TRAIT-FACTOR COUNSELING/PERSON x ENVIRONMENT FIT

COMPANION WEBSITE MATERIAL

Accompanying

THEORIES AND STRATEGIES IN COUNSELING AND PSYCHOTHERAPY (FIFTH EDITION)

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COMPANION WEBSITE NUMBER THREE – TRAIT-FACTOR COUNSELING/PERSON x ENVIRONMENT FIT

Fundamental Tenets

PRELIMINARY PERSPECTIVES

This website chapter is about vocational psychology in the twenty-first century. About a century ago, Frank Parsons established the Vocation Bureau in Boston that ushered in the beginnings of the profession of counseling. Following the hundred years of spawning of a multitude of counseling theories, approaches, styles, and formulations, the essence of Parson's basic vocational psychology is being revisited, acclaimed, and integrated as a relevant perspective on career decision making that includes both rational and alternative models. Indeed, as Hartung and Blustein (2002, p. 41) have so cogently asserted, the return to its "early roots in 20th century social and political reformation movements could ultimately lead the profession to a renewed vision that comprehends career decision making and counseling as a socially situated process entailing purposeful reasoning, prudent intuition, and sustained efforts at ameliorating social injustice."

During most of the latter thirty years of the twentieth century, counseling theorists largely overlooked vocational adjustment as a helping strategy and all but ignored the career development of ethnic and cultural minorities. Twenty-first century career development proponents have recently emphasized, within the mental health and vocational psychology domains, the role of work and cultural values in occupational choice, satisfaction, and success (Brown 2002, p. 48). The movement toward systematic and research-based use of occupational information to enhance the effectiveness of career counseling has brought forth groundbreaking techniques into the counseling process (Mallinckrodt & Gelso, 2002; Peterson, Mumford, Borman, Jeanneret, & Fleishman, 1999). But such techniques are not really new. The essence of this website chapter is to inform and reaffirm career decision making, as recommended by Martin and Swartz-Kulstad (2000), as a key and integral ingredient in assisting people to adjust to problems that arise from the unique interactions between particular individuals and environments.

HISTORY

Trait and factor, the Minnesota point of view, differentialist, directive, and *decisional* all describe a counseling approach centered in four decades of writings by Edmund Griffin Williamson and his colleagues at the University of Minnesota. The classic trait-factor approach that Donald Paterson, John Darley, and E. G. Williamson proposed in the late 1930s was a direct outcome of their investigation of a variety of settings. Going back to the late nineteenth and early twentieth centuries, they integrated Galton's empirical and systematic attempts to measure differences in individual capacities and aptitudes; investigations by Binet in France and Cattell in America of differential prediction of intelligence; and Munstenberg's utilization of such individual differences in industrial applications. They then bound these psychometric approaches to Frank Parson's theories of vocational guidance (Williamson, 1972, pp. 137--140).

During the Great Depression, Paterson and Darley brought these concepts to the Minnesota Employment Stabilization Research Institute and used psychological tests and other assessment devices to analyze the vocational abilities of the unemployed. Case histories, staffing for diagnosis and prognosis, provision of

educational and vocational training, and placement services were all used in a comprehensive attempt to place people in jobs (Williamson & Biggs, 1979, p. 92). At approximately the same time, Williamson was appointed director of the University of Minnesota Testing Bureau. The task of the bureau was to apply those guidance procedures developed by Paterson to the educational and vocational problems of students (Williamson & Biggs, 1979, p. 92).

Thus, out of a "dust bowl empiricism" of the 1930s, trait-factor counseling was born. Its practical purpose was to define human behavior by specific *traits*, such as aptitudes, achievements, personalities, and interests. These traits could then be integrated in a variety of ways to form constellations of individual characteristics called *factors*. Based on such traits and factors, a scientific problem-solving method could be employed that had statistically predictable outcomes that could be applied differently to individuals (Williamson & Biggs, 1979).

Trait-factor's heyday was in the 1940s, when it was put to maximum use in the military's selection and classification efforts during World War II and in developing student personnel services on college campuses. With the advent of Rogers's client-centered approach in the early 1950s, the trait-factor approach was heavily attacked as unreliable, dogmatic, and reductionist and began to fade from the scene as a therapeutic approach. Its impact has degenerated to the point that it is now relegated to career counseling texts, where it is often viewed as having historical significance only. The question may be immediately posed, "So why does it appear in this website to this book?"

While it has not received a great deal of press in the academic literature in the last thirty years, and whether it is known by them as such, the fact is that most school, vocational, and rehabilitation counselors practice a trait-factor approach in some form or the other. Further, many of the aptitude, personality, and interest tests and occupational information materials formulated by the trait-factorists have steadily evolved and remain in use today. Finally, the trait-factor approach is admirably suited to computer-therapist-client interaction with computer-assisted instruction (CAI), particularly computer-assisted career guidance (CACG) programs such as DISCOVER (American College Testing Program, 1988) and SIGI PLUS (Educational Testing Service, 1988), which, whether therapists like it or not, is here and whose role will only expand (Sampson & Krumboltz, 1991).

Offshoots of the trait-factor approach may be seen in Holland's vocational theory (1985), the theory of work adjustment (Dawis & Lofquist, 1984), and the cognitive information processing approach (Peterson, Sampson, & Reardon, 1991). Finally, Chartrand (1991) makes a compelling case for its evolution to a person times environment (P x E) fit approach (Rounds & Tracey, 1990). The P x E fit approach draws heavily from differential psychology and acknowledges the utility of traits for predicting occupational behavior, but it is more interested in the dynamic interaction between persons and environments and in this way differs significantly from the classic trait-factor approach (Chartrand, 1991).

Two distinct attributes uniquely mark the trait-factor approach. First, the theory evolved from a vocational perspective. Second, it developed as a student personnel program in a university setting and later found its way into secondary schools. As such, many of its techniques and practices are based on the vocational and educational counseling of students. It continues to operate in those venues today and is clearly one of the few theoretical approaches at present that focuses on nonpathological clients who are experiencing typical developmental problems of living during the early years of the twenty-first century. From that standpoint it still operates on its historical principles of preventive counseling, information services, testing, and teaching.

OVERVIEW OF TRAIT-FACTOR COUNSELING

The trait-factor approach is concerned with the total development of the individual across life stages and environments. Its short-term goal is to help the client stop irrational, nonproductive thinking and behaving and start using rational problem-solving skills for effective decision making (Lynch & Maki, 1981). The counselor-client relationship can be described as teaching, mentoring, and influencing. External measures that allow the individual to gauge personal development against society are used. The long-term goal of the counseling relationship is to provide the client with decision-making skills formulated jointly by the client and society. Counseling is a way station on the road to full development.

Basic assumptions of the trait-factor theory as it particularly applies to career counseling are:

  1. Each person possesses a unique and stable pattern of traits that can be measured.

  2. There is a unique pattern of traits required for successful performance of the critical tasks of each occupation.

  3. It is possible to match the traits of persons with the trait requirements of occupations on a rational and actuarial basis.

  4. The closer the fit between a person's traits and the trait requirements of that person's occupation, the greater the likelihood for successful job performance and personal satisfaction (Klein & Weiner, 1977).

  5. Personal traits may be viewed in a context of how well they fit into the environmental system within which the person operates. Environmental systems may be viewed in a broad ecological context that includes geographical, local, cultural heritage, family background and influence, socioeconomic class, work/ school setting, community setting, and economic climate.

  6. In a broader context, "occupational" or "vocational" counseling may be replaced with any of the developmental tasks of living such as going to school, raising a family, or planning for retirement.

THEORY OF PERSONALITY

The trait-factor approach has been criticized as lacking comprehensive theories of personality and counseling (Crites, 1981; Patterson, 1966; Williamson & Biggs, 1979). It is more often seen as a set of procedures for counseling and probably best describes the behavior of school, employment, and rehabilitation counselors (Schmitt & Growick, 1985; Stefflre & Matheny, 1968). Does this mean that trait-factorists do not believe in theory or that school, employment, and rehabilitation counselors do not have any theoretical foundations on which to counsel?

If Chartrand's (1991) premise that the person x environment (P x E) fit approach has issued from trait-factor is taken as valid, then such criticisms seem unwarranted. Holland's (1985) theory of vocational fit between personalities of people and environments is probably one of the most researched and validated theories of personality. Chartrand has also drawn from Moos's (1981; 1987) extensive research on work and social environments to suggest that a complex matrix of P x E factors govern adaptation to a dynamic environment. Work content and personal preferences influence one's cognitive appraisal and coping resources, which in turn influence individual adaptation such as performance and

well-being. Overlaying this matrix is another factor that includes the physical features of the environment, the policies and structure of the organization, and suprapersonality orientations like Holland's. Finally, Moos (1987) also promotes three major social climate dimensions: relationships and involvement with other people in the setting, personal growth as applied to goals in the setting, and system maintenance and openness to change in the setting.

Thus, modern trait-factor theory emphasizes the challenge of attaining a complex correspondence between one's traits and one's work environment (Dawis & Lofquist, 1984). The P x E fit approach moves beyond static, stable congruence between person and environment and assumes a more reciprocal, fluid, dynamic process with the individual shaping the environment and the environment influencing the individual in a continuing series of interactions that characterize developmental outcomes (Chartrand, 1991).

In *Vocational Counseling*, Williamson (1965) wrote at length on what an adequate theory should be and what it should do. Theory should not arbitrarily weld counselors to any one precept, but should allow openness to change as new conditions, new problems, and new environments are experienced. No theory is of much good if it prescribes blanket approaches and blanket goals, since that would be opposed to the individual's moral right to choose appropriate goals and would deny individual differences (pp. 153--175).

The philosophy of the trait-factorists is more than one of curative or remedial therapy. It is a general method of life adjustments (Williamson 1950a, p. 213) that reaches far beyond the counseling session. Trait-factorists assume humankind to be rational and capable of making satisfying choices if the necessary facts are available.

Therefore, the counselor's role in helping individuals is largely educational. The counselor not only teaches the client about the meaning of psychometric data presented (Williamson, 1950a, p. 38) but also illustrates the range of options and choices available from an analysis of the data. Client and counselor are concerned with the individual's unique abilities, aspirations, and plans within the context of the values and alternatives in society and its institutions. Thus, counseling must attend to both individual needs and social reality (Williamson & Biggs, 1975, p. 273).

