Special Feature

Annual Review: Practice and Research in Career Counseling and Development, 1988

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This review of the 1988 literature on career development and counseling addresses career development theories and their application, career intervention, career exploration motives and constraints, and problems in career decision making. Emphasis was given to conceptual contributions that offered new perspectives on career choice and development, research reports that stated specific implications for practice, and articles that described counseling methods or other career services.

This review of the literature published during 1988 addresses contributions that increased knowledge about vocational development and advanced the practice of career counseling. The source of the literature to review was two computer searches (ERIC and PsychInfo) and an inspection of the tables of contents of 27 relevant journals. Having identified an impressive body of literature about vocational behavior, I read the abstracts and skimmed the texts to select conceptual contributions that offered new perspectives on career choice and development; research reports that stated specific implications for practice; and articles that described counseling interventions or other career services. This process identified 259 articles that seemed directly pertinent to the practice of career counseling and education. Because of space limitations, not all 259 articles could be included in this review. Therefore, the articles were

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carefully studied to identify those articles which I considered to be the most relevant to and informative about career counseling and education. This process resulted in the selection of 124 articles for inclusion in the review. To guide my review of these 124 articles, I kept a single question in mind: What does this article teach readers about career development and its facilitation? Recognizing my biases about practice and acknowledging my limitations in understanding the import of the articles, my answer to this question comprises the review.

The review is organized in four major sections. The first section deals with theories of career development and counseling. Its two parts address elaborations of vocational development theories and the application of these theories to career counseling. The second section deals with career intervention. It begins with a consideration of research on intervention and concludes with a discussion of methods for fostering career development. The next two sections deal with critical factors in career development: exploration and decision making. The section on career exploration focuses initially on factors that motivate exploration and subsequently on factors that constrain exploration. The fourth section addresses career decision making by first describing dimensions of career indecision and then describing types of undecided students. The section concludes with a comment on realism in career decision making and the mention of two resource books that describe career assessment instruments. *Unless otherwise noted, all references in this review are from the year 1988.*

THEORY

Theory Elaborations

The theory and practice of fostering vocational development have themselves developed over the last 80 years, and they continue to do so. Since early in this century (Parsons, 1909), vocational theorists have relied on the matching model and career counselors have continued to improve methods for matching clients to congruent occupations. During 1988, empirical work on vocational theory elaborated the matching model's congruence hypothesis which states that individuals who have personalities congruent with their work environments are likely to be successful, satisfied, and stable in their occupations. Gade, Fuqua, and Hurlburt extended support for the congruence hypothesis in another population, Native-American high school students. Studies of the congruence hypothesis using Holland's constructs with (a) female factory workers (Heesacker, Elliott, & Howe), (b) restaurant proprietors and hospital aides (Greenlee, Damarin, & Walsh), and (c) employed college graduates (Elton & Smart) uncovered complex issues concerning the role of gender and race in adaptation to Social, Realistic, and Conventional occupations. Two other studies (Meir; Meir & Yaari) with employed adults indicated that

congruent specialty choice within an occupation may relate more strongly to job satisfaction than to congruent occupational choice.

At midcentury a developmental perspective on vocational choice (Super, 1953) began to extend practitioner's outlook beyond the matching model as researchers studied the readiness of individuals to make career choices. Based on this research, counselors devised methods to develop client's decision-making attitudes and competencies and to facilitate the process of career choice. During the 1970s, career theorists and counselors applied advances in understanding life-cycle psychology to comprehend and address adults' career concerns (Super, Thompson, & Lindeman). Within the last 5 years career theorists and counselors have begun to explore how a new paradigm in developmental psychology, constructive-developmentalism, may inform their work.

The constructive-developmentalism perspective (Kegan, 1982) integrates constructivism (people constitute or construct reality) and developmentalism (people evolve through predictable eras) to conclude that what develops during the life-cycle is the activity of meaning-making or making sense of self and situation. Products of this new perspective appeared in several 1988 publications on career theory and practice written by counselors who used constructs from hermeneutics (the practice of interpreting texts or narratives), family systems, or life-narrative psychology to look (beyond matching the content of self-concepts to occupations) to the processes of self-conceiving and meaning-making. Although these authors used different constructs, they all seemed to (a) view people as self-organizing systems, (b) believe that behavior is purposive, (c) attend to meaning and how people construct it, and (d) emphasize that people use their experiences to reconstruct meaning and move toward more completeness. An article by Ivey and Goncalves provides an informative orientation to the constructive-developmentalism perspective. They related their model of developmental counseling to the major theories of human development and then explained how counselors may use this model to integrate developmental and constructive cognitive processes into clinical practice.

To date, most publications on meaning-making in career development and counseling have not been based on quantitative research. A notable exception is the research that uses Kelly's (1955) personal construct psychology to investigate cognitive structures and vocational behavior. This quantitative research was the subject of a review by Neimeyer. After summarizing and comparing the results of studies on vocational schemata conducted during a 20-year period, Neimeyer discussed how he and his colleagues used this research integration to construct a model that explains vocational development as "ongoing reorganization in the structural characteristics of schemas used to interpret, regulate, and anticipate vocational experiences" (Neimeyer, p. 455). Neimeyer's review of research on vocational structures exemplifies the value of programmatic research and demonstrates an empirical approach to constructive-developmental theory building.

The constructive-developmentalism perspective on vocational behavior pervades Miller-Tiedeman's monograph on the theory and philosophy of "*lifecareer*." Simply stated, Miller-Tiedeman viewed occupational decision making as an opportunity to examine, redefine, and direct one's life. The occasion for decision making is typically a life discontinuity or transition that disturbs the stability of one's self-pattern or self-conceived theory of one's purposes or missions in life. People experience the unstable pattern as feelings of indecision, meaninglessness, or loss of direction. These feelings signal the opportunity to move toward greater completeness. Toward this end, people try to construct a more comprehensive and complex self-pattern. Choice is the effort one makes to restablize a life pattern. Counselors help clients become more complete by facilitating the self-conceiving process, stimulating self-consciousness, and promoting choice. Miller-Tiedeman's theory lends itself to use with many existing counseling methods, particularly those that stem from phenomenology or existentialism.

A book by Carlsen, *Meaning-Making*, provides a readable introduction to the meaning-making paradigm as well as its theories and application in counseling. Carlsen viewed life as a self-authored story enacted as an ongoing conversation between the individuating person and the world. Thus, she defined counseling as a dialogue that seeks to make sense of life. In a chapter that addressed "Career Development as Meaning-Making," she conceptualized career both as a "carrier of meaning" and as a path that provides direction, structure, and significance to life. Her approach, called career therapy, enables clients to examine and adopt new perspectives on the patterns which have shaped their lives. Carlsen described four stages in the therapy of career development: (a) establish relationship and define problem, (b) gather historical data relevant to this moment in time, (c) process and reshape client's patterns of experience, and (d) achieve closure through reintegration. To help clients make sense of their embodied dramas, she orders their experiences to reveal the latent theories that clients hold about themselves. Carlsen uses traditional career counseling methods and materials to discover life patterns and disclose them to clients. Moreover, she has devised several new methods. One example may illustrate the pattern in her approach to counseling. She asks some clients to write the letters of the alphabet down the side of a sheet of paper. Then, beside each letter, they write their interests that begin with that letter. Together, client and counselor identify patterns in this list and combine varied interests into a job description.

MacGregor and Cochran presented a model and method for making sense of the drama that portrays a client's character. To understand the client's life story, they suggested that counselors determine how dramas enacted within the family of origin are restaged in work. The classic study on the relation of family adjustment to work adjustment (Friend & Haggard, 1948) used psychoanalytic constructs to explain how workers endowed bosses with the self-same qualities of their parents. Drawing on contemporary advances in cognitive psychology, MacGregor and Cochran

explained the family adjustment-work adjustment relationship by viewing the family as an "interpretive system" that provides the child with a cognitive structure and set of constructs for making sense of life and its experiences. They likened a person's repertoire of roles and dramas to a personal mythology (Feinstein & Krippner). MacGregor and Cochran reasoned that the dramatic forms plotted in childhood and youth are brought forward into adulthood as general themes that pervade working. To test their hypothesis, they devised a Q-sort using personality traits to represent Holland's (1985) six types. Then they asked 10 participants to sort these traits separately for self, family members, and significant people at work. For each participant, the correlations between the sorts for each pair of people showed their interrelationship and the principal components among the correlations revealed the overall pattern of relationships. The researchers concluded that the majority of coworkers were construed as variants of family members and interpreted this conclusion to mean that people may restage family dramas in interacting with coworkers. Case studies showed how five individuals used family dramas and roles to impart meaning to work and how they structured work situations to enhance this meaning.

