy beliefs, can be exposed to engineers who are also African American and female (Hackett & Byars, 1996). Clients with sufficient ability but low self-efficacy beliefs can also be encouraged to gather ability-related data from friends, teachers, and others to counteract faulty self-efficacy beliefs. Counselors can also work collaboratively with these clients to construct success experiences (e.g., taking specific academic courses, participating in volunteer experiences) to strengthen weak self-efficacy beliefs. In processing these success experiences, counselors can challenge clients when they identify external attributions for their successes and disregard internal, stable causes (e.g., ability) for their successes. Thus, the four sources of self-efficacy can be used as organizing structures for career interventions (Lent, 2005).

Tips from the Field

Career development occurs in a social learning context and is facilitated by the presence of supportive environmental conditions and the relative absence of barriers.

Lent, 2013, p. 143

Evaluating SCCT

Most research related to SCCT focuses on self-efficacy. In summarizing this literature, Lent et al. (1996) noted support for the following theory-related conclusions: “(1) domain-specific measures of self-efficacy are predictive of career-related interests, choice, achievement, persistence, indecision, and career exploratory behavior; (2) intervention, experimental, and path-analytic studies have supported certain hypothesized causal relations between measures of self-efficacy, performance, and interests; and (3) gender differences in academic and career self-efficacy frequently help explain male-female differences in occupational consideration” (p. 397).

In addition, research findings indicate some support for SCCT’s theorized relationships among self-efficacy beliefs, outcome expectations, goals, and interests (Lent, Brown, & Hackett, 1994). For example, Choi, Park, Yang, Lee, Lee, and Lee (2012) found that career decision-making self-efficacy correlated significantly with self-esteem, vocational identity, and outcome expectations among their study participants. Tang, Pan, and Newmeyer (2008) found career self-efficacy had a mediating effect on the career decision-making process for the 141 high school students participating in their research. Rogers, Creed, and Glendon (2008) surveyed 414 Australian high school students and found that career exploration was related to goals and social support (levels of exploration were highest when goals were clear and social support was strong), highlighting the fact that social cognitive variables are influenced by personal and contextual variables. Gibbons and Borders (2010) used SCCT to study college-related expectations in 272 seventh-grade students. Differences were found between prospective first-generation college students and nonprospective first-generation college students, “with the former group demonstrating lower self-efficacy, higher negative outcome expectations, and more perceived barriers” (p. 194). Self-efficacy directly affected outcome expectations, and both variables directly affected the students’ strength of educational intentions. Gibbons and Borders suggest, however, that for their population of interest, the SCCT model may need to be revised as the
effects of barriers and supports may directly influence outcome expectations rather than being mediated through self-efficacy.

Ali and Menke (2014) used social cognitive career theory to investigate the career development of 9th-grade students living in two rural communities with large numbers of Latino immigrants (55% of study participants). Study participants completed measures of vocational skills self-efficacy, career decision outcome expectations, career aspirations, and barriers to postsecondary education. Interestingly, Latino students in this study reported higher self-efficacy beliefs than did White students. Latino students also reported higher perceived barriers, but this did not seem to relate to their career aspirations. Ali and Menke suggest that results from their study indicate that school and career counselors should attend to Latino students’ self-efficacy and outcome expectations as well as efficacy for overcoming barriers.

Raque-Bodan, Klingaman, Martin, and Lucas (2013) also used social cognitive career theory as the basis for examining the person and contextual variables of gender, ethnicity, educational and career barriers, and career-related parent support for incoming first-year African American, Asian, Latino, and White college students. Their results indicate that women, as compared to men, perceived significantly higher levels of career barriers but similar levels of coping efficacy in dealing with these barriers. Women also reported receiving more career-related emotional support from parents than did men. For all participants, career-related parental support accounted for a significant portion of the variance for perceptions of educational and career barriers and coping efficacy with educational and career barriers. Among other things, this study reinforces the importance of career-related parental support relative to selecting academic majors and coping with perceived career barriers.

Shen, Liao, Abraham, and Weng (2014) examined the associations between culturally specific factors (i.e., parental pressure and support, living up to parental expectations, internalized stereotyping) and Asian American college students’ occupational outcomes. Results of this study indicate that when Asian American students perceive their parents to be supportive, they are prone to follow parental expectations to choose certain occupations, which in turn is linked to their self-efficacy, outcome expectations, and interests in stereotypical occupations.