NATURE OF MALADJUSTMENT

Because the roots of the trait-factor approach are based in educational and vocational counseling, a broad band of individuals are counseled who are generally not considered to be pathological. Therefore, maladjustment is viewed in terms of vocational and/or educational maladjustment. One must ask, "What is the relationship of vocational adjustment to adjustment in general?" If we may believe such social psychologists as Erikson (1959, p. 92), who states that "in general it is primarily the inability to settle on an occupational identity which disturbs young people," and Levinson (1978), who in *Seasons of a Man's Life* discusses composite adults whose career crises spill over into the rest of their lives, then vocational adjustment has a great deal to do with life adjustment in general. If one considers that a great portion of one's adult life is spent "on the job" and that a great many potential satisfactions or frustrations come from those moments, then trait-factor practitioners' emphasis on vocational and educational adjustment may not seem as narrow as at first glance.

Whereas personal growth is the vehicle for change in a P x E fit approach, it is relationships and system maintenance that influence commitment to a particular environment (Moos, 1987). Both people and environments have varying degrees of flexibility necessary for adjustment to one another. If one cannot adapt to the

constraints of a rigid environment or the environment cannot be changed, there are likely to be serious adjustment problems (Chartrand, 1991).

Whether the environment is work, school, or family, when systems begin to malfunction and relationships subsequently deteriorate, bad things happen to personal growth. When the environment is extremely specific, little deviation from the person is acceptable. Therefore, as the environment changes, the person must stay in correspondence with it (Chartrand, 1991). A classic example is the magical thinking of a person engaged to be married to an alcoholic: "Well, after we're married, he/she will love me so much he/she won't want to drink anymore." Because of the very rigid, maladaptive environment of alcoholism that focuses on intoxication to the exclusion of all else, it is extremely unlikely the alcoholic will change. What is more likely is that if the other person stays in the marriage, he or she will aid and abet the rigid environment by adapting to it or, in the jargon of addiction, becoming an enabler. While the family system may achieve homeostasis, it will be a highly maladaptive environment.

The Counseling Process

Because counseling is an extension of the institution, particularly the school or community, it is educational and thus is involved in a relationship that might best be called guided learning toward self-understanding within the boundaries of the institution or community (Williamson, 1950a, pp. 209--210).

The client comes to counseling with an affective state that ranges from, at worst, crisis to, at best, nagging self-doubt about making the right decision. This feeling state is the result of irrational negative self-evaluation to the extent that normal, rational decision-making processes are paralyzed (Williamson & Biggs, 1979, p. 104). What the client must do at this point in counseling is to integrate the actuarial data presented with his or her own self-appraisal. The client compares him- or herself with new reference points provided by the counselor; generates action hypotheses to be tried; assesses the probability of success of different alternatives; and then tries those alternatives out in the real world. During this process the final judgment for evaluating and acting on the information is the client's (Rounds & Tracey, 1990; Williamson & Biggs, 1979, pp. 91--127).

To apply appropriate counseling techniques, the counselor must make a differential diagnosis of client problems. To obtain a diagnosis the counselor must work with the client to differentiate presenting problems, set priorities among goals, and assess current resources and stressors that could either foster or inhibit planning or adjustment. Based on this information alternative intervention strategies can be developed (Chartrand, 1991). Such a role calls for the counselor to be well grounded in assessment procedures and to have the ability to analyze and apply such data to each client's needs (Stefflre & Matheny, 1968, p. 30). The counselor is an action therapist who assesses and deals with issues in the client's life with the notion that what is gained from counseling will aid the client's self-development for the rest of his or her life (Hennessey, 1980). To accomplish this task the counselor (1) helps the client to understand himself or herself; (2) suggests steps to be taken by the client; (3) directly helps the client to explore his or her own assets and liabilities; and (4) refers the client to other personnel workers for special help (Williamson & Hahn, 1940, p. 213).

To accomplish these four services the counselor often functions as a mentor or teacher. The counselor not only delivers information on abilities, aptitudes, and interests, but also helps clients identify motivating forces in their lives, apprises them of the future implications such forces may have, and, when appropriate, encourages clients to substitute alternative behaviors that will help them reach desired life goals (Williamson, 1958).

In the past, trait-factorists have focused more on the quality and type of information presented than on how the information is processed or the acquisition of problem-solving skills to accomplish successful resolution. According to Rounds and Tracey (1990), the primary goal of P x E fit counseling is to facilitate decision making, planning, and adjusting through the acquisition of problem-solving skills. Their model is a four-step sequence of information processing that includes the following: obtaining information and synthesizing it; goal setting; developing plans; and acting to implement a situation. They acknowledge the effect of emotional arousal at each stage of the counseling process and believe it is important to assess and explore affect throughout the process.

It is the responsibility of the counselor, by virtue of knowledge, skill, and experience, to apprise the client of potential pathways and roadblocks to full development. Both counselor and client freely evaluate the sum and scope of the client's aspirations, frustrations, disappointments, successes, and failures in relation to how these can be synthesized into a meaningful diagnosis. Once this diagnosis is obtained, a prescription as to how the client can actualize positive potentials can be made. If the counselor has truly done a good job, the termination of counseling will be but a starting point that will result in continual self-counseling throughout the client's life (Williamson & Biggs, 1979, pp. 101--102).

ASSESSMENT PROCEDURES

Trait-factorists make more use of actuarial measures than practitioners of other approaches because of their emphasis on problem solving. Objective and verified data allow the client greater understanding and exploration of problems (Lowman, 1991; Roberts & Hogan, 2001; Williamson, 1972, pp. 292--293). Data may be collected by means of six analytic tools: (1) the cumulative record, case, or personnel file, (2) the interview; (3) the time distribution form, (4) the autobiography, (5) anecdotal records, and (6) psychological tests (Williamson, 1939, p. 68).

The *cumulative record, case*, or *personnel file* provides a comprehensive look at the educational, psychological, physical, and work records of the client. Grades, honors, military and criminal activities, work habits, leisure activities, previous test scores, attendance records, and physical and mental health histories are a sample of the variety of P x E components that paint a picture of how the client has performed in the past in the view of instructors, therapists, and supervisors. It is a longitudinal record that may provide insight into the individual's current problems and gives the counselor data with which to compare the client's self-perception in the interview and the facts as significant others view them.

The *interview* retrieves the individual's self-perception. A major component of the counseling process itself, it also serves to integrate the perceptions of the client with those of the counselor and, combined with the reports of others and particular test data, provides the framework within which the client's problem is painted.

The *time distribution form* was originally formulated to monitor how time was spent in wise and unwise ways. In business and industry it still has wide use. In counseling it has been replaced by the *behavior baseline*, which attempts to objectify discrete behaviors and count them in various times, places, and settings to determine how much, when, and where behaviors may need to be changed.

The *autobiography* may be used to obtain fast, poignant pictures of the salient features in one's life. This loose form of analysis lets the client free-associate without the threat of a face-to-face encounter with the counselor, which might cause the client to "repress" certain information that could prove highly significant.

Anecdotal records are specific little slices of the client's life. Usually they are constructed by observers such as family members, teachers, and supervisors who watch the client in specific situations. They may be formally or informally obtained and provide information that might never be seen through other assessment procedures. While admittedly colored by the observer's view, anecdotal records can vividly counterpoint the client's perception of the dimension of the problem. The substance abuser is a classic example of how important the anecdotal reporting of significant others can be in treatment planning.

Psychological tests are the capstone of the trait-factor practitioner's tools (Lowman, 1991; Roberts & Hogan, 2001). Williamson has made a strong case for the use of tests by contrasting the subjective data the client brings to the counseling session with the objective data of empirical assessment devices. Williamson (1972, pp. 151--153), has listed these advantages:

1. A mathematical analysis of objective and observable data is not possible if one deals only with subjective data.

2. At least an approximation of accuracy in the measurement and identification of client experience, aptitude, interest, and personality is possible.

3. Greater clarity of communication is possible through the use of quantifiable data, compared with the vagueness and bias of the purely subjective client self-report.

4. Through the use of massed data more than one individual can be characterized at a time.

Reliance on tests is not a be-all and end-all. Williamson made clear early in his work that to provide a differential view of people, tests could not be used in a mechanical or isolated fashion and should have diagnostic significance only in relation to individual case data (Williamson, 1939, pp. 74--75). A contemporary example is the belief that computer-generated expert analysis would provide perfect diagnoses. In reality, the single-test "cookbook" analysis has not worked well (Moreland, 1990). The use of objective data in classifying serves to highlight the individuality of the client, who does not lose his or her uniqueness even in an age of computerized data. That the counselor may not achieve 100 percent accuracy in prediction does not mean a return to self-analysis (Williamson 1972, pp. 151--155).

CASE HISTORY

In their earliest writing (Paterson, Schneidler, & Williamson, 1939, pp. 27--51), the trait-factor practitioners understood that a one-shot test administration was not conducive to adequate reliability and validity in the diagnosis and prognosis of client problems. The case history therefore became central in ascertaining the differential aspects of clients (Williamson, 1972, pp. 293--294). While the case history concentrates on an ecology that includes family, work, school, health, social, and recreational interests (Williamson, 1939, p. 67), it also seeks to integrate these facets of the individual with test data so that a very clear diagnosis and prognosis can be made.

Rounds and Tracey (1990) indicate that the quality of assessment has more to do with the dependability and accuracy of information than the way the information is gathered. Thus, increasing the client's involvement in the assessment process is important. Assessment is based on client goals and interview data and is made in conjunction with the client (Chartrand, 1991). In P x E fit counseling, psychometric information is one way of organizing self-reported information and can be used to help clients develop a clearer cognitive structure of both themselves and their environments.