The family as an interpretive system influences more than career preferences and work adjustment—it conditions how people make career decisions. Schumrum and Hartman explained how they use the family as an interpretive system to understand clients' problems in career decision making. They suggested that, in making a differential diagnosis between developmental and chronic career indecision, counselors ask clients to describe the experience of growing up in their family of origin. As an example, they discussed how the personality traits and behavior patterns established by a child to survive in an alcohol-related dysfunctional family may later produce chronic career indecision. The authors shared their clinical insights about typical career problems that may concern adult children of alcoholics as well as suggestions on how to address these problems.

"Whoever lives out a career creates a text." Young and Collin (p. 156) proceeded from this premise to propose hermeneutical inquiry as a method for understanding career development. Hermeneutics seeks new understanding of the events portrayed in texts or narratives by restating or resymbolizing them from a different perspective. If one considers human actions as analogous to texts, then hermeneutical inquiry pertains to the study of career development. Moreover, hermeneutics generalizes easily to career counseling because both use the interview as a means to gather data. During an interview counselors may act as historians or biographers in getting to know clients. Then, counselors can make sense of events in their clients' lives by assuming that behavior is purposeful. This assumption permits counselors to comprehend the meaning of clients' careers by interpreting the unique purpose that forms their vocational past, present, and future into a coherent life story. In so doing, the counselor and client weave a sequence of events into a story through time. When nar-

rating these stories to clients, counselors emphasize dramatic structure and themes as a way of helping clients sense continuity and agency in themselves and their careers. Then, counselors encourage clients to use new conceptions of self and career to act in a more adaptive manner and to plan the future. Counseling closes when clients are ready to enact the next chapters in their life stories.

Ochberg advanced the use of life-narrative psychology in career counseling by explaining that the life stories which clients are able to understand about themselves are constricted by (a) psychodynamic suppression of what they prefer to leave unmentioned and (b) cultural circumscription of what we are able to talk about with each other. He advised counselors to do more than understand a story's characters and circumstances; they should look beneath the content of the story and uncover its plot. People use plots to remember life events and anticipate new situations. By examining the plot, in addition to the story's characters and situations, counselors may quickly detect themes that structure a life in progress. Counselors may discern underlying themes by looking for similarities in the narrative structure of a client's life vignettes. Ochberg asserted that narrative structure is produced jointly by individuals and their culture and that the meaning of narrative structure can be decoded as a psychodynamic symbol. Thus, in unpacking the meaning of a client's life vignettes to uncover the plot, counselors should consider both psychodynamic symbols and cultural motifs. Ochberg showed how to do this by interpreting the narratives that two middle-aged businessmen told about their careers. He divulged the plots which guided the lives of "the man no one could ignore" and "the man who could not stop" by using the cultural motif of aggressive ambitiousness and psychodynamic symbols for closeness to father.

The interpretation of cultural motifs and psychodynamic symbols benefits from a model that sharpens one's observations and organizes one's conceptualizations of a client's life themes. Hamachek adapted such a model (Erikson, 1982) for counselors who want to discern the psychosocial themes in a client's life story. To implement the model, he provided a method for observing and interpreting the behavioral consequences of the self's developmental level and direction of evolution. The method relies on "behavioral expression tables" that counselors may use to evaluate the meaning of people's actions. In addition to delineating characteristic behaviors associated with themes in the growth of the self, Hamachek instructed counselors to concentrate on understanding the meaning of behaviors that stand out in a client's story because of their inappropriateness, intensity, or duration.

Counselors want to do more than interpret life stories; they want to facilitate development. To foster the development of meaning-making, some counselors help clients reconstruct their life stories, emphasizing greater consciousness of self and sense of agency. Young devised a method for decoding plots which counselors may also use to help clients reframe meaning. He applied two dimensions to categorize the ordinary expla-

nations which people use to interpret their experiences. The first dimension contrasts explanations as person-centered attributes or situation-centered events. The second dimension contrasts explanations as empowered (stable) or enabling (changeable). Counselors who are familiar with attribution theory may recognize the four categories that result from combining these dimensions as similar to the four causal attributions of ability, effort, luck, and other people. Counselors may use these categories to detect the dimensions which structure the client's autobiography. Then they may use interventions described in the literatures on self-efficacy, attribution, social influence, and cognitive counseling to help clients reattribute their career problems to controllable causes. Typically, these interventions encourage clients to make person-centered and enabling attributions that facilitate decision making.

Applications

"The conduct of counseling benefits from a theoretical conception of the client's situation" (Stark & Zytowski, p. 475). With this statement, Zytowski began his account of counseling Stark about her career. His account aptly demonstrated that the meaning-making paradigm applies to counselors as well as their clients. Counselors must make sense of what they hear and see before they can be useful to their clients. To comprehend clients, counselors may use ordinary explanations (Young) or theories of counseling and development.

Counselors who wish to learn how their colleagues use theories to make sense of clients and their situations may consult several case reports published during 1988. Not only do we learn about clients as we read these cases, but we also learn about counselors' conceptualizations of their clients. Stark and Zytowski revealed how a counselor used several different theoretical models and constructs to understand one client. Each of the "Getting Down to Cases" sections in three issues of the *Career Development Quarterly* contained one counselor presenting a case report followed by two different counselors discussing how they made sense of and proposed to help that client. The case in the March issue showed explicitly how theories provide cognitive tools for understanding and responding to clients. The case in the September issue showed how case conceptualization leads to the selection of appropriate interventions. The case in the December issue showed how counselors must sometimes stretch their constructs to make sense of concerns which they have not previously encountered.

Counselors who wish to learn how their colleagues use theories to conceptualize the counseling process may consult five other articles. Dorn presented a detailed case report to demonstrate how counselors may apply (a) the social influence model to make sense of the counseling process and (b) cognitive restructuring techniques to help a client change causal attributions. Dorn also showed how causal reattribution changed the client's "story" and freed her to develop along a new path. Goodyear and Healy

interviewed two counselors who provide authoritative occupational guidance and "maintain full responsibility for the process and for delivering options to the client" (p. 52). In commenting on these counselors' conceptions of career counseling, Zytowski made a counterclaim against their view and emphasized that authoritative occupational guidance may reinforce clients' perfectionism and dependency, rather than facilitate self-exploration and personal responsibility. Miller expressed a view similar to Zytowski's in restating how the client-centered counseling model may be used to comprehend career counseling. He also presented a counseling dialogue to demonstrate the client-centered model for career counseling. The dialogue provided another example of how causal reattribution can prompt behavior change. Pask-McCartney and Salomone discussed how thinking about each client as multipotentialed may, despite complicating the counselor's case conceptualization and the client's decision making, foster flexible thinking, careful introspection, and a sense of adventure and exploration for both counselor and client. As the authors of articles on theory implied or stated, using theoretical models and constructs rather than ordinary explanations, should prepare counselors to intervene more effectively.

INTERVENTION

Research

We know that career interventions generally have positive effects (Baker & Popowicz, 1983; Spokane & Oliver, 1983). Now we need to determine which interventions work with whom and under what circumstances. Consequently, researchers are studying how interventions achieve their effects and how to optimize these effects. Gray and Braddy called this work "incremental staged innovation" and, in emphasizing its importance, warned that only rigorous and systematic research will produce innovation.

