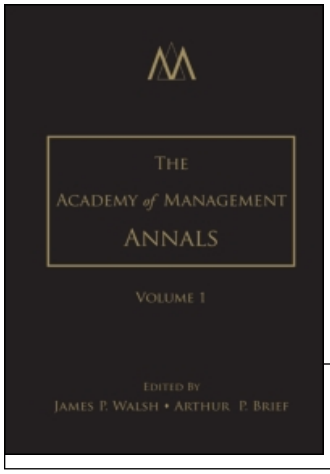

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4

Person–Environment Fit in Organizations:
An Assessment of Theoretical Progress

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Abstract

Person–environment (P–E) fit is a central concept in organizational behavior research. Historically, reviews of P–E fit research have summarized empirical studies but said little about whether P–E fit research has made theoretical progress. This chapter applies criteria for evaluating theory to review and assess the theoretical status and progress of P–E fit research. The review encompasses P–E fit theories that span nearly a century and cover research on job satisfaction, job stress, vocational choice, recruitment and selection, and organizational climate and culture. This review indicates that most theories in P–E fit research fall well short of criteria for developing strong theory, and theories presented in recent years are no stronger than those developed decades earlier. Reasons for theoretical stagnation in P–E fit research are identified, and ways to promote theoretical progress are discussed.

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Introduction

For decades, person–environment (P–E) fit has maintained a central position in organizational behavior research. In general terms, P–E fit refers to the congruence, match, or similarity between the person and environment (Dawis, 1992; Edwards, Caplan, & Harrison, 1998; Muchinsky & Monahan, 1987; Schneider, Kristof, Goldstein, & Smith, 1997). Specific types of P–E fit involve the needs of the person and the rewards provided by the environment (Dawis & Lofquist, 1984; Porter & Lawler, 1968), the abilities of the person and the demands of the environment (McGrath, 1976; Sells, 1970; Shirom, 1982), and the similarity between the person and the social environment, which can refer to individuals, groups, organizations, or vocations (Chatman, 1989; Holland, 1997; Meglino, Ravlin, & Adkins, 1989; Schneider, 1987).

Although the concept of P–E fit dates back to the work of Plato (Dumont & Carson, 1995), contemporary P–E fit research is often traced to Parsons (1909), who developed a matching model to describe the fit between attributes of the person and characteristics of different vocations. Subsequent theoretical work that laid the foundation for P–E fit research includes Murray's need–press model (Murray, 1938, 1951) and Lewin's field theory (Lewin, 1935, 1951), which produced the formula $B = F(P, E)$ stating that behavior is a function of the person and environment. Following this work, P–E fit emerged as a core concept in research on job satisfaction (Katzell, 1964; Locke, 1976; Schaffer, 1953), job stress (French, Caplan, & Harrison, 1982; McGrath, 1976), vocational choice (Dawis & Lofquist, 1984; Holland, 1997), recruitment and selection (Breaugh, 1992; Wanous, 1992; Werbel & Gilliland, 1999), and organizational culture and climate (Chatman, 1989; Meglino et al., 1989; Schneider, 1987).

The various streams of research that fall under the rubric of P–E fit have generated hundreds of studies. This work has been reviewed in narrative summaries (Edwards, 1991; Katzell, 1964; Kristof, 1996; Meglino & Ravlin, 1998; Pervin, 1968; Spokane, 1985; Spokane, Meir, & Catalano, 2000) and meta-analyses (Arthur, Bell, Villado, & Doverspike, 2006; Assouline & Meir, 1987; Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005; Hoffman & Woehr, 2006; Kristof-Brown, Zimmerman, & Johnson, 2005; Tranberg, Slane, & Ekeberg, 1993; Tsabari, Tziner, & Meir, 2005; Verquer, Beehr, & Wagner, 2003). Based on these reviews, one might conclude that P–E fit research is thriving and productive, yielding evidence that has been used to evaluate, modify, and extend theories of P–E fit. Indeed, after decades of work, it would seem inevitable that P–E fit research has repeatedly run through the cycle linking theory and empiricism that generates scientific progress (Runkel & McGrath, 1972), such that current P–E fit theories are markedly superior to their predecessors.

Despite the enormous effort invested in conducting and reviewing empirical P–E fit research, little attention has been devoted to evaluating theories that guide this research. As a result, fundamental questions about P–E fit theories

remain largely unanswered. For instance, how would P–E fit theories fare against basic criteria for evaluating theory? Are contemporary P–E fit theories superior to those developed when P–E fit research was in its infancy? Have successive statements of P–E fit theories become more refined, adding propositions that were initially overlooked and shedding propositions that were rejected empirically? Overall, from a theoretical standpoint, has P–E fit research made progress?

In this chapter, I take stock of theoretical progress in P–E fit research. Using basic criteria for theory development (Bacharach, 1989; Dubin, 1976, Sutton & Staw, 1995; Weick, 1995; Whetten, 1989), I evaluate major P–E fit theories, starting with their initial presentations and tracing subsequent developments, and examine the extent to which theories have improved over time. The review starts with work by Parsons (1909), Murray (1938, 1951), and Lewin (1935, 1951), and then examines primary theories of P–E fit within the domains of job satisfaction, job stress, vocational choice, recruitment and selection, and organizational culture and climate. This review shows that many theories are stated in vague terms that obscure the meaning of P–E fit and its relationship with other constructs, and theories proposed in recent years are often less sophisticated than those developed decades earlier. Drawing from this assessment I offer suggestions for future theory development in P–E fit research along with recommendations for empirical research that will produce stronger tests of the theories we propose.

The following review is intended to be critical but not adversarial. To this end, I evaluate P–E fit theories against theoretical criteria I believe most researchers would consider relevant and uncontroversial, and I have liberally quoted from sources that present the theories to minimize interpretations of my own. Moreover, this review is not a prologue to some alternative theory I have developed that is immune from the criticisms leveled against the theories examined here. Indeed, my own theoretical work related to P–E fit either draws heavily from the work of others (Edwards et al., 1998) or is tangential to P–E fit research as it is usually conceived (Edwards, 1992). In either case, my work is subject to many of the same criticisms that apply to the theories reviewed. Furthermore, some of the scholars who developed the theories I review have become colleagues and friends over the years, and I am not in this business to hurt feelings or make enemies. Rather, we as P–E fit researchers are part of the same struggle to advance knowledge, which in turn requires strong theory. To that end, we would all benefit from taking a hard look at the theories that guide our work, noting their strengths and limitations, integrating their best features, and determining how these theories can be developed and improved.

Selecting Theories for Review

The theories reviewed here were selected by balancing several criteria. One criterion was whether the source material could be reasonably viewed as an

attempt to define constructs, explain their interrelationships, and organize them in a coherent framework, thereby constituting a *bona fide* effort to develop theory (Dubin, 1976; Sutton & Staw, 1995; Whetten, 1989). This criterion ruled out frameworks used in literature reviews to describe relationships examined in empirical work (e.g., Edwards, 1991; Kristof, 1996) and models used in studies to assemble hypotheses derived from existing theory and research (e.g., Cable & Edwards, 2004; Day & Bedeian, 1995; Dineen, Ash, & Noe, 2002; Graves & Powell, 1995; Kristof-Brown, Barrick, & Franke, 2002; Wayne & Liden, 1995). At the stage of theory selection, this criterion was intended not to evaluate theories, but rather to identify attempts to develop theory. Material that satisfied this criterion was eligible for theoretical evaluation as part of the review itself

A second criterion was whether the theory explicitly incorporated the concept of P–E fit. As noted earlier, P–E fit refers to the congruence, match, or similarity between the person and environment. This general definition of P–E fit has been distinguished in terms of supplementary fit and complementary fit (Muchinsky & Monahan, 1987). *Supplementary fit* exists when the person "supplements, embellishes, or possesses characteristics which are similar to other individuals" in the environment (Muchinsky & Monahan, 1987, p. 269). *Complementary fit* means that a "weakness or need of the environment is offset by the strength of the individual, and vice versa" (Muchinsky & Monahan, 1987, p. 271). Complementary fit has been further distinguished according to whether needs are held by the person or environment (Dawis & Lofquist, 1984; Edwards, 1991; French et al., 1982; Kristof, 1996). The degree to which the needs of the person are fulfilled by intrinsic and extrinsic rewards in the environment is termed *needs–supplies fit* (French et al., 1982; Kristof, 1996). The degree to which needs of the environment are fulfilled by capabilities of the person is called *demands–abilities fit,* such that environmental needs are reframed as demands imposed on the person (French et al., 1982; Kristof, 1996; McGrath, 1976). Theories that addressed one or more of these three forms of P–E fit were considered for review.

A third criterion was the degree to which the theory provides a general foundation for P–E fit research or characterizes a major stream of research within the P–E fit domain. As noted earlier, the five streams that surfaced from this review involve research on job satisfaction, job stress, vocational choice, recruitment and selection, and organizational culture and climate. This criterion captured theories that anchored subsequent theory development (e.g., Lewin, 1935, 1951; Murray, 1938, 1951; Schaffer, 1953), serve as primary theoretical statements within a research stream (e.g., Chatman, 1989; French, Rodgers, & Cobb, 1974; Locke, 1969, 1976; Holland, 1959, 1997; Schneider, 1987), or are representative of other theories in the stream (e.g., Breaugh, 1992; McGrath, 1970; Wanous, 1980, 1992). This criterion also excluded some relevant theories that are largely redundant with the theories reviewed. As a result, the review presented here is selective but adequately maps the theoretical terrain of P–E fit research.

Criteria for Evaluating Theories

Principles for developing and evaluating theory have been discussed extensively in the organizational and social sciences (Bacharach, 1989; Blalock, 1969; Dubin, 1978; Kaplan, 1964; Sutton & Staw, 1995; Whetten, 1989; Weick, 1995). Of these principles, the most basic stipulate that a theory should select and define constructs of interest, describe how the constructs relate to one another, explain why the focal constructs were chosen and why they relate as predicted by the theory, and specify boundaries that denote the conditions under which the predictions of the theory should hold. Theories satisfy these principles to varying degrees (Weick, 1995), and as the principles are better satisfied, a theory can be regarded as stronger and more fully developed.

The general principles summarized above can be translated into specific criteria for evaluating theories in a particular domain of inquiry. Applying these principles to P–E fit research suggests that, as a starting point, P–E fit theories should clearly define the person and environment constructs that constitute P–E fit. At a minimum, these definitions should indicate whether P–E fit refers to needs–supplies fit, demands–abilities fit, or supplementary fit. The definitions should also specify whether the person and environment are conceptualized as objective, subjective, or both, as these distinctions are relevant to the meaning and effects of P–E fit (French et al., 1982; Kristof, 1996; Locke, 1976). Definitions should also describe the units on which the person and environment are conceived. For example, needs can refer to the desired amount or importance of an attribute, a distinction that has significant implications for theories of needs–supplies fit (Katzell, 1964; Locke, 1969, 1976; Schaffer, 1953). P–E fit theories can be considered stronger to the extent they address these definitional issues.[1]

A second criterion involves the manner in which relationships between P–E fit and other constructs are described. Weaker theories express P–E fit relationships in general terms, merely saying that P–E fit is positively or negatively related to another construct. Stronger theories go further by describing the form of this relationship, such as whether the function relating P–E fit to an outcome is symmetric about the point of P–E fit (French et al., 1974; Locke, 1976) and whether the effects of P–E fit depend on the absolute levels of the person and environment (Edwards & Shipp, 2007; Harrison, 1978). P–E fit theories are also stronger when they indicate whether and how relationships between P–E fit and other constructs differ across types of P–E fit (i.e., needs–supplies fit, demands–abilities fit, supplementary fit) and the content of person and environment dimensions (e.g., needs and supplies for pay versus travel).

Third, P–E fit theories should explain the conceptual logic for choosing the person and environment constructs included in the theory and the reasoning behind the P–E relationships described by the theory. Theories that select

person and environment constructs with little justification are weaker than theories that explain why the selected constructs were chosen. Similarly, theories that posit P–E fit relationships without explanation are weaker than theories that articulate the conceptual logic behind the relationships. Typically, theories that carefully explain P–E fit relationships also describe the relationships in detail, because when the reasoning behind P–E fit relationships is critically examined, the result often points to complexities that require detailed description, as when the effects of P–E misfit differ depending on whether the environment exceeds or falls short of the person (Harrison, 1978; Locke, 1976).

Finally, stronger P–E fit theories identify boundaries that establish conditions under which P–E fit relationships should occur. These conditions can be expressed as moderators that influence the form or strength of P–E fit relationships, as when the effects of demands–abilities fit are stronger when failure to meet demands has important consequences (McGrath, 1970, 1976). Boundary conditions can also refer to limits beyond which the theory does not apply, as when the theory explains the effects of subjective rather than objective P–E fit (French et al., 1982) or the outcomes of P–E fit are restricted to the organizational level rather than the individual level (Schneider, 1987). P–E fit theories with explicit boundaries are stronger than theories without stated boundaries, and theories that accommodate a wide range of conditions are stronger that theories with conditions that are restrictive and narrow.

The foregoing criteria were applied to the P–E fit theories selected for review, focusing on the conceptualization of the person and environment and the relationship between P–E fit and other constructs, most of which are cast as outcomes of P–E fit. Theories were considered stronger to the extent they clearly defined the person and environment, justified the selection of person and environment constructs, described the form of the relationship between P–E fit and other constructs, explained the logic behind P–E fit relationships, and specified conditions that influenced the form and strength of the relationship between P–E fit and other constructs. By focusing on these issues, the scope of the review is kept manageable, and it concentrates directly on the concept of P–E fit that lies at the core of each theory.

Foundations of Person–Environment Fit

We begin with theories that are generally considered the roots of contemporary P–E fit research, starting with Parson's (1909) matching model and moving to Murray's (1938, 1951) needs–press model and Lewin's (1935, 1951) field theory.

Parsons' Matching Model of Career Decision-making

Parsons (1909) has been credited as the founder of vocational psychology (Hartung & Blustein, 2002), and his matching model of career decision-making

is considered one of the first theories of P–E fit (Kristof-Brown et al., 2005). Parson's model is summarized by the following quote, which often appears in accounts of his work:

> 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. (Parsons, 1909, p. 5)

In this passage, Parsons foreshadows demands–abilities fit by referring to the requirements of work and the aptitudes, abilities, resources and limitations of the person. He also presages needs–supplies fit by describing the interests and ambitions of the person and the advantages, disadvantages, compensation, opportunities, and prospects of work. The consequences of these types of fit are mentioned in a separate passage:

> An occupation out of harmony with the worker's aptitudes and capacities means inefficiency, unenthusiastic and perhaps distasteful labor, and low pay; while an occupation in harmony with the nature of the man [*sic*] means enthusiasm, love of work, and high economic values – superior product, efficient service, and good pay. (Parsons, 1909, p. 3)

The remainder of the Parsons (1909) volume is essentially a manual for vocational counseling, outlining questions counselors might ask job applicants to guide their occupational choices. Parsons also listed personal qualities suited to various lines of work, although he did not define the person and environment in formal terms, describe the form of the relationship between P–E fit and outcomes, or address other theoretical issues. Hence, Parsons expressed ideas that have parallels in contemporary theories of P–E fit, but he used these ideas to inform vocational counseling, not to develop a theory of P–E fit.

Murray's Needs–Press Model

Murray (1938, 1951) is regarded as a founder of P–E fit research for his development of the needs–press model. A major emphasis of this model was a typology that described different needs and organized them into broader categories, such as whether needs are conscious or unconscious, viscerogenic or psychogenic (i.e., physiological or psychological), and latent or manifest (i.e., hidden or openly expressed). Press refers to stimuli that can benefit or harm the person, based on whether the stimuli promote or inhibit the fulfillment of needs. Murray noted that press can be described in terms that parallel those used to describe needs, as when the need for achievement is thwarted by the press of failure (Murray, 1938, p. 123). Murray defined a *thema* as the

combination of a particular press with its corresponding need, which he argued was key to understanding affect, behavior, and well-being. Murray also distinguished between *alpha press* and *beta press*, where the former refers to the environment as it actually exists and the latter describes the environment as perceived by the person.

