Savickas, M. L. (2007). Occupational choice.
In H. P. Gunz and M. A. Peiperal (Eds.),
Handbook of Career Studies (pp. 79-96).
Thousand Oaks, CA: Sage.

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Occupational Choice

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In considering the psychology of occupational choice, the first third of this chapter describes the cultural context that moved industrialized societies from assuming that youth would inherit their family's occupation to expecting that adolescents should choose an occupation that they prefer. The movement from a model of occupational inheritance to one of occupational choice leads to a discussion of Parsons's (1909) matching model and the superordinate construct of person-environment (P-E) fit. The middle third of the chapter describes the individual differences paradigm for occupational choice as systematized by John L. Holland (1959, 1997) in his P-E fit theory of vocational personalities and work environments. Holland characterizes six types that form the theory's primary propositions along with four secondary propositions about consistency, congruence, differentiation, and vocational identity. The final third of the chapter describes the developmental paradigm for occupational choice by explaining the phases in the decisional process and the construct of career choice readiness. The chapter concludes by outlining the decisional difficulties that individuals may encounter as they make occupational choices and the career interventions that counselors use to ease their clients' vocational decision making.

From Occupational Inheritance to Occupational Choice

During the 19th century, children usually shared in their family's field of work. Accordingly, many families in Europe and America subscribed to the traditional view that an eldest son should follow in his father's wake. On the model of the self-sufficient village, the boy apprenticed to his father would ensure that whatever service the family provided would be available to the next generation of townsfolk, and of course, the boy's own future would be secure. For a younger son, there might be several options depending on which neighbors had no sons of their own to train, but the eldest was sure to share the father's occupation. Daughters, of course, faced a different future. These circumstances and the sentiment associated with occupational inheritance combined to produce railroad, circus, or fishing families in addition to those families who perpetuated their own farm, factory, or business. Today, living in the 21st century, many parents who engage in a profession or a family business still

subscribe to the traditional view of occupational inheritance. Furthermore, many of the families who share a collectivist culture believe that parents should choose occupations for their children (Leong, Hardin, & Osipow, 2001). In the cases of both inheritance and assignment, the children do not choose an occupation; instead, they accept the choices conferred on them by their parents.

While some families today continue to prefer occupational inheritance or assignment, as early as 1900, the belief that youth should make their own occupational choices became predominant in industrial societies. Propelled by the forces of industrialization and urbanization from 1890 to 1910, a great number of families moved from farms to cities to find work. Families who lived in cities soon realized that their children would eventually work for an employer rather than in a family business. A corollary development was dissemination of the idea that youth should develop an ambition for work that they would enjoy and, in due course, choose their own occupation.

Concern about how individuals should make occupational choices arose and intensified as the Western world experienced the second wave of the Industrial Revolution. In particular, social workers worried about how they could assist street children, urban migrants from rural towns and villages, and immigrants from other countries make viable and suitable job choices. The old method of having friendly visitors chat with youngsters no longer worked as well as it once had (Baker & Maguire, 2005). As early as 1894, Frank Parsons urged a systematic and scientific approach to matching people and positions when he wrote,

> Men work best when they are doing what nature has especially fitted them for. A sensible industrial system will therefore seek . . . to put men, as well as timber, stone, and iron in the places for which their nature fits them. (Parsons, 1894, p. 16)

In 1908, Parsons organized a bureau in Boston to "give scientific vocational counsel to the young" and a year later published posthumously a book about his new model for vocational guidance. Parsons's (1909) book scientized vocational choice and started the new profession of vocational guidance to replace "friendly visits" in assisting city dwellers make occupational choices.

Scientific vocational guidance, as designed by Parsons, gave order to chaos and generated constructs that made "thinkable" the issues and problems of occupational choice. The model, which career counselors still use today, was first articulated by Parsons (1909) as follows:

> In the wise choice of a vocation, there are three broad factors: (1) a clear understanding of yourself, your aptitudes, abilities, interests, ambitions, resources, limitations, and their causes; (2) a knowledge of the requirements and conditions of success, advantages and disadvantages, compensation, opportunities, and prospects in different lines of work; (3) true reasoning on the relations of these two groups of facts. (p. 5)

Essentially, the matching model states that psychosocial adaptation will be fostered by a good fit between the attributes of the individual and the attributes of the behavioral setting. The degree of fit shapes important outcomes such as occupational success, job satisfaction, and organizational tenure. While Parsons was developing from the perspective of the worker his concept of matching people to positions, Frederic Winslow Taylor (1911) developed from the perspective of the employer his concept of "the first class man," that is, the better, more competent man for doing the job efficiently. This parallel development in scientific management foreshadowed many other parallel developments that were to occur as psychologists worked on the complementary problems of guidance for the individual and selection for the organization (Savickas & Baker, 2005). Today, the parallels between career counseling and human resource management remain; yet the distance between the two lines of development has widened (see Peiperl and Gunz, Chapter 3).

Parsons's matching model solved industrial society's problem of how to assign individuals to work in a manner different from agricultural society's method of occupational inheritance. The matching model provided society with both a public policy and a system of ideas to use in fitting individuals to jobs. In using the model, societies seek four outcomes (Watts, 2005).

First, the model assists individuals to learn about themselves and occupations and how to match the two. Second, the model promotes efficiency in matching individuals to labor market needs. Third, the model contributes to economic development through the effective use of human resources. And fourth, the model encourages social equity and cohesion because individuals are matched to jobs based on abilities, values, and interests rather than based on sex, race, and social class. Because these four important outcomes are attributed to using a "scientific" matching of person to position, psychologists have elaborated and refined the matching model into a superordinate framework called P-E fit (Martin & Swartz-Kulstad, 2000)

Person-Environment Fit

While often viewed as a single approach, the broad framework of P-E fit actually consists of a family of matching models. Two major models address two different types of fit—complementary and supplementary (Muchinsky & Monahan, 1987). Complementary fit occurs when an individual and an environment provide what the other wants. Complementary fit produces need fulfillment. Supplementary fit occurs when an individual and the people in an environment possess similar characteristics; that is, they resemble each other. Supplementary fit produces value congruence. The models of complementary fit and supplementary fit are not interchangeable. Accumulated research on each model has found them to be equally, yet differently, predictive of attitudes across work dimensions and outcomes. Cable and Edwards (2004) concluded that "complementary and supplementary fit are interrelated but that both contribute independently to outcomes" (p. 830). Complementary and supplementary fit contribute independently, probably, because they contribute to predicting two independent aspects of establishing oneself in an occupation.