Two studies addressed the question of "which intervention with whom." Noting the lack of research on fostering the vocational development of disadvantaged or minority groups, Rodriguez and Blocher compared two career interventions designed to enhance the career maturity of Puerto Rican women attending an urban college. Both treatments presented a 2-hour session each week for 10 weeks. The first treatment was a modified version of Adkins's (1970) Life Skills Career Program; the second treatment was a traditional career program consisting of minilectures followed by experiential exercises and small-group discussions. The researchers hypothesized that the women in the Adkins treatment group would benefit more than those in the traditional treatment group or those in the placebo control group who experienced a general college orientation program. Rodriguez and Blocher reasoned that the traditional career program with

its abstract, reflective, and nondirective methods might be less useful to disadvantaged students than the Adkins program with its structured, specific, and task-oriented methods. Compared to the control group, both interventions significantly increased the participant's internal control attributions. Only the traditional intervention, however, enhanced the participants' attitudes toward career planning and exploration. Rodriguez and Blocher concluded that traditional career interventions, when they are carefully designed, can produce significant results with a population whose background and prior experiences may differ profoundly from that of typical middle-class clients.

In considering another special population, Kerr and Ghrist-Priebe reasoned from the results of earlier research that gifted and talented students prefer structured, task-oriented career interventions. Gifted students who have difficulty selecting among multiple occupational options pose problems for counselors who focus only on interests and abilities. Multipotentialed clients often have "high-flat" profiles on interest inventories and ability tests along with straight A grades. Accordingly, counselors might emphasize values and needs in a structured intervention aimed at setting specific goals. In their report, Kerr and Ghrist-Priebe described one such intervention and demonstrated its usefulness empirically. Moreover, they discussed some techniques such as the Personal Map of the Future which may be used with all career clients. Unfortunately, Kerr and Ghrist-Priebe did not investigate whether gifted students benefit more from structured than less structured interventions.

Pask-McCartney and Salomone also dealt with the career counseling needs of multipotentialed clients. They suggested, as did Kerr and Ghrist-Priebe, that when multipotentiality plays a major role in clients' indecision, counselors might help their clients imagine themselves in the future. Furthermore, they recommended that clients do this several times, each time picturing themselves in different occupations, environments, and life circumstances. When using "futures thinking" interventions, they advocated that counselors (a) ground occupational fantasies in reality by offering realistic information and exploratory experiences and (b) avoid client confusion by systematically evaluating each occupational daydream separately. Also, like Kerr and Ghrist-Priebe, they gave values clarification a prominent role in counseling multipotentialed clients and advised counselors to allot sufficient time for clients to reflect on what they really care about in life.

Two research reports dealt with "which intervention with whom" relative to a computer-assisted guidance program. Roselle and Hummel reported that college students at higher levels of intellectual development (Perry, 1970) used DISCOVER more effectively than did students at lower levels of development. More highly developed students seemed to view the program as another tool in the career decision-making process,whereas less developed students seemed to expect the program to chose the right occupation for them. Roselle and Hummel questioned whether most students can use DISCOVER on their own, without prior

structure or feedback. In a collateral study, Shahnasarian and Peterson reported that cognitive structuring (a 10-minute videotape explaining Holland's [1985] occupational typology) prior to using DISCOVER enhanced college students' thinking about their occupational options. Students who used the program without the prior cognitive structuring however, became more certain of their vocational identities. The researchers wondered if the change in thinking about options associated with cognitive structuring actually caused less certainty. Although DISCOVER generally seems to have a positive effect on career self-efficacy and decision making among college students (Fukuyama, Probert, Neimeyer, Nevill, & Metzler), more research is needed to determine who should use DISCOVER as well as when and how they should use it. For example, Phillips and Bruch's study of shyness and dysfunction in career development suggests that individuals with evaluation anxiety may prefer an impersonal approach to career intervention. Counselors who intend to purchase a computer-assisted guidance program may appreciate the advice in articles by Johnston, Buescher, and Heppner, and by Sampson, Shahnasarian, and Reardon.

To promote incremental innovation, several writers pressed researchers to expand the outcome criteria which they use in studying career interventions. These writers also urged counselors to distinguish between test validity and validity for use (Cronbach, 1980). Two empirical studies in 1988 indirectly addressed the validity for use of the Strong-Campbell Interest Inventory (Johnson & Hoese; Yee & Pawlovich). In a conceptual article about the valid use of interest inventories as interventions in women's career development, Diamond (1988a) proposed the criterion of "exploratory validity." She called upon counselors to evaluate the extent to which interest inventory interventions stimulate clients to increase their options and to explore more kinds of occupations.

Tittle proposed a heuristic model for evaluating the validity of career interventions. The model specifies outcome variables arising from gender research: plans for, attainment of, and satisfaction in adult roles. In general, Tittle's life-pattern perspective focused on how individuals develop opinions about the roles of worker, spouse, homemaker, and parent and how they arrange these roles in their life plans. In particular, she identified new outcome criteria such as (a) number of traditional and nontraditional occupations explored, (b) relation of fertility and educational plans to preferred occupations, (c) degree of commitment to career, marriage, and parenthood, (d) plans for the articulation of occupational and homemaking responsibilities, (e) plans for the integration of role cycles for husband and wife, (f) negotiation skills to implement preferences for marriage, family, work, and homemaking activities, and (g) degree of gender-stereotyping of all adult roles. Counselors who wish to apply Tittle's life-pattern model to their research and practice should read four articles, each of which contains ideas on assessment and intervention: (a) DeCasper and Tittle described values rating and ranking materials and counseling methods pertaining to occupation, marriage, and parenthood roles; (b)

Ellermann and Johnston reported research results with implications for counseling clients about the salience of life roles involving work, family, study, leisure, and community; (c) Crary, Pazy, and Wolfe examined complexity, flexibility, conflict, and compartmentalization of life-role patterns, and (d) Nevill and Super discussed the relationship between career maturity and commitment to the work role.

A study by Barak, Golan, and Fisher investigated the use of interventions with female clients. They studied whether counselors' gender and gender-role orientation affected the traditionality of clients' career choices; that is, the degree to which a career choice is socially traditional in terms of an individual's gender. Client gender emerged as the only significant determinant of client career choice traditionality. The researchers concluded that the occupations which a client considers and chooses are mainly affected by the client, not counselors or the counseling process. Barak and his colleagues interpreted this conclusion as adding to a body of research that questions the prevalence of counselor gender bias in career counseling.

Arguably, the most important 1988 contribution to incremental innovation in career intervention was a research integration. Oliver and Spokane extended their earlier meta-analysis of career intervention studies (Spokane & Oliver, 1983) by adding studies conducted since then and by performing additional analyses of great relevance to practitioners. Because their previous research integration showed that career counseling generally has positive effects, they conducted additional analyses that dealt with whether given treatments are more effective for some clients than others and whether the length of treatment affects its outcome. Their quantitative integration indicated that individual counseling and workshops had slightly more effect than group interventions, except for classes. Classes had the largest effect, but required more hours of counselor time to achieve this larger effect. Oliver and Spokane, in considering the practical implications of their findings, encouraged counselors not to omit diagnosis as the initial step in intervention and to follow up clients who prematurely terminate counseling. They also advised practitioners that increasing the number of sessions or hours for an intervention increases the favorability of the outcome.

The importance of thoroughness in career counseling was also affirmed in three other articles. It was empirically supported in an archival study of career counseling conducted by Phillips, Friedlander, Kost, Specterman, and Robbins. They reported that counselors who had seen their clients for more interviews were more likely to believe that the goals of counseling had been achieved. In discussing this finding, however, the researchers wondered if counselors' evaluations of outcomes were biased because they may have been more invested in clients with whom they had spent more time. In an article on the person in career counseling, Wrenn drew on his counseling philosophy and experience to emphasize thorough counseling. He warned against rushing clients and concluded (p. 339) that "the pace of counseling is generally too fast because we often

proceed at the pace suggested by our understanding and insight, not at a pace based on the client's level of understanding and degree of acceptance." In characterizing five steps in career counseling and distinguishing counselor steps from client stages, Salomone also affirmed the importance of thorough career counseling.