From a theoretical standpoint, Murray's (1938, 1951) primary contributions to P–E fit research are his typology for describing needs, the notion that needs and press can refer to the same content dimension, the distinction between actual and perceived press, and the idea that needs can be fulfilled by press, a notion that parallels contemporary thinking on needs–supplies fit. However, Murray's work said little about how and why the match between needs and press influence outcomes, nor did it consider the form of this relationship, how it varies across needs, or boundary conditions surrounding the relationship. Thus, Murray's needs–press model is a useful starting point for P–E fit theories concerned with needs–supplies fit, but his work focused primarily on describing needs rather than explaining the nature and effects of needs–press match.

Lewin's Field Theory

Lewin (1935, 1951) is widely considered a pioneer in P–E fit research. The influence of Lewin's work is widespread, and there is little dispute that his research on field theory, group dynamics, and related topics have significantly influenced social, organizational, and applied psychology. Lewin's main contribution to P–E fit research was his statement that behavior is a function of the person and environment, as expressed in the classic formula $B = \mathrm{F}(P, E)$. By this formula, Lewin meant that "behavior (B) is determined by the person and the environment ($B = \mathrm{F}(P, E)$) and not by the person or the environment alone" (Lewin, 1951, p. 339). This formula is pervasive in P–E fit research, and its conceptual and intuitive appeal are undeniable.

Despite the widespread reference to Lewin's formula in P–E fit research, Lewin (1935, 1951) did not posit that behavior results from the fit between the person and environment. Rather, his claim was more general, asserting that the person and environment jointly affect behavior without specifying the nature of the effect. Hence, $B = \mathrm{F}(P, E)$ could be interpreted as saying that the person and environment combine additively, interactively, proportionally, or in other ways that do not signify P–E fit (Schneider, 2001). Moreover, Lewin did not specify the particular person and environment constructs that combine to determine behavior, such as whether P and E refer to needs and supplies, demands and abilities, or the self and others. Hence, Lewin's formula $B = \mathrm{F}(P, E)$ is shorthand for saying that the person and environment jointly influence behavior, but the effect represented by this formula did not refer to P–E fit. Beyond this formula, Lewin's work says little that pertains to P–E fit theory and research, even though the broader impact of his work is indisputable.

Job Satisfaction

Discrepancy theories of job satisfaction are based on the premise that job satisfaction results from the comparison between what the job provides and what the employee needs, wants, or desires from the job (Katzell, 1964; Lawler, 1973; Locke, 1969, 1976; Morse, 1953; Porter & Lawler, 1968; Schaffer, 1953). This comparison corresponds to needs–supplies fit as discussed in the P–E fit literature. As such, discrepancy theories of job satisfaction fall squarely within the domain of P–E fit. This section examines discrepancy theories of job satisfaction proposed by Schaffer (1953), Katzell (1964), and Locke (1969, 1976).

Schaffer's Theory of Job Satisfaction

Schaffer (1953) outlined a theory of job satisfaction that has been cited as an early formulation of P–E fit (Dawis, 1992; Latham & Pinder, 2005). Schaffer (1953) described the core elements of his theory as follows:

> For any individual in any given situation the amount of tension or dissatisfaction generated is determined by (*a*) the strength of his [*sic*] needs or drives, and (*b*) the extent to which he [*sic*] can perceive and utilize opportunities in the situation for the satisfaction of those needs. (p. 2)

As implied by this passage, tension and dissatisfaction were considered interchangeable, as Schaffer (1953, p. 2) confirmed by defining dissatisfaction as "a conscious recognition of a state of tension". Need strength was not explicitly defined, although Schaffer (1953, p. 4) indicated that it could be measured by asking respondents to rank or rate each need "in terms of its importance". Need satisfaction was also not defined, and its operationalization blurred the distinction between the comparison of what the employee wants and the job provides with emotions that might result from this comparison (Hulin & Blood, 1968). This confound is evident in the need satisfaction measure developed by Schaffer, which contained statements describing need fulfillment (e.g., "I have as much freedom as I want on my job") but used a response scale ranging from "not at all satisfied" to "completely satisfied" with the instructions "Let your feelings be your guide in rating these items" (Schaffer, 1953, p. 26). The needs and opportunities that constitute need satisfaction were also not defined, although the need satisfaction measure referred to these concepts as the desired and perceived amount, frequency, or duration of various job attributes.

Schaffer (1953) described the combined effects of need satisfaction and need strength on job satisfaction as follows:

> Over-all job satisfaction will vary directly with the extent to which those needs of an individual which can be satisfied in a job are actually satisfied; the stronger the need, the more closely will job satisfaction depend on its fulfillment. (p. 3)

This statement indicates that higher need satisfaction leads to higher overall job satisfaction. If need satisfaction refers to need fulfillment, meaning that needs and opportunities are aligned, then the relationship between need–opportunity fit and job satisfaction is curvilinear, such that job satisfaction is greatest when needs and opportunities match and decreases as needs and opportunities differ in either direction. This interpretation is tenuous, however, because the meaning of need satisfaction is unclear, which renders the form of its relationship with job satisfaction ambiguous. Need strength was apparently viewed as a moderator of the effects of need satisfaction on job satisfaction, as suggested by the statement that job satisfaction depends more heavily on need fulfillment when needs are stronger.

Although Schaffer's (1953) theory stimulated subsequent work on discrepancy models of job satisfaction, the theory itself omits definitions of needs and opportunities, the core person and environment constructs of the theory, and obscures the distinction between need fulfillment and need satisfaction. In addition, the theory says little about the form of the relationship between need satisfaction and job satisfaction, and the curvilinear relationship implied by the measures that accompany the theory is not explained or justified. The theory suggests that the effects of need satisfaction on job satisfaction are restricted to needs with at least minimal strength, but the boundaries of these effects are not otherwise addressed.

Katzell's Proportional Difference Model

Katzell (1964) developed a theoretical model to explain the relationships between discrepancies on specific job facets, satisfaction with job facets, and overall job satisfaction. Katzell defined job satisfaction as the "affect or hedonic tone" associated with a job that "results from the interactions between job incumbents and their job events: incumbents possess values or needs, and jobs are more or less instrumental in providing fulfillments or reinforcements" (Katzell, 1964, p. 341). Hence, Katzell distinguished job satisfaction as affect from the comparison of what the employee values and the job provides. Katzell defined values as "that magnitude of a stimulus which evokes a higher level of satisfaction than that yielded by other magnitudes of that type of stimulus" (Katzell, 1964, p. 343). This definition implies that satisfaction decreases as stimuli deviate from values in either direction, a notion Katzell (1964) elaborated by proposing that "the extent to which a stimulus evokes an affective response that is less than maximally pleasurable is postulated to be directly proportional to the absolute discrepancy between the magnitude of the stimulus and its corresponding value, and inversely proportional to the value" (p. 343). Katzell expressed his reasoning in equation form as follows:

$$d_x = f\left(\frac{X_i - V_x}{V_x}\right) \tag{1}$$

where X_i is the stimulus amount, V_x is the valued amount of the stimulus, d_x is dissatisfaction, and f is an increasing function. Algebraically, Equation (1) indicates that dissatisfaction increases as the stimulus amount exceeds values and decreases as the stimulus amount falls short of values. However, Katzell further described d_x as "departure from maximum pleasantness" (Katzell, 1964, p. 343) and added that "satisfaction increases as the magnitude of a stimulus approximates more closely the valued amount"(Katzell, 1964, p. 344). Thus, the functional notation in Equation (1) apparently refers to an absolute value transformation (cf. Locke, 1969, p. 323). Katzell defined satisfaction as the complement of dissatisfaction, which he expressed as follows:

$$s_x = 1 - d_x = 1 - f\left(\frac{X_i - V_x}{V_x}\right) \tag{2}$$

The rationale for dividing $X_i - V_x$ by V_x in these equations consisted of the following example:

> A person who receives a salary of $100 per week, and whose attitude is one of indifference or neutrality to approximately $60 per week, will be more satisfied with his [*sic*] pay than will a person receiving the same salary but having an adaptation level at approximately $80 per week. The former will also be more satisfied than a person whose adaptation level is at about $100 per week, and who receives $140. (Katzell, 1964, pp. 342–343)

In general terms, this example suggests that discrepancies between actual and valued amounts have greater effects on satisfaction when the valued amount is small rather than large.

Katzell (1964) added that the amount of satisfaction produced by a discrepancy depends on the importance of the value involved in the discrepancy. Katzell expressed this notion in equation form as $S_x = I_x s_x$, meaning that "satisfaction varies not only with the extent to which the magnitude of a stimulus approximates its corresponding value but also with the importance of that value" (Katzell, 1964, p. 344). Katzell further argued that the overall satisfaction elicited by a complex job feature or total job is a function of the sum of the satisfactions for each ingredient (i.e., facet) of the feature or job, or:

$$S_T = f_x S_x + f_y S_y + \ldots + f_n S_n \tag{3}$$

Katzell's (1964) model has several noteworthy features. In particular, the model distinguishes valued amount, which serves as the standard against which job experiences are compared, from value importance, which weights the effects of discrepancies on satisfaction. The model also describes how discrepancies on multiple job facets lead to satisfaction with each facet, which in turn produces overall satisfaction. In addition, the model was stated in explicit

terms using formulas that translate into specific hypotheses that can be empirically tested and potentially refuted. However, certain aspects of the model were not fully explained, and some are questionable on logical grounds. For instance, defining values as the amount of a stimulus that yields the highest satisfaction renders the relationship between discrepancies and satisfaction circular, given that the value involved in a discrepancy is defined by the outcome the discrepancy is intended to predict. In addition, the notion that satisfaction is maximized when discrepancies equal zero runs counter to the example Katzell used to justify dividing the discrepancy by values, which indicates that larger positive discrepancies lead to greater satisfaction. Moreover, dividing discrepancies by valued amount is questionable on logical grounds, as it implies that an actual salary of $200 and valued salary of $100 yields the same satisfaction as an actual salary of $20,000 and valued salary of $10,000. This aspect of Katzell's formulation has drawn criticism elsewhere and does not appear in subsequent discrepancy theories that draw from Katzell's work (e.g., Lawler, 1973; Locke, 1969, 1976). The model also does not clearly distinguish between actual and perceived person and environment constructs, other than noting that environmental stimuli can be operationalized by self-report, observation, or experimental manipulation. Finally, the predictions of the model were set forth as assertions with little explanation, and boundary conditions were not addressed, aside from the implication from the expression $S_x = I_x s_x$ that discrepancies cause satisfaction only when values are at least minimally important.

Locke's Value–Percept Model

One of the most influential discrepancy theories of job satisfaction was developed by Locke (1969, 1976). Locke defined job satisfaction as "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values" (Locke, 1969, p. 316). According to Locke, this appraisal process has three elements: "1) the perception of some aspect of the job; 2) an implicit or explicit value standard; and 3) a conscious or subconscious judgment of the relationship between (e.g., discrepancy between) one's perception(s) and one's value(s)" (Locke, 1969, pp. 316–317). Locke defined values as that which a person subjectively "desires, wants, or seeks to attain" (Locke, 1976, p. 1304) and added that values can be described in terms of *content*, which entails what and how much a person wants, and *intensity*, or the importance of what is valued. Locke contrasted values with needs, which he described as objective requirements for health and survival. Locke argued that values are related to needs such that "*the ultimate biological function of man's* [*sic*] *values is to direct his* [*sic*] *actions and choices so as to satisfy his* [*sic*] *needs*" (Locke, 1976, p. 1306, emphasis in original). From this, Locke surmised that the fulfillment of values leads to job satisfaction provided that values are compatible with needs. Locke also distinguished values from

expectations, which are beliefs about the future. Locke argued that a discrepancy between perceptions and expectations leads to surprise, which can be satisfying or dissatisfying depending on whether the unexpected event is desired (e.g., winning the lottery) or undesired (e.g., being fired).

Locke (1976, p. 1306) formalized his perspective concerning the effects of perceptions and values on satisfaction as follows:

$$S = (V_c - P)V_i \tag{4}$$

where S is satisfaction, V_c is value content (expressed as wanted amount), P is perceived amount, and V_i is value importance. Locke added that either the absolute or algebraic difference between V_c and P might be appropriate, depending on the content of the value in Equation (4). These two possibilities were illustrated by Locke (1976) as shown in Figures 4.1 and 4.2. Figure 4.1 indicates that pay satisfaction increases as perceived pay increases toward valued pay and continues to increase as perceived pay exceeds valued pay. Figure 4.1 also shows that the function relating the pay value–percept discrepancy to satisfaction is steeper when the importance of pay is high rather than low. In contrast, Figure 4.2 indicates that satisfaction with temperature is

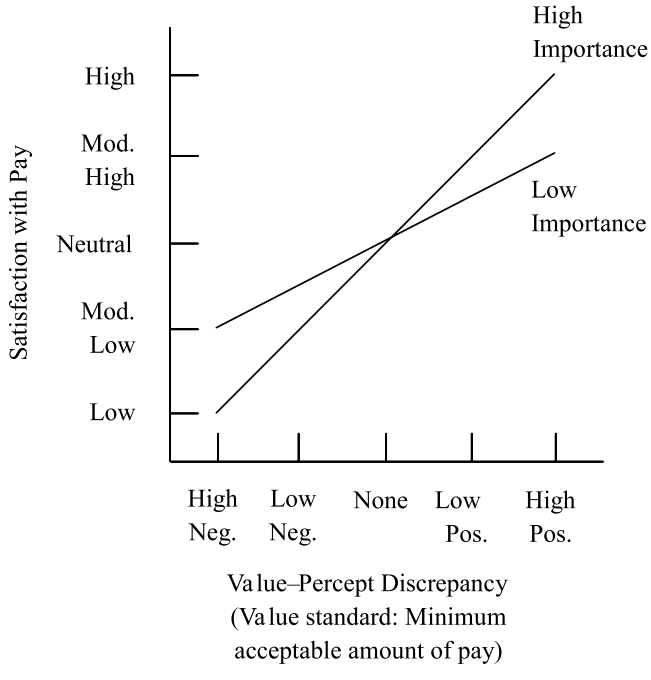

Figure 4.1 Hypothetical Function Relating Value–Percept Discrepancy and Importance to Pay Satisfaction (After Locke, 1976, p. 1305).

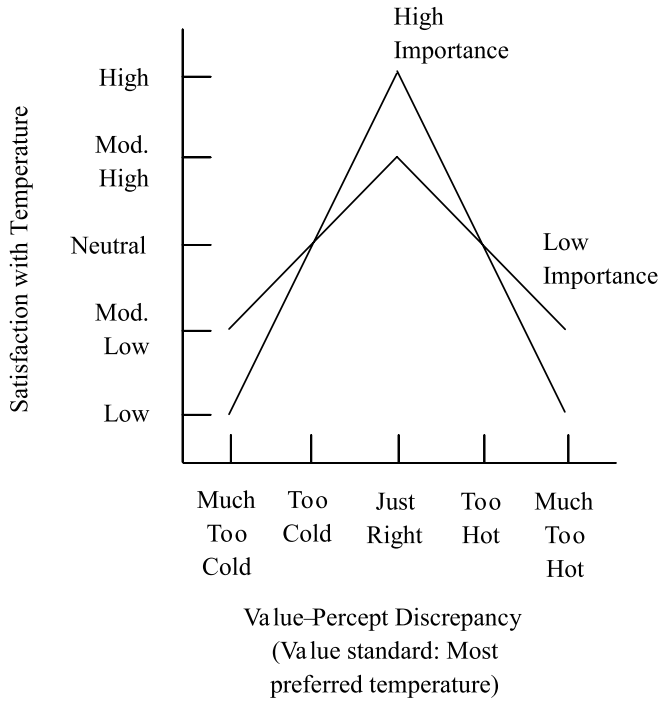

Figure 4.2 Hypothetical Function Relating Value–Percept Discrepancy and Importance to Satisfaction with Temperature (After Locke, 1976, p. 1305).

highest when perceived and valued temperature are equal and decreases as perceived temperature deviates from valued temperature in either direction. As with pay, the function relating the temperature value–percept discrepancy to satisfaction is steeper when temperature is more important. Like Katzell, Locke argued that the evaluations of individual job facets indicated by Equation (4) combine additively to produce overall job satisfaction. Locke emphasized that, when predicting overall job satisfaction, facet satisfaction should *not* be weighted by value importance, given that the effects of value importance are taken into account when the value–percept discrepancy is weighted to produce facet satisfaction, as shown in Equation (4). Therefore, weighting facet satisfaction with value importance is redundant (Locke, 1969, 1976; Mobley & Locke, 1970).