INTERVIEW

The interview between counselor and client is the boards and nails that build the complex pattern of individual abilities, interests, needs, wants, and values into a unified structure. The methodology of the interview is predicated on the counselor collecting and writing down information on (1) the client's description of, the circumstances of, and the persons associated with the problem; (2) the client's attitudes toward persons, places, and things associated with the problem; (3) the client's attitude as these are discussed; (4) the counselor's tentative estimation of the seriousness, causes, and possible developments; (5) new and additional information to be collected; and (6) suggested next steps discussed about what the counselor and the client will need to do in a cooperative program to work out a solution to the problem (Williamson & Hahn, 1940, pp. 178--179). The comprehensive recording procedure is no less than a continuing and updated game plan of the counseling process.

In conducting the interview the counselor (1) listens attentively, giving suggestions in the early stages of counseling and more specific suggestions in later stages; (2) asks questions to clarify the client's self-understanding; (3) explains the meaning of the client's interests, abilities, and personality traits; (4) outlines a stepwise progression to ultimate decision making; and (5) may serve as an adviser by making decisions as to what will stimulate the client to start taking responsibility for his or her own actions (Williamson, 1972, pp. 164--165).

COMPUTER-ASSISTED GUIDANCE SYSTEMS

The voluminous amount of information on vocational, educational, and social information available makes it impossible for the counselor to stay abreast of the information needs of every client. Counseling in the twenty-first century must take into account the complementary disciplines of sociology, economics, demography, and social psychology if it is to be effective (Otto, 1984). Understanding one's abilities, aptitudes, and interests in relation to the vast array of societal forces that impinge on the individual is critical if such an avalanche of information has any meaning in decision making. How might that be done?

A major innovation in the field of counseling has been the development of computer-assisted guidance (CAG) programs that provide everything from assessment to simulation activities (Sampson & Krumboltz, 1991). The interactive dialogue, storage and searching of data files, and assessment capabilities render the computer an excellent tool for use in counseling (Harris-Bowlsbey, 1984). Counselors may obtain highly reliable scoring, normative interpretations, and specific therapeutic recommendations through the use of computerized testing programs and can assign clients a variety of information retrieval and therapeutic activities that can be done on CAG systems.

In particular, computer-assisted career guidance systems have become one of the most widely used applications of computer technology in the counseling field. Clients may conduct their own self-assessment or work conjointly with the

therapist through such occupational interest inventories and information systems as DISCOVER (American College Testing Program, 1988), which links interests and abilities to occupations and SIGI PLUS (Educational Testing Service, 1988), which links values to occupations.

Directories of computer software have identified hundreds of applications to counseling that range from personal, family, and career counseling to administrative, assessment, and research functions (Walz, Bleuer, & Maze, 1989). Computer-assisted instruction provides tutorials and real-life simulations to present concepts, describe examples, measure performance, and present feedback to the learner (Sampson, 1986). Its interactive capabilities allow the user to explore personal values, interests, abilities, and decision-making styles (Hinkle, 1992). A review of the literature indicates that clients react positively to CACG applications by expanding their knowledge of self and the world of work, specifying career and educational plans, and making confident career decisions (Garis, 1983; Sampson, 1984); it is particularly true of younger, better-educated clients who typically are more familiar with computers (Spinhoven, Labbe, & Rombouts, 1993).

The counselor of the future will have to be an information broker, mediator, and interpreter of such machine-generated data to meet the needs of clients (Schmitt & Growick, 1985). The computer, therefore, holds the promise of delivering a sophisticated occupational, social, and educational grouping and assessment model that can provide predictive validity based on sound scientific and actuarial methods. (See Chapter 14, Computer—Assisted Therapy/Cybercounseling, in the basic text for which this website serves as a supplement)

Strategies for Helping Clients

From a differential point of view, the steps in the counseling process are of primary importance. The following steps were first formulated by Williamson and Darley (1937) and still hold to the present:

   1. *Analysis*: acquiring a comprehensive understanding, through appropriate assessment techniques, of how the client is and what he or she is likely to be

   2. *Synthesis*: ordering and arranging the various parts of the client into a total picture by assessing information on strengths and weaknesses across the inter- and intrapersonal aspects of the client's life

   3. *Diagnosis*: descriptively identifying the problem, discovering its causes, checking the logic and the client's reactions, and proposing a program of action based on the objective and subjective data presented

   4. *Prognosis*: forecasting on the basis of available choices; diagnosis relates to past and present conditions, whereas prognosis attempts prediction of the future

   5. *Counseling*: learning to deal in a generalized way with totality of life; guided learning and reeducation through personal assistance by a variety of techniques that help the client apply learning gained in counseling to all kinds of problem situations

   6. *Follow-up*: reinforcing, reevaluating, and checking the client's progress in applying what has been learned in counseling to daily life

Although counseling is only one of the helping strategies, it is woven throughout the fabric of the trait-factor approach, from analysis to follow-up. This concept of counseling as a pervasive strategy has seemed to evolve, as Williamson moved from understanding that a pure trait-factor approach is

untenable to adopting a more developmental point of view. Although we present the steps separately for the sake of clarity, there is a great deal of flux and flow among them. To illustrate we have woven the component of counseling throughout the other parts of the therapeutic process in the case study of Glenn that follows shortly.

With the advent of computerized assessment, the ability of the counselor to collect, analyze, synthesize, and diagnose has grown dramatically. Structured interviews, questionnaires, rating scales, and tests can be combined to measure symptom profiles, disabilities, and risk factors. Diagnostic interpretations and treatment plans can be generated by these "expert" programs. By using these in combination with human decision making, a computer-assisted clinical approach can be highly effective in generating a treatment approach (Andrews & Wittchen, 1995; Farrell, 1991; Jager, 1991; Moreland, 1990; Smith, 1993; Warzecha, 1991).

The contemporary trait-factor approach views the client's problem in a developmental and holistic sense (Chartrand 1991; Rounds & Tracey, 1990; Williamson & Biggs, 1979). Therefore, at each step in the case study we look at the counseling process and the problems presented not just as a case of vocational decision making, but rather as a whole-person problem that has ramifications across the significant others and environments of the client.

Pertinent to this process are the hunches and guesses that the counselor makes. Hunches and guesses may seem completely opposed to the notion of a highly empirical trait-factor approach, but they may well be as valid as any statistical constant if based on valid and differential indicators about a client (Williamson, 1939, p. 105). Throughout his writing, Williamson has constantly promoted counselors as highly capable of making intuitive guesses and formulating tentative hypotheses if---and this is a big *if*---they have been well grounded in their discipline (Williamson, 1939), if they constantly engage in research to update their knowledge (Williamson & Biggs, 1975), and if they interface with other skilled professionals (Williamson, 1972).

Sample Case

The following case data were retrieved by the intake counselor during Glenn's initial visit to the university counseling center.

BACKGROUND

Glenn is a thirty-six-year-old male who is currently employed as a police officer in a large metropolitan city. He works on a tactical unit that is on constant standby to deal with extremely dangerous situations. He moonlights in real estate and referees high school sports. He maintains that the real estate work provides needed income and the referee jobs are for fun and relaxation.

Glenn is married to LaQuita, a nurse who has recently been promoted to a supervisory position in a large hospital. He describes her as a highly skilled professional who takes a great deal of pride and effort in her work and still has time to be an excellent wife and mother to their two children. The two children are Avon, age eight, and Danielle, age five. Glenn describes both children as bright, industrious, and involved in many activities.

Glenn was born to a large and poor sharecropper family. He is the oldest of seven siblings, four boys and three girls. Glenn attended a small, rural, segregated elementary school and was one of the first African-Americans to attend a community high school. He was active in sports and music in high school and parlayed his athletic ability into an athletic scholarship at a small state university, where he played football. He majored in criminal justice and saw

himself as an "average student who could have done better," but football came first and what time was left was devoted to a social life.

After his eligibility expired, Glenn left school twelve hours short of a degree and enlisted in the army. He became a military police officer, saw duty in the Gulf war, and was wounded in action. He received the bronze star and a purple heart and was honorably discharged. He reported no recurring medical problems with his wound and indicated he is in excellent health except for some problems "with a nervous stomach," which he medicates.

After his discharge from the army, Glenn came to the present locale and joined the police department as a patrol officer, finished his degree in criminal justice, and met and married his wife. He indicates his family life is good and extremely important to him, although his job as a sergeant on the TACT squad exacts an extreme amount of physical and psychological stress, both in the amount of constant training and in the crisis situations in which he finds himself. He states that sometimes after a hard day he is "pretty short with the wife and kids."

Glenn is currently enrolled in his first semester of graduate school as a part-time student in counseling. On a questionnaire of what problems he thought he had, Glenn indicated "vocational---want to talk to counselor." At the time of his intake interview, Glenn completed a counseling intake questionnaire, which asks for specific demographic and ecological information in regard to his request for counseling. The following assessment data were retrieved during the course of Glenn's counseling sessions:

Undergraduate grades	Strong Interest Inventory
Graduate Record Exam	Priorities problem ranking by client
Counseling intake questionnaire	DISCOVER occupational preference
California Psychological Inventory	Computer printout

ANALYSIS

While Glenn has already provided a great deal of data through his intake interview and the open-ended assessment device given in his initial visit to the counseling center, these are basically self-analyses. Taken alone, self-analysis is likely to provide a very biased notion of the problem and any attempts at resolution. Therefore, the counselor uses this opening interview to collect, sift, evaluate, and classify data about Glenn. The counselor will continue doing so until a complete description can be obtained that will provide insight into the circumstances that brought the client in for counseling in the first place (Williamson, 1950b, p. 109). Accomplishing this task will require not only written and verbal client self-reports but also empirical information on aptitudes, interests, physical health, emotional balance, and other characteristics that facilitate or inhibit satisfactory adjustment (Williamson, 1950b, p. 158).

The counselor is also trying to determine in what manner the client approaches problems, for this will not only reveal the client's lifestyle but also will determine reactions to the analysis and diagnosis. These attitudes, in fact, are one of the most important pieces of analytic data the counselor can obtain (Williamson, 1950b, p. 146). As such, the excerpts from Glenn's interview sessions show the counselor dealing with both attitudes and data.

CO: Hello, Glenn, I'm Dr. Jimenez. I've been assigned as your counselor. I've been looking over the autobiographical material you submitted. On the part where

it asked you to state your problem, I noticed you put vocational. I wonder if that's where you'd like to start.

CL: I...to tell you the truth I really feel kinda foolish being here, I mean thirty-six years old and enrolled in the master's program in counseling...