The two distinct aspects of stabilizing in a new job are organizational adaptation and position performance (Savickas, 2004). First, a new employee must fit into the organizational culture that surrounds the job. Organizational adaptation involves participating in the work environment, not performing the job tasks. Organizational adaptation occurs through transactions and negotiations with coworkers in which the new employee engages in efforts to learn about the company of workers, and the veteran workers engage in efforts to socialize with the newcomer. New employees, no matter how experienced in other settings, must first learn how things are done in their new organization; this includes learning about the people, politics, values, language, and history of the organization. There can be some reciprocity in the newcomer changing the company, but this is infrequent and minimal when it does occur. Position performance is the second task of stabilizing in a new job. In addition to organizational adaptation, individuals must demonstrate competence in performing their job duties. They must clearly understand their job tasks, take these responsibilities seriously, and perform the tasks efficiently and effectively.

Organizational adaptation is fostered by supplementary fit, whereas position performance is fostered by complementary fit. These twin models of P-E fit are operationally defined quite differently. The supplementary fit model is implemented by determining the resemblance of an individual to a group of workers who are successful and satisfied in a specific occupation. The complementary fit model is implemented by comparing an individual's knowledge, skills, and abilities with those required to perform the job. For example, an industrial/organizational psychologist must know the principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.

The need fulfillment model of complementary fit is characterized by a point-to-point matching of an individual's abilities and interests to the job's requirements and rewards. The worker's abilities must complement the job's requirements. When they fit together well, the outcome is occupational success. In parallel fashion, when the job's rewards complement the worker's interests, the outcome is job satisfaction. If complementary fit is poor, then failure and frustration result rather than success and satisfaction. A third outcome of complementary fit arises from success and satisfaction. Workers

who are satisfactory and satisfied tend to stabilize in their position, so the third outcome is tenure.

The complementary fit model is popular in personnel selection and military classification because it is easier to select a person for a position than it is to select a position for a person. In both selection and classification, tests are useful for sorting out the most fit candidates by identifying those who possess the needed qualifications for one specific job. Of course, vocational psychologists also use the complementary fit model, a preeminent example being the Minnesota Theory of Work Adjustment or TWA (Lofquist & Dawis, 1961). Proponents of the TWA, along with other vocational psychologists, have developed an extensive repertoire of ability tests and interest inventories to assess clients and then match them to the occupational ability patterns and interest profiles in their databases. It is beyond the scope of this chapter to describe the major programs for appraising vocational fitness for occupational fields and levels. Suffice it to state that career counselors have available numerous tests with which to measure abilities along with many inventories with which to measure interests (Kapes & Whitfield, 2002).

The goal of matching for complementary fit is to use assessment results to help individuals select an occupational level that corresponds to their abilities and an occupational field that corresponds to their interests. For example, in the field of social service, at the highest level one finds the occupation of psychotherapist, while at the lowest level one finds hospital attendant. In the technology field, consulting engineer is at the highest level, whereas laborer is at the lowest level. Of course, the results of such assessment only "guide" individuals to explore certain occupational groups; assessment cannot "select" an occupational goal for any individual. In fact, test scores seem to work better in ruling out options than in identifying possibilities. Picture a 6×6 grid with occupational fields across the top and ability levels down the side. Assessment might suggest that occupations contained in the cell at Column 3/Row 3 are a good match for the client. However, the client and counselor cannot easily rule out occupations in the cells that surround Column 3/Row 3. They can be more confident about ruling out the occupations in Rows 1, 5, and 6 and probably all the occupations in Columns 1, 5, and 6.

Guidance work involves helping a person choose an occupation. The guidance problem differs from the selection problem in that it seeks to identify suitable and viable occupations from among the vast number of reasonable alternatives. While the complementary model for P-E is dominant among personnel specialists who do selection and classification, the supplementary model for P-E fit is dominant among guidance specialists. According to Ayres (1913) and later Kitson (1942), vocational tests are useful in selecting persons for positions but not in selecting positions for persons. They reasoned that vocational guidance practitioners need occupational information more than they need personality tests. Ayres (1913) urged practitioners to remember that "people and positions are both plastic, not rigid, and much mutual change of form often takes place without injury to either person or position" (p. 237).

As used in vocational guidance, the supplementary model concentrates on the similarity of an individual to the people who populate an occupation and an organization. The key concept is resemblance. Using the rationale that "birds of a feather flock together," guidance specialists have constructed interest inventories to determine the degree of resemblance between an individual client seeking vocational guidance and a catalog of diverse occupational groups composed of satisfactory, satisfied, and stable workers (Savickas, 1999). In reviewing the results from an interest inventory, a counselor can inform a client about which occupational groups he or she resembles and, by extension, which occupations the client should explore first. Among the first generation of interest inventories, two remain popular today. E. K. Strong published one of the first interest inventories in 1927; today it is known as the *Strong Interest Inventory* (Harmon, Hansen, Borgen, & Hammer, 1994). The second leading interest inventory with a long history was first published by Frederic Kuder in 1939. The current form is the *Kuder Occupational Interest Survey, Form DD* (Kuder & Zytowski, 1991). Strong and Kuder constructed and developed their inventories using strictly empirical methods. Later interest inventories were constructed using a

blend of Strong's and Kuder's empirical approach to scale construction with attention to theoretical conceptualizations concerning the structure of interests. Examples of leading interest inventories designed using an explicit conceptual structure include the *Campbell Interest and Skills Survey* (Campbell, Hyne, & Nilsen, 1992), the *UNIACT* (American College Testing Program, 1995), and the *Vocational Preference Inventory* (Holland, 1985). These prominent interest inventories are described, then empirically compared and contrasted, in a monograph by Savickas, Taber, and Spokane (2002) and in an article by Savickas and Taber (2006).