Locke's model arguably represents the culmination of discrepancy theories of job satisfaction, and subsequent discrepancy theories bear the imprint of Locke's work (e.g., Brief, 1998; Cranny, Smith, & Stone, 1992; Lawler, 1973; Rice, McFarlin, Hunt, & Near, 1985). The sustained appeal of Locke's model is justified by its various strengths, which include how it clearly defines key constructs, explains which constructs are relevant to discrepancy judgments and

satisfaction, and explicitly describes how discrepancies relate to satisfaction. Locke's model also tackled some key issues left unresolved by earlier discrepancy theories. In particular, Locke explained that the appropriate standard for discrepancies is not what people expect or objectively need, but what they value. Locke also pointed out that people use values to appraise their job as they perceive it, which might deviate from how the job actually exists. In addition, Locke's explanation of the role of value importance in predicting overall job satisfaction helped resolve an ongoing controversy (Blood, 1971; Evans, 1969; Ewen, 1967; Mikes & Hulin, 1968; Quinn & Mangione, 1973; Wanous & Lawler, 1972) and has been adopted in subsequent work (Edwards & Rothbard, 1999; McFarlin & Rice, 1992; Rice, Markus, Moyer, & McFarlin, 1991).

Despite its strengths, Locke's model has several limitations. First, the definition of job satisfaction given by Locke combines the discrepancy between perceptions and values with the emotional state presumably caused by the discrepancy. As such, this definition renders the relationship between discrepancies and satisfaction circular. Second, the formula in Equation (4) used to describe the effects of value–percept discrepancies on satisfaction is inconsistent with the examples given by Locke, including those in Figures 4.1 and 4.2. Specifically, the $(V_c - P)$ term in Equation (4) indicates that satisfaction decreases as perceived amount increases relative to valued amount, which is the opposite of the relationship shown in Figure 4.1. If $(V_c - P)$ is interpreted as an absolute difference rather than an algebraic difference, a possibility suggested by Locke, then the function indicated by Equation (4) is V-shaped, which is the inverse of the function shown in Figure 4.2. Finally, although Locke used Figures 4.1 and 4.2 to illustrate possible functions relating value–percept discrepancies to satisfaction, he stopped short of predicting which function would apply to particular job facets. He initially posited that the relationship in Figure 4.2 "should hold for the great majority of job aspects (e.g., variety, task difficulty, temperature of workplace, attention from supervisor, travel required, etc.)" (Locke, 1969, pp. 317–318), but he later ceded this position by stating that "the point(s) of inflection and the point(s) of neutrality (no satisfaction, no dissatisfaction) would have to be discovered empirically" (Locke, 1976, p. 1306). This stance makes Locke's model difficult to evaluate empirically, because if the relationships between discrepancies and satisfaction are not predicted *a priori*, then numerous relationships can be interpreted as consistent with the theory, including those in Figures 4.1 and 4.2 and others with different shapes. Based on his review of the literature, Locke (1976) isolated seven job facets he considered particularly relevant to job satisfaction, but with the exception of pay, he did not address the functional form relating value–percept discrepancies to satisfaction for these facets. Finally, Locke's theory said little about boundary conditions, other than the implication that discrepancies between perceptions and values influence satisfaction only when values have some importance and are compatible with needs.

Job Stress

The concept of P–E fit is prevalent in theories of job stress (Cummings & Cooper, 1979; Edwards, 1992; French et al., 1982; Kahn & Quinn, 1970; McGrath, 1970, 1976; Quick, Nelson, Quick, & Orman, 1992; Schuler, 1980; Shirom, 1982). Some theories focus on needs–supplies fit (Cummings & Cooper, 1979; Edwards, 1992; Schuler, 1980), others emphasize demands–abilities fit (McGrath, 1970, 1976; Shirom, 1982), and still others that integrate needs–supplies fit and demands–abilities fit (French et al., 1982). This section reviews theories developed by McGrath (1970, 1976) and French, Caplan, and Harrison (Caplan, 1983, 1987; French & Kahn, 1962; French et al., 1974, 1982; Harrison, 1978, 1985), which treat P–E fit as a core concept.

McGrath's Model of Stress and Performance

McGrath (1970, 1976) presented a model of stress and performance that centers on demands–abilities fit. According to McGrath (1970: 17), stress exists when there is "a substantial *imbalance* between environmental demands and the response capability of the focal organism" (emphasis in original). McGrath (1970) qualified this assertion in several respects. First, the imbalance that defines stress refers to demands and capabilities not as they exist objectively, but as they are perceived by the person. Thus, the person must be aware of an imbalance between demands and capabilities in order to experience stress. Second, stress can refer to *overload*, which occurs when demands of the environment exceed the capabilities of the person, as well as *underload*, in which environmental demands fall short of the person's capabilities. Third, stress occurs only when the person believes that the consequences of failure to meet demands are important. For overload, these consequences might involve foregoing rewards that are contingent on fulfilling environmental demands. For underload, consequences include understimulation, skill atrophy, and lack of opportunity to use valued capabilities. Thus, McGrath (1970) conceptualized stress as a demands–abilities misfit such that stress increases as demands deviate from abilities in either direction, provided the person perceives this deviation and considers its consequences important.

The definition of stress given by McGrath (1970) was expressed in equation form by McGrath (1976: 1352) as follows:

$$ES = C(|D - A|) \tag{5}$$

where ES is experienced stress; C is the perceived consequences of meeting versus not meeting demands, D is perceived demands, and A is perceived abilities. According to this equation, experienced stress increases as the absolute difference between perceived demands and abilities increases, such that overload and underload contribute equally to experienced stress. Perceived consequences serve as a weight, such that the difference between demands and

abilities yields greater stress when the consequences of meeting demands are high rather than low. McGrath (1976) then described a study that operationalized stress as physical arousal and found that arousal was high when the difference between demands and abilities was small. McGrath (1976) interpreted this result as indicating that arousal is a manifestation of uncertainty, based on the notion that the uncertainty of task success is maximized when task demands and abilities are close to one another, given that success becomes certain as abilities exceed demands and failure becomes certain as demands exceed abilities. This reasoning led McGrath (1976, p. 1353) to revise the definition of stress and its associated equation as follows:

$$ES = C(K - |D - A|) \tag{6}$$

where K is a constant. Because the term $|D - A|$ is subtracted from K, this equation indicates that experienced stress (i.e., arousal) increases as the absolute difference between perceived demands and abilities becomes smaller.

In terms of P–E fit, the stress model developed by McGrath (1970, 1976) has several merits, in that it explicitly specifies the functional form of the relationship between demands–abilities fit and experienced stress, underscores the notion that demands and abilities must be perceived by the person to produce stress, and emphasizes that misfit between demands and abilities leads to greater stress when the consequences of misfit are considered important by the person. However, the model has several limitations. First, the model does not provide clear definitions of demands and abilities. McGrath (1970, p. 15) described a demand as a "load, or input, or 'stressor', or press, or environmental force". In contrast, McGrath (1976) used demand to indicate "the degree to which a favorable versus an unfavorable outcome" results from task performance (McGrath, 1976, p. 1361) but later stated that D in Equation (6) connotes the "perceived difficulty" of a task (McGrath, 1976, p. 1363). The meaning of abilities was not explicitly addressed, although ability was operationalized as average performance on prior tasks in the study McGrath (1976) used to revise the model. Second, the $|D - A|$ term in Equations (5) and (6) implies that positive and negative discrepancies between demands and abilities have equal but opposite effects on experienced stress. This assertion is restrictive and was not evaluated against other possibilities, such as effects that are opposite in sign but unequal in magnitude. Third, the model does not address whether the effects indicated by Equations (5) and (6) differ across demand and ability dimensions. These effects were apparently intended to apply to all dimensions, given that the results from the task involved in the study reviewed by McGrath (i.e., hitting a baseball) were used to propose "a dramatic reformulation of the nature of human stress and its effects" (McGrath, 1976, p. 1364). This generalization also implies that the boundaries of the model were very broad, such that the model applies to all demands and abilities that the person perceives and considers at least minimally important,

but the rationale for specifying such broad boundaries was not explained. Finally, the reversal of the equation relating demands–abilities fit to experienced stress hinged on the redefinition of stress as arousal. This revision was driven by empirical rather than conceptual considerations, and defining stress in terms of outcomes such as arousal has been criticized in the stress literature (Edwards, 1992; Lazarus & Folkman, 1984), including McGrath's initial presentation of the model (McGrath, 1970, pp. 12–13).

French, Caplan, and Harrison's Person–Environment Fit Theory

The P–E fit theory of stress developed by French, Caplan, and Harrison originated with the work of French and Kahn (1962), who presented a framework for studying person and environment factors that influence mental health in the workplace. French and Kahn proposed that mental health and adjustment depend on P–E fit, as captured by the following passage:

> adjustment always depends upon properties of the person in relation to properties of the objective environment; it refers to the goodness of fit between the requirements of the person and the supplies which are available to him [*sic*] in the environment. A state of maladjustment therefore implies directly a lack of satisfaction, a persisting experience of frustration and deprivation, and an inability to achieve valued goals in a specific set of environmental conditions. (French & Kahn, 1962, p. 45)

The requirements of the person refer to his or her needs, values, and goals, such that adjustment is effectively a function of needs–supplies fit. French and Kahn added that the person and environment can be compared only when they refer to commensurate dimensions. French and Kahn also discussed relationships between the objective and subjective person and environment, defining the accuracy of the self-concept as the match between the objective and subjective person and the accuracy of perceptions of reality as the match between the objective and subjective environment.

The initial work of French and Kahn (1962) was extended and refined by French et al. (1974), who again defined adjustment as the goodness of fit between the person and environment but added that P–E fit can refer to the subjective as well as the objective person and environment. French et al. (1974) combined subjective and objective P–E fit with accuracy of self-assessment and contact with reality into a fourfold framework, which they expressed in equation form as shown in Table 4.1. French et al. (1974) also distinguished two pairings of demands and supplies, one in which the motives of the person act as demands on environmental supplies, and another in which the demands of the environment are supplied by the abilities of the person. Like French and Kahn (1962), French et al. (1974) emphasized that supplies and demands should be conceptualized on commensurate

Table 4.1 Fourfold Classification of the Person and Environment (after French et al., 1974, p. 319)

	Objective	Subjective	Contact or accuracy
Person	P_O	P_S	$A = P_O - P_S$
Environment	P_O	E_S	$C = E_O - E_S$
P–E fit	$F_O = E_O - P_O$	$F_S = E_S - P_S$	

Note: P_O and P_S refer to the objective and subjective person; E_O and E_S refer to the objective and subjective environment; F_O is the fit between the objective person and environment; F_S is the fit between the subjective person and environment; A refers to accuracy of self assessment, which is the congruence between the objective and subjective person; C is contact with reality, or the congruence between the objective and subjective environment.

dimensions and refer to a common metric, which French et al. (1974) described in terms of amount.

French et al. (1974) indicated that all four discrepancies in Table 4.1 have implications for mental health, but they underscored the fit between the subjective person and environment as the key predictor of psychological strain. They added that psychological strain occurs only when demands exceeded supplies, arguing that:

> other things being equal, there will tend to be a monotonic and probably curvilinear relationship between the size of a perceived discrepancy for a particular supply or ability and various dependent variables, including measures of psychological strain and of the probability of certain coping and defensive behaviors. Excesses of supplies (either too much environmental supply to meet a need or too much ability to meet an environmental demand) are not expected to have any direct effect on such variables. (French et al., 1974, p. 319)

This basic relationship between subjective P–E fit and psychological strain was depicted as the solid line in Figure 4.3, which shows that strain increases as supplies fall short of demands but remains constant as supplies exceed demands. The dashed line, which shows that strain increases as supplies exceed demands, draws from the notion that supplies on different dimensions can be negatively related. To illustrate, French et al. (1974) described supplies representing affiliation and privacy, noting that an excess of one supply implies a deficiency of the other. In combination, the fit between supplies and demands for affiliation and privacy would produce a U-shaped relationship with psychological strain. French et al. (1974) added that the combined effects of fit on multiple dimensions depends on their relative importance, which acts as a weight on each dimension, but they did not specify how importance weights should be applied to the P–E fit expressions in Table 4.1. French et al.

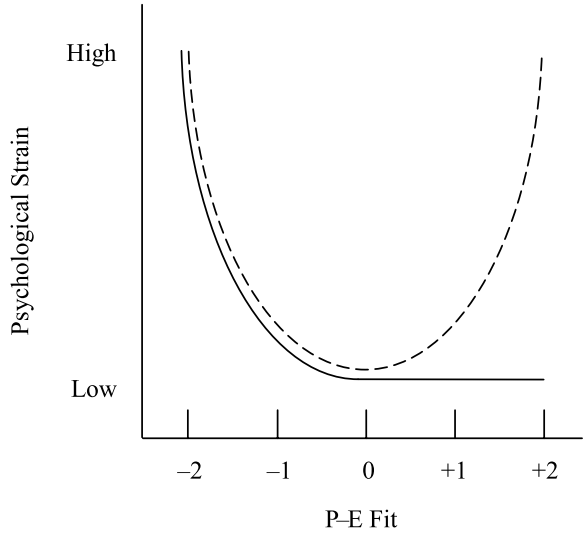

Figure 4.3 Hypothesized relationship between P–E fit (FS) and psychological strain (after French et al., 1974, p. 31). From G. Coelho, D. Hamburg, & J. Adams (Eds.), *Coping and adaptation*. Reprinted by permission of Basic Books, a member of Perseus Books Group.

(1974) also discussed adjustment in dynamic terms such that, when P–E misfit signifies the deprivation of a need or value, the person is motivated to resolve misfit by changing the objective or subjective person or environment. Changes that resolve objective P–E fit were termed *coping*, whereas changes that impact subjective P–E fit were labeled *defense* (French et al., 1974, pp. 330–331).

The framework outlined by French et al. (1974) was elaborated by Caplan (1983, 1987), Harrison (1978, 1985), and French et al. (1982), each of whom depicted the framework using the model in Figure 4.4. This model shows that the objective person and environment cause their subjective counterparts, and strains and illness are caused by subjective rather than objective P–E fit. The objective and subjective person and environment are influenced by coping and defense, and although not depicted in the model, coping and defense are considered outcomes of strain and illness, which motivate the person to improve P–E fit (Harrison, 1978). The environment constructs of the model are supplies and demands, consistent with French et al. (1974), whereas the person constructs formerly called demands and supplies were renamed needs and abilities, respectively, such that the two types of P–E fit addressed by the model were henceforth labeled needs–supplies fit and demands–abilities fit. In addition, needs–supplies fit was cast as a mediator of the effects of demands–abilities fit on strain. As explained by Harrison (1978), demands–abilities fit should influence strain only when failure to meet demands inhibits the receipt of supplies, as when pay is contingent upon meeting performance

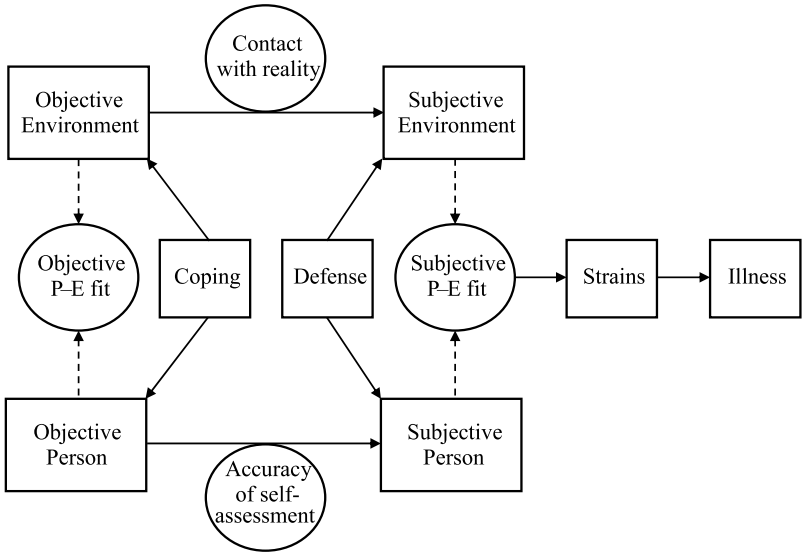

Figure 4.4 A model describing the effects of psychological stress in terms of the fit between the person and the environment (after Harrison, 1978, p. 31). From C.L. Cooper & R. Payne (Eds.), *Stress at work*. © John Wiley & Sons Limited. Reproduced with permission.

requirements, or when demands become internalized as needs the person seeks to fulfill.