CO: It seems like whatever is bothering you, you ought to be able to figure it out, old as you are and particularly since you're in counseling as a major.

CL: That's for sure. You could say I feel stupid being here.

CO: You wonder whether you might be thought less of by me or your professors for seeking counseling?

CL: Yeah, that's right! I mean you don't want your professors to think you're crazy or can't cut it.

CO: My feeling is that it's a wise person who gets help. I can understand those feelings. I had them myself when I was a student. I think it also says something that you realize that counselors too need help at times. I also feel that your professors would respect that.

CL: Okay. I've been a police officer for a long time. It's exciting and I've enjoyed the work, but it's also dangerous and here I am thirty-six. I mean I really like dealing with people, but not always the negative side. So I started into counseling, but I don't know...you don't seem to get problems solved.

CO: So, on one side you like police work but the danger of it and seeing the bad side of people makes you think there are other jobs that might give you more satisfaction and security. On the other side, counseling seems kinda slow and at thirty-six you don't feel you can make mistakes career-wise.

CL: That's pretty much on target. I'm having some real questions about counseling as a profession and myself...both time-wise and financially.

CO: So far as time and money are both concerned, it's pretty important at least to have some odds on coming out right and getting on with your life---whatever direction it might take. You also seem to have some questions about yourself.

CL: I'm not so sure I can cut the mustard. It's been a long time since I was an undergraduate, and I wasn't a great big ball of fire then, and with working and family and all, it seems like there's never enough time. (*silence*) I just couldn't very well face flunking out...(*sigh*) That gets depressing...a lot of people looking over my shoulder; wife, she's smart as a whip. Other guys at the station wonder what I'm doing, and the damn beeper, never know when a call is coming, and trying to be a father, too. I wonder whether five guys could do it, and finally I get these gut pains...don't know whether I'm breeding an ulcer or what. Sounds weird, huh?

CO: What it sounds like is a lot of things going on in your life and sorting them all out is a real headache...or gut ache, as the case may be. What do you back off of and what do you give your undivided attention to, particularly the big risk you're taking by getting into counseling and maybe changing not only careers but also a whole bunch of other things in your life?

CL: That's about it. I need to figure out a way to go and I need some help doing it.

CO: Okay. You seem really motivated to get some of this stuff rolling and that's super. Here's what I'm gonna do and here's what I want you to do. First, I'll call over to records and get your grades and your GRE scores. I'll look at those

and compare them with some expectancy tables we've got that will give us a ballpark figure of what you might expect to do grade-wise. What you've said rings pretty true. It's not just your aptitude, but your interest and to some extent how your personality fits into an occupation and vice versa. There are a couple of inventories I'd like you to take so we can get a better line on some of the issues in your life right now---particularly how those issues fit with your educational, vocational, familial, and other kinds of goals. You'll need to make an appointment with testing and also go over to the career counseling center to get on the DISCOVER computer program. It's real easy to access, just ask the student helper over there. It'll ask you some questions and then give you some information back on a printout that should give you some food for thought. Bring it back with you for our next session. These inventories are not chiseled in stone. They are comparing you against samples of other people: their likes, dislikes, feelings, needs, values, motivations, and so on. I can give you my interpretation of the inventories, but in the final analysis, you're the one who decides how and what kind of meaning they have for you. Does that make sense?

CL: So what you're saying is that you believe that these inventories will help me get my head straight about a career and that while you'll tell me about them, I got the responsibility of making use of them.

CO: That's right! One other thing---I have a homework assignment I'd like you to do on your own. I'd like you to make a list of all those concerns you have right now and rank them according to what you think and feel, and I'd like you to give equal time to both the thinking and feeling parts. Once we obtain all this, we'll analyze it, and see if we can't put the pieces together.

The counselor is highly proactive in this first meeting. While the counselor listens, clarifies, and reflects the client's content in a nonjudgmental way, at times he also interprets the content to test the validity of tentative hypotheses he is proposing to himself. Data are being gathered, compiled, and sorted. "Returning student, older, not real sure of himself both academically and career-wise; feeling a time and financial press. Got lots of responsibilities---two jobs, family, wife successful. What kinds of pressure points in all this?" As the counselor processes these questions and comments, he is busy comparing his analysis to analyses of other clients who have demonstrated the same general set of problems. How does Glenn fit into this large reservoir? What specific idiosyncratic data bits make him distinct from the populations that fit Glenn's profile? What other assessment data are needed?

The counselor will do all that can be done to build rapport, particularly in the first session. The counselor reinforces the client for the decision to seek counseling. Even though Glenn may understand a good bit more about the meaning of tests because of his background, their use is still explained to get him motivated to start being a full-fledged partner in the process. Finally, the counselor uses a lot of "we" statements, setting the stage for a cooperative effort.

SYNTHESIS

Before a diagnosis can be determined, synthesis needs to occur. The teasing out of a mass of sometimes seemingly irrelevant facts into a consistent pattern of behavior that is unique to the individual's assets and liabilities is based not only on the counselor's learning and data base, but also on other cases the counselor has worked with and the experience that comes with that work. Based on a synthesis of these diverse parts, the counselor is able to make a diagnosis and a prognosis of the pattern of the client's future adjustment to the problem (Williamson, 1950b, p. 101). Test scores, rating scales, autobiographical accounts, anecdotal reports, and grades, among other data, are summarized (Williamson & Hahn, 1940, p. 212). After the data are summarized the counselor

explains to the client the "rules of evidence." That is, certain traits in combination with certain factors are admissible as rules of evidence (Williamson, 1950b, pp. 148--149).

In Glenn's case, the initial session indicates an interest in the field of counseling, although the client's interest is somewhat cloudy and ill-defined. The counselor first explores that professed interest more closely, not only by empirically looking at it, but also by trying to establish how the client's interest manifests itself with his desires and the reality of life. The second problem is to explore how his interests mesh with the aptitudes needed for the work he desires. Can he do it?

CO: Good to see you again, Glenn. I've sifted through those inventories you took last week and put what came out on those with your own thoughts and feelings and the other data like grades and scholastic aptitude. What I'd like to do is explain some of the findings and then put our heads together and see where that leads us.

CL: Super. Okay, let's get at it.

CO: You took the Strong Interest Inventory and you should remember the caution that this is no occupational crystal ball. Your interests are based on what you said you liked or disliked. From time to time this may change somewhat. Further, this inventory measures interests, not abilities, so it doesn't necessarily mean you'd succeed either academically or on the job. Do you understand this?

CL: What you're saying is that there might be some slip in this---like depending on how I felt, some of the scales might go up or down and even though I might be interested in it, I might or might not be able to cut it, like assessments.

CO: Assessment's giving you some trouble?

CL: Yeah, it's the math...the statistics...a real headache; haven't had any since freshman year in college.

CO: Uh-huh, that seems to fit from your grades and scores and that's a good example of what I'm talking about. It's one thing to be interested in counseling, but quite another when you're dealing with math, something you probably thought you wouldn't deal much with in counseling.

CL: Man, is that ever the truth. Don't know if I'd have gotten into it if I'd known about that assessment course.

CO: Okay. We can look at that more closely in a little while. Let's see what your SCII has to say.

The counselor explains Glenn's Strong occupational themes and scales. Glenn has high Realistic (R), Social (S), and Enterprising (E) themes. These themes seem to fit with occupations of police officers, counselors, and sales---occupations in which Glenn has either a stated or a manifest interest.

CL: I could guess that Realistic would be high and maybe the Enterprising,'cause I'm already into those things, but I gotta say I'm really amazed at that Social. I kinda felt like I had those interests but this makes me feel even more like that's what I ought to do.

The counselor then explains various combinations of occupational themes. For Glenn, his high theme combinations are RES and RSE---that is, combinations of Realistic, Enterprising, and Social---in that order.

CL: Yeah! That R for police officer fits. Not so high in realtor, E, and not so high in counselor, SE (*frowns*).

CO: What about your realty work? Is there anything you don't like about it?

CL: Well...the nit-pick stuff...the paperwork...although I'll do it for the money. I sure don't like it much. The people, the selling; that's all very exciting.

CO: There are a lot of things in counseling like that, excitement working with different people, different problems.

CL: Doesn't look I'm much cut out to be a counselor either. I can't figure that out. I really like working with kids.

CO: You'll note that this is based on high school counselors. That profile will be flavored with some or the other scales such as Conventional because they have to push a lot of paper too. While I'm a counselor, I don't have a Strong profile that looks like that either, and frankly I don't think I have the right stuff to be a high school counselor. What I'm saying is that there are a lot of different kinds of counselors and the personality and environmental fit may be different for them than that of a high school counselor, so don't take that as chiseled in concrete.

CL: (*sighs*) So I don't exactly look like a counselor...or at least a high school counselor. Well that makes the stuff I did on the computer make a little more sense. It sure didn't make much out of me being a counselor. Kinda depressing really. I don't like my job and now I'm not sure about what I'm gettin' into.

CO: I understand the frustration of feeling caught in the middle in something that means so much to you and the rest of your life. I wonder if you've talked to any counselors about what they do?

CL: Yes, and I can remember them saying there was a lot of paper shuffling, but I guess I forgot about that when they started talking about the other things. Those interests generally seem to fit, but it looks like I'm back to being a cop.

CO: What made you want to get out of it?

CL: I'm tired of hurting people, seeing people get hurt. I'm getting a hard shell and that bothers me. I like people and just don't want to have to come down on'em anymore. Plus, with a family and all, it's dangerous work...the wife's not handling it so well, open season on cops and all. Sometimes I get really depressed about it and my guts hurt. Although at times it's a real high, but it seems like those are getting fewer and farther between.

CO: So if you move over into counseling, you feel like those positive strokes will come a lot faster.

CL: I don't know about that. It's just that...the way I feel right now I don't know if I could help anyone.

CO: Let's take a look at the way you feel about yourself in general---what the California Psychological Inventory (CPI) has to say. What the CPI will do is give us another perspective---where you are right now in regard to a number of personality measures, how those particular measures may be reflective of strong points and problem areas you have at present.