Holland's Theory

For Strong and Kuder, the matching model was atheoretical, in that it was not based on an explicit model of vocational behavior. After World War II, the methodology emerged for what was to become known as trait-and-factor psychology, a more sophisticated version of Parsons's matching model. In 1947, Leona Tyler (1947) had complained that the test makers' motto was "If there is a word for it, there's a test for it" (p. 359). So the search began to identify what Tyler called more basic traits. Led by Cattell (1950), Eysenck (1953), and Guilford (1948), psychologists applied factor analysis to identify latent personality traits and ability factors from manifest variables. Then, instead of measuring variables selected individually and intuitively, psychometricians measured latent ability factors and personality traits that have been objectively identified from manifest variables using factor analysis. These personality traits and ability factors were viewed as more basic or fundamental. And, no theory of occupational choice could claim to address more fundamental variables than those conceptualized by John L. Holland (1959, 1997) in his supplemental fit theory of vocational personalities and work environments.

Vocational Personalities

Based on factor analyses of vocational interest inventories conducted by Guilford, Christensen, Bond, and Sutton (1954) and three decades of research on Strong's interest inventory, Holland (1959) formulated a theory of vocational personality types and corresponding work environments. The theory describes and organizes an individual's vocationally relevant experiences into a simplifying taxonomy based on six types: realistic, investigative, artistic, social, enterprising, and conventional (RIASEC). Holland specified each of the six types with a distinct syndrome of interests, competencies, and activities. Thus, each type presents an ideal exemplar characterized by a constellation of personality traits and ability factors, which can be summarized as follows:

1. *Realistic* (R) types report outdoor and mechanical interests, prefer to work with animals and machines, enjoy the role of doer, display physical competencies such as leisure pursuits involving physical skills and challenges, and admire role models such as athletes and adventurers. They often can be heard saying, "Just do it."
2. *Investigative* (I) types report scientific interests, prefer to work with ideas, enjoy the role of thinker, display intellectual competencies such as leisure pursuits involving reading and researching, and admire role models such as scientists, inventors, and detectives. They often can be heard saying, "Let's explore it."
3. *Artistic* (A) types report artistic, literary, and musical interests, prefer to work with feelings, enjoy the role of creator, display aesthetic competencies such as leisure pursuits involving self-expression and appreciation of concerts, theaters, and museums, and admire role models such as artists, composers, writers, and performers. They often can be heard saying, "Let's create it."
4. *Social* (S) types report social interests, prefer to work with people, enjoy the role of helper, display communication competencies such as leisure pursuits involving conversation and social gatherings, and admire role models such as teachers and social workers. They often can be heard saying, "Let's talk about it."
5. *Enterprising* (E) types report sales and managerial interests, prefer to work with opinions, enjoy the role of leader, display persuasive competencies such as leisure pursuits involving

travel and politics, and admire role models such as public officials, military officers, and corporation presidents. They often can be heard saying, "Make it so."

6. *Conventional* (C) types report clerical and business interests, prefer to work with data and records, enjoy the role of member, display organizing competencies such as leisure pursuits involving collecting and genealogy, and admire role models such as teams, altruists, and historians. They often can be heard saying, "God is in the details."

An individual's personality pattern is denoted by listing, in descending order, the three types that the individual most resembles. For example a physics professor (I) who enjoys teaching (S) in a creative way (A) would be coded as ISA. The manager (E) of an accounting department (C) at an automobile manufacturer (R) would be coded ECR. Today, the most popular interest inventories—including the *Campbell Interest and Skills Survey, Kuder Occupational Interest Inventory, Strong Interest Inventory, UNIACT,* and *Vocational Preference Inventory*—each provide scores for the six RIASEC types or some variation on these six themes (Savickas & Taber, 2006). These scores indicate the test taker's degree of resemblance to each of the RIASEC prototypes.

Work Environments

One of Holland's most important contributions was to use commensurate types and terms to characterize six work environments that correspond to each of the six RIASEC personality types. Experiences such as work history, educational achievement, and leisure pursuits can also be coded into one of six types. The rationale is that "birds of a feather flock together," so individuals of like types tend to congregate in a given work environment. As Schneider (1987) explained in his attraction-selection-attrition (ASA) framework for understanding organizations, environments vary in part because of the skills and attitudes of the people in them. According to Schneider's (1987) ASA theory of organizational fit, "since activities in the environment that have an effect on people always involve people then it is the nature of the people in an environment that make it the way it is" (p. 355). Human beings in an environment create different kinds of behavioral settings by their own behavior. Organizational culture, social climate, and company policies are determined by people who are attracted to the setting, selected to join it, and remain in it. So Holland characterizes an environment based on the people occupied in that work setting.

Holland and his colleagues formulated six prototypical work environments, or ecological niches, that correspond to each of the six personality types. Holland cleverly used this taxonomic approach to construct an occupational classification system as well as to classify other behavioral settings, such as university degree programs, universities, and leisure activities. Researchers are able to "type" a behavioral setting by identifying the most frequently occurring vocational personality types that populate it. For example, the Environmental Assessment Technique (Astin & Holland, 1956) applies this procedure to assign RIASEC types to colleges. Researchers can assign a type to a college by calculating the proportion of professors and students on campus who fall into each of the six RIASEC types. For example, I teach at a university that has a large number of professors and students occupied with the fields of education, sociology, and criminology so it is characterized as a social work environment. In contrast, the university has few technology professors and students and none in agriculture or engineering, so it least resembles a realistic work environment.