The relationships between P–E fit and strain discussed by French et al. (1974) were also extended in subsequent work. For needs–supplies fit, three relationships were considered, as shown in Figure 4.5 (Caplan, 1983, 1987; French et al., 1982; Harrison, 1978, 1985). The solid curve on the left indicates a monotonic increase in strain as environmental supplies fall short of the person's motives (i.e., needs or values). When supplies exceed motives, strain can increase, decrease, or remain constant, depending on the implications of excess supplies for other motives and for the same motive in the future. When excess supplies cannot be applied to other motives or preserved for the same motive, needs–supplies fit should have an asymptotic relationship with strain, as indicated by curve A. Harrison (1978) illustrated this relationship using opportunities for personal growth, for which excess supplies are unlikely to be preserved or transformed into supplies for other dimensions. When excess supplies can be preserved or used to fulfill motives on other dimensions, the monotonic relationship represented by curve B should result. For instance, discretionary income that exceeds the person's basic living expenses can be saved to meet living expenses in the future or spent on luxury goods and services. When excess supplies interfere with needs–supplies fit on other dimensions or inhibit future fit on the same dimension, then a U-shaped relationship is expected, as depicted by curve C.

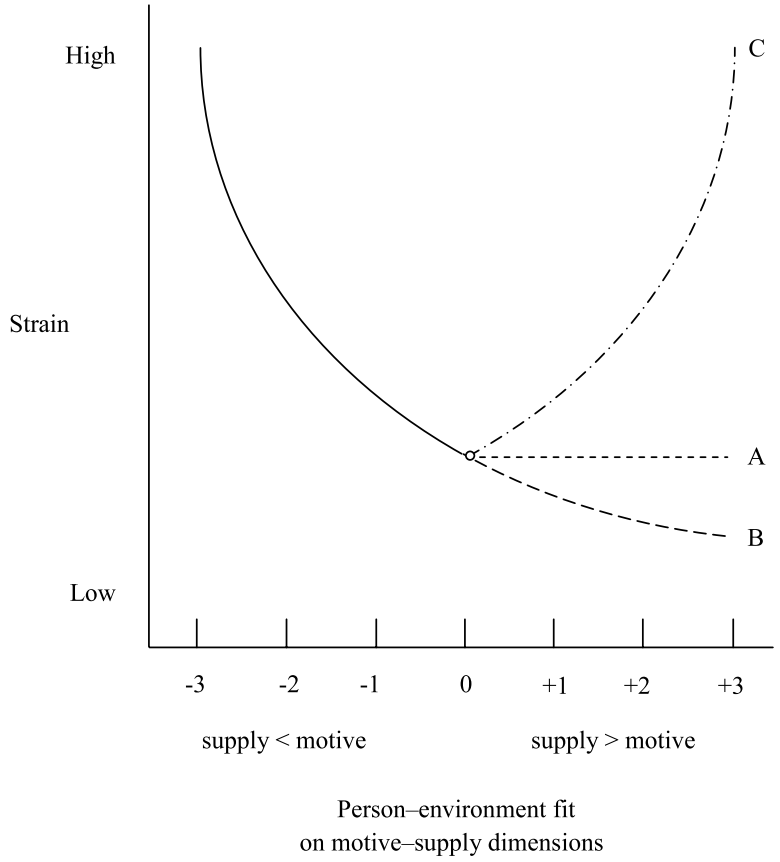

Figure 4.5 Three hypothetical shapes of the relationship between P–E fit on motive–supply dimensions and strains (after Harrison, 1978, p. 184). From C.L. Cooper & R. Payne (Eds.), *Stress at work*. © John Wiley & Sons Limited. Reproduced with permission.

Similar relationships were proposed for demands–abilities fit, as shown in Figure 4.6 (French et al., 1982; Harrison, 1978). The solid curve on the right indicates that strain increases as the demands of the environment exceed the abilities of the person, provided that failure to meet demands inhibits the receipt of valued supplies. When abilities exceed demands, strain can again increase, decrease, or remain constant. If excess abilities have no implications for supplies that might fulfill motives, as when the person has specific technical knowledge that exceeds what the job requires, then demands–abilities fit should exhibit an asymptotic relationship with strain, as shown by curve A. If excess abilities allow the person to fulfill other motives, as when being able to easily handle quantitative work load provides time to socialize or pursue other interests, then demands–abilities fit should follow the monotonic relationship with strain indicated by curve B. Finally, if excess abilities interfere with motives, as

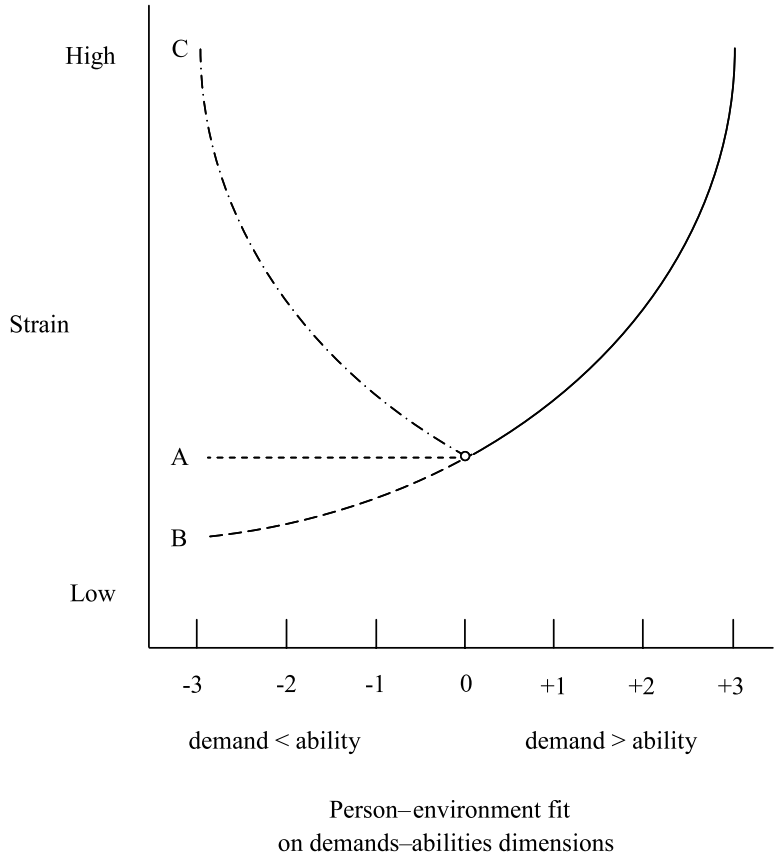

Figure 4.6 Three hypothetical shapes of the relationship between P–E fit on demand–ability dimensions and strains (after Harrison, 1978, p. 186). From C.L. Cooper & R. Payne (Eds.), *Stress at work*. © John Wiley & Sons Limited. Reproduced with permission.

when the person cannot exercise valued skills, then demands–abilities fit should demonstrate a U-shaped relationship with strain, corresponding to curve C.

Other extensions to the French et al. (1974) framework have been developed. For instance, Caplan (1983, 1987), Harrison (1978), and Kulka (1979) described functions relating P–E fit to strain that go beyond the curves in Figures 4.5 and 4.6. Some of these functions have minima at points other than perfect P–E fit, representing the notion that "the most emotionally satisfying point of fit may be one that creates a bit of challenge" (Caplan, 1983, p. 39). Others were broadened at the base, indicating that strain does not increase until P–E misfit exceeds a range of tolerance. Caplan (1983, 1987) also extended the framework of French et al. (1974) to include past, present, and future P–E fit, arguing that current strain is influenced not only by current P–E fit, but also by changes in P–E fit relative to the past and expectations of P–E fit in the future. Harrison

(1985) considered how importance might influence the effects of P–E fit, suggesting that "P–E fit on several dimensions and the importance of each dimension could be conceptually integrated in a formula that multiplies the discrepancy on each P–E fit dimension by the importance of that dimension" (Harrison, 1985, p. 38). Finally, Harrison (1985) expanded the framework to include the effects of P–E fit on organizational strain, which refers to problems with the functioning of the organization that hinder its productivity and survival. Organizational strain occurs when employee abilities are insufficient to meet role demands. As put by Harrison (1985): "Just as meeting needs and values is fundamental to the continued functioning and existence of the individual, meeting role demands is fundamental to the continued functioning and existence of the organization" (p. 42). Although Harrison (1985) emphasized demands–abilities misfit as the proximal cause of organizational strain, he noted that needs–supplies misfit can produce organizational strain when insufficient supplies prompt employee to withhold abilities that would otherwise fulfill role demands, or when the organization assumes responsibility for meeting employee needs, thereby translating employee needs into demands the organization strives to fulfill. Harrison (1985) added that the relationship between demands–abilities misfit and organizational strain can follow the functions shown in Figure 4.6, such that organizational strain increases as demands exceed abilities but can increase, decrease, or remain constant as abilities exceed demands, depending on the implications of excess abilities for other demands faced by the organization.

The theory developed by French, Caplan, and Harrison is strong on many counts. For the most part, the theory describes the person and environment in clear terms, distinguishing needs and supplies from abilities and demands and differentiating between the objective and subjective person and environment. The theory devotes particular attention to the relationship between P–E fit and strain, explaining how this relationship differs for needs–supplies fit and demands–abilities fit and providing conceptual justification for alternative functional forms of the relationship. The theory also explains why subjective rather than objective P–E fit is the proximal cause of strain and why the effects of demands–abilities fit are mediated by needs–supplies fit. The boundaries of the theory have been reasonably explicit, initially restricting the theory to the effects of P–E fit on mental health and later expanding to include outcomes such as job satisfaction, physical health, job performance, and organizational effectiveness, as well as the effects of P–E fit from different time frames. Other features of the theory place boundaries on P–E fit effects, such as the notion that the person must be subjectively aware of P–E fit and consider it important, and the proposition that demands–abilities fit has no effects unless it invokes needs–supplies fit.

The shortcomings of the theory fall into three areas. First, the theory does not explicitly define needs, supplies, demands, and abilities. Needs are described

variously as desires, values, motives, and goals, terms that often refer to different concepts (Chatman, 1989; Locke, 1969; Super, 1973). Supplies, demands, and abilities are described more consistently, but like needs, these terms are not formally defined, leaving them open to interpretation. Second, when taken literally, the equations in Table 4.1 are inconsistent with the descriptions of P–E fit, contact with reality, and accuracy of self-assessment associated with the theory. For instance, the equations for F_O and F_S imply that fit increases as the environment exceeds the person, whereas Harrison (1978, p. 184) indicates that "perfect fit" occurs when the person and environment are equal. Similarly, the equations for A and C indicate that accuracy of self-assessment and contact with reality increase as the objective person and environment exceed their subjective counterparts. However, Caplan (1983) notes that accuracy of self-assessment refers to the "correspondence between objective and subjective *P*" and contact with reality signifies the "correspondence between objective and subjective *E*" (p. 36). Hence, accuracy of self-assessment and contact with reality are presumably maximized when the expressions for A and C in Table 4.1 equal zero. Finally, although the various P–E fit relationships described by the theory are accompanied by conceptual logic, the theory does not predict which relationship will occur in a given instance. This point is acknowledged by Harrison (1978) as follows:

> No specific relationship can automatically be assumed to exist between a particular P–E fit dimension and strain. One must consider the implications of the dimension for the motives and goals of the individual to be studied. Only then can specific predictions be made concerning the shape of the relationship between the P–E fit dimension and strain. (pp. 191–192)

In effect, the theory equips the researcher with principles for predicting P–E fit relationships, but the theory itself does not offer these predictions. Thus, strictly speaking, any of the functions in Figure 4.5 and 4.6 might be considered consistent with the theory, depending on the predictions developed by a particular researcher. Moreover, various presentations of the theory suggest that strain can be minimized at points other than perfect P–E fit, which further expands the types of relationships accommodated by the theory and undermines its capacity to be corroborated or refuted. Aside from these limitations, the work of French, Caplan, and Harrison demonstrates many of the characteristics of strong theory, resulting from years of collaborative development.

Vocational Congruence

P–E fit is central to theories of vocational congruence, many of which concern the match between the needs, interests, and abilities of the person and the reinforcers and requirements of different occupations, vocations, and careers (Dawis & Lofquist, 1984; Holland, 1997; Moos, 1987; Parsons, 1909; Schein,

1978; Super, 1953). Theories of vocational congruence often trace their roots to Parsons (1909) who, as noted earlier, presented a model that foreshadowed P–E fit but did not set forth a theory in formal terms. Among theories of vocational congruence, the most widely studied is the theory of vocational choice developed by Holland (1959, 1966, 1973, 1985, 1997). Vocational congruence also figures prominently in the theory of work adjustment, which emerged from the Minnesota studies of vocational rehabilitation (Dawis & Lofquist, 1984; Dawis, England, & Lofquist, 1964; Dawis, Lofquist, & Weiss, 1968; Lofquist & Dawis, 1969). This section critically examines these prominent theories.

Holland's Theory of Vocational Choice

The initial presentation of Holland's (1959) theory conceptualized the person in broad terms that included such diverse attributes as values, interests, task and role preferences, skills, abilities, problem-solving approaches, and self-image. Collectively, these attributes constituted the personal orientation of the individual. Occupational environments were described by listing vocations without addressing their specific characteristics and requirements. Personal orientations and occupational environments were each classified into six types labeled motoric, intellectual, supportive, conforming, persuasive, and esthetic. Holland proposed that this typology could be used to rank the orientations of the person in terms of relative strength, with the primary (i.e., top-ranked) orientation directing the person into the corresponding occupation. If circumstances prevented the person from entering the primary occupation, he or she would move down the hierarchy, pursuing occupations at lower rankings. In this manner, "The person making a vocational choice in a sense 'searches' for situations which satisfy his [*sic*] hierarchy of adjustive orientations" (Holland, 1959, p. 35).

Subsequent versions of the theory expanded the definitions of personal orientations and occupational environments, revised the six-fold typology, and further elaborated the definition and outcomes of congruence. Holland (1966) broadened the description of personal orientations to include goals, values, preferred roles and activities, aversions, self-concept, outlook on life, perceptual skills, aptitudes, abilities, achievements, and personal background. These attributes were ultimately distilled into vocational and avocational preferences, life goals and values, self-beliefs, and problem-solving style (Holland, 1973, 1985, 1997). Descriptions of occupational environments went beyond listing representative vocations to include task characteristics, skill requirements, problems encountered, interpersonal relations, and the nature of the people in the environment. Holland (1966) underscored the idea that environments reflect the people in them by saying that "the *dominant* features of an environment are dependent upon the *typical* characteristics of its members" (p. 53, emphasis in original). This idea persisted in later versions of the theory (Holland, 1973, 1985, 1997) and was made concrete by operationalizing

occupational environments as the distribution of personality types in the occupation (Holland, 1997, p. 48).

The six types used to describe personal orientations and occupational environments were recast as realistic, investigative, artistic, social, enterprising, and conventional, establishing the RIASEC typology that remains central to the theory (Holland, 1973, 1985, 1997). Holland (1973) arranged the six types into the hexagonal model shown in Figure 4.7, which depicts the conceptual similarities among the six types in terms of their distances from one another (e.g., the realistic type is considered most similar to the investigative and conventional types and least similar to the social type). The structure of the hexagonal model underlies the conceptualization of congruence, such that the proximity of the types defines the degree of congruence between the person and environment. For instance, according to the theory, a person whose primary type is realistic is most congruent with a realistic environment and progressively less congruent with environments that are investigative and conventional, artistic and enterprising, and social, as indicated by the distances of these five types from the realistic position on the hexagon. More elaborate treatments of congruence classify the person and environment according to their primary, secondary, and tertiary types, with the congruence between each pairing of types gauged using the hexagonal model.