Based on these results, Shen et al. (2014) recommend that career counselors explore Asian parents’ involvement in Asian American students’ self-efficacy, outcome expectations, and interests in stereotypical and nonstereotypical occupations. For example, career counselors could assess parental involvement in terms of parental pressure versus support and discuss their differential role in occupational outcomes with Asian American students. Career counselors also could assist students in negotiating among parental expectations, occupational stereotypes and barriers, and their individual occupational interests in their career decision-making process. In addition, counselors should examine what academic and occupational stereotypes Asian American students have internalized and then investigate whether these serve as external and internal barriers in exploring nonstereotypical occupations.

Lent et al. (2001) investigated the applicability of SCCT to educational choices made by college students. They found that contextual barriers and supports indirectly affect educational choices through their influence on self-efficacy and the individual’s willingness to convert interests into educational choices. Lindley (2005) found that her study participants had high rates of correspondence between the Holland codes for their career choices and their highest self-efficacy scores for their respective Holland types. Ochs and Roessler (2004) examined the relationship among career self-efficacy, career outcome expectations, and career exploration intentions of 77 special education students and 99 general education students.
They found career decision-making self-efficacy and outcome expectations to be significant predictors of career exploratory intentions in both student groups. Nauta, Kahn, Angell, and Cantarelli (2002) investigated the SCCT assumption that changes in self-efficacy precede changes in interests. Using a cross-lagged panel research design and structural equation modeling, they found a reciprocal relationship between self-efficacy and interests but no clear pattern of temporal precedence. Flores and O'Brien (2002) conducted path analyses on data acquired from a sample of 364 Mexican American adolescent women to assess SCCT's propositions related to the influence of contextual and social cognitive variables on career aspiration, career choice prestige, and traditionality of career choice. These researchers found partial support for SCCT as nontraditional career self-efficacy, parental support, barriers, acculturation, and feminist attitudes predicted career choice prestige. In addition, acculturation, feminist attitudes, and nontraditional career self-efficacy predicted career choice traditionality. Finally, feminist attitudes and parental support predicted career aspiration. Gainor and Lent (1998) examined the relations among SCCT, racial identity, math-related interests, and choice of major within a sample of 164 African American first-year university students. They found that self-efficacy and outcome expectations predicted interests, and interests predicted choice intentions across racial identity attitude levels. Diegelman and Subich (2001) found that raising outcome expectations among college students considering pursuing a degree in psychology resulted in an increased interest in pursuing this degree option for their study participants.

Hsieh and Huang (2014) investigated the relationship of family socioeconomic status and proactive personality to career decision self-efficacy in a sample of 336 Taiwanese college students. Their findings indicate support for the person input variables (i.e., socioeconomic status and proactive personality) as being predictive of career decision self-efficacy. Hsieh and Huang recommend that career counselors teach proactive thinking training programs for clients. Helping clients build skills that equip them to recognize and seize new opportunities, defend themselves against threats, and translate core competencies into competitive advantages are specific competencies recommended to build self-efficacy.

A number of studies have demonstrated positive outcomes for SCCT-based interventions used with diverse client groups. This provides strong support for the robustness of this theory as it is applied across diverse populations. An additional, and related, strength of SCCT is that it addresses both intra-individual and contextual variables in career development. Clearly, incorporating these two dimensions increases the applicability of the theory for diverse career development issues and populations. A recent literature review conducted by Patton and McElveen (2009) indicates that SCCT is generating substantial research, especially in comparison to other career theories.

The Cognitive Information Processing Approach

The cognitive information processing (CIP) approach (Peterson et al., 1996; Peterson et al., 2002; Sampson et al., 2004) is rooted in the three-factor Parsonsian model for making career choices (i.e., self-understanding, occupational knowledge, and bringing self-understanding and occupational knowledge together to make a choice). The CIP approach extends the Parsonsian model, however, by incorporating more recent developments related to how people engage in cognitive information processing. Peterson and his associates apply what is known about cognitive information processing to career counseling.