Intervention Methods

Diamond (1988b), who edited a special issue of *Applied Psychology: An International Review* on the topic of "Women's Occupational Plans and Decisions," contended that sex stereotyping of occupations is the biggest single obstacle to women's optimal career development. After reviewing the controversy about the use of interest inventories with women, Diamond concluded that interest inventories should be used to increase options for clients, not to confirm existing self-concepts and occupational stereotypes. She illustrated how to do this with the Kuder Occupational Interest Inventory and offered recommendations for the effective use of interest inventories as an intervention and for developing sex-fair inventories.

To reduce sex bias and broaden exploration, some counselors use occupational card sorts instead of interest inventories. An article by Brooks may increase this practice. She elaborated "expectancy-valence theory" into a model of motivation for occupational choice. Based on this model, she described a theoretically derived method for using an occupational card sort to assess women's interests and expectancy-valence barriers to occupational exploration. Moreover, Brooks discussed accompanying strategies that counselors may use to reduce barriers to choosing nontraditional occupations.

Career counselors who like to involve parents will appreciate an intervention described and empirically demonstrated by Palmer and Cochran. Their "Partners Program" helped adolescents develop a career choice while strengthening their relationship with their parents. Counselors provided parents with a self-administered career guidance program, which consisted of a manual and three workbooks. After studying the manual, parents formed a partnership with their adolescent and collaborated in doing exercises from the workbooks. The first workbook dealt with self-exploration, the second workbook addressed occupational exploration and making a tentative choice, and the third workbook dealt with plans for implementing that choice. Palmer and Cochran showed that their program made parents agents of career planning.

The life cycle perspective on careers contributed three noteworthy interventions. A career counselor turned clinical psychologist combined vocational development stages with cognitive-behavioral psychotherapy to write two publications on cognitive career counseling. Richman (1988a) applied Rational-Emotive Therapy (RET) to *role con-*

flicts experienced by women during the career stages of exploration, establishment, maintenance, and decline. For each stage she identified three typical role conflicts and associated self-defeating beliefs. She explained how counselors can therapeutically challenge these self-defeating beliefs and help clients adopt adaptive beliefs. In a book chapter, Richman (1988b) applied RET to people's beliefs about the *vocational development tasks* inherent in job entry, adjustment, commitment, crisis, and disengagement. For each task, she listed five "vocational irrational beliefs" and discussed how counselors may challenge these beliefs. Richman's contributions seem particularly pertinent to "career therapy" (Carlsen).

The manual for the *Adult Career Concerns Inventory* (Super, Thompson, & Lindeman) described the use of this measure of career planning and adaptability attitudes in exploratory research and counseling. The ACCI includes three substage scales for each of four career stages: exploration, establishment, maintenance, and decline. For example, there are exploration substage scales to measure crystallization, specification, and implementation. Substage scales contain five items that each operationally define a developmental task in that substage. Clients respond to each item on a 5-point scale from "no concern" to "great concern" to indicate the strength of their concern about that task. ACCI scores can contribute to selecting career interventions for adults who request assistance in managing or rethinking their careers, reentering the workforce, or coping with midlife crises. The ACCI is well suited for use in instructional counseling (Healy, 1982) by counselors who wish to orient clients to the adaptational challenges that they will probably encounter as they develop their careers and to foster planful anticipation of the specific tasks which they will soon meet. Counselor educators may also use the ACCI items to teach their students about Super's model of vocational development.

In addition to the above three interventions, the life-cycle perspective also produced an article on the process of delivering interventions. Counselors who work with clients who need to crystallize a vocational identity may wish to consult Hamachek's application of Erikson's (1982) life cycle model to the counseling process. Hamachek (p. 360) suggested that, in delivering career interventions, counselors should (a) earn trust by caring and carrying through, (b) encourage autonomy by offering emotional support, (c) build a sense of initiative and industry by communicating positive yet realistic expectations, and (d) sustain identity exploration by providing unconditional acceptance.

Practitioners looking for other innovative interventions will find that their colleagues shared many good ideas during 1988. "Career intervention with women" was the topic of a special issue of the *Journal of Career Development* edited by Brooks and Haring-Hidore. The contributors to the issue presented many stimulating ideas about interventions as well as intervention philosophy (i.e., Kahn on feminism and career counseling with women).

Those interested in *counseling center activities* may consult Hirsch and Tobin on career centers as women's centers; Bjorkquist on creating an alumni career consultant program; Kuhlman on using computer and videotapes in career programming; Elliott on major fairs to promote career exploration; and Stamler, Christiansen, Macagno-Payne, Staley, and Johnson on a support group for female counseling center professional staff. Those interested in *marketing career services* may want to read Trice and Haire on the role of prompts; Quinn on increasing referrals from faculty members; Heppner, Johnston, and Brinkhoff on creating a career hotline; Forrest and Backes on writing a weekly informational column for student newspapers; and Stoltenberg and Davis on how to maximize students' acceptance of and response to communications concerning the availability and utility of career services.

Those implementing outreach programs might read Erwin's discussion of the Map of College Majors as a tool to predict which freshmen are more likely to change majors several times during their college careers and Schmitz's recommendations for career counselors who work with gay clients. Those providing academic and career *services for reentry women* will find valuable information by reading Ross on what triggers their return to college; Pickering and Galvin-Schaefers on their personality characteristics; MacKinnon-Slaney, Barber, and Slaney on their career aspirations; and Read, Elliott, Escobar, and Slaney on their career concerns.

College counselors who *orient graduating seniors* to their first job will appreciate Weinberg's course for female students facing transitions as well as Hatcher and Crook's and Meyer and Allen's work on the importance of preentry first-job expectations for job success and organizational fusion. Also, Kennedy's analysis of eight career-damaging mistakes, although written for college seniors majoring in engineering, offered sound advice for all seniors.

High school counselors who try to smooth the school-to-work transition may want to read six articles on transition to work in a thematic issue of the *Journal of Career Development* edited by Drier, as well as in articles by Herr and Watts on work shadowing; Roessler on Life-Centered Career Education and Employability Enhancement Strategies; Post Kammer, Fouad, and Williams on collaboration between high schools and universities to enable greater minority participation in higher education; and Allen-Meares on facilitating school and community agency collaboration in helping handicapped youth move from school to work. Counselors who work with *dual career families* will find sound advice about careers and caring in Gilbert's book about the struggles and rewards involved in "sharing it all." Support and placement services for *dislocated workers* was the topic of Mallinckrodt and Fretz's article on older professionals and Heimlich and Van Tilberg's article on farmers. Interventions that prompt career exploration were mentioned in several articles. Most of these articles, however, addressed factors that, primarily motivate or constrain exploration.

CAREER EXPLORATION

Exploration Motives

Career exploration involves seeking information about self and environment that may facilitate occupational choice, job entry, and work adjustment. Counselors advocate information-seeking behavior because they believe that increasing knowledge about self and occupations enhances career decision making. Unfortunately, many clients do not share their counselor's enthusiasm for career exploration. So counselors typically must encourage their clients to explore. We rely on extrinsic needs and rewards to move clients to explore when we try to convince them that exploration will help them declare a major, choose an occupation, or secure a job. In a study of 148 introductory psychology students, Blustein and Phillips empirically reaffirmed the value of this extrinsic motivation in moving clients to explore. They reported that some forms of anxiety provided an incentive for career exploration. Furthermore, stress concerning specific and imminent events prompted exploration more than stress concerning distant events. For example, concern about declaring a major may motivate freshmen more than concern about eventual career choice. They recommended that counselors encourage information-seeking behavior with interventions that emphasize the importance of exploration for events that follow soon.

In the same report Blustein and Phillips showed, empirically, the advantages of a systematic approach to career exploration. A conceptual article by Atkinson and Murrell presented a model for fostering systematic exploration activities. Based on the assumption that learning is the central task of career exploration, they used Kolb's (1984) theory of experiential learning to explain how clients may translate their career exploration experiences into concepts that can guide the choice of new experiences and improve career decision making. The article discussed a logical way to structure exploration, how to teach clients a method of exploration that they can use in the future, and how individual differences in learning style can influence clients' preferences for types of exploratory activities. Most helpfully, they specified accompanying career exploration activities for each component in Kolb's (1984) experiential learning cycle (affective, perceptual, symbolic, and behavioral) as well as how to sequence these activities to maximize client learning about self and occupations.