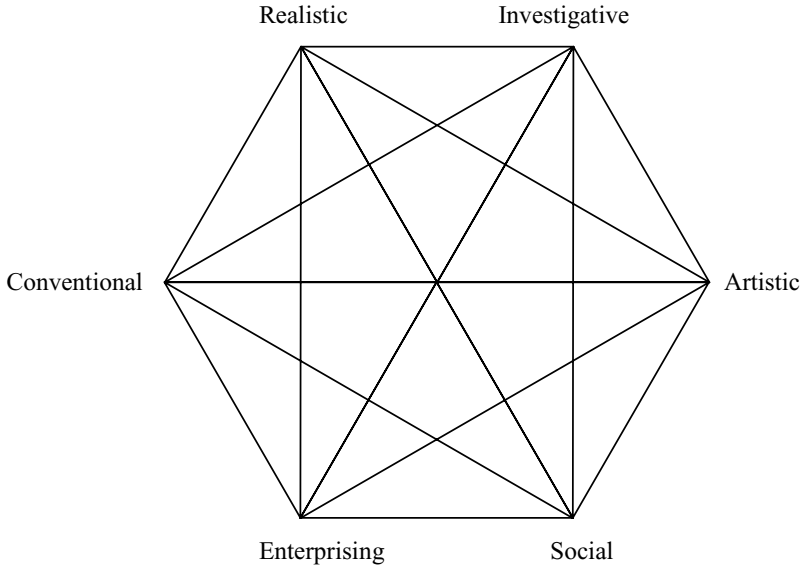

Figure 4.7 Hexagonal model describing the similarities among personal and vocational types (after Holland, 1973, p. 23). From J.L. Holland, *Making vocational choices: A theory of vocational personalities and work environments* (2nd edn.). Published by Allyn and Bacon, Boston, MA. Copyright© 1984 by Pearson Education. Reprinted with permission of the publisher.

Holland's theory has guided numerous studies of vocational congruence (Assouline & Meir, 1987; Spokane, 1985; Spokane et al., 2000; Tranberg et al., 1993), and its impact on the field of vocational psychology is without question. Despite its impact, the theory has several key shortcomings. Specifically, the theory conceptualizes the person and environment in such broad terms that it confounds distinct types of P–E fit. Personal orientations include abilities and skills relevant to demands–abilities fit, preference, interests, and goals that pertain to needs–supplies fit, and beliefs about the self that connote supplementary fit. Likewise, occupational environments include skill requirements relevant to demands–abilities fit, task characteristics that could apply to demands–abilities fit, needs–supplies fit, or both, and attributes of people in the environment that suggest supplementary fit. By combining these distinct person and environment constructs, the meaning of congruence is rendered ambiguous. Moreover, congruence is defined not as the fit between the person and environment on each of the six dimensions of the RIASEC typology, but instead as the similarity of the highest-ranked types of the person and environment. This approach ignores the substance of the dimensions that define congruence and omits dimensions that are not highly ranked, even though all six dimensions are relevant to the theory as indicated by their presence in the hexagonal model. Furthermore, defining congruence as the similarity of person and environment rankings means that the absolute levels of the person and environment are disregarded (Edwards, 1993). Unless the absolute levels of the person and environment are considered, it is unclear whether the environment is greater than, less than, or equal to the person on a common conceptual metric, information that is essential to the meaning of P–E fit. These ambiguities surrounding the meaning of congruence obscure the form of its relationship with outcomes and whether this relationship differs across the dimensions that constitute the RIASEC typology. In addition, the theory says little about the distinctions between the objective and subjective person and environment, aside from noting that "the person's perception of his or her psychological field or environment" should be controlled in some fashion when the environment is measured (Holland, 1997, p. 42). The theory is also short on explanation, placing greater emphasis on defining and measuring person and environment types than explaining the effects of congruence on outcomes. Finally, the theory does not specify clear boundary conditions other than its implied restriction to vocational choice and its consequences. In summary, Holland's theory provides a useful typology for describing the person and environment, but it lacks many of the features that characterize strong theories of P–E fit.

Dawis and Lofquist's Theory of Work Adjustment

Dawis et al. (1964) laid the foundation for the theory of work adjustment, outlining its core concepts and their interrelationships (see Figure 4.8). Dawis

et al. (1964) conceptualized the person in terms of abilities and needs, where abilities referred to "dimensions of response measurable through the application of psychological testing procedures, principally by ability and aptitude tests" and needs were defined as "dimensions of reinforcement experience associated with classes of stimulus conditions" (Dawis et al., 1964, p. 9). The environment was described in terms of ability requirements, defined as "specifications of optimal ability ranges required for satisfactory work performance", and the reinforcer system, meaning "specifications of the reinforcement values of classes of stimulus conditions" (Dawis et al., 1964, p. 9–10). These person and environment constructs were mapped onto two types of correspondence, one involving the similarity between the abilities of the person and the ability requirements of the environment, and another concerning the similarity between the needs of the person and the reinforcer system of the environment (see Figure 4.8). Dawis et al. (1964) indicated that the terms used to describe abilities and needs should also be used to describe required abilities and available reinforcers, respectively, such that the person and environment are conceived on commensurate dimensions. The proximal outcomes of correspondence were satisfaction, defined as "the individual's evaluation of stimulus conditions in the work environment with reference to their effectiveness in reinforcing his [*sic*] behavior", and satisfactoriness, which refers to the "evaluation of the individual's work behavior principally in terms of the quality and quantity of task performance and/or performance outcomes (products, service)" (Dawis et al., 1964, p. 9). The effects of correspondence were summarized in two propositions as follows:

> Satisfaction is a function of the correspondence between the reinforcer system of the work environment and the individual's set of needs, provided that the individual's abilities correspond with the ability requirements of the work environment … Satisfactoriness is a function of the correspondence between an individual's set of abilities and the ability requirements of the work environment, provided that the individual's needs correspond with the reinforcer system of the work environment. (Dawis et al., 1964, p. 10)

According to these propositions, satisfactoriness moderates the effects of needs–reinforcer correspondence on satisfaction and, likewise, satisfaction moderates the effects of ability–ability requirements correspondence on satisfactoriness. Work adjustment, the overarching concept of the theory, was defined as the combined levels of satisfactoriness and satisfaction of the person. Dawis et al. (1964) further indicated that satisfactoriness and satisfaction influenced the likelihood that the person will remain in or leave the work environment, as shown in Figure 4.8.

The theory presented by Dawis et al. (1964) was substantially revised by Dawis et al. (1968) and Lofquist and Dawis (1969) and updated Dawis and

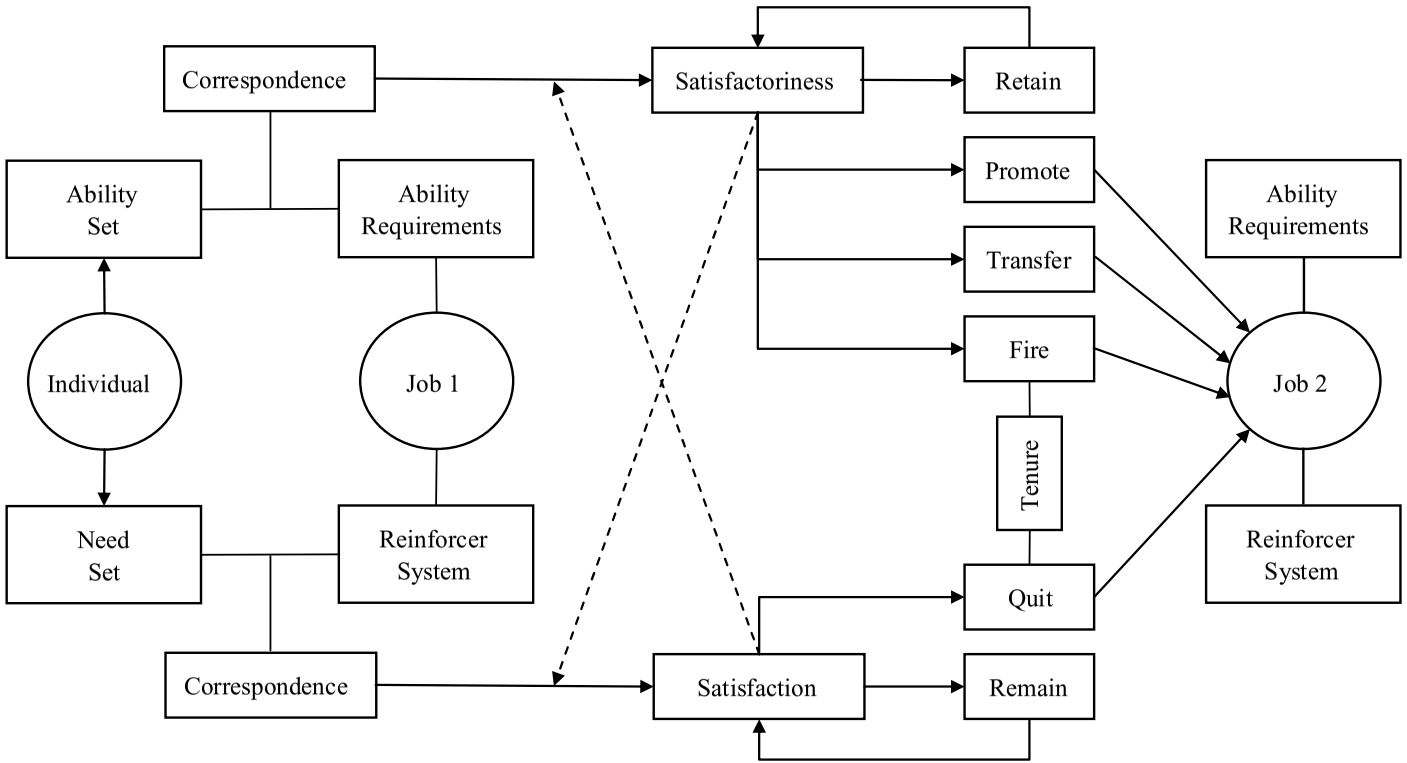

Figure 4.8 The Theory of Work Adjustment (After Dawis et al., 1964, p. 12).

Lofquist (1984). The most recent version of the theory redefines abilities as empirically derived factors that encompass specific skills, which are "recurring response sequences that tend to become modified and refined with repetition" (Dawis & Lofquist, 1984, p. 15). According to the theory, skills can be described on dimensions such as level of difficulty, economy of effort, and efficiency. Ability requirements are conceived in parallel terms as general factors that encompass specific skill requirements. Analogously, values are empirically derived factors that comprise specific needs, which are defined as "an individual's requirement for a reinforcer at given level of strength" (Dawis & Lofquist, 1984, p. 17). Strength refers to the frequency of response a reinforcer maintains, although Dawis and Lofquist (1984, p. 17) also imply that strength connotes need importance by stating that some reinforcers are required "at such low strength as to be of little or no importance to an individual". This point is reiterated when Dawis and Lofquist (1984, p. 82) state that "Values, as importance dimensions, are conceptualized … as reference dimensions for the description of needs. Needs are preferences for reinforcers expressed in terms of the relative importance of each reinforcer to the individual". Reinforcer factors are broad categories that summarize specific reinforcers, defined as stimulus conditions that are "consistently associated with an increased rate of response over the base rate" (Dawis & Lofquist, 1984, p. 16).

The revised theory also devoted greater attention to the meaning and outcomes of correspondence. The definition of correspondence was expanded, stated as "a harmonious relationship between individual and environment, suitability of the individual to the environment and of the environment to the individual, consonance or agreement between individual and environment, and a reciprocal and complementary relationship between the individual and environment" (Dawis & Lofquist, 1984, p. 54). This definition goes beyond similarity between the person and environment, as described Dawis et al. (1964), to include reciprocal relationships between the person and environment as well as notions of harmony, suitability, consonance, and complementarity. In addition, discussions of satisfactoriness and satisfaction were modified to suggest that they refer to appraisals of correspondence itself, as opposed to outcomes of correspondence. For instance, Lofquist and Dawis (1969, p. 47) stated that satisfaction is "the individual worker's appraisal of the extent to which the work environment fulfills his [*sic*] requirements" and satisfactoriness as an "appraisal of his [*sic*] fulfillment of the requirements of the work environment" derived from sources other than the worker (cf. Dawis & Lofquist, 1984, p. 55). In contrast to satisfaction and satisfactoriness, tenure continued to be treated as a distinct outcome of correspondence.

The effects of satisfactoriness and satisfaction on tenure were also described in greater detail. For instance, Dawis and Lofquist (1984) indicated that individuals remain in the work environment when satisfactoriness and satisfaction reach some critical level:

> There are … minimum levels of satisfactoriness required of individuals and of satisfaction required by individuals. These minimum levels are best established by observing individuals who have remained in a work environment. The levels of satisfactoriness and satisfaction observed for a group of individuals with substantial tenure in a specific work environment establish the limits of satisfactoriness and satisfaction from which tenure can be predicted for other individuals. (p. 57)

This passage implies that tenure increases as satisfactoriness and satisfaction increase toward empirically derived minimum levels, but it does not describe the consequences of increases in satisfactoriness and satisfaction beyond the minimum levels. Later, Dawis and Lofquist (1984) suggest that tenure results when satisfactoriness and satisfaction fall within certain limits:

> The work personalities of individuals who fall within the limits of satisfactoriness and satisfaction for which substantial tenure can be predicted are inferred to be correspondent with the specific work environment. The different kinds of work personalities for which correspondence is inferred thus establish the limits of specific personality characteristics that are needed for adjustment to the specific work environment. (p. 57)

From this passage, it seems that tenure might decrease if satisfactoriness and satisfaction exceed their required minimum levels to the point they fall outside of certain empirically derived limits. Dawis and Lofquist (1984) added that the effects of correspondence on tenure are moderated by flexibility, which refers to the range of correspondence an employee requires to remain in the work environment. Finally, the revised theory indicates that lack of correspondence can prompt behavior directed toward the person and environment to improve correspondence over time.

The theory of work adjustment has become increasingly complex during the course of its development. The person and environment constructs of the theory are described in great detail, and the theory proposes typologies that yield commensurate dimensions for skills and skill requirements as well as needs and reinforcers, which are arranged hierarchically in terms of broader ability and value dimensions, respectively. Despite its complexity, the theory does not adequately address various conceptual issues that are central to theories of P–E fit. In particular, the theory defines person and environment constructs using terms that require definitions of their own. For instance, skills are defined as recurring response sequences without specifying the types of responses involved or how long or often they must recur to qualify as skills. It stands to reason that not all forms of recurring response sequences should be interpreted as skills, as when an employee consistently delivers subpar performance. Likewise, reinforcers are defined

as stimuli that increase responses over base rate without describing the types of stimuli involved or the required excess over base rate. In addition, the metrics on which person and environment constructs vary are unclear. The theory indicates that skills vary along dimensions of difficulty level, economy of effort, and efficiency, but these terms were not further explained. Needs are described as varying both in terms of importance and strength (i.e., the frequency of response elicited by a reinforcer), and the apparent inconsistency between these dimensions was not resolved. The distinction between the actual and perceived person and environment received little attention, aside from noting that of reinforcement strength can be experienced and reported by the focal individual or an observer. The theory is also unclear concerning the meaning of satisfactoriness and satisfaction, which are framed as outcomes of correspondence (Dawis et al., 1964) as well as appraisals of correspondence itself (Dawis & Lofquist, 1984; Lofquist & Dawis, 1969). Additional ambiguities surround the form of the relationship between correspondence and outcomes, such as tenure. Discussions of this relationship suggest that tenure is maximized when the person and environment are equal (i.e., correspondent), although the theory also refers to minima and limits that might be interpreted as asymmetries or ranges of tolerance around the point of correspondence. The theory also asserts that ability–ability requirement correspondence and need–reinforcer correspondence moderate the effects of one another but does not explain this assertion or describe the nature of the moderating effect. Finally, the theory does not directly address boundaries of the effects of correspondence, other than the implication that some degree of inflexibility is required for these effects to occur.

Recruitment and Selection

P–E fit is fundamental to recruitment and selection, which are concerned with matching people with jobs in organizations (Borman et al., 2003; Heneman & Judge, 2003; Ployhart, Schneider, & Schmitt, 2006). For the most part, research on recruitment and selection treats P–E fit as an implicit premise rather than an explicit concept. For instance, selection research generally involves identifying the knowledge, skills, and abilities required by jobs, measuring these attributes among prospective employees, and examining the relationship between these measures and subsequent job performance. This research does not directly address the fit between the person and job, because job requirements are not included with person attributes when predicting job performance (Schneider, 2001). Among theories of recruitment and selection, those that explicitly incorporate P–E fit include the matching model set forth by Wanous (1980, 1992), the model of the recruitment process outlined by Breaugh (1992), and the facet model of fit by Werbel and Gilliland (1999). We now turn to these theories.