Holland's RIASEC vocabulary and typology provide an invaluable resource for articulating accounts of work and workers. It puts words on people's perceptions of the social arrangement of work. These words provide vocational psychologists and occupational sociologists with a concise vocabulary for describing vocational personalities and occupations. The RIASEC vocabulary even strengthens the solidarity of their own subculture by serving as a *sociolect*—that is, a shared language that reflects the group's values, interests, and ideology. Also, the RIASEC vocabulary and typology enable career counselors to teach clients how the work world is organized, compare occupations, and describe what types of work the individual is seeking.

Furthermore, the vocabulary and typology serve career counseling clients by providing a language for articulating who they are as well as for increasing and organizing their self-knowledge. In addition to enabling clients to be more efficient and effective in thinking about themselves and work, the language offers a vocabulary for self-construction. Many counselors report that using Holland's RIASEC language prompts their clients to think heuristically about self and occupations.

The six RIASEC types compose the primary propositions in Holland's theory. The typology has garnered substantial empirical support and constitutes Holland's most important contribution to vocational psychology. Holland supplements the research and reflection on the RIASEC types with four secondary propositions. These propositions address the degree of relatedness among types (consistency), the fit between personality types and environment types (congruence), how closely a person resembles a single type (differentiation), and the clarity and stability of an individual's self-perceptions and vocational goals (vocational identity). Holland (1997) formulated these secondary assumptions about consistency, congruence, differentiation, and identity to refine predictions and expectations derived solely from the six types (p. 4).

Consistency

In the middle of the 1970s, Holland elaborated his RIASEC theory by formulating a simplifying structure that serves as a source of ideas, hypotheses, and possibilities. Holland placed each of the six RIASEC types on a nodal point of a hexagon. The RIASEC types are arranged around the hexagon based on correlation coefficients from inventory scores. The order is R-I-A-S-E-C. This means that the two types most consistent with the artistic type are the type before it (investigative) and the type after it (social). The least consistent type is the furthest away (conventional). At an intermediate degree of consistency are the realistic and enterprising types. Consistency of types within a personality pattern is thought to relate to ease of vocational decision making. Consistent types share many common characteristics. For example, both the realistic type and the investigative type are viewed as being asocial and interested in things rather than people. Thus, an individual who resembles these two types (i.e., has a code of IR or RI) can search for an occupation that suits these compatible traits, say engineer or mechanic. It is more difficult to find occupations that reward individuals who resemble inconsistent types because their characteristics are more incompatible. For example, individuals who resemble the realistic and social types see themselves as both asocial and social. It is often more difficult for them to identify matching occupations that require a worker to be both reserved and friendly. This does not mean that they cannot find such occupations; it just takes more effort. For example, individuals who see themselves as both asocial and social have found success and satisfaction working as high school physical education teachers because they teach realistic skills to students by doing more than by talking. The teaching role is social yet the content of what they teach is realistic.

The hexagonal compass provides a valuable tool for teaching clients how to organize and store information both about themselves and about the work world. The hexagon is a momentous contribution to vocational psychology because of its utility in teaching individuals how society organizes itself into macro environments such as occupations, school subjects, and leisure activities. In using Holland's hexagon, counselors can teach clients that occupations are socially constructed pathways for contributing to the community. The hexagon can be viewed as a road map that shows where occupational pathways intersect and also as a travelogue that describes the types of people and situations one can meet on the different paths. Birds of a feather do flock together.

Congruence

The same RIASEC hexagon that is used to determine consistency *within* a personality pattern or work environment is also used to determine "goodness-of-fit" *between* a person and an environment. The best or most congruent fit between an individual and an environment has an exact match of personality pattern to occupational pattern. For example, the most congruent fit for an ISA individual would be an ISA environment, as

happens when an ISA individual works as a university professor teaching psychology classes in a social science building. The most incongruent fit would have this ISA individual working in an ERC occupation such as selling large stamping machines to automobile manufacturers. Note that the occupation of machine sales is completely incongruent because each letter in the occupational type is opposite on the hexagon of the corresponding letter in the personality type. Of course, there are many degrees of congruence between the extremes of perfect fit and perfect misfit. If needed, researchers and practitioners can calculate precisely the degree of congruence using mathematical formulas (Brown & Gore, 1994).

Differentiation

Differentiation means the degree to which an individual resembles a single RIASEC type. It can be indexed with inventory scores for each of the six types by subtracting the lowest score from the highest score. The larger the difference between these extreme scores, the more the differentiation. High differentiation indicates a specialist with narrow interests and an occupation that is highly focused on one process or product. Low differentiation indicates a generalist with broad interests or that the occupation involves many processes and products. Of course, specialists dislike generalist jobs, even if the jobs are a congruent match to their personality types.

Identity

To help counselors determine a student's readiness for making educational and vocational decisions, Holland added a fourth and final secondary proposition to his theory of occupational choice. In general, identity refers to how an individual thinks about self in relation to society. Vocational identity, in particular, refers to how an individual thinks about his or her own interests and talents relative to occupational goals. Thus, Holland defines vocational identity as the clarity and stability of an individual's self-perceptions and vocational goals. A well-formed vocational identity means that the individual is ready to make decisions that match self-knowledge to educational-vocational information and that result in a fitting occupational choice. An individual with a diffuse vocational identity is more likely to be undecided or indecisive when asked to make an occupational choice.

Clarity of vocational identity can be measured efficiently by using Holland, Daiger, and Power's (1980) *My Vocational Situation* (MVS). The MVS serves as a screening device that intake counselors can use to assign new clients to specific treatments. Two 4-item checklists on the MVS ask respondents to indicate their occupational information needs and identify barriers that block their career decision making. The final portion of the MVS consists of an 18-item Vocational Identity Scale (VIS). Scores on the VIS indicate the degree of readiness to make matching choices. Individuals with high scores, usually, have already decided or about to decide, whereas individuals with low scores usually need more time to increase self-knowledge and gather occupational information before attempting to match themselves to fitting occupations and academic degree programs.