The counselor interprets the CPI. It pictures Glenn as fully functioning and well within the normal range of adjusted individuals. A comprehensive profile of

Glenn indicates that he is ambitious, persistent, planful, enthusiastic, outgoing, and achievement-oriented. He is responsible, has a well-structured set of values, has good interpersonal relationships, and has insight, perceptiveness, and assertiveness balanced with sincerity and acceptance of others. He has weaknesses in self-acceptance, sense of personal well-being, and intellectual efficiency.

CL: I'd say that those scales are true. I have been pretty enthusiastic about life in general...but lately...I don't know. I've never felt guilty about anything. I mean I think things out, not rash, but if I ducked out on the assessment course I'd probably feel guilty and I sure as hell wouldn't be very accepting of me, but I sure don't want to come up a loser either. Damned if I do and damned if I don't.

CO: So really you'd feel pretty good and confident to handle about anything except for the assessment course.

CL: That's kinda the tip of the iceberg---it's the whole decision about the career field, but if I could handle that course it'd sure make me feel a whole lot better!

CO: Can those other strong characteristics you indicated be brought to bear on the problem?

CL: Most of the time for sure; it's just that I can't seem to get it together right now and it even spills over at home.

CO: I am wondering from these scores and what you said about your wife's fears, if some of the indecision about vocational choice isn't related to your deep feeling about being needed at home.

CL: (*long silence*) Well, you're right. On my list of priorities I put family way down, but I guess if I really admit it, I'm kinda paralyzed right now and a lot of it's got to do with LaQuita. She's so damn cool. Handled her master's...no sweat...working her job and raising the kids. I...I just don't feel like I can talk to her and I really feel guilty as hell about not being able to handle this, when she has.

CO: Makes you feel guilty and even a little angry that she could do all those things with seemingly no problem and you're questioning whether you can.

CL: Yeah, and the personality test confirms it.

CO: Hold it! You seem to have heard only part of what I said. Those below-average scales are well within normal range, and looking across the rest of the scales, I get the picture of a pretty well-integrated individual, saner than most, less neurotic than most, which is pretty good, looking at the heat you've been under---job, school, home. So look at both sides of the coin. Sure you've got some problems, but let's consider the strong points too.

The counselor reinforces Glenn's positive psychological traits as they relate to his numerous accomplishments. He also relates Glenn's feelings of intellectual inferiority to his Graduate Record Exam scores---high verbal and low quantitative---and undergraduate grades---high social science, low math and physical science.

CO: So I wonder how what I've said goes with what you might think?

CL: Frankly, I'm scared to death of assessments and research. I can picture two Cs or worse, and probably worse, and that gets all wrapped up in the way I'm feeling. (*cracks knuckles*) All the pressure I feel...couldn't face my wife if I

flunked...myself either...just stuck. (*lowers head*) Looks like we're back to square one.

CO: Not necessarily. Recapping, what we've got are some data to back up those hunches and feelings I've had. We know that there are parts of counseling that you are interested in and seem to have the personality for. As far as scholastic aptitude is concerned, you seem to have more than enough ability verbally and your need to achieve is high, so there's both the ability and motivation to succeed. It's your math that is weak and has really gotten to the point where it goes beyond just class, and the fear of failure seems to be getting into lots of other parts of your life. That causes problems because you're doing so many things right now that it seems like if one aspect of your life gets out of kilter, it starts to snowball and affect everything else. How does all that seem to fit?

CL: Like a glove, really, but I sure don't know what to make or do with it.

CO: We've put a lot of pieces into the puzzle; let's stand back a bit and see where it leads us. I'd like you to take that problem list and reevaluate it for next time. Just pencil your prognosis alongside each problem and I'll be doing the same.

The counselor goes step by step through the various assessment devices with the client, looking at different combinations of the measures and how they seem to fit or not. A good deal of time may be taken in explaining to the client that one test does not constitute a diagnosis. The counselor makes it clear there is slippage in the scores, that they are not static. If scores are reported, we believe that the only acceptable ways are either by band scores, which show the amount of variation that surrounds the client's obtained score, or by stanines, which cover a broad enough range that scores do not become chiseled in stone.

The counselor is encouraging and motivating. The counselor reports weak areas honestly and objectively but does not dwell on them. If the client starts to brood or catastrophize, the counselor quickly apprises the client of this and accentuates the attributes in legitimate and reinforcing ways. After each piece of test information is given, an opportunity is given for the client to interpret the information. The counselor does not just wade relentlessly through test data. As thoughts and feelings surface from the client's self-analysis, the counselor reflects on these feelings and seeks to clarify them in response to the presenting problem. If more problems are uncovered, the counselor works through these with the client. What becomes known about the client's interests, achievements, aptitudes, and personality are put together in various combinations so that client and counselor try to puzzle out problems and their solutions. Once this has been done, counselor and client are ready to make a diagnosis and prognosis.

DIAGNOSIS

Diagnosis is the cornerstone of the trait-factor approach. It is the differential classification of clients according to the distinguishing characteristics of their problems (Crites, 1976). Once these characteristics are identified, the counselor infers causes as they apply to the present problem and what the implications for future adjustment will be (Williamson, 1939, pp. 108--109). The proof of the diagnosis ties in the client's reaction to the counselor's logic and the tryout of a program of action based on a mutually agreed-on plan (Williamson, 1950b, p. 54). Diagnosis is a cooperative undertaking, with the client taking major responsibility for confirming or denying its validity (Williamson, 1950b, p. 180). Williamson (1939) felt that the complicated fabric that a client's life was woven from meant that a counselor could expect to diagnose more than one problem in the course of a usual case and that problems presented might well have cause-and-effect

relationships (p. 110). As we shall see in the case of Glenn, this is indeed true.

To this point the counselor has been analyzing and synthesizing data. Several clues and facts have been presented:

1. *Family*. Glenn feels some pressure from his wife, who seems to be progressing well in her job and is earning a good salary. Comparing himself with her and being found wanting may be part of the motivating factor in Glenn's career change. There are also guilt feelings about not spending enough time with his children.

2. *Financial*. Glenn is faced with the prospect of needing to maintain the salary he currently has. A career shift to counseling at the entry level would not let him maintain his current standard of living as he sees it.

3. *Personal*. Glenn has a need to act in humane ways to people. Although his job provides some opportunity to do this, more often he has to enforce rules of society that may not always meet this need. He is frustrated because of these conflicting demands. The Strong reflects to some degree his interest in police work, but also it is highly indicative of his interest in human service work. This is a dilemma.

4. *Educational life*. Compounding deficient scores on the quantitative portion of the GRE are low grades received throughout high school and college in mathematics and science. Glenn will probably have trouble with courses related to this, such as assessment, research, and statistics. This problem is even more severe in that Glenn has little extra time to study because of his job, family, community, and educational commitments.

The encapsulated diagnosis is that Glenn's entering problem of indecision about a tentative vocational choice has roots in other problems. He has become involved in so many activities that, cognitively, he can no longer prioritize the issues. His inability to do so is causing him affective reactions that will only serve to paralyze him further. However, rather than wallow any longer in this quagmire, Glenn is self-actualized enough to seek counseling and try to get back on track. His determination, zeal, energy, humanness, physical stamina, and love of his family are all positive attributes. All of the foregoing is reported to Glenn in a straightforward but empathic and caring manner by the counselor.

CO: So generally that's what I am going on. You're covering a lot of territory just now and I wonder if that isn't the general problem---at least for the stress you feel.

CL: Really I guess I...just...never...stopped....to think. It's like it's overwhelming...but yet I feel like all those are important commitments. What do you think?

CO: I think two things. I want to give you a tentative prognosis of where this might lead and some alternative prognoses if things are done a bit differently, but I want to emphasize "tentative." What I've got are some hunches. However, no two people are alike and what you do with these guesses is up to you. In the end *you* must choose. I'll help you look at all the ramifications of those choices but I won't make any judgments about your decisions. So I'd like to lay some of these out, then get your feelings about them, and then see if we couldn't come up with a game plan.

PROGNOSIS

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A prognosis projects the present situation into the future, arriving at a judgment of the probable outcome of the problem (Williamson, 1939, p. 116). The counselor's chief purpose is to see that the client moves in a positive direction toward an achievable goal. Therefore, the counselor carefully explains not only the diagnosis but also the prognosis so that the client is completely apprised of the facts and will have an adequate basis for choosing a goal (Williamson, 1939, pp. 112--115). The counselor must pose numerous subvocal questions as the data are culled. "If this, then what?" "If not this, then what?" Possible outcomes are written in specific and detailed form to be used as reference notes (Williamson, 1939, p. 116).

The general prognosis for Glenn is that if he continues operating under the stressful conditions that pervade his environment, something's going to give. Failing graduate school, job dissatisfaction, marital problems, and concomitant loss of self-esteem, depression, and psychosomatic illness are all high potential outcomes. Many of these signs are already present. There are too many stresses and not enough time or energy available to deal with them. There are, however, alternative positive prognoses:

   1. If the job stress Glenn is experiencing can be reduced so that his human relations skills can be used, some form of police work might be acceptable. That way no financial loss would be suffered. What about community relations officer or hostage negotiator?

   2. If he can sit down with his wife and talk about the stress he is under, he can reestablish an important support system as he strives to accomplish his goals. Can he do this himself, or does he need professional help? The suggestion should be raised that he consider meeting with the center's marriage counselor, Dr. Roberts.

   3. The graduate problem is too much right now, given Glenn's deficits in mathematics. Chances are slim to none that he will pass assessment, research, or statistics. He might consider dropping assessment and going to the Educational Support Program for remedial help in mathematics. Once he is up to standards, he could reenter the graduate program.

   4. While Glenn has previously made money and enjoyed real estate work, it is another stress. Given the present lack of financial incentive, would he consider getting out of it for a while?

   5. The refereeing and coaching seem to be a source of avocational enjoyment to Glenn, but do they provide enough stress reduction to compensate for the fact that they require a lot of time?

These are questions the counselor has generated in his own mind and now carefully and fully goes over with Glenn.

CL: Well, I can see you've honed it down. The community relations job seems kinda bland. I think that the hostage negotiation job might be up my alley. I really don't think I'd mind the stress with that negotiation job; it's like you're really in there doing something worthwhile. Saving lives and using counseling skills.