After considering career exploration from a motivational perspective, Blustein (1988a) argued that, although the use of extrinsic motives to prompt exploration works, counselors have neglected the use of intrinsic motives. He found that, for 154 introductory psychology students, intrinsic motives were related to exploration, especially *self-exploration.* The weaker relation of intrinsic motives to *environmental exploration* could have occurred because freshmen, who are early in the exploration

process, may be more motivated to explore self. Blustein hypothesized that intrinsic motives might correlate more strongly to environmental exploration later in their college careers. He advised counselors not to rely exclusively on extrinsic motives to prompt exploration. We need to develop interventions based on intrinsic motivation and persuade clients to view exploration as a means to self-determination. In other words, Blustein, like Pask-McCartney and Salomone, urged counselors to make information seeking about self and occupations more attractive to the intrinsic side of people, that is curious, creative, playful, and growth-oriented.

A way to guide exploration of intrinsic needs and rewards appeared in an article by Naughton and Outcalt. They constructed a taxonomy of job characteristics empirically based on five intrinsic or growth-related needs: (1) variety, (2) autonomy, (3) identity (i.e., degree to which the individual produces a whole product or complete service), (4) task significance, and (5) task feedback (i.e., "even if no one tells me, I can figure out how well I am doing on my job"). They found that workers' descriptions of their jobs along these five dimensions correlated positively with job satisfaction, organizational size, and job prestige. Using cluster analysis to group the job descriptions, Naughton and Outcalt constructed 10 profiles of job characteristics. The 10 profiles may be used to guide exploration of jobs within the same occupation and to distinguish among the jobs. Naughton and Outcalt's job taxonomy complements occupational taxonomies (e.g., Holland, 1985), which classify the interests and abilities of clients relative to occupations. The 10 profiles classify clients' growth-needs relative to different jobs within the same occupation and thus pertain to placement, job search, and job choice, but not to occupational choice. Clients who have already chosen an occupation may use the job taxonomy to match their growth-needs to a job's potential for stimulation. For example, a new graduate who has been offered a career counseling job at three different high schools could use the 10 profiles to compare the jobs and select the one that best fits her or his growth-needs.

Comparing one's intrinsic needs to a job's rewards may be particularly important for adults who are experiencing life transitions. In a study of 464 managers over 4 years, Kanchier and Unruh compared 166 job changers to 298 job keepers. They concluded that motivational orientation interacts with life transitions in influencing job change. Intrinsically oriented managers seemed inclined to view life transitions as opportunities to change jobs. Extrinsically oriented managers tended to view transitions as threats to their security, power, position and salary and seemed inclined to allow these needs, as well as family responsibilities, the economy, and other situational factors to influence their decision to keep their jobs. Kanchier and Unruh advocated that counselors encourage adults to view periods of life transition as a time to reexplore their career goals and to consider changing to a job that better meets their personal and professional growth-needs.

Exploration Constraints

Given that exploration provides important information about self and occupations and enhances decision making, it is unfortunate that so many individuals prematurely constrict the scope of their exploration (Phillips & Bruch) or find that other people condition the occupations that they may explore. Individuals' gender, social position, and abilities seem to have a particularly strong influence in circumscribing how they develop occupational preferences. For example, McNulty and Borgen reported that when adolescents must compromise an ideal occupational preference for a more realistic occupational preference, they appeared to sacrifice interest in a field to maintain sex-type and prestige level. Gottfredson's (1981) developmental model of the formation of vocational aspirations offers a coherent structure for integrating previous research on circumscription and compromise. Moreover, her model has heightened counselors' awareness of choice determinants and stimulated research on how self-perceptions of gender, social position, and ability narrow the scope of occupational exploration.

Henderson, Hesketh, and Tuffin tested Gottfredson's model of how individuals eliminate possible occupations from consideration. Using a 15-item occupational card sort organized by socioeconomic status (SES) and occupational sex type in New Zealand, they found that sex-typing of occupations occurred in 5-year-olds, somewhat earlier than the age of 6 suggested by Gottfredson. Men more rigidly sex-typed their preferences. The results supported Gottfredson's proposition that social background only influences the SES of preferences among children 9 years and older. Ability seemed to mediate the influence of social background on the SES of preferences. Their data upheld Gottfredson's premise that the occupational preferences of children are influenced first by sex-typing and second by SES.

A study by Gianakos and Subich identified the types of occupations that people with differing sex-role orientations may eliminate prematurely from consideration. As Walsh and Huston (p. 358) stated in their study of three social occupations, "Holland's theory is silent on the role of gender in vocational behavior." Gianakos and Subich addressed this gap by examining sex differences in career choices. They compared 608 students' sex-role orientations (masculine, feminine, androgynous, and undifferentiated) to their college major choices classified by Holland (1985) type. The sample did not produce sufficient feminine-type men ($N = 16$), masculine-type women ($N = 38$), or Realistic majors ($N = 6$) for statistical analyses. The results suggested that sex by itself related to majors in Social (more females) and Investigative (more males) fields. An interaction between sex and sex-role orientation was related to Investigative, Artistic, and Enterprising majors. Masculine-type men overselected, and undifferentiated women underselected Investigative majors. Undifferentiated women overselected, and androgynous women underselected, Artistic majors, feminine-type women overselected, and undifferentiated men and

women underselected Enterprising majors. Gianakos and Subich's heuristic interpretations of their findings should prompt more research on how sex-role socialization may influence circumscription and why different sex-role orientations bias exploration of certain types of occupations.

One way that sex-role socialization may function to circumscribe occupational exploration is through role schemata. Researchers who study social cognition define a role schema as a cognitive structure that organizes knowledge about normative behavior for age, race, sex, and occupation. Levy, Kaler, and Schall examined the content of adults' occupational schemata regarding the personality characteristics of people in a number of disparate occupations. They concluded that achievement orientation versus helping orientation was the predominant dimension that distinguished the perceived personalities of people in the occupations they studied. This dimension seemed to rely on gender-role characteristics; so they concluded that gender may be the major cognitive bias in occupational role schemata.

In investigating occupational schemata, Neimeyer, Metzler, and Bowman focused on structural features rather than content. They sought to explain previous reports of sex differences in occupational structures. These reports indicated that women showed higher levels of vocational integration and men showed higher levels of vocational differentiation. Integration seems to relate to ease of decision making and possibly early foreclosure, whereas differentiation seems to relate to congruent occupational choice. Neimeyer and his colleagues hypothesized that sex differences in integration and differentiation (a) are an artifact of the types of occupations (male versus female dominated) that individuals rate in measures of occupational schema or (b) relate to individual differences in career orientation (traditional versus nontraditional). As did previous researchers, they found sex differences in occupational structures; women showed higher levels of integration and men showed higher levels of differentiation. Only gender related to these differences in differentiation and integration; neither career orientation nor type of occupation rated explained this sex difference. Although the causes of sex differences in vocational structures remains unknown, the researchers speculated that sex differences in integration and differentiation may arise from differences in socialization and self-conception (Gilligan, 1982). Women who value connection with other people may be predisposed to greater integration; whereas men who value separation from other people may be predisposed to greater differentiation. A similar hypothesis can be drawn from Stonewater's essay to explain sex differences in the career decision-making process by uniting Perry's (1970) model of cognitive development with Gilligan's (1982) model of attachment and individuation.

Most research reports on circumscription also urged teachers and counselors to inform students about the influence of sex type and SES on occupational preferences and to dissuade students from prematurely narrowing their career exploration. Two research reports included specific suggestions. Based on results of an experiment, Tetreau and Trahan sug-

gested that exposure to female role models who work in nontraditional occupations might influence more women to explore their interests in nontraditional occupations. Erez categorized the factors that influence women's career choice in three groups: (a) stable characteristics such as ability and personality; (b) attitudes and social factors including attitudes toward career, sex-role stereotypes, and the influence of significant others; and (c) information about course and job opportunities provided by the social system. She examined the relative effects of variables in these three categories by contrasting 650 female and male Israeli high school students majoring in innovative and traditional fields of study. Social factors and information each made unique contributions to female students' choice of innovative fields of study, over and above the effects of stable characteristics. Erez concluded that counselors should give students information that increases options and combats sex-role stereotypes.