Applying Holland's Theory: The Self-Directed Search

A popular instrument for measuring RIASEC type, consistency, congruence, and differentiation is Holland's (1997) *Self-Directed Search* (SDS). While the SDS is often mistaken for being an interest inventory, it is really an intervention presented in the form of two booklets called the *Assessment Booklet: A Guide to Educational and Career Planning* and *The Occupations Finder.* Holland designed the SDS for students who do not have access to a vocational guidance counselor. In taking the SDS, a student simulates the experience of working with a guidance counselor. First, the student taking the SDS lists occupational daydreams or aspirations in the *Assessment Booklet* and then codes each one using a booklet called the *Occupations Finder,* which contains RIASEC types for 1,346 occupations. In this way, the student learns the RIASEC vocabulary and occupational typology. The student then continues to work in the *Assessment Booklet* by responding to a series of short inventories that measure interests and survey activities and estimate competencies. By following the directions at the end of the *Assessment Booklet,* the student scores the

inventories and computes total scores for each of the six RIASEC types. This scoring procedure produces a three-letter RIASEC code that indicates the student's degree of resemblance to the types. In the final step, the individual returns to the *Occupations Finder* to identify the occupations that have the same three-letter code. There are also booklets for finding the RIASEC types for college majors (Rosen, Holmberg, & Holland, 1994) and for leisure activities (Holmberg, Rosen, & Holland, 1990). Although the data are old, Astin (1965) determined RIASEC codes for U.S. universities in his book *Who Goes Where to College?*

The Decision-Making Process

The construct of vocational identity and the topic of career choice readiness announce the second grand paradigm in the psychology of occupational choice. Holland's theory of occupational choice is the best contemporary exemplar of the P-E fit framework that Parsons originated when in 1909 he published the first "scientific" book on vocational choice. Because the proponents of P-E fit concentrate on individual differences, their stream of thought is referred to as the *differential* model. As we have already discussed, the P-E fit framework concentrates on differences between individuals and uses these differences to match their abilities and interests to occupational levels and fields.

The second paradigm for research and practice related to occupational choice is called the *developmental paradigm* because it concentrates on differences within an individual across time, not on differences between individuals. The developmental paradigm of occupational choice originated in the middle of the 20th century with the publication of Ginzberg's (1952) developmental theory of occupational choice and Super's (1953) developmental theory of vocational behavior. Because the developmental paradigm concentrates on careers, in contrast to occupations, over time *career counseling* for developing vocational behavior became an intervention to complement *vocational guidance* for matching individuals to fitting occupations. These two types of intervention differ in that career counseling concentrates on developmental processes (i.e., identity and adaptability), whereas vocational guidance concentrates on adjustment outcomes (i.e., success and satisfaction). The fundamental difference between development and adjustment as counseling outcomes is substantiated in vocational guidance's concentration on the occupational choice itself versus career counseling's concentration on the decision-making process yielding that occupational choice.

Counseling methods that match clients' abilities and interests to occupational requirements and rewards, or identify which occupational groups a client most resembles, work well for clients who are ready to make choices. Decisive clients, those who score high on the VIS, for example, can use the results of interest inventories and aptitude tests to make realistic choices. However, other clients who are not ready to choose encounter difficulties when they try to make occupational choices. In fact, after discussing test results and occupational information, indecisive clients may become even more confused about their occupational options because they have more data than they are ready to use.

Occupational Choice Content and Process

Counselors who are sensitive to variations in clients' readiness to make occupational choices appreciate Crites's (1974) distinction between the *content* of occupational choice and the *process* of vocational decision making. Content refers to which occupation a client should enter and thus concentrates on the client's abilities and interests or resemblances. It asks the question "Which occupation has this client chosen?" Process refers to how a client arrives at an occupational choice and thus concentrates on the client's decisional and developmental concerns. It asks the question "How did the client make this occupational choice?" Crites used the analogy of an assembly line to describe the distinction between occupational choice and vocational decision making. He likened occupational choice to the product and vocational decision making to the production activities.

To more effectively use the matching model and its content-oriented methods, experienced counselors view occupational choice as a process that develops over time, not as an event.

Typically, they conceptualize making educational and vocational choices as an adaptive process through which individuals meet and master social expectations (called developmental tasks) to choose an occupation in which they can fulfill both the job demands and their own needs. The choice process originates when, in early adolescence, individuals encounter the vocational development task and social expectation that they orient themselves to the work world and prepare to enter it. As adolescents become more oriented to the importance of work in their future lives, they find the work role to be increasingly salient. This work role salience produces a "basic readiness" for vocational decision making. Among adults, the readiness to make new occupational choices and career transitions reemerges repeatedly over the life course as individuals consider new opportunities, whether moved by personal pull or employer push.

Regardless of an individual's age, the process model of occupational choice remains basically the same. The decisional process begins when an individual becomes aware of the need to adapt to an imminent or intermediate career change by making an occupational choice. Career changes are considered developmental if they are predictable—such as graduating from high school—and traumatic if they are unpredictable—such as a sudden plant closing. Whether or not the individual foresees the career change, the circumstances require that the individual adapt to the transition by making an occupational choice.

Phases in the Decisional Process

Making occupational choices requires that the individual seek ways to bring psychological needs into balance with social opportunities. To balance inner means and outer ways, the individual must first solve psychosocial problems that are usually unfamiliar, often ill defined, and always complex. Vocational psychologists refer to this problem-solving activity, which in due course leads to an occupational choice, as decision making or the decisional process. The psychosocial problems encountered as part of the decisional process can be conceptualized as a developmental sequence of issues and activities that reoccur during the life course each time when an individual faces a career transition and the need to make another occupational choice.