CO: How can you find out about that?

CL: I can go to the captain and pick up an application tomorrow. Talk to him about it...see what he thinks.

CO: Sounds good. What about your wife?

CL: That I don't know about. I mean whether she'd go for it.

CO: How about you?

CL: Well, I'm a little uptight about it. Couldn't you do it? I don't know Dr. Roberts.

CO: Well...I feel Dr. Roberts would be better; that's not my specialty and she is a clinical member of the American Association of Marriage and Family Therapists. She's quite competent. Perhaps I could arrange an initial appointment for her to talk to you---kinda get the feel of it.

CL: Yes, I'd appreciate that. I'd like to know a little more about what would go on.

CO: Okay. I'll make the phone call today. What do you think of the Educational Support Program for your math problems?

CL: I don't know. I really hate to give up on something I start. I'm a little embarrassed about going in there.

CO: I can understand that, but I would want you to know from your test results that the expectancy of making a B or better in assessments is about one in ten at this point. However, ESP has helped people increase their math ability.

CL: I know it's probably the smart thing to do, but it really is tough to think of giving up on something.

CO: Why not check with your professor and see what he thinks?

CL: I'm a little scared about that, but that's about the only way to find out how I'm doing. Okay! I'll do it!

CO: When?

CL: I can see him before class this Thursday.

CO: Good. What about real estate?

CL: I haven't made any money, what with school and all...can't spare the time. I could retire my license and activate it again when things get better.

CO: Plus when you get this schoolwork under your belt, it ought to give you some good communication skills in sales...at least that's what others who've got their degree in counseling say who are in real estate.

CL: I really feel better. Like I've got my priorities straightened out. That indecision was driving me crazy.

CO: We've covered a lot of ground today. I wonder if you could go back over what we've done and recap it so we're real clear as to what you'll do.

While the counselor listens closely to Glenn's concerns and is empathic with his needs, he also draws on a vast knowledge base and expertise in proposing what he thinks are the best bets and outcomes. These hypotheses are not forced on the client, but are reported. Together the client and the counselor decide what course of action to take: the counselor from the point of view of his analysis and synthesis of the data presented; the client from his perception of how these data fit his own analysis of the situation.

The counselor is not just concerned with the vocational problem initially presented---having broadened the scope of the client's presenting problem into a

number of aspects of his life. Where the counselor has information, knowledge, and skill, he is not reticent about acting on the information obtained and imparting his own hunches. Where he feels that others with more expertise would be better at solving particular problems, he does not hesitate to refer the client, as in the case of the marriage counselor. The counselor drives toward commitment. The client is asked "when," "where," "what," "who," and "how." Clear game plans are developed for the agreed-on goals. Finally, the client is asked to recapitulate what has gone on in the session. By doing so the client reaffirms what will be done outside the session and the counselor is assured that the game plan is clear and the client is committed to it.

FOLLOW--UP

Follow-up continues as long as additional assistance is needed with the client's entering problems (Williamson & Hahn, 1940, p. 214). It has the further advantage of helping uncover and deal with any new problems that may arise as the client attempts to resolve his or her original concerns. From the counselor's point of view it also helps to determine how effective counseling has been and, if ineffective, to formulate new hypotheses and solutions with the client (Williamson, 1950b, p. 101). The following encapsulated dialogue summarizes the case of Glenn.

CL: I checked that marriage counselor out and we've got an appointment next week. I was really sweating telling my wife, but when I mustered up the courage and we talked it over, she seemed pretty pleased. We're really starting to talk about some stuff that had just built up over a long time.

CO: Sounds like some positive things are starting to happen.

CL: Yes, and I talked to LaQuita about what I was gonna do with the work---I mean the hostage negotiation team. LaQuita thinks it'd be a good deal and I feel a lot better with her behind me. The captain also told me he thought I'd do well...the way I've handled domestic disputes when I was a patrol officer and with a master's in counseling, that'd put me high on the list of candidates. So now I've gotta get that degree.

CO: So the talk with your wife and the captain really has encouraged you to go for that job. But you're going to need the degree to have a really good chance at it. I'm interested as to what you found out from your professor.

CL: Well, I did that too, you know, and he was kinda surprised. Said I'd been doing real well in class participation. It was really hard to tell him that I really didn't know the math well. So he encouraged me to go to ESP, even said he'd send up a summary of math concepts I needed to know.

CO: I'm glad to hear you've taken those gutsy steps. I still have a question of spreading yourself too thin and getting back into those old binds.

CL: Yeah. I know. Even though the broker tried to talk me out of it, I told her I needed to retire my license. So that's already done and instead of running an open house last Sunday, I packed the kids up and we went to the state park and I got my studying done Sunday evening.

CO: Fantastic! You've really gotten hard-nosed about reordering priorities and rearranging your time.

CL: You know, I do feel better. I mean even though I'm still doing a lot, it doesn't seem all messed up anymore. I gotta tell you, though, I don't believe I can give up the refereeing. I like the travel to different schools, seeing old

friends, talking. I really do need that, although I was feeling a little guilty about what you'd think.

CO: I guess I'm most concerned about what will do the best for you and allow you to reach your goals. It's your life and you're the one who leads it.

CL: That's right, and I feel like the refereeing is such a small part in time but so big as far as my personal satisfaction---I still want to keep it up.

CO: Okay. Is there anything else?

CL: Not really. Not that I can think of. I'd kinda like to check back from time to time. Kinda, you know, keep on track.

CO: Okay. How about a month from now, and we can keep it on that basis. Checking back in to see how your goals are coming.

Although closure is gained in this session, the client is still given the opportunity to seek assistance. It is up to the client to decide what is best for himself after listening to the counselor's input. Thus, when the counselor tentatively questions Glenn about still having too many stresses in his life, and Glenn responds by stating the rational reasons for those things, the counselor accepts those decisions. The refereeing is an excellent example of an activity that the counselor might not personally care for and thinks would be an additional stress for Glenn. Glenn has prioritized his problems, made decisions about how to attack them, and initiated a plan of action. It would appear that Glenn is on the track to becoming his own counselor again.

A final point should be made about why we chose Glenn as a representative subject for the trait-factor approach. Glenn represents the kind of student we encounter in urban college settings more and more. He is older, already established in a job and family. Yet in a very real sense he is still developing in all facets of his life. His multiple problems are rather typical of a midlife, returning student who has begun to question what is really important and what the rest of life will be. His time is limited and he is forthright in seeking assistance so that he can get on with his life. He may feel some trepidation and embarrassment about seeking help, but the need he feels about moving forward and his own experiential background outweigh his reticence. The differential emphasis of the trait-factor approach provides him with needed information that he can fit into his own scheme of things and help him get on with his life.

Contributions of the Trait-Factor Approach

The trait-factor is an approach for individuals experiencing everyday adjustment problems---particularly in regard to education and vocation. It does this efficiently and expeditiously and, as far as sheer number of clients, few other approaches can match it. In times of crisis such as war and depression, it has been the approach of choice. Because of its strong emphasis on actuarial assessment techniques it has spurred the growth of the testing movement in the United States. The consequences can be seen in business and industry, schools, the armed services, and anywhere else that selection and placement of people is undertaken.

Another strength of the approach, and one most neophyte counselors would do well to consider, is the team approach and referral to other specialists (Williamson & Hahn, 1940). No one person has all the answers. Other professionals lend alternative views that provide a more comprehensive picture of problems. Few theories advocate referral to other specialists. In its pragmatic fashion, the trait-factor approach does.

Trait-factorists have been criticized for their "three interviews and a cloud of dust" format. Yet it seems realistic to suppose that many clients may only want information in as quick and efficient a manner as possible and then, of their own volition and through no dissatisfaction with counseling, make their own "cloud of dust" as they take responsibility for their decisions.

With increased pressure from insurance companies to move people with psychological and physical disabilities back into functional living, forms of therapy that provide pertinent and timely information and that are highly goal-focused with clear treatment plans to accomplish those goals will garner much attention and third-party payments. Trait-factor approaches fill that bill admirably.

While much time, training, and attention in the professional literature have been given to all of the psychopathologies that assail us, the trait-factor/P x E approach is mainly practiced on people who are reasonably healthy and are experiencing everyday, typical, developmental problems. Its emphasis on rational decision making and information dissemination practiced in a methodical way holds little of the appeal of dynamic interpretation or other, more intense, emotive techniques. There have been many apologists for this directive stance, but the fact is that if therapists really do have expertise in their field, then they have information that clients need, and they need to convey that information in as efficient and clear a manner as possible. In short, at times therapists need to teach people how to do things both to remediate problems and to prevent them. From that standpoint it is one of the few theories of counseling that takes an active and preventive therapeutic stance.

Trait-factor counseling has been somewhat negatively tied to career counseling and has somehow been seen as less sophisticated and worthy than other theories that deal with more "personal" problems. The fact is that we pretty much define ourselves by what we do and where we work. As it affects individuals and society, there is probably no other area of counseling that is so critical to the general well-being than career counseling.

Our society is changing from an industrial to an information-processing base, and the trait-factor approach is ideally suited to the computer and other electronic technology. "High-tech" counseling, in which a computer or other electronic medium is central to the accomplishment of client objectives, and "high-touch" counseling, in which the mode of delivery is by empathic, interpersonal interaction by a skilled professional, are not oppositional (Harris-Bowlsbey, 1984). Both in counseling and in counselor education, preliminary data indicate that clients and trainees adapt quickly to technology and feel that electronic counseling and training are helpful (Garis, 1983; Halpain, Dixon, & Glover, 1987).

With the advent of cost-effective computerized assessment, information, and simulation programs, large numbers of clients can be served with a reasonable degree of reliability and validity (Biggs & Keller, 1982; Dawes & Corrigan, 1974; Goldberg, 1970; Pressman, 1984; Sampson & Krumboltz, 1991). Whether we recognize it, believe it, or even want it, the trait-factor system coupled with high-tech counseling represents the wave of the future---and that future is not very far away.