Information that may increase students' awareness of factors that constrain their occupational exploration and career choices appears in two fact-filled review articles. Gutek reviewed research on sex segregation and women at work. She dealt with demographic changes in the status of women at work, problems at work, and work and family interdependence. Gutek emphasized that sex segregation of work causes women's low wages and affects their psychological health. Spitze reviewed research on the family consequences of women's employment: the effects of women's employment on marriage and divorce, marital quality, fertility, spouse health, outcomes for children, division of housework, and the interaction of husband's and wife's jobs. Spitze emphasized that the consequences of women's employment are favorable when women's employment status conforms to their and their husbands' preferences about it.

Mullet and Neto asserted that merely informing students about factors that shape their interests may not produce real awareness. They reasoned that greater awareness for a given individual may only be achieved by assisting that individual to examine the determinants of her or his stated occupational preference. Mullet and Neto described a method by which counselors may help clients examine the real, really important, and unimportant influences that have shaped their occupational preferences.

Information that may increase counselors' awareness of circumscription and compromise appeared in three articles about occupational interests. Fiorentine observed an increasing similarity in the values and life plans of women and men from 1969 to 1984. Rather than a *masculinization* of female college student plans, he observed an *amalgamation* in that women showed a dramatic increase in valuing status-attainment goals with little or no decrease in valuing domestic-nurturant goals. He reported an increasing congruence between the sexes in educational and occupational expectations, and emphasized that nearly half of the students who aspire to advanced degrees are women. Fiorentine advised researchers to focus less on childhood socialization practices that may lead to initial sex differences in career aspirations and concentrate more on adult experiences that may modify these initial aspirations. Articles of related interest in-

clude one by Gerstein, Lichtman, and Barokas on female adolescent's occupational plans and one by Voydanoff on work-family conflict.

As noted in Fiorentine's report, the last 50 years have brought marked shifts in the female labor force. Counselors might wonder if this shift reflects a change in women's occupational interests. Hansen investigated the effect of history on the occupational interests of women by using 50 years of interest inventory data. She found "tremendous stability" in the interests of heterogeneous samples of women-in-general measured during the 1930s, 1960s, 1970s, and 1980s. After comparing women-in-general interests to men-in-general interests for each of these 4 decades, she concluded that the differences in interests of women and men continue to persist. Hansen also examined the interests of women in six specific occupations during this time period (youth program director, lawyer, fine artist, psychologist, life insurance agent, and reporter). Overall, the interests of women in these six occupations showed remarkable stability. As a group the women in these six occupations did show a trend toward increased interest in the Enterprising area (especially Public Speaking and Law/Politics) and decreased interest in the Conventional area. Men in the same six occupations showed this same increase (Enterprising) and decrease (Conventional) along with increases in the Realistic area and in Adventure, Merchandising, Management, and Teaching. So men actually showed a greater tendency toward change in interests during the last 50 years.

Although Hansen reported that societal changes had not had a dramatic effect on the interests of women, three different studies (Tetreau and Trahan with 5th, 7th, and 11th graders; Gianakos and Subich with college students; and Hansen with adults) all suggested that women's interests may now be evolving in a nontraditional direction, toward Enterprising-type occupations. Gianakos and Subich speculated that this may be because women with a feminine sex-role orientation possess the social skills required in Enterprising-type occupations.

Swanson and Hansen complemented Hansen's study of interest stability among groups with a study of interest stability within individuals. They conducted a 12-year follow-up study of 411 participants who had completed the Strong-Campbell Interest Inventory (SCII) as college freshmen. The interest profiles of the majority of the sample were remarkably stable over 12 years. The median stability coefficient was .72. Individual differences in interest stability ranged from one individual whose two SCII profiles had no relationship (−.11) to another individual whose two SCII profiles were virtually identical (.96). Based on some additional analyses, Swanson and Hansen also concluded that interests were probably more stable after college than during college.

CAREER INDECISION

In learning about indecision from the 1988 literature, a chapter by Slaney may be the best place to start because he reviewed and integrated the

research on career decidedness and indecision from 1937 to 1986. His chapter provides a historical perspective on indecision research and why it accelerated in 1988. Furthermore, the chapter orients counselors to the complexities that researchers encounter as they try to make sense of career indecision.

For me, the evolution of research on indecision traced by Slaney exemplifies the development of complexity in meaning-making. Maybe because people typically begin to make meaning by construing dichotomies (Kelly, 1955), counselors initially diagnosed career clients as decided or undecided. Researchers coming after Williamson (1937) conducted numerous studies that compared decided and undecided students. Following Tyler (1961), researchers dichotomized half of the original dichotomy by contrasting undecided students with circumscribed career indecision to undecided students with generalized indecisiveness. Multiplied dichotomies frequently evolve into multidimensional constructs or a continuum. Hence, 15 years after Tyler's contribution, we find that researchers began to devise more complex conceptualizations of career indecision. Two key articles seemed to establish the two current approaches to making sense of students' indecision. Osipow, Carney, and Barak (1976) focused attention on the dimensions of career indecision, and Holland and Holland (1977) focused attention on types of undecided students.

Dimensions of Indecision

One of the two prevalent approaches to making sense of undecided students seeks to understand the dimensions of indecision, map indecision's dimensional network, and then use dimensional profiles to differentially diagnose and treat undecided students. Researchers who try to identify the dimensions of indecision seem to follow the prototypal work of Osipow, Carney, and Barak (1976), who identified four dimensions within the problem of indecision. Typically, these researchers administer the Career Decision Scale (CDS; Osipow, 1987) to students, factor analyze students' responses to the items, interpret the factors as dimensions of indecision, and propose CDS subscales to operationally define these dimensions. At least seven studies prior to 1988 have pursued this tactic. Unfortunately, results from these studies conflict from slightly to moderately. In considering these conflicting results, Osipow (1987, p. 7) advised caution in the use of factor-derived scales and Slaney (p. 49) concluded that "the failure of subsequent studies to replicate the original factor structure raises questions about the usefulness of factor scores and, in turn, the development of treatments based on these factor scores." The conflicting results probably stem, at least in part, from researchers' repeatedly using exploratory factor analysis rather than confirmatory factor analysis. The repeated use of exploratory factor analysis is overly rigorous because several alternative and equally acceptable (on statistical grounds) solutions may result from exploratory factor analysis, thus making it harder to confirm a factor model extracted from a prior study. Given what we

already know from exploratory factor analyses of the CDS, confirmatory factor analysis may now provide a better method for examining the dimensions of indecision.

Two studies discussed and tried to resolve the problem of whether the dimensions measured by the CDS are stable across samples. In the first study, Shimizu, Vondracek, Schulenberg, and Hostetler attributed, in part, the failure of the seven studies to identify a stable factor structure to differences in factoring methods. They integrated the seven studies methodologically by transforming the results of each study to a comparable metric. Unfortunately, they defined this common metric using the partial information in the factor loading matrices rather than working with the complete information in the zero-order correlation matrices. After comparing the results in the common metric, they concluded that more factor stability existed in the disparate studies than had been previously recognized. Next they reported the results of their own exploratory factor analysis of the CDS items. They produced a four-factor solution: (1) indecision regarding career choice accompanied by confusion, discouragement, and lack of experience and information; (2) relative decidedness with desire for reinforcement and support; (3) approach-approach conflict generated by multiple positive feelings about careers that make choosing difficult; and (4) internal and external barriers to career decision making. They concluded that these factors were quite similar to the factors identified in their methodological integration of prior studies.

In a second study using the same sample of students, Schulenberg, Shimizu, Vondracek, and Hostetler examined whether the dimensions of career indecision remain unchanged during adolescence. They used confirmatory factor analysis to test the four-factor model that they had devised in the first study. For four subgroups of grades 7-9 and 10-12 male and female students, they found no evidence for structural reorganization or emergence of new dimensions during adolescence. They advised readers to be skeptical of this conclusion because they used the same sample to devise and test their model and because they addressed a developmental hypothesis with cross-sectional data. They did not, in the limitations section, remind readers that the chi-squared test for the model was significant, thus indicating that the model provided a less than acceptable fit. They explained this finding following what is becoming common practice in interpreting LISREL results. They could have tested other models, however, or noted that other models may provide a more acceptable fit. Although we still do not have a confirmatory factor analysis on an independent sample, Shimizu and his colleagues advanced our understanding of career indecision dimensions by scrutinizing all the data and examining the developmental structure of the dimensions.