The first phase in the decisional process, *orientation,* begins with awareness of the need to make an occupational choice in the imminent or intermediate future. This need can arise from emergent dissatisfactions or the awareness of either new occupational opportunities or employment threats. Growth in abilities, interests, and values continues throughout life, with certain periods of acceleration prompted by external circumstances and opportunities, including developmental tasks, career transitions, and work traumas. In addition to awareness of the need to eventually make an educational or vocational choice, orientation includes two additional aspects. Awareness should move individuals to become familiar with the timing and tasks of the choice points they will encounter in the near, intermediate, and distant future. Furthermore, after becoming aware of and familiar with the choices to be made, individuals should relate themselves to these choices by becoming actively involved in the decision-making process, starting by exploring possible futures.

Orientation should be followed by *exploration* that enables the individual to make fitting occupational choices based on self-knowledge and occupational information. The exploration phase of vocational decision making has two developmental tasks. The first task involves a broad exploration of self and occupations through which the individual learns about his or her own work values, occupational abilities, and vocational interests as well as about viable occupational fields. The developmental task associated with the first aspect of exploration is to *crystallize vocational preferences* for an occupational group. Occupational group, here, means a set of similar occupations in the same interest field and at the same ability level. For example, the Knowledge of Preferred Occupational Group Test or KPOG (Thompson & Lindeman, 1981; www.vocopher.com) identifies 20 distinct occupational groups that an individual might prefer. To clarify the construct of occupational groups, consider two social type groups that differ in ability level. The social service group includes the occupations of guidance counselor, marriage counselor, school psychologists, school teacher, and social worker.

The personal service group includes the occupations of beautician, hospital attendant, host/hostess, receptionist, and waiter/waitress. The KPOG has a test taker select one of the 20 occupational groups and then measures that individual's fund of information about the occupational group that she or he prefers. This is a useful assessment because it predicts the realism and stability of the individual's eventual occupational choice.

Of course, as a part of in-breadth exploration, an individual can expand her or his preferred occupational group to include occupations from neighboring groups, but eventually, the individual should concentrate on a small group of similar occupations for advanced exploration. The developmental task associated with this second aspect of exploration is to *specify an occupational choice.* The individual should identify and explore in-depth a few occupational alternatives through advanced exploration. This means becoming quite familiar with the requirements, routines, and rewards of a few specific occupations. While in-breadth exploration broadens the horizon, in-depth exploration narrows it. The outcome of in-depth exploration should be a willingness to specify an occupational choice and to commit oneself to implementing that choice.

Following the phases of orientation and exploration, the third phase in developing an occupational choice involves *implementing* the specified choice by entering training for it or by obtaining a trial position in it. At first, the specified choice may be tentative. Initial training may confirm or disconfirm the suitability and viability of the tentative choice. Even after training has been completed, a trial position in the chosen occupation may cause the individual to reconsider the occupational choice. For example, after completing the first 2 years of medical school, students enter clinical clerkships at a hospital. While studying basic science in the medical school, they might have remained committed to their tentative choice of medicine. However, after a month on the hospital wards, a few students become aware of the need to make a different occupational choice. The clerkship as a trial position shows them that the occupation of physician does not suit them. They must now recycle through the tasks of orientation, exploration, and implementation.

In due course, the tentative choices and trial positions of the implementation phase of developing an occupational choice clarify the situation so that the individual is ready to stabilize in a certain occupation and a particular job with a specific employer. Thus, *stabilization* is the fourth and final phase in developing an occupational choice. While stabilizing in a position, as well as consolidating it and advancing in it, the individual experiences a period in his or her work history during which new occupational choices are unnecessary. However, for most individuals, awareness of the need to make new occupational choices will soon enough appear on the horizon because of new occupational opportunities or employment threats.

Most individuals make many important occupational choices throughout their work lives. Each time they make an occupational choice, they recycle through the phases of orientation, exploration, implementation, and stabilization. A small percentage of individuals cycle through the phases of occupational choice only once because after they establish themselves in a position, they remain in that position for the remainder of their work lives. The less stable the economy, the more times a worker is likely to face the need to make an occupational choice. In the current U.S. economy, by age 38, the average person born from 1957 to 1964 had held an average of 10.2 jobs (U.S. Bureau of Labor Statistics, 2004). So it is not unusual for individuals to make a dozen or more occupational choices during their work lives, each time recycling through the four phases of vocational decision making.

Although tautological, it should be noted that "occupational choice" technically refers to choosing an occupation. For example, an individual makes a new occupational choice when moving from the occupation of teaching to the occupation of accounting. However, researchers usually subsume under the broad rubric of occupational choice other types of choices that do not involve a change in occupation. For example, an individual can choose a new job within the same occupation, such as moving from elementary teacher to high school teacher. Or, an individual could change organizations but keep the same job, say when a fifth-grade teacher moves to a position in a different school district. This is really an organizational change

not an occupational change. Each change in position—whether of job, organization, or occupation—involves decision making and choice. For completeness, I should note that individuals do not make career changes. A career is the complete sequence of educational and vocational positions that an individual occupies during his or her life course. Each person has only one career, regardless of the number of positions that person occupies from childhood through retirement.

Individuals who seek career counseling may be concerned about issues in any of the phases of vocational decision making. To be useful to the client, the counselor must provide interventions that directly address the client's concerns. Therefore, when meeting a new client, counselors must assess which phase of developing an occupation choice concerns that individual: orientation, exploration for either crystallization or specification, implementation, or stabilization. Most counselors interview their clients to make this determination; yet there are inventories that can be used for this purpose. For example, the Adult Career Concerns Inventory or ACCI (Super, Thompson, & Lindeman, 1988; www.vocopher.com) includes scales that measure crystallization, specification, implementation, and stabilization. The ACCI can be administered to college students and adults to measure their degree of vocational development and the current focus of their career concerns. The ACCI can also be administered to groups of employees, to conduct a needs analysis for an organization or work group, as well as to graduate students who wish to learn operational definitions of the phases in vocational decision making.