Wanous' Matching Model

The matching model presented by Wanous (1980) was an adaptation of the theory of work adjustment (Lofquist & Dawis, 1969) that conceptualized the environment in terms of the organization rather than the occupation. Like its precursor, the model incorporated two forms of fit, one involving the needs of the person and the reinforcers in the environment, and another concerning the abilities of the person and the requirements of the environment (see Figure 4.9). Needs were defined as "basic strivings or desires", and abilities referred to "what people are able to do *now* or are potentially able to do in the *future*" (Wanous, 1980, p. 11; emphasis in original). Unlike needs and abilities, reinforcers and requirements were not explicitly defined.

According to the model, the match between abilities and ability requirements affects job performance. This effect is presumably symmetric, as suggested by the statement "a mismatch between one's abilities (or potential) and the job requirements results in poor performance" (Wanous, 1980, p. 15) without specifying the direction of the mismatch. The match between needs and reinforcers causes job satisfaction, defined as "the match between a person's

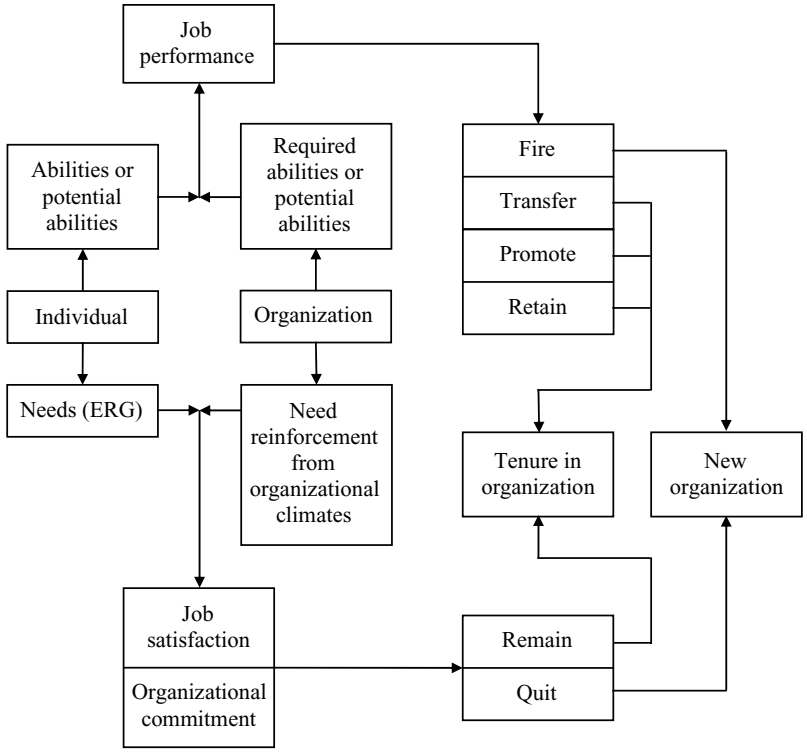

Figure 4.9 Matching Individual to Organization (After Wanous, 1980, p. 11).

needs and the reinforcement received from the work performed", and organizational commitment, which refers to "the match between human needs and the reinforcement received from the nonjob climates of the organization" (Wanous, 1980, p. 14). These definitions blur the conceptual boundary between need–reinforcer match and its outcomes, although elsewhere job satisfaction and organizational commitment are described as "outcomes of needs–climates match" affected by the "mismatch between the individual's needs and the organization's capacity to satisfy those needs" (Wanous, 1980, p. 14). This statement again implies symmetric effects of mismatch on outcomes, given that the direction of the mismatch between needs and reinforcers is disregarded.

A revised version of the matching model (Wanous, 1992) departed from its predecessor in several ways. In particular, individual needs were specified as general constructs that lead to specific wants associated with the job. The revised model also introduced organizational culture, defined as "the subconscious assumptions, shared meanings, and ways of interpreting things that pervade an entire organization", as a general concept that gives rise to organizational climate, which refers to "shared perceptions of 'the way things are around here'" (Wanous, 1992, p. 11). Organizational culture and climate were treated as counterparts to individual needs and wants, with the stipulation that the match between individual wants and organizational climates has more immediate effects on outcomes than the "more 'distant' match-up" between basic human needs and organizational cultures (Wanous, 1992, p. 13).

The matching model has several strengths, in that it incorporates both needs–supplies fit and demands–abilities fit, explicitly defines person constructs, and distinguishes between the needs and wants of individuals and between the culture and climate of organizations. However, the model does not clearly define the environment, as indicated by the absence of a definition of ability requirements and the characterization of organizational climate simply as "the way things are around here" without specifying the "things" involved. In addition, the model does not address the distinction between the actual and perceived person and environment, aside from defining organizational climate as shared perceptions held by employees. The model also says little about the form of the relationships between fit and outcomes. These relationships are presumably symmetric, in that mismatches are predicted to decrease job performance, job satisfaction, and organizational commitment irrespective of the direction of the mismatch. One exception concerns the effects of the mismatch between abilities and ability requirements on turnover, for which turnover is considered more likely "when the individual is *over*qualified for a job, rather than underqualified" (Wanous, 1992, p. 18; emphasis in original). Beyond this, the model implies that mismatches have symmetric effects on outcomes without further explanation. Finally, the model does not address the boundary conditions of matching effects, other

than predicting that different types of match cause some outcomes but not others (see Figure 4.9).

Breaugh's Person–Job Congruence Model

Breaugh (1992) developed a model of the recruitment process that features person–job congruence as a central component (see Figure 4.10). Person–job congruence was defined as "the discrepancy between the attributes an organization requires from a prospective employee and the characteristics the person offers and the discrepancy between what the person wants from the organization and the incentives the employer offers" (Breaugh, 1992, p. 112). These two

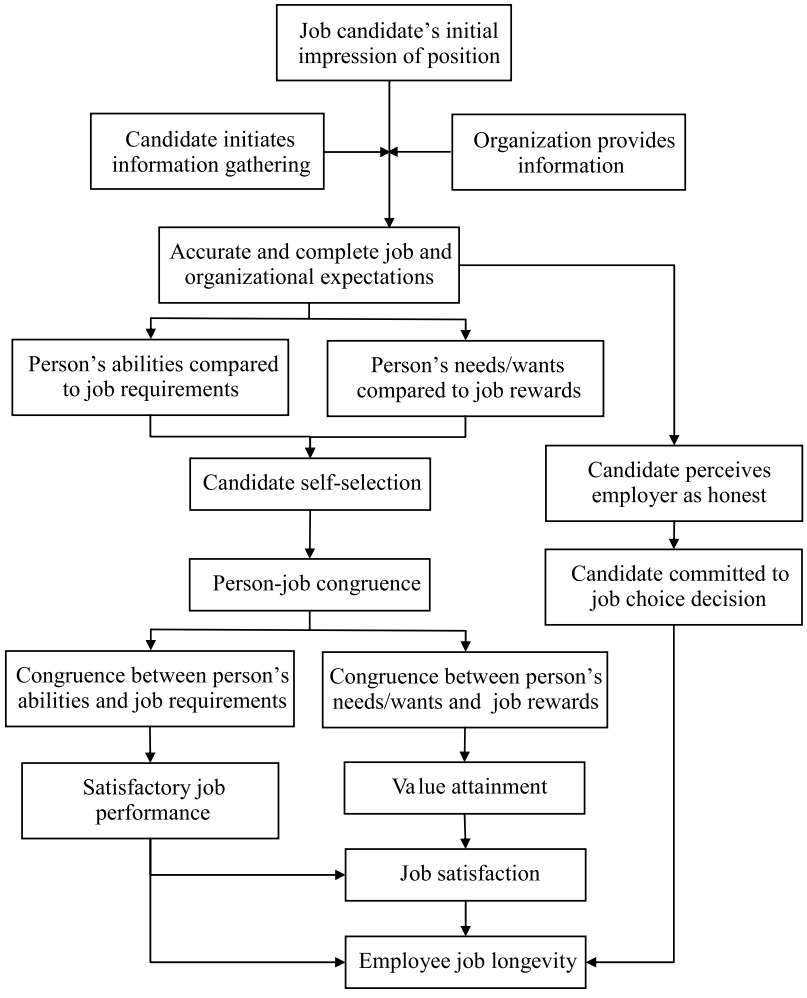

Figure 4.10 A Model of the Recruitment Process (After Breaugh, 1992, p. 156).

forms of congruence were characterized as the match between the abilities of the person and requirements of the job and between the needs/wants of the person and rewards of the job, respectively, as shown in Figure 4.10. The model hypothesized that "congruence between a person's abilities and the skills required by a job… results in a satisfactory level of job performance" and "a good fit between a person's needs/wants and the attributes (rewards) a job offers…will result in a sense of value attainment" which in turn "is hypothesized to result in job satisfaction" (Breaugh, 1992, p. 159). Although not explicit, these hypotheses imply that congruence has symmetric effects on outcomes.

From a theoretical standpoint, the primary strengths of the Breaugh (1992) model are its distinction between needs–supplies fit and demands–abilities fit and the manner in which it links these two types of fit to different outcomes. However, the model does not explicitly define the person and environment constructs involved in congruence, instead leaving their meaning at face value. The model also does not describe the conceptual metric on which the person and job are compared, although some examples used to illustrate the fit between needs and rewards refer to amount. In addition, the model says little about the distinction or relationships between actual and perceived person and environment constructs. A footnote discussing measurement states that person–job fit refers to "a new employee's perception of the congruence between his or her skills and what the job demands and between his or her needs/desires and the rewards a position offers" (Breaugh, 1992, p. 140). This statement describes fit as the perception of congruence itself, but the process by which perceived congruence results from the actual and perceived person and environment is not addressed. The model is also vague concerning the form of the relationship between congruence and outcomes. In a footnote, Breaugh (1992, p. 140) mentioned that, "For some job/organizational attributes, an individual may seek neither too much nor too little of an attribute (e.g., travel). For other attributes, the more the organization offers (e.g., pay), the better [the] individual will evaluate the fit". This passage suggests that the relationship between congruence and outcomes can be curvilinear or linear, but these possibilities are not further elaborated, nor does the model predict which relationship will occur for specific job attributes or outcomes. Finally, the model does not address boundary conditions of the effects of congruence on outcomes, aside from assigning different types of fit to different outcomes.

Werbel and Gilliland's Facet Model of Fit

Werbel and Gilliland (1999) proposed a facet model of P–E fit that describes the selection process in terms of person–job fit, person–workgroup fit, and person–organization fit (see Figure 4.11). Person–job fit is defined as the "congruence between the demands of the job and the needed skills, knowledge, and abilities of a job candidate" (Werbel & Gilliland, 1999, p. 211).

According to the model, the knowledge, skills, and abilities of selected employees predict person–job fit, which in turn leads to job proficiency, technical understanding, and work innovations. Person–workgroup fit refers to "the match between the new hire and the immediate workgroup (i.e., coworkers and supervisors)" (Werbel & Gilliland, 1999, p. 217). Person–workgroup fit includes supplementary fit, meaning the similarity between the person and workgroup members in terms of values, goals, personality, and interpersonal skills, as well as complementary fit, described as heterogeneity of group member skills, proficiencies, and interpersonal networks such that the "performance weaknesses of one individual may be offset by the performance strengths of a second individual" (Werbel & Gilliland, 1999, p. 217–218). Person–workgroup fit results from interpersonal attributes and broad-based proficiencies of new employees and influences group performance and cooperation. Person–organization fit refers to "the congruence of applicants' needs, goals, and values with organizational norms, values, and reward systems" (Werbel & Gilliland, 1999, p. 217). Person–organization fit includes supplementary fit, described as the compatibility of value systems of people and organizations, as well as needs–supplies fit, as implied by reference to the match of "applicants' needs with organizational reward systems" (Werbel & Gilliland, 1999, p. 217). The causes of person–organization fit are the values, needs, and goals of new employees, and the primary outcomes are organizational citizenship behaviors (OCBs), organizational satisfaction, organizational commitment, and retention. The immediate outcomes of person–job, person–workgroup, and person–organization fit are linked to overall performance and organizational effectiveness, as shown in Figure 4.11.

The facet model of Werbel and Gilliland (1999) is noteworthy in that it incorporates three types of P–E fit that compare the person to the job, workgroup, and organization and collectively address needs–supplies fit, demands–abilities fit, and supplementary fit. Despite its breadth, the model leaves various theoretical issues unresolved. First, the model does not explicitly define the person and environment constructs that constitute person–job, person–workgroup, and person–organization fit, nor does it distinguish between actual and perceived conceptualizations of these constructs. Second, the relationships between fit and other constructs in the model are not fully described or explained. The discussion of the model focuses primarily on relationships that run horizontally across Figure 4.11, saying little about the vertical paths that indicate relationships between person–job fit, person–workgroup fit, and person–organization fit, between the subcomponents of job performance, and between the outcomes of the model. Moreover, many of the paths in the model are double-headed arrows, but it is unclear whether these arrows represent reciprocal causation, non-causal covariation, or some other type of association. Third, the predictors of each type of fit consist of variables involved in the definition of fit. For instance, person–job fit is defined as the congruence

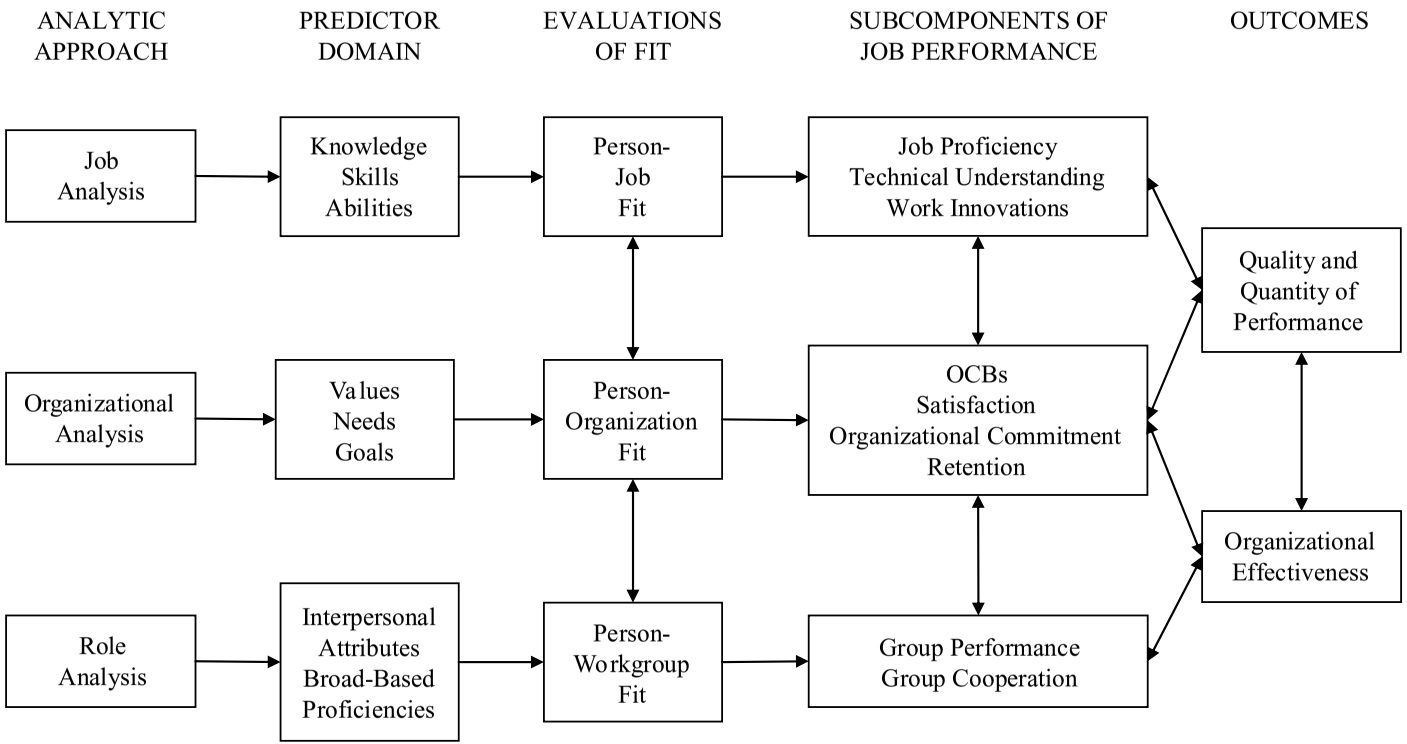

Figure 4.11 A Facet Model of Fit in the Selection Process (After Werbel & Gilliland, 1999, p. 218).

between the demands of the job and the knowledge, skills, and abilities of the candidate. Because knowledge, skills, and abilities are part of the definition of person–job fit, specifying them as causes of person–job fit yields a tautological relationship. Fourth, the model does not address the form of the relationships between fit and other constructs. Discussions of these relationships imply that outcomes are maximized when the person fits the job, workgroup, and organization, such that each type of fit has a curvilinear relationship with outcomes. Unfortunately, it is unclear whether this interpretation is warranted. Finally, the model does not place explicit boundaries on the relationships between fit and other constructs. The numerous arrows in Figure 4.11 suggest that each type of fit directly or indirectly affects every outcome of the model, but the implied breadth of these effects is not discussed.