While other researchers concentrated on identifying a stable factor structure for the CDS, Fuqua, Newman, and Seaworth began trying to map the nomological network of indecision dimensions. They related trait and state anxiety to four dimensions of indecision they had extracted from the CDS responses of 349 college students: (1) need for information and

tendency to delay decision making, (2) need for information about fit of self to various occupations, (3) multiple interests, and (4) barriers to implementation. The last two factors were each defined by only two items. After correlating trait and state anxiety to these four factors, they concluded that anxiety did not relate to the multiple interests dimension but did relate to the other three dimensions, most strongly to the first dimension. They advanced theory by showing that anxiety may relate differently to various dimensions of indecision. Mapping the nomological network of indecision dimensions, however, will not advance practice until researchers identify stable dimensions of indecision.

Types of Undecided Students

The other prevalent approach to making sense of undecided students seeks to type these students into homogeneous subgroups, delineate the characteristics of each type, and then use these characteristics to differentially diagnose and treat undecided students. Counselors who try to identify types of undecided students seem to follow the lead of Holland and Holland (1977), who speculated, based on a literature review and their own research, that undecided students are a heterogeneous group composed of three subgroups. They characterized subgroups of students who (a) express no pressure to decide right now; (b) show slight to moderate immaturity; and (c) display moderate to severe immaturity.

Downing and Dowd provided an example of the conceptual approach to typing undecided students. First, they reviewed the literature on indecision by organizing it into four categories: (a) demographic factors such as sex, family, and socioeconomic status, (b) psychological problems such as anxiety and depression, (c) social learning experiences, and (d) personal characteristics such as self-identity and creativity. Second, they applied the construct of ego-identity to suggest that counselors diagnose the identity status (foreclosed, moratorium, diffused, achieved) of an undecided student and treat that student accordingly. Downing and Dowd suggested interventions to reduce indecision among students in each identity status. Although credible, the idea of typing undecided students by identity status must be empirically demonstrated before counselors consider systematically applying these interventions.

In contrast to the deductive approach to categorizing undecided students into homogeneous subgroups, three 1988 studies took the inductive approach. Because they focused on types of students, not dimensions of indecision, these studies used cluster analysis rather than factor analysis. In the first study, Fuqua, Blum, and Hartman administered the CDS and measures of psychosocial identity, locus of control, and state and trait anxiety to 152 high school seniors and three juniors enrolled in introductory sociology or psychology courses. Cluster analysis formed four groups. An analysis of variance for the five variables across the four groups distinguished the groups by level of indecision. A career decided cluster (CDS = 22.9), constituting 41.9% of the sample, showed little excess anx-

iety and relatively effective identity formation and internal-control attributions. A *moderate indecision/moderate anxiety* group, constituting 22.6% of the sample, showed moderate indecision (CDS = 28.7), fair internal-control attributions, increased anxiety, and less identity formation. The two remaining groups both displayed serious career indecision (CDS = 37.0 and 36.4) along with more external-control attributions and poorer identity formation. Anxiety distinguished the two groups. The *serious indecision/moderate anxiety* group, constituting 27.7% of the sample, showed moderate anxiety whereas the *serious indecision/excessive anxiety* group, constituting 7.7% of the sample, showed excessive anxiety. Fuqua, Blum, and Hartman concluded that anxiety level may suggest differential intervention if future research confirms that anxiety differentiates the groups. For example, anxiety may cause indecision in the serious indecision/excessive anxiety group and result from indecision in the serious indecision/moderate anxiety group.

In the second study, Larson, Heppner, Ham and Dugan administered measures of indecision (CDS), interests, and problem-solving self-appraisal to 104 college sophomores and nine freshmen. They also constructed and administered a 42-item Career Planning Inventory (CPI) and scored it on eight scales that measured career problem solving, career myths, support systems, self-knowledge, perceived pressure, academic self-efficacy, world of work, and career obstacles. The researchers operationally defined students as decided if they had declared a major by the college's official deadline and had scored above six on the first two items of the CDS. They defined students as undecided if they had not yet declared a major before the official deadline for sophomore students. CDS means were 21.9 for 26 decided students and 36.3 for 87 undecided students. Cluster analysis formed four subgroups of undecided students. A *planless avoiders* group, constituting 21% of the sample, had the highest CDS mean (39.9), very poor problem solving, and the worst scores on five of eight CPI scales. An *informed indecisives* group, constituting only 5% of the sample, had the lowest CDS mean (24.0), best scores on seven of eight CPI scales, and poor problem solving. A *confident but uninformed* group, constituting 25% of the sample, had moderate CDS (32.5) and CPI means but the best problem solving. An *uninformed* group, constituting 49% of the sample, was similar (CDS mean = 37.9) to the confident but uninformed group but showed only average problem solving.

The results of these two cluster analytic studies seem remarkably similar given that they differed in participants (high school seniors versus college sophomores), variables (anxiety versus problem solving), clustering strategy (cluster undecided and decided students versus cluster only undecided students), and clustering methods (centroid cluster analysis in BMDP2M versus Fastclus in SAS). The CDS means (22.9 versus 21.9) for the Fuqua et al. decided cluster and the Larson et al. decided group were similar. Although Larson and her colleagues considered the informed indecisives group to be undecided, they seem similar to decided students.

Matching the remaining three groups in each study suggests that the Larson et al. *confident but uninformed* group with their moderate indecision and excellent problem solving seems similar to the Fuqua et al. *moderate indecision/moderate anxiety* group. In addition to being similar to each other, these two groups may fit Holland and Holland's category of no pressure to decide now. The Larson et al. *uninformed* group with their serious indecision and average problem solving seems similar in level of indecision and conceptual description to the Fuqua et al. *serious indecision/moderate anxiety* group. Both of these groups may fit Holland and Holland's category of slight to moderate immaturity. The Larson et al. *planless avoiders* group with their serious indecision and very poor problem solving seems similar in level of indecision and conceptual description to the Fuqua et al. *serious indecision/excessive anxiety* group. These two groups may fit Holland and Holland's category of moderate to serious immaturity.

Although more research is needed, accruing evidence on types of undecided students seems to indicate a three-level continuum something like: Level I equals slight to moderate indecision, with little anxiety, and good problem solving; Level II equals moderate to serious indecision with moderate anxiety; and Level III equals serious indecision with excessive anxiety. This interpretation basically supports Osipow's advice that counselors use the CDS total score, rather than factor scores, because the CDS total score can distinguish among decided students, undecided students with moderate indecision, and undecided students with serious indecision. The CDS total score, however, cannot differentiate between Levels II and III because they both include serious indecision. The main difference between Levels II and III is amount of anxiety, of variable not assessed by the CDS. Level II may include more students with developmental indecision (anxiety results from indecision) whereas Level III may include more students with chronic indecision (anxiety causes indecisive disposition). This interpretation implies that qualitatively different problem patterns may exist within the quantitative level of serious indecision.

A third study that clustered undecided students may be interpreted as suggesting the presence of distinct qualitative patterns within the other two quantitative levels (I and II) of indecision. Lucas and Epperson classified 302 of 514 introductory psychology students as undecided, based on their response to a screening item. Using measures of self-esteem, anxiety, locus of control, vocational identity, and role salience (work, leisure, relationships), their cluster analysis formed five groups of undecided students. *Happy and work-oriented* students (55) appeared to be actively formulating vocational plans and *happy and playful* students (52) seemed relatively close to deciding on a career although they were, at that time, more interested in leisure activities. *Caught in a dilemma* students (57) displayed lower career salience and seemed to be figuring out how to balance life roles and *undecided and limited interests* students (69) seemed to lack motivation to enter the career decision-making pro-

cess. *Anxious and unclear on goals* students (55) seemed confused about their goals and showed high anxiety, low self-esteem, and external-control attributions. By considering vocational identity scores as an index of indecision, I matched Lucas and Epperson's description of each group to one of the levels of indecision described above. The two "happy" groups may represent two types of students at Level I. The "dilemma" and "limited interest" groups may represent two types of students at Level II. The description of the "anxious" group fits Level III. Research is needed to test empirically the adequacy of conceptualizing undecided students at three levels of indecision and the conjecture that qualitative subtypes appear at each level.