Having determined the client's career concern, the counselor can then provide interventions, such as career education for orienting to the vocational development task, vocational guidance for crystallizing vocational preferences, career counseling for specifying an occupational choice, occupational placement for implementing a tentative choice, and job coaching for stabilizing in a position. Because the developmental model for occupation choice centers on decision making, the remainder of the chapter will concentrate on crystallizing and specifying. The developmental tasks that precede choice (i.e., orientation) and follow choice (i.e., implementation and stabilization) are addressed elsewhere (Savickas, 2004).

Career Adaptability

While the tasks of crystallizing vocational preferences and specifying an occupational choice have been delineated, we have not yet addressed how individuals master these tasks. Development arises from activity and from solving difficulties met in the world. Therefore, developmental tasks are mastered through activities and behaviors, for example, information-seeking behavior and making decisions that solve the problems that the tasks present. While this seems straightforward, numerous individuals encounter difficulty in performing the coping behaviors that master the developmental tasks. Accordingly, vocational psychologists and career counselors have accumulated an impressive literature about the attitudes and competencies that influence when and how an individual engages in the decisional process that leads to an occupational choice (Walsh & Savickas, 2005). Collectively, these critical attitudes and competencies, which shape vocational behavior, are referred to as career adaptability.

Career adaptability is a psychosocial construct that denotes an individual's readiness and resources for coping with imminent, intermediate, and distant vocational development tasks and career transitions (Savickas, 2005). Adaptability for crystallizing vocational preferences and specifying an occupational choice has been the focus of extensive research since the middle of the 20th century. Several researchers have used different variable names to label the same coping attitudes and competencies. In an attempt to unify this research, I examined their linguistic explications, operational definitions, and intercorrelations and then consolidated them into four global strategies for vocational decision making (Savickas, 2002). I referred to these self-regulation strategies as constructs or tools for career building throughout the life course.

The four global dimensions of career adaptability are each named according to their principal functions: concern, control, curiosity, and confidence. The homogeneous variables within each

dimension are grouped into attitudes, beliefs, and competencies—the ABCs of career construction—which shape the concrete coping behaviors used to master developmental tasks, negotiate occupational transitions, and resolve work traumas. Attitudes and beliefs are dispositions that prime readiness, whereas competencies are cognitive skills, such as comprehension and problem solving, that condition behavioral responses. So the two key types of variables within each of the four dimensions of adaptability are readiness and resources. While it may sound complicated, career adaptability for making occupational choices can be characterized simply as

1. showing *concern* about choices to be made in the future,
2. increasing personal *control* over the decision-making process,
3. displaying *curiosity* about possible selves and alternative work scenarios, and
4. strengthening the *confidence* needed to make occupational choices.

Career Concern

Concern about the vocational future is the prime dimension in career adaptability. It has been called planfulness, time perspective, anticipation, orientation, and awareness (Savickas, Silling, & Schwartz, 1984). Essentially, concern in all its linguistic forms means an orientation toward the future that disposes an individual to prepare for tomorrow. Concern makes the future feel real as individuals become aware of the vocational development tasks and career transitions to be faced and the choices to be made in the near and distant future. Planful attitudes and a belief in the connection between today's experiences and tomorrow's circumstances incline individuals to engage in activities and experiences that promote competence in planning. A lack of career concern is called *career indifference,* and it reflects a planlessness regarding the future and pessimism about it. Career concern prompts individuals to think about who owns their future and who should make their occupational choices.

Career Control

Possessing a sense of control over one's future is the second most important dimension of career adaptability. The importance of control in the vocational decision-making process is reflected in the large amount of research about variables such as decision making, assertiveness, locus of control, autonomy, self-determination, effort attributions, and agency (Blustein & Flum, 1999). Essentially, control in all its linguistic forms denotes that individuals feel and believe that they are responsible for constructing their own careers. Attitudes of assertiveness and decisiveness incline individuals to make their own choices in a timely manner rather than procrastinate or follow the directions of significant others. Members of the dominant culture in countries such as Denmark, France, the United Kingdom, and the United States, and individuals who have assimilated to these cultures, lean toward independence in balancing self and society (Leong et al., 2001). Of course, many other families prefer interdependence and their children take pride in their occupational inheritance and assigned choices. Nevertheless, prevalent views about occupation choice and materials for career education both assume that the individual is autonomous in making occupational choices. People living in a more collectivist context do not emphasize their individuality as much, yet they still exercise career control by fine-tuning conferred choices and making those choices personally meaningful by enacting them uniquely. Moreover, counselors recognize that control from either an individualistic or a collectivistic perspective means being intentional about what you do and responsible for how you do it (Spector, Sanchez, Siu, Salgado, & Ma, 2004). In this way, both individualistic and collectivistic approaches to control enable individuals to increase their decision-making competence. A lack of career control is called *career indecision.* A sense of career control prompts curiosity about possible selves and alternative futures.

Career Curiosity

A sense of control increases an individual's initiative to explore the types of work that she or

he might prefer as well as the occupational opportunities for performing that work. Career curiosity refers to inquisitiveness about and the exploration of the fit between oneself and the work world. The central role of curiosity in occupational choice and career construction has led to an extensive literature on exploration and information-seeking behavior (Blustein, 2000) and an even larger literature about the outcomes of this behavior—namely, self-knowledge and occupational information. Individuals who have explored both themselves and their situation possess more knowledge about their occupational abilities, vocational interests, and work values as well as about the requirements, routines, and rewards of preferred occupations. In most cases, this increased competence in self-knowledge and occupational information fosters realism and objectivity when the individual makes choices that match self to an occupation. A lack of career curiosity leads to *unrealism* because of naïveté about the work world and inaccurate images of the self. Once an individual has a broad fund of information about self and situation, she or he is able to form realistic occupational daydreams and envision possible selves. These aspirations usually prompt questions concerning one's capacity to convert these ideas into reality.