Organizational Culture and Climate

A growing body of research has examined the fit between the person and the culture or climate of the organization (Cable & Judge, 1996; Chatman, 1991; Hoffman & Woehr, 2006; Kristof-Brown et al., 2005; Meglino, & Ravlin, 1998; Schneider, 1987; Verquer et al., 2003). Much of this research traces its theoretical underpinnings to the model of person–organization fit presented by Chatman (1989, 1991; O'Reilly, Chatman, & Caldwell, 1991) and the attraction–selection–attrition (ASA) framework developed by Schneider (1983, 1987; Schneider, Goldstein, & Smith, 1995; Schneider, Smith, & Goldstein, 2000). These theories are examined below.

Chatman's Model of Person–Organization Fit

The model of person–organization fit developed by Chatman (1989, 1991; O'Reilly et al., 1991) conceptualizes fit in terms of the values held by the person and organization (see Figure 4.12). Drawing from Rokeach (1973), the model defines personal values as "enduring beliefs through which a specific mode of conduct or end-state is personally preferable to its opposite", and the value system of the organization as "an elaborate and generalized justification both for appropriate behaviors of members and for the activities and functions of the system" (Chatman, 1989, p. 339). Personal and organizational values were described in terms of content, or the substantive dimension to which they refer (e.g., security, competitiveness) and intensity, or how strongly the value is held relative to other values. Organization values were further described in terms of crystallization, or the degree to which values are shared by organizational members. Person–organization fit is defined as "*the congruence between the norms and values of organizations and the values of persons*" (Chatman, 1989, p. 339; emphasis in original).

According to the model, the effects of individual and organizational values on person–organization fit are influenced by selection and socialization, such that selection enables organizations to locate people whose values match

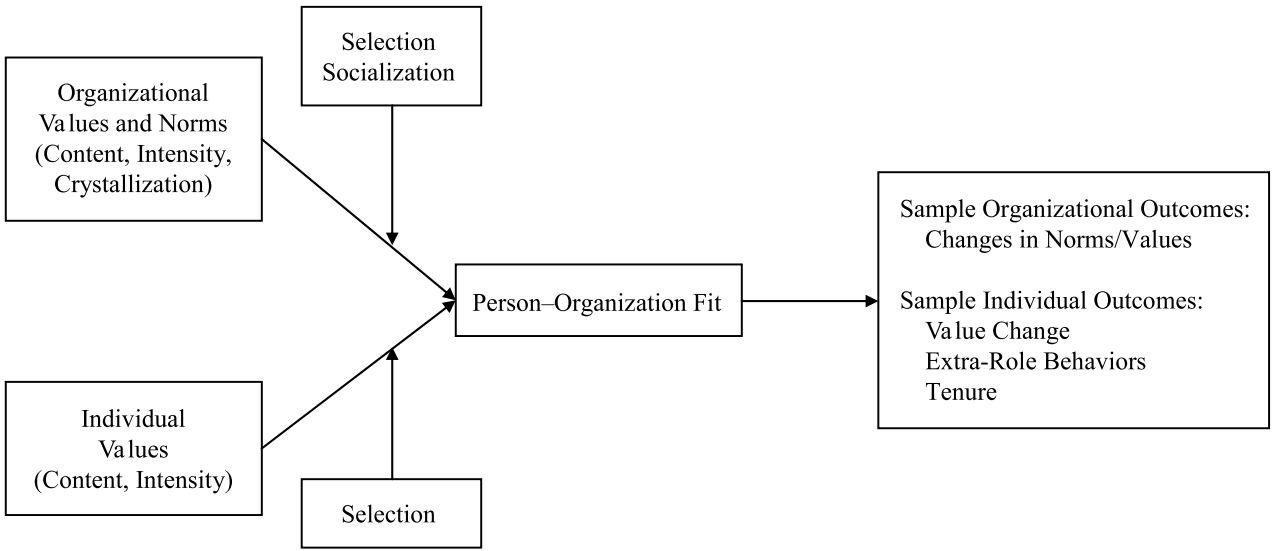

Figure 4.12 A Model of Person-Organization Fit (After Chatman, 1989, p. 340).

those of the organization, and socialization molds personal values to align with organizational values. Outcomes of person–organization fit include changes in personal and organizational values, with the intent of increasing person–organization fit, as well as individual-level outcomes that include extra-role behavior, tenure, satisfaction, commitment, and feelings of comfort and competence (Chatman, 1989, 1991; O'Reilly et al., 1991). In general, person–organization fit is hypothesized to have positive consequences, although Chatman (1989) cautioned that extremely high levels of fit could lead to ineffective individual and organizational behavior, such as conformity, inertia, and reduced innovation and adaptability. Consequently, Chatman (1989) suggested that "some optimal level of person–organization fit may exist both in terms of how close the fit is for any one individual and in terms of the proportions of high and low 'fitters' within an organization" (p. 344).

Chatman's model of person–organization fit has several noteworthy features. In particular, the model expands the conceptualization of the environment beyond specific jobs to the organization as a whole. The model also highlights the dynamics of person–organization fit, describing how personal and organizational values can change over time to enhance person–organization fit. In addition, the model questions the common assumption that P–E fit invariably leads to positive outcomes, suggesting that some degree of misfit might benefit individuals and organizations.

Despite its merits, Chatman's model leaves several theoretical issues unresolved. One issue concerns the meaning of value intensity, the conceptual metric on which the values of the person and organization vary. According to Rokeach (1973, p. 5), whose definition of values Chatman adopted, values range "along a continuum of relative importance." This definition suggests that value intensity involves the relative importance of values to the person and the organization. Discussions of Chatman's model do not explicitly state whether value intensity refers to importance, although the intended meaning of value intensity can be inferred from the Organizational Culture Profile (OCP [O'Reilly et al., 1991]), which Chatman recommended for testing the model. For individual values, the OCP asks respondents "How important is it for this characteristic to be a part of the organization I work for?" with response options ranging from "the *most desirable* values" to "the *most undesirable* values" (Chatman, 1989, p. 341, emphasis in original). The same format was used by O'Reilly et al. (1991, p. 496), whereas Chatman (1991, p. 466) used a different prompt that asked "How desirable is it for this attribute to be a part of my ideal organization's values system?" From this, it appears that the intensity of individual values was conceptualized as a hybrid of desires and importance. These concepts are distinct (i.e., what a person considers important can be desirable or undesirable) and are treated as such elsewhere in the P–E fit literature (Harrison, 1985; Locke, 1969, 1976). For organizational values, the OCP asks "How much does this attribute characterize your organization's

values?" with response options ranging from "*most characteristic*" to "*most uncharacteristic*" (Chatman, 1989, p. 341, emphasis in original; see also Chatman, 1991; O'Reilly et al., 1991). Hence, for organizational values, intensity apparently refers to characteristicness, a term open to alternative interpretations. Thus, if the OCP accurately operationalizes Chatman's model, then value intensity is a blend of importance, desirability, and characteristicness, and the meaning of value intensity differs for personal and organization values, rendering them noncommensurate (i.e., it is unclear whether a given level of importance or desirability is above or below a given level of characteristicness).

Other ambiguities of the model concern the relationships between person–organization fit and outcomes. For the most part, the model implies that these relationships are symmetric, given that the direction of misfit is disregarded when the effects of person–organization fit on outcomes are discussed. However, Chatman (1989) noted that certain outcomes might be maximized by a modest degree of misfit, a notion that implies an M-shaped function with peaks on either side of the point of fit or a skewed relationship with a single peak on one side of fit. These possibilities were not further explained, nor were they mapped onto predictions for specific value dimensions or outcomes. In addition, the model does not indicate whether the effects of person–organization fit depend on how the person perceives the values of the organization. Discussions of the OCP recommend measuring values from sources other than the focal person (Chatman, 1989, 1991; O'Reilly et al., 1991), which suggests that the person's perception of organizational values are not relevant to the effects of person–organization fit. Finally, the model addresses boundary conditions to some extent by identifying moderators of the effects of person–organization fit, including individual differences such as openness to influence, self-efficacy, and personal control, and situational factors such as the strength and crystallization of organizational values.

Schneider's Attraction–Selection–Attrition Framework

Schneider's ASA framework (Schneider, 1983, 1987; Schneider et al., 1995; Schneider et al., 2000) incorporates the concept of P–E fit to explain the process by which people are attracted to, selected by, and either leave or remain in organizations. Schneider (1983) summarized the core principles of the ASA framework as follows:

> (*a*) organizations are defined by the kinds of people who are attracted to them, selected by them, and who remain in them; (*b*) as a result of the attraction–selection–attrition cycle, organizations can become overly homogeneous resulting in a decreased capacity for adaptation and change; and (*c*) in the face of turbulent environments, organizations can

> remain viable by attracting, selecting, and retaining people in differentiated roles who are externally and future oriented. (Schneider, 1983, p. 27)

Schneider (1983) depicted the ASA framework as shown in Figure 4.13. At the center of the framework are organizational goals established by the founder, which

> form a hub from which all organizational processes emerge. Thus, people are attracted to organizations because of organizational goals, organizations select people who appear to be able to help the organization achieve its goals, and people who achieve their own goals there will tend to remain in the organization. (Schneider, 1983, p. 35)

This passage frames organizational and personal goals as key drivers of the ASA cycle, with organizational goals influencing attraction and selection and personal goals affecting attrition. Attraction and attrition are also attributed to interpersonal similarity, such that "people with similar abilities and needs tend to be attracted to particular settings, and people with similar sets of positive reactions to their experiences tend to remain in those settings" (Schneider, 1983, p. 33). Similarity is also implied by the idea that organizations become homogeneous over time, where homogeneity is described in terms such as abilities, needs, orientations, and experiences. Outcomes of P–E fit are attraction, selection, and attrition, which anchor the three stages of the ASA cycle, as well as organizational performance, which is predicted to suffer

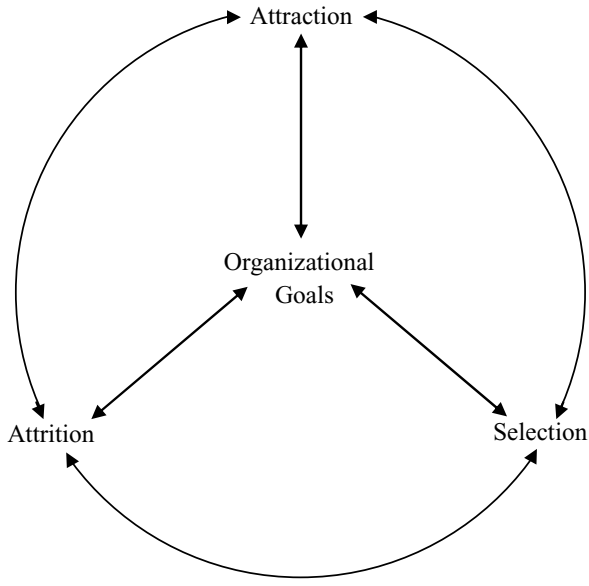

Figure 4.13 The Attraction-Selection-Attrition Framework (After Schneider, 1987, p. 445).

as organizations become increasingly homogeneous. The ASA framework also emphasizes that organizational environments are functions of the people in them, although it is unclear whether this function refers to a causal relationship between distinct person and organization constructs or a definitional identity in which organizations are equated with the people in them. The form of the relationships between P–E fit and these outcomes is not addressed by the ASA framework, which instead describes the effects of fit in general terms.

Subsequent presentations of the ASA framework elaborated the principles set forth by Schneider (1983). Schneider (1987) reinforced the notion that organizations are functions of people by revising the classic formula proposed by Lewin:

> My basic thesis is that it is the people behaving in them that make organizations what they are. My thesis suggests that Kurt Lewin may have overstated the case when he hypothesized that behavior is a function of person and environment, that is, $B = f(P, E)$. My thesis is that environments are function of persons behaving in them, that is, $E = f(P, B)$. (Schneider, 1987, p. 438)

The idea that the ASA cycle leads to homogeneity was also reiterated, with homogeneity described broadly in terms of personality, behavior, experiences, orientations, feelings, and reactions (Schneider, 1987) and more narrowly in terms of personality, attitudes, and values (Schneider et al., 1995, 2000). As before, homogeneity was predicted to reduce the adaptive capacity of organizations, thereby hindering organizational effectiveness and survival. However, homogeneity was also linked to certain positive outcomes, such as satisfaction, communication, cooperation, harmony, adjustment, and commitment. Schneider et al. (2000) explained these countervailing predictions by suggesting that the detrimental effects of fit apply to long-term organizational outcomes, whereas the benefits of fit pertain to short-term individual outcomes.

The meaning of P–E fit at each stage of the ASA cycle was again described in various ways. Schneider (1987) attributed attraction to interpersonal similarity, and likewise, Schneider et al. (1995, p. 749) asserted that "people find organizations differentially attractive as a function of their implicit judgments of the congruence between those organizations' goals (and structures, processes, and culture as manifestations of those goals) and their own personalities". Selection, in turn, is said to occur when prospective employees have competencies that meet the needs of the organization (Schneider, 1987) or, more broadly, have "attributes the organization desires" (Schneider et al., 1995, p. 749). For attrition, Schneider (1987, p. 442) described P–E fit in terms of met expectations, or "fit between individual expectations and the reality of organizational life", as well as similarity, such that "if people who do not fit

leave, then the people who remain will be similar to each other". In contrast, Schneider et al. (1995) attributed attrition exclusively to similarity, saying that "if people who fit are more likely to stay in an organization, then over time, the environment will become more homogeneous because similar people will stay in the organization and dissimilar ones will leave" (p. 756). The functional forms relating fit to attraction, selection, attrition, and other outcomes remained unspecified, leaving open the question of whether the effects of misfit are the same when the organization exceeds or falls short of the person on a particular dimension.

When compared to most theories of P–E fit, the ASA framework has several distinctive features, such as its proposition that environments are functions of the people in them, the inclusion of organizational-level outcomes such as structure, technology, and effectiveness, and the notion that P–E fit can have negative consequences. However, the ASA framework presents several ambiguities concerning the meaning and effects of P–E fit. One ambiguity involves the conceptualization of the person. Schneider (1987) described the person in general terms, referring to attributes such as personality, behavior, experiences, orientations, feelings, and reactions. Schneider et al. (1995, p. 749) acknowledged this ambiguity but asserted that "the clear implication [of Schneider, 1987] is that the attributes of interest are personality, attitudes, and values". However, Schneider et al. (1995, p. 758) later noted that "one of the limitations of the ASA model is its vague specification of what is meant by 'personal characteristics' or 'kind' in its reference to people". In a similar vein, Schneider et al. (2000, p. 78) commented:

> Another interesting issue, not specified in the original Schneider work, is good fit with regard to what characteristics… Members of an organization can have good fit on a number of different aspects; goals, dispositions, values, and attitudes to name a few—and we have treated these generically… under the rubric "personality". Perhaps fit on certain characteristics may lead to negative consequences, and fit on other characteristics may lead to positive consequences.

Thus, Schneider and colleagues acknowledged the ambiguities surrounding the meaning of the person in the ASA framework and underscored the importance of conceptualizing the person with greater precision as the framework is further developed.