Shortcomings of the Trait-Factor Approach

The severest critics of the trait-factor approach have found fault with the premise that values can be taught (Arbuckle, 1967). The problems in such a value-laden approach are twofold. The first problem is the assumption that the counseling process is always rational and that the client "can see the light" if

the facts and consequences are marshaled against the client's irrational thinking. It is our experience that clients are not often inclined to buy into anything approaching rationality---particularly in crisis situations. Generally, it takes a good deal of time and effort, plus a cooling-off period, before a client who feels grievously wronged by significant others, an institution, or society can perceive the situation in ways that resemble rationality and objectivity.

A correlative problem occurs with the use of an external system to lead the client to the right, correct, and proper values. While many counselors are employed by institutions where trait-factor approaches are used, we are not sure how far one goes in imposing institutional values on the client. We believe that in many cases the counselor acts as ombudsman when individual and institutional values conflict. However, to act solely in the interests of the institution seems to deny the very essence of counseling. The trait-factor approach never seems to resolve this dilemma clearly.

We have not reached the ideal state in assessment, where perfectly reliable and valid instruments are available---although many counselors seem to believe in the infallibility of the instruments they use. One need examine only a few caustic test reviews in *The Twelfth Mental Measurements Yearbook* (Conoley & Impara, 1995) to see that this is far from true. Even in the well-researched area of occupational interests, there is poor predictive validity. When trying to predict job satisfaction, the degree of congruence between interests and occupations accounts for less than 10 percent of the variation in job satisfaction (Rounds, 1988), which is a pitiful showing in the world of statistics.

In the trait-factor approach a great deal of reliance is placed on the counselor's expertise. We would first question what this expertise would entail. Does everyone who would counsel need to have a Ph.D. with a concentration in assessment procedures? If that were the case, there would be few counselors in schools, employment bureaus, and rehabilitation clinics. If such expertise is not necessary, can counselors then be labeled as *experts*? How much trust, given what is known about test validity and counselor diagnostic reliability, should we have? How valid is the information the counselor disperses? What price might the consumer of such counseling services ultimately pay?

Many clients come to counseling because they cannot take responsibility for themselves and will do everything in their power to invest responsibility for their actions or inactions with the counselor. It appears to us that a format that is directive or teaching in nature runs the great risk of assuming responsibility for the client. Experience has shown us that dependent clients are all too willing to let this happen.

As the approach has evolved, more emphasis has been given to the affective components of counseling. Yet little is said about this in the counseling process. Arbuckle has been particularly severe in seeing adherents of this approach as lacking the intimate involvement necessary for counseling. Rather than being called counselors, Arbuckle maintains, some persons should be designated sensitive occupational teachers (Arbuckle, 1967, pp. 138--139).

Computer systems offer much not only in assessment and informational programs, but also in other psychoeducational and interactive computer counseling programs. However, as with commercial tests, therapists need to know which are reliable and valid (Farrell, 1991). As of yet there is not a comprehensive theory of how computer-assisted diagnosis should exist (Jager, 1991). Currently there is no designated venue in which computer-assisted counseling programs are subjected to the same scrutiny as tests (Andrews & Wittchen, 1995). As a result, therapists are pretty much left to their own devices or word of mouth to figure out which programs are reliable and valid.

Dramatic strides are being made in computer-assisted guidance, counseling, and assessment. The problem is that many practitioners make limited use of computers because they lack computer literacy, are not sure how to use the expert systems, and are unclear what programs are available to them or under what conditions they could be used (Farrell, 1991; Hinkle, 1992; Sampson & Krumboltz, 1991).

Trait-Factor Counseling with Diverse Populations

Because the emphasis is more on choice rather than on change, trait-factor is a nonthreatening approach to counseling (Peterson, Sampson, & Reardon, 1991, p. 55). Therefore, the therapeutic relationship may not hold as much importance as in other modes of counseling because the counselor has minimal chance of becoming too emotionally involved with the client. Although trait-factor does not denigrate counselor-client relationships or affective components of the client's experiencing, it also does not emphasize them. Cultures that place a premium on shielding emotions from public view will find a great deal of utility in the approach. The emphasis on teaching and learning tends to make trait-factor a nonthreatening approach that does not stigmatize clients as having "mental" problems. Because of its time-limited and clear-cut goals, trait-factor has intrinsic appeal to clients who are not used to long, drawn-out activities that have no short-term reinforcement or immediately discernible outcomes.

Trait-factor's strong actuarial and assessment basis may be a bane to some clients and a boon to others. A great deal of research has been conducted on the detrimental effects of culture, race, and ethnic bias in standardized, norm-referenced tests. Clearly caution should be used in interpreting any norm-referenced test to minority populations. Counseling with culturally different clients should be conducted with a great deal of awareness of on whom test scores have been normed. In particular, gender bias in interest inventories has caused much job stereotyping and educational channeling of males and females. The same is true of achievement, aptitude, and other mental abilities tests when used with minorities and other unacculturated people. Counselors who practice the trait-factor approach must be highly sensitive to both overt and hidden bias in the tests they use. Thus, they must temper normative results with an idiosyncratic analysis of each client. This differentialist, individual view is at the heart of the approach and no capable trait-factor counselor would base decision making on normative tests by themselves (Rounds & Tracey, 1990; Williamson, 1939; 1950a; Williamson & Biggs, 1979).

However, if local norms have been generated and solid, predictive validity developed for such criteria as academic and vocational success, it has been our experience that most clients, particularly parents of minority school children, appreciate the conveyance of straightforward, concrete, and understandable information about achievement and aptitude tests. When such test data are tied with specific information on what clients need to do to excel, test interpretation may serve as a great motivator or, conversely, serve to temper unrealistic expectations.

Although the kindly but paternalistic counselor that Williamson espoused is clearly part of the past (Chartrand, 1991), many minorities, particularly those who value learning, look to school counselors as experts who can provide them with guidance in areas with which they or their parents have little familiarity. However, care must be taken with students who come from cultures that have ironclad parental authority. Counselors do not want to become allied so much with parents that the students are excluded and have little to say about their futures. Further, if the counselor has not built trust with the client, this very directive approach may be seen as patronizing or even dictatorial by some minorities who may perceive such attempts to deliver information as

"preachy putdowns." Then, no matter how valid the counselor's information or strategy, it will generally fall on deaf ears and the counselor will be perceived as another barrier placed in the minority client's way.

For the physically and mentally disabled, the trait-factor reliance on assessment, diagnosis, and prognosis provides meaningful data to apprise such clients and their support systems in realistic terms of their abilities, options, and limitations. The trait-factor approach, which matches a person's traits and abilities with job requirements, and the P x E fit approach, which considers the dynamic nature of person and environment interactions, is at the heart of rehabilitation counseling (Kosciulek, 1993). Rehabilitation counselors have a long history of using the treatment paradigm of the trait factor approach to provide assessment, diagnosis, intervention, and follow-up to their clients. In that regard there is probably no more successful group of therapists.

Computer-assisted guidance systems, as an adjunct to trait-factor therapy, hold much promise in regard to achieving a bias-free therapeutic role with diverse populations. The computer is an infinitely reinforcing machine that is nonbiased (or at least as bias-free as the programming is) in its response sets and is also free of language and dialect barriers. It is infinitely patient and doesn't get frustrated by abortive attempts of clients to learn new behaviors and concepts. With the growing body of interactive video disk technology, ethnicity can easily be matched between counselor and client so that clients can't say the counselor doesn't understand what's going on because of race, gender, sexual orientation, age, nationality, or ethnic differences. The computer and video simulations are completely familiar and nonthreatening to most young people. No matter what their cultural or ethnic background, this electronic common denominator is the preferred choice of interaction for young people (Sampson & Krumboltz, 1991).

Summary

The trait-factor approach has developed from a marriage of differential psychology's research and theories to Parson's vocational guidance concepts. The approach was born at the Minnesota Employment Stabilization Research Institute and the University of Minnesota Test Bureau as a practical response to educational and vocational adjustment problems of the unemployed and students. It is still closely identified with educational and vocational counseling. The approach has placed heavy reliance on the scientific method by attempting systematically to observe and measure individuals. Traits are categories that are used for describing individual differences in behavior, and statistical methods of factor analysis are used to ascertain how many factors are sufficient to account for similarities and differences in individuals.

Trait-factorists have relied heavily on empirical objective data for a logical problem-solving approach to client problems. Thus, the approach may be placed in the constellation of theories that are more cognitively than affectively oriented. Its basic model of analysis, synthesis, diagnosis, prognosis, counseling, and follow-up is a structured, stepwise attempt to help the client become self-counseled. The major component of the model is the integration of objective test data with client subjective data to arrive at a differential diagnosis.

As it has evolved, the trait-factor approach has become more developmental, dynamic, process-oriented, and eclectic. It has moved to a person times environment fit approach, which is seen not as static but as reciprocal and dynamic (Martin & Swartz-Kulstad, 2000). Vocational counseling, in particular, is not seen as fixed but as a continuing experience with definable stages. The contemporary approach is eclectic in that it sees merit and utility in cognitive

therapies such as the reality, rational-emotive, and behavioral approaches. The logical basis of the approach relies heavily on a mentoring and teaching role by the counselor to influence and change the irrational thinking and behavior of the client. A great deal of knowledge, experience, and expertise is assumed of the counselor. Trait-factor counseling is most commonly found in school, employment, and rehabilitation counseling.

By including a broader diagnostic scheme, more advanced information-processing concepts, and a more adaptive counseling style, the person times environment fit approach has matured beyond the old trait-factor model. The person times environment model includes these elements by organizing personal constructs, the world of work, person times environment interactions and then applying them in a problem-solving sequence. Including current concepts of problem solving, information processing, and attitude change has reinvigorated a venerable approach to career counseling (Chartrand, 1991).

Suggestions for Further Reading

Martin, W. E., Jr., & Swartz-Kulstad, J. L. (Eds.). (2000). *Person-environment psychology and mental health: Assessment and intervention.* Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Rounds, J. B., & Tracey, T. J. (1990). From trait-and-factor to person-environment fit counseling: Theory and process. In W. B. Walsh & S. H. Osipow (Eds.), *Career counseling* (pp. 1--44). Hillsdale, NJ: Erlbaum.

Walz, G. W., Bleuer, J., & Maze, M. (1989). *Counseling software guide: A resource for the guidance and human development professions*. Alexandria, VA: American Association for Counseling and Development.