Each of the authors who reported results of clustering undecided students suggested the possibility of differential intervention. As a group they seemed to indicate that students at Level I may benefit sufficiently from career guidance in the form of brief workshops or self-directed individual learning experiences like those involved in Discover, SIGI, and the Self-Directed Search. Students at Level II may need the added benefits achieved in career planning courses or career counseling (including the use of interest inventories) aimed at increased self-knowledge and readiness for career decision making. Students at Level III may benefit from personal counseling or psychotherapy to deal with psychological blocks to decision making, reduce anxiety, and increase problem-solving competence.

Realism in Career Decision Making

Similar to undecided students, decided students may also contain homogeneous subgroups. A study relevant to differences among decided students was conducted by Blustein (1988a). He investigated the relationship between vocational maturity and career choice crystallization (level of decidedness and degree of commitment to a specific career goal). Presumably, individuals with greater crystallization should also display more highly developed attitudes toward and competence for career decision making. Blustein did find a strong positive correlation between crystallization and career planning attitudes. Crystallization, however, did not relate substantively to many important dimensions of vocational maturity: specifically, attitudes toward career exploration, world-of-work information, and decision-making competence. This finding reminds counselors that a decided client may not have made a good choice. In fact, if that client made a choice without exploration, information, or decisional skill, then the choice may be unrealistic. Blustein advocated that counselors use multiple criteria in evaluating the outcome of career interventions, not just decidedness.

The other major outcome criterion, in addition to decidedness, is realism of choice. In using models of career maturity, some counselors link decisional attitudes to career choice decidedness and link comprehension and problem-solving competencies to career-choice realism. This dis-

tinction may explain why Blustein found that decidedness related to attitudes toward planning one's future but decidedness did not relate to informational and decisional competencies. This interpretation, however, is not easy to test because of the difficulties involved in measuring choice realism and its components of suitability (fit of interests and abilities to occupational field and level) and viability (society's opportunity structure).

To resolve the difficulties involved in assessing a client's self-knowledge and decision-making competence, some vocational psychologists have experimented with an indirect and simple measurement strategy. They constructed competence tests that require clients to appraise and make decisions for hypothetical people. These standardized tests can be easily administered and scored. The scores are interpreted based on the assumption that individuals who score well at appraising and making realistic choices for other people are good at appraising themselves and selecting goals for themselves. Although this assumption has been repeatedly challenged, Westbrook and his colleagues were the first to empirically test the assumption. In two studies, Westbrook, Sanford, Merwin, Fleenor, and Gilleland and Westbrook, Sanford, Gilleland, Fleenor, and Merwin investigated how measures of self-appraisal and decisional competence correlated to making realistic choices. In short, they reported that, for 9th-grade students, an index of self-appraisal accuracy did not relate significantly to appraisal of others as measured by the Career Maturity Inventory Competence Test (Crites, 1978). They did find a statistically significant correlation between goal selection for others and making appropriate career choices for self among white male students ($r = .31$) and white female students ($r = .32$) but not for black male students ($r = .24$) and black female students ($r = .14$). Although these findings do not address the role of competencies in models of career maturity, they do challenge the assumption that presupposes the operational definition of these competencies. Moreover, these studies serve to underscore the import of Westbrook's advice in an article on selecting appropriate career assessment instruments, "know what you are looking for and know what you are getting" (p. 186).

To know what they are getting, counselors need resource books that provide information about and evaluations of career assessment instruments. In particular, practitioners have long needed a resource to replace the now outdated description of career development inventories and their use (Super, 1974). A new resource book, *Career Decision Making,* detailing assessment of the career decision-making process was edited by Walsh and Osipow. Three chapters in the book summarized the state-of-the-art in assessing career choice *process.* In the first chapter, Phillips and Pazienza discussed the history and theory of assessing both career development and decision making. In the second chapter, Slaney reviewed the literature on career indecision and discussed four prominent measures of career decision making. In the third chapter, Betz did the same for the assessment of career development and maturity. In the fourth chapter, Taylor dealt with assessing career choice *content* as part of career-

planning systems that are designed not only to measure but also to foster career development. In the final chapter, Tinsley and Tinsley presented their theory of leisure experience and asserted that an integrated view of work and leisure may expand the theory and practice of career counseling and development.

A second edition of another resource book on career assessment measures was published in 1988. *A Counselor's Guide to Career Assessment Instruments* (Kapes & Mastie) may assist counselors to wisely choose and use 43 different vocational guidance instruments. The second edition supplements the first edition because it provides (a) reviews for 21 instruments that were not included in the first edition and (b) new reviews for 22 instruments that were included in the first edition.

CONCLUSION

I introduced this annual review by discussing the question that was used to guide the examination of each article: What can the reader learn about career counseling and development from these articles? In answering this question in the form of a review article, I have tried to convey the scholarship, innovations, and wisdom of the various authors. If I have succeeded, the reader of this review will conclude that our colleagues taught us much during 1988. As individual practitioners, we have been provided with new ideas to think about, fresh techniques to try, and modern perspectives on old problems. This review concludes with speculations about the effect that the 1988 literature might be having on practitioners as a group.

The conceptual work on meaning-making and life patterns reviewed in the section on career theory may induce more practitioners to supplement trait-and-factor vocational guidance with "career pattern counseling" (Super, 1954). The life pattern paradigm for career counseling encourages counselors to consider a client's aptitudes and interests in a matrix of life experiences, not just in comparison to some normative group. By combining trait *descriptions* with life pattern *explanations* of aptitudes and interests, counselors may be able to clarify clients' choices more effectively and enhance their ability to decide.

The 1988 articles on career intervention and on decision making certainly contributed to incremental innovation in counseling practice yet they should not be expected to produce noticeable changes in practice in the near future. If the pace of research on problems in career decision making and types of undecided clients continues at the 1988 pace, then it should eventually provide practitioners with valid assessment techniques and decision rules to use in assessing client needs and formulating counseling plans. Hopefully, the rudimentary work that has begun to examine "which intervention with whom" will interlock with work on differential diagnosis and accelerate as research and experience resolve

theoretical and practical problems that have thwarted counselors' attempts to differentially diagnose career clients.

The publication of several case reports during 1988 should prompt more practitioners to publish case studies. These reports allow practitioners to "observe" how their colleagues work. This observational learning has been shown to be extremely popular at recent professional conventions. For example, many of the most highly valued sessions at National Career Development Association conferences have involved case presentations or live demonstrations. For some reason these presentations have not been published so they are not accessible to a larger audience.

While practitioners may be pleased with the contributions that appeared in 1988, they may also be curious about what is missing. Many of the articles not considered in the review dealt with topics that pertain to vocational adjustment counseling. They include interesting articles on occupational stress, mentoring, commitment to work, Type A behavior, achievement motivation, and leisure. Unfortunately, the authors of many of these articles presented conceptual models, described psychometric instruments, or reported the results of basic science research without stating the practical applications or potential implications for counseling practice. As this base of knowledge expands, scientist-practitioners will need to study and write about how to apply this knowledge to the practice of career counseling.

Some topics are missing from the present review, not because they ignored implications for the practice of career counseling, but because they did not even appear in 1988. In particular, it seemed to be an off year for work on career assessment. Little work was published on this topic. The articles that did appear seemed to be isolated pieces of work, in that they did not extend ongoing research programs or relate to each other in any obvious way. It is hoped that the coming years will bring more substantial developments in career assessment instruments and in their valid use. Also underrepresented in the 1988 literature were articles that described or evaluated career courses, workshops, and group counseling. Practitioners in school and college settings rely on group activities to reach the large number of students who need career education and development. These practitioners would benefit if they could encourage colleagues who have devised and refined group activities to publish descriptions of their model, methods, and materials.

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