Career Confidence

The fourth and final dimension of career adaptability is confidence. Self-confidence denotes the anticipation of success in encountering and overcoming obstacles (Rosenberg, 1989). Making and enacting realistic occupational choices involves solving complex problems or at least resolving the problems so that one can move forward. The importance of confidence in solving career problems is reflected in the extensive body of writings about self-esteem, self-efficacy, and encouragement in the literature on educational and vocational decision making (Lent, Brown, & Hackett, 1994). Relative to career adaptability, confidence denotes feelings of self-efficacy concerning one's own ability to successfully execute a course of action needed to make and implement suitable educational and vocational choices. Individuals build their self-confidence as they solve the problems that they encounter during their exploratory experiences and in the activities of daily living, especially household chores, schoolwork, and hobbies. Success in meeting these challenges increases feelings of self-acceptance and problem-solving competence. In contrast, mistaken beliefs about social roles, gender, and race often produce internal doubts and external barriers that thwart the development of confidence. A lack of career confidence can result in an *inhibition* that thwarts actualizing roles and achieving goals.

Interventions for Decisional Difficulties

The four dimensions of career adaptability enable an individual to approach occupational choices and career transitions with a concern for the future, a sense of control over it, the curiosity to experiment with possible selves and explore opportunities, and the confidence to solve problems in making and implementing occupational choices. Development along these four dimensions of adaptability, however, may not proceed smoothly; there may be fixations and regressions. Delays within or disequilibrium among the four development lines produce problems in specifying occupational choices, which counselors diagnose as indifference, indecision, unrealism, or inhibition. In addition to interviewing clients, counselors may use inventories, such as the Career Development Inventory and the Career Maturity Inventory (www.vocopher.com), to assist them make developmental diagnoses of decisional difficulties (Savickas, 2000). Each diagnosis of a specific problem in making an occupational choice leads to a particular career intervention that is formulated to resolve that problem and foster development.

Career counseling directly concentrates on addressing decisional problems as opposed to vocational guidance, which concentrates on matching abilities and interests to occupational levels and fields. The apathy of career indifference is addressed by career counseling interventions designed to foster a forward-looking orientation and awareness of the vocational development tasks and career transitions on the

horizon. These interventions assist individuals to formulate occupational daydreams in which they think about their aspirations. The interventions aim to induce a future orientation, foster optimism, make the future feel real, practice planning skills, link present activities to future outcomes, and heighten career awareness. In short, career concern interventions help individuals form positive feelings and beliefs about their vocational future.

Counseling interventions aimed at increasing a sense of career control concentrate on promoting attitudes of decisiveness and competence in decision making. In general, the interventions include assertiveness training, decisional training, attribution training, time management techniques, and self-management strategies. In short, career control interventions help individuals to feel and believe that they own their future.

Counseling interventions that aim at increasing career curiosity concentrate on providing information and teaching information-seeking behavior. These interventions can include interpreting vocational tests that increase self-knowledge and providing occupational information that helps individuals learn about the work world. Other important interventions include clarifying values, discussing intrinsic versus extrinsic rewards, engaging in job simulations, shadowing workers, practicing goal setting, learning how to systematically explore occupations, reading occupational pamphlets, working part-time jobs, and volunteering at community centers. In short, career curiosity interventions help individuals examine what they want to do with their future.

Counseling interventions that aim at increasing career confidence concentrate on building self-efficacy. Career inhibition is reduced by interventions designed to increase feelings of confidence and self-efficacy through role modeling, success acknowledgement, encouragement techniques, anxiety reduction, and problem-solving training. These interventions promote the courage to try when the outcome is in doubt by helping individuals concentrate on *what* they are doing rather than on *how* they are doing. In short, career confidence interventions help individuals gain the assurance that they can achieve their goals. With a sense of concern for the future, a feeling of control over it, curiosity about it, and confidence in it, individuals are ready to engage in vocational decision making and possess the resources with which to make realistic choices in which they match themselves to suitable occupations.

Conclusion

The psychology of individual differences that leads to the six types of vocational personalities and work environments along with the psychology of individual development that leads to the four dimensions of adaptability provide two complementary perspectives on occupational choice. The perspective of types concentrates on the content of occupational choice and the personality of the individual who makes them. The perspective of tasks concentrates on the process of occupational choice and problems in decision making. Both perspectives, that of person description and problem diagnosis, should be used to comprehend how individuals make occupational choices as well as to structure career interventions to assist individuals with the decisional process. While career interventions may be conducted from either the vantage point of types or of tasks, intervention produces deeper understanding and broader outcomes when both perspectives are used together. Knowing both what is at stake and how to proceed enhances individuals' abilities to choose and then commit themselves to achieving their goals.

While scholarly research continues to refine the models of individual differences and development, attention has recently turned to building new models for comprehending occupational choice in the postmodern society and global economy (Savickas, 2001). These models have taken the "narrative turn" toward personal constructivism and social constructionism (Cochran, 1997; Savickas, 2006; Young & Collin, 2004). Viewing careers from constructionist and contextual perspectives focuses attention on interpretive processes, social interaction, and the negotiation of meaning. From this standpoint, careers do not unfold; they are constructed as individuals make choices that manifest their

identities and substantiate their values in the social reality of work roles. Whereas the positivist approach to occupational choice concentrates on objective facts in matchmaking and congruence, the constructivist approach concentrates on subjective truths in meaning making and mattering (Savickas, 2005). The metaphor of career as story that emerged after the narrative turn has only an inchoate research base at this time—mostly case studies using qualitative methods. Nevertheless, conceptualizing occupational choice as a process of self-construction is gaining adherents because the model fits the 21st-century information era, as the individual differences model fits the machine age (1900–1950) and the individual development model fits the corporate era (1951–2000).

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