Williamson, E. G. (1965). *Vocational counseling: Some historical, philosophical, and theoretical perspectives*. New York: McGraw-Hill.

Williamson, E. G., & Biggs, D. A. (1979). Trait-factor theory and individual differences. In H. M. Burks, Jr., & B. Stefflre (Eds.), *Theories of counseling* (3rd ed., pp. 91--131). New York: McGraw-Hill.

References

American College Testing Program. (1988). DISCOVER (computer program). Iowa City, Iowa.

Andrews, G., & Wittchen, H. U. (1995). Clinical practice, measurement, and information technology. *Psychological Medicine*, *25* (3), 443--446.

Arbuckle, D. S. (1967). *Counseling and psychotherapy: An overview*. New York: McGraw-Hill.

Biggs, D. A., & Keller, K. E. (1982). A cognitive approach to using tests in counseling. *Personnel and Guidance Journal, 60*, 528--532.

Brown, D. (2002). The role of work and cultural values in occupational choice, satisfaction, and success: A theoretical statement. *Journal of Counseling and Development, 80*(1), 48-56.

Chartrand, J. M. (1991). The evolution of trait-and-factor career counseling: A person times environment fit approach. *Journal of Counseling and Development, 69*, 518--524.

Conoley, J. C., & Impara, J. C. (Eds.). (1995). *The twelfth mental measurements yearbook*. Lincoln, NE: University of Nebraska Press.

Crites, J. O. (1976). Career counseling: A comprehensive approach. *Counseling Psychologist, 6*, 2--12.

Crites, J. O. (1981). *Career counseling: Models, methods, and materials*. New York: McGraw-Hill.

Dawes, R. M., & Corrigan, B. (1974). Linear models in decision making. *Psychological Bulletin, 81*, 95--106.

Dawis, R. V., & Lofquist, L. H. (1984). *A psychological theory of work adjustment: An individual differences model and its applications*. Minneapolis, MN: University of Minnesota Press.

Educational Testing Service. (1988). SIGI PLUS (computer program). Princeton, NJ.

Erikson, E. H. (1959). Identity and the life cycle. *Psychological Issues, 1*, 1--171.

Farrell, A. D. (1991). Computers and behavioral assessment: Current applications, future possibilities, and obstacles to routine use. *Behavioral Assessment, 13*(20), 159--179.

Garis, J. W. (1983). The integration of the DISCOVER computer-based guidance system in a college counseling center: Its effect upon career planning (doctoral dissertation, Pennsylvania State University). *Dissertation Abstracts International, 43*, 2236A. (University Microfilms no. 822 8889).

Goldberg, L. R. (1970). Man versus model of man: A rationale plus evidence for a method of improving on clinical inferences. *Psychological Bulletin, 73*, 422--432.

Halpain, D. R., Dixon, D. N., & Glover, J. A. (1987). The great therapists program: Computerized learning of counseling theories. *Counselor Education and Supervision, 26*, 255--259.

Harris-Bowlsbey, J. (1984). The computer and career development. *Journal of Counseling and Development, 63*, 145--148.

Harris-Bowlsbey, J. (1992, December). Building blocks of computer based career planning systems. *CAPS Digest*, EDO-CG-92--7.

Hartung, P. J., & Blustein, D. L. (2002). Reason, intuition, and social justice: Elaborating on Parson's career decision-making model. *Journal of Counseling and Development, 80(1)*, 41-47.

Hennessey, T. C. (1980). Introduction to the special issue, values and the counselor. *Personnel and Guidance Journal, 58*, 557--558.

Hinkle, J. S. (1992). Computer-assisted career guidance and single-subject research: A scientific-practitioner approach to accountability. *Journal of Counseling and Development, 70*, 391--395.

Holland, J. L. (1985). *Making vocational choices: A theory of vocational personalities and environments*. Englewood Cliffs, NJ: Prentice-Hall.

Jager, E. S. (1991). Computer diagnostics---a survey: Practical applications of computerized assessment: Theoretical principles and perspectives. *Revue Europe'ene de Psychologie Applique'e, 41*(4), 247--268.

Klein, K. L., & Weiner, Y. (1977). Interest congruence as a moderator of the relationship between job tenure and job satisfaction and mental health. *Journal of Vocational Behavior, 10*, 91--98.

Kosciulek, J. F. (1993). Advances in trait-and-factor theory: A person times environment fit approach to rehabilitation counseling. *Journal of Applied Rehabilitation Counseling 24* (2), 11--14.

Levinson, D. J., Darrow, C. N., Klein, E. B., Levinson, M. H., & McKee, B. (1978). *The seasons of a man's life.* New York: Knopf.

Lowman, R. L. (1991). *The clinical practice of career assessment: Interests, abilities, and personality.* Washington, DC: American Psychological Association (APA Books).

Lynch, R. K., & Maki, D. (1981). Searching for structure: A trait-factor approach to vocational rehabilitation. *Vocational Guidance Quarterly, 30*, 61--68.

Mallinckrodt, B., & Gelso, C. J. (2002). Impact of research training environment and Holland Personality Type: A 15-year follow-up of research productivity. *Journal of Counseling Psychology, 49*(1), 60-70.

Martin, W. E., Jr., & Swartz-Kulstad, J. L. (Eds.). (2000). *Person-environment psychology and mental health: Assessment and intervention.* Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Moos, R. H. (1981). *Work environment scale manual*. Palo Alto, CA: Consulting Psychologists Press.

Moos, R. H. (1987). Person-environment congruence in work, school, and health care settings. *Journal of Vocational Behavior, 31*, 231--247.

Moreland, K. L. (1990). Some observations on computer-assisted psychological testing. *Journal of Personality Assessment, 55*(3--4), 820--823.

Otto, L. B. (1984). Bringing parents back in. *Journal of Career Education, 10*, 255--265.

Paterson, D. G., Schneidler, G., & Williamson, E. G. (1939). *Student guidance techniques: Handbook for counselors in high schools and colleges*. New York: McGraw-Hill.

Patterson, C. H. (1966). T*heories of counseling and psychotherapy*. New York: Harper & Row.

Peterson, G. W., Sampson, J. P., Jr., & Reardon, R. C. (1991). *Career development and services: A cognitive approach*. Pacific Grove, CA: Brooks/Cole.

Peterson, N. G., Mumford, M. D., Borman, W. C., Jeanneret, P. R, & Fleishman, E. A. (Eds.). (1999). *An occupational information system for the 21st century: Development of O*NET.* Washington, DC: American Psychological Association (APA books).

Pressman, R. M. (1984). *Microcomputers and the private practitioner*. Homewood, IL: Dow Jones-Irwin.

Roberts, B. W., & Hogan, R. (Eds.). (2001). *Personality psychology in the workplace*. Washington, DC: American Psychological Association (APA books).

Rounds, J. B. (1988). *Meta analysis of research on the relationship of vocational interest and job satisfaction*. Paper presented at the annual convention of the American Education Research Association, New Orleans.

Rounds, J. B., & Tracey, T. J. (1990). From trait-and-factor to person-environment fit counseling: Theory and process. In W. B. Walsh & S. H. Osipow (Eds.), *Career counseling* (pp. 1--44). Hillsdale, NJ: Erlbaum.

Sampson, J. P., Jr. (1984). Maximizing the effectiveness of computer applications in counseling and human development: The role of research and implementation strategies. *Journal of Counseling and Development, 63,* 187--191.

Sampson, J. P., Jr. (1986). The use of computer assisted instruction in support of psychotherapeutic processes. *Computers in Human Behavior, 2,* 1--19.

Sampson, J. P., Jr., & Krumboltz, J. D. (1991). Computer-assisted instruction: A missing link in counseling. *Journal of Counseling and Development, 69,* 395--397.

Schmitt, P., & Growick, B. (1985). Trait-factor approach to counseling: Revisited and reapplied. *Journal of Applied Rehabilitation Counseling, 16,* 39--42.

Smith, R. O. (1993). Computer-assisted functional assessment and documentation. *American Journal of Occupational Therapy, 47*(11), 988--992.

Spinhoven, P., Labbe, M. R., & Rombouts, P. (1993). Feasibility of computerized psychological testing with psychiatric patients. *Journal of Clinical Psychology, 49*(3), 440--447.

Stefflre, B., & Matheny, K. (1968). The function of counseling therapy. In S. C. Stone & B. Shertzer (Eds.), *The guidance monograph series. II: Counseling.* Boston: Houghton Mifflin.

Walz, G. W., Bleuer, J., & Maze, M. (1989). *Counseling software guide: A resource for the guidance and human development professions*. Alexandria, VA: American Association for Counseling and Development.

Warzecha, G. (1991). The challenge to psychological assessment from modern computer technology. *Revue Europe'enne de Psychologie Applique'e, 41*(3), 213--220.

Williamson, E. G. (1939). *How to counsel students: A manual of techniques for clinical counselors*. New York: McGraw-Hill.

Williamson, E. G. (1950a). A concept of counseling. *Occupations, 29,* 182--189.

Williamson, E. G. (1950b). *Counseling adolescents*. New York: McGraw-Hill.

Williamson, E. G. (1958). Value orientation in counseling. *Personnel and Guidance Journal, 37,* 520--528.

Williamson, E. G. (1965). *Vocational counseling: Some historical, philosophical, and theoretical perspectives*. New York: McGraw-Hill.

Williamson, E. G. (1972). Trait-factor theory and individual differences. In B. Stefflre & W. H. Grant (Eds.), *Theories of counseling* (2nd ed., pp. 136--176). New York: McGraw-Hill.

Williamson, E. G., & Biggs, D. A. (1975). *Student personnel work: A program of developmental relationships*. New York: Wiley.

Williamson, E. G., & Biggs, D. A. (1979). Trait-factor theory and individual differences. In H. M. Burks, Jr., & B. Stefflre (Eds.), *Theories of counseling* (3rd ed.; pp. 91--131). New York: McGraw-Hill.

Williamson, E. G., & Darley, J. G. (1937). *Student personnel work: An outline of clinical procedures*. New York: McGraw-Hill.

Williamson, E. G., & Hahn, M. E. (1940). *Introduction to high school counseling*. New York: McGraw-Hill.