A related ambiguity concerns the conceptualization of the environment, which is defined as the people in it and, at the same time, treated as an outcome of the people in it. For instance, Schneider et al. (1995) stated that "the situation *is* the people there behaving as they do" but then added that "structure, process, and culture are the *outcome* of the people in an organization" (p. 751, emphasis in original). Both of these statements cannot be true, because if the situation is the people in it, then the situation and the people

are the same construct, and saying one causes the other is tantamount to saying a construct causes itself. Perhaps social features of organizations, such as cultural values, can be defined by as characteristics of the people who constitute an organization, whereas organizational features such as structure and technology are best viewed as outcomes, or products, of people who occupy organizations. These ambiguities concerning the meaning of the environment are not resolved within the ASA framework.

If we assume that people and organizational environments refer to distinct entities, such that their causal relationship can be meaningfully considered, then another issue raised by the ASA framework concerns the direction and structure of their relationship. Schneider (1987, p. 440) implied that this relationship runs exclusively from the person to the environment when he said "technology, structure, and the larger environment of organizations are outcomes of, not the causes of, people and their behavior". Schneider et al. (1995, p. 751) reiterated this claim but subsequently allowed for reciprocal effects, as follows:

> Are there reciprocal relationships between people's personalities and their employing organizations? We think so, but we put primacy on the *people* in those employing organizations as those people's personalities are revealed in the structures, processes, and culture employees' experience. (Schneider et al., 1995, p. 766, emphasis in original)

More generally, the notion that people and organizational environments influence behavior is embedded in the ASA cycle itself, in that attraction, selection, and attrition are behaviors that result from the fit between people and organizational environments. Thus, although the ASA framework emphasizes the function $E = f(P, B)$, the operation of the ASA cycle depends on the function $B = f(P, E)$. In principle, there is no reason why both of these functions cannot coexist (cf. Dawis & Lofquist, 1984; French et al., 1982).

A fourth issue concerns the distinction between actual and perceived person and organization constructs. Presumably, the ASA cycle require that the people making choices at each stage of the cycle perceive the characteristics of the person and organization. For instance, prospective employees must perceive the organization in order to be attracted to it, and recruiters must perceive characteristics of prospective employees in order to select them. The distinctions and relationships between actual and perceived characteristics of the person and organization are not addressed by the ASA framework.

A fifth issue concerns the types of P–E fit are involved in each stage of the ASA cycle. Overall, the ASA cycle is predicted to create organizations whose members are homogeneous, which implies that the ASA framework is primarily concerned with supplementary fit. However, when each stage of the ASA cycle is described separately, attraction and attrition are discussed primarily in terms of supplementary fit, whereas selection is characterized in terms of demands–

abilities fit. Some discussions of attraction also suggest needs–supplies fit, such as the passage from Schneider et al. (1995, p. 764) that "individual differences in the relative attractiveness of tangible organizational rewards and attributes are tied to deeper personality and values issues, the kinds of issues ASA suggests drive eventual organizational membership". Moreover, as noted earlier, attrition is sometimes attributed to misfit between the expectations of the person and the realities of the organization (Schneider, 1987), which refers to met expectations rather than P–E fit. Schneider et al. (2000) acknowledged that the ASA framework discusses fit generic terms and posed the question:

> Which fit are we referring to, supplementary fit or complimentary [*sic*] fit? Perhaps supplementary fit is needed on some characteristics whereas complimentary [*sic*] fit is needed on others. For example, organization effectiveness may increase when there is supplementary fit on the goals, or vision, of the organization… However, complimentary [*sic*] fit may be desired on other characteristics, such as problem-solving perspectives. (Schneider et al., 2000, p. 79)

Answers to questions such as these are needed to clarify which types of P–E fit are involved at each stage of the ASA cycle.

Finally, the ASA framework says little about the form of the relationship between P–E fit and other constructs or boundary conditions that govern these relationships. Because P–E fit is treated as a general concept, it would seem that the relationships and other constructs are symmetric, such that the effects of fit on attraction, selection, and attrition do not depend on the direct of misfit, and the homogeneity that results from the ASA cycle involves the reduction of differences among organizational members regardless of the direction of the initial differences. The functional forms underlying these relationships are not addressed by the ASA framework. Attention to boundary conditions is evidenced by the notion that the positive outcomes predicted by the ASA model apply to individuals in the short run, whereas the negative outcomes pertain to organizations in the long run. Boundary conditions are also manifested by the prediction that "organization effectiveness may increase when there is supplementary congruence on the goals, or vision, of the organization" whereas "complimentary congruence may be desired on other characteristics, such as problem solving perspectives" (Schneider et al., 2000, p. 79). Beyond these conditions, the boundaries of the ASA framework have yet to be fully fleshed out.

The Status of Person–Environment Fit Theories

We now step back from the individual theories to take stock of the theories as a whole, using the criteria established at the outset of the review. This summary compares the theories to one another and provides an overall assessment of the strength of theory in P–E fit research.

Person and Environment Constructs

How well do the theories define person and environment constructs and explain why the constructs included in the theory were chosen? Although some theories explicitly define the person and environment (Chatman, 1989, 1991; Locke, 1969, 1976; O'Reilly et al., 1991; Wanous, 1980, 1992), most theories give no explicit definitions (Breaugh, 1992; Caplan, 1983, 1987; French & Kahn, 1962; French et al., 1974, 1982; Harrison, 1978, 1985; McGrath, 1970, 1976; Schaffer, 1953; Werbel & Gilliland, 1999) or describe the person and environment in general terms that subsume distinct constructs (Holland, 1959, 1966, 1973, 1985, 1997; Schneider, 1983, 1987; Schneider et al., 1995; Schneider et al., 2000). Moreover, some theories discuss the person and environment in ways that blur the distinction between P–E fit and its hypothesized outcomes (Katzell, 1964; Schaffer, 1953) or between the person and environment themselves (Schneider, 1983, 1987; Schneider et al., 1995; Schneider et al., 2000). Analogously, some theories define outcomes in terms that confound their distinction with P–E fit (Locke, 1969, 1976; Wanous, 1980). Moreover, most theories do not address the distinction or relationship between actual and perceived person and environment constructs. A few theories posit that the effects of P–E fit depend on how the environment is perceived by the person (Locke, 1969, 1976; McGrath, 1970, 1976), and one theory incorporates the objective and subjective person and environment as distinct constructs (Caplan, 1983, 1987; French et al., 1974, 1982, Harrison, 1978, 1985), but these theories are exceptions to the rule. Finally, very few theories explain the conceptual logic for choosing the person and environment constructs included in the theory. Perhaps the most complete explanation is given by Locke (1969, 1976), who articulated why values were chosen over needs and expectations as the standard against which perceptions are compared to predict job satisfaction. Overall, many of the theories reviewed did not explicitly define the person and environment, and very few addressed the distinction between the actual and perceived person and environment or explain why the person and environment constructs included in the theory were chosen over potential alternatives.

Person–Environment Fit Relationships

How clearly do the theories describe relationships between P–E fit and other constructs and explain the conceptual logic behind these relationships? The vast majority of the theories describe these relationships in general terms, stating that fit is positively or negatively related to other constructs, most of which are specified as outcomes of fit (Breaugh, 1992; Chatman, 1989, 1991; Dawis et al., 1964; Dawis & Lofquist, 1984; Holland, 1959, 1966, 1973, 1985, 1997; Lofquist & Dawis, 1969; Murray, 1938, 1951; O'Reilly et al., 1991; Parsons, 1909; Schaffer, 1953; Schneider, 1983, 1987; Schneider et al., 1995; Schneider

et al., 2000; Wanous, 1980, 1992; Werbel & Gilliland, 1999). Describing fit relationships in this manner is conceptually ambiguous, because it fails to address basic issues embedded in the concept of fit. For instance, saying that fit is positively related to an outcome implies that misfit is negatively related to the outcome. Misfit itself occurs when the person exceeds the environment or the environment exceeds the person. It follows that a negative relationship between misfit and an outcome means that the outcome decreases when the person exceeds the environment or the environment exceeds the person, that is, regardless of the direction of misfit. This premise is questionable on conceptual grounds, given that the direction of misfit is arguably relevant for many types of fit and content dimensions used to describe the person and environment. For instance, there are clear differences between receiving rewards that exceed or fall short of aspirations, having abilities that exceed or fall short of demands, and holding values that are more or less important than those espoused by the organization. Similarly, fit exists when the person and environment match regardless of their absolute levels, which in turn implies that the same outcome results regardless of whether the person and environment are low or high in absolute terms. Again, this notion is dubious, given that the absolute levels of person and environment constructs lead to different experiences of P–E fit (e.g., wanting and having a simple job is not the same as wanting and having a complex job), which in turn are likely to influence outcomes relevant to P–E fit.

A handful of theories describe P–E fit relationships in unambiguous terms, as when the relationships are expressed as theoretical equations (Katzell, 1964; Locke, 1976; McGrath, 1976) or hypothetical functions (Caplan, 1983. 1987; Locke, 1969, 1976; French et al., 1974, 1982; Harrison, 1978, 1985). Despite their clarity, some of these relationships are difficult to defend from a conceptual standpoint, such as the ratio formula proposed by Katzell (1964), the negated absolute difference formula derived by McGrath (1976), and the formula presented by Locke (1976) that contradicts the functions he depicted graphically. Of the theories reviewed, the one that provides the most clear and defensible account of P–E fit relationships is the P–E fit theory of stress (Caplan, 1983. 1987; French et al., 1974, 1982; Harrison, 1978, 1985). Nonetheless, even this theory says little about whether the outcomes of P–E fit depend on the absolute levels of the person and environment. Some theories describe different functions relating P–E fit to outcomes (Caplan, 1983, 1987; French et al., 1974, 1982; Harrison, 1978, 1985; Locke, 1969, 1976), but these theories fall short of predicting when each function will occur, leaving the functions as possibilities to be explored empirically. Most of the theories devote little attention to explaining the conceptual logic underlying P–E fit relationships, although the P–E fit theory of stress was arguably strongest in this regard. Overall, the theories reviewed stated P–E fit relationships in ways that do not translate into specific predictions, either

because the relationships are described in ambiguous terms or the theory does not predict when a particular relationship will occur.

Boundary Conditions

To what extent do the theories address boundary conditions that govern the relationships between P–E fit and other constructs? Some of the theories say little if anything about boundary conditions (Holland, 1959, 1966, 1973, 1985, 1997; Murray, 1938, 1951; Parsons, 1909). Other theories specify factors that influence P–E fit relationships in terms of moderator variables (Dawis & Lofquist, 1984; French et al., 1974; Katzell, 1964; Harrison, 1985; Locke, 1969, 1976; McGrath, 1970, 1976; Schaffer, 1953). These moderator variables implicitly establish boundary conditions, based on the notion that the relationships influenced by the moderator variables should appear only when the moderator falls within certain limits. Other theories assign different types of P–E fit to different outcomes (Breaugh, 1992; Schneider, 1983, 1987; Schneider et al., 1995; Schneider et al., 2000; Wanous, 1980, 1992; Werbel & Gilliland, 1999), which effectively restricts P–E fit relationships to the assigned outcomes. Boundary conditions were explicitly discussed in the most recent presentation of the ASA framework (Schneider et al., 2000), although they were framed as questions to be pursued in future research. Overall, the theories reviewed largely neglected boundary conditions, aside from the boundaries implied by moderator variables and different outcomes assigned to different types of P–E fit.

Overcoming Theoretical Stagnation in Person–Environment Fit Research

The theories covered by this review span nearly a century, with most appearing during the past 50 years. These theories resulted from countless hours of concerted labor by many of the best scholars in P–E fit research. Collectively, the theories have generated over 13,000 citations, averaging nearly 900 citations per theory and ranging from about 50 (Werbel & Gilliland, 1999) to over 3000 (Lewin, 1935, 1951).[2] Needless to say, the theories are products of much work and have attracted considerable attention. Nonetheless, the review presented here indicates that most of the theories fall short of basic criteria for evaluating theory, and recent theories are hardly stronger than those developed decades earlier. For instance, a reader of Parsons (1909) during the early twentieth century probably would have concluded that fit between the person and environment leads to positive outcomes, irrespective of the particular person and environment constructs involved, and that misfit between the person and environment in either direction is detrimental. Many of the theories developed since Parsons (1909) would invite the same basic conclusion. Several theories have incorporated different types of P–E fit, some have presented functions that indicate different effects depending on the direction of P–E misfit, and a few suggest that P–E fit can be detrimental for certain

outcomes. Although these refinements are important, it seems safe to say that theoretical progress in P–E fit research during the past century has been meager. How can we overcome this theoretical stagnation in P–E fit research?

Commit to Evaluating Theory

Perhaps the most fundamental solution is to hold ourselves and others accountable for developing strong theory in P–E fit research. When we review the literature in a given field, we usually focus on empirical studies, and there is no shortage of such reviews in P–E fit research (Arthur et al., 2006; Assouline & Meir, 1987; Chapman et al., 2005; Edwards, 1991; Hoffman & Woehr, 2006; Katzell, 1964; Kristof, 1996; Kristof-Brown et al., 2005; Meglino & Ravlin, 1998; Pervin, 1968; Spokane, 1985; Spokane et al., 2000; Tranberg et al., 1993; Tsabari et al., 2005; Verquer et al., 2003). We should supplement reviews of empirical work with reviews of theory that apply criteria for strong theory and evaluate the status and direction of theory development. Like any pursuit, theoretical progress in P–E fit research requires taking stock of where we have been, where we stand, and where we are going. These assessments should ask and answer hard questions about how well P–E fit theories describe and explain the meaning of the person and environment, the relationship between P–E fit and other constructs, and conditions that influence the direction and strength of these relationships. Unless we regularly and rigorously hold P–E fit theories up to criteria such as these, theory development in P–E fit research is destined to remain adrift.

Promote Theoretical Integration

Although the theories reviewed have important shortcomings, integrating the best features of each theory would strengthen P–E fit theories across the board. For instance, theories developed by Chatman (1989, 1991; O'Reilly et al., 1991), Locke (1969, 1976), and Wanous (1980, 1992) provide examples of clearly defining person and environment constructs. Theories proposed by Katzell (1964), Locke (1969, 1976), McGrath (1970, 1976), and French, Caplan, and Harrison (Caplan, 1983, 1987; French & Kahn, 1962; French et al., 1974, 1982; Harrison, 1978, 1985) demonstrate how to describe P–E fit relationships in clear and explicit terms, supplemented by theoretical equations and hypothetical functions. The work of French, Caplan, and Harrison also shows how to reason through different functions that might relate P–E fit to other constructs. Theories that incorporate moderators of P–E fit relationships (Dawis & Lofquist, 1984; French et al., 1974; Katzell, 1964; Harrison, 1985; Locke, 1969, 1976; McGrath, 1970, 1976; Schaffer, 1953) or assign different types of fit to different outcomes (Breaugh, 1992; Schneider, 1983, 1987; Schneider et al., 1995; Schneider et al., 2000; Wanous, 1980, 1992; Werbel & Gilliland, 1999) indicate how boundary conditions can be established. Thus, much of the raw material for strengthening P–E fit theories is scattered among

the theories themselves. Regrettably, the boundaries that define the various domains of P–E fit research have impeded the type of knowledge transfer that would strengthen theories in each domain. We should leverage the best features of P–E fit theories across domains to strengthen P–E fit theories as a whole.

Confront the Meaning of Fit

Beyond general considerations of evaluating and integrating theory lie some fundamental conceptual issues that P–E fit theories have yet to address. One such issue is the meaning of fit itself. The P–E fit literature is rife with terms taken as synonyms for fit. Some of these terms are reasonably precise, as when P–E fit is described as the match, similarity, or congruence between the person and environment (Breaugh, 1992; Chatman, 1989; Dawis et al., 1964; French et al., 1974; Wanous, 1980, 1992; Werbel & Gilliland, 1999). These terms connote the proximity of the person and environment to one another, which is the proper conceptualization of P–E fit. Other terms are metaphors without clear meaning, such as harmony, compatibility, suitability, and consonance (Dawis & Lofquist, 1984; Lofquist & Dawis, 1969; Parsons, 1909). Fit has also been called an interaction (Dawis et al., 1964; Holland, 1966, 1973; Katzell, 1964; Murray, 1938, 1951) and a reciprocal relationship (Dawis & Lofquist, 1984), neither of which should be equated with P–E fit. To clarify the meaning of fit, we should start by using terms that refer to the proximity of the person and environment to one another and dispense with metaphors and terms that represent other types of person–environment relationships.

As a next step, we should come to grips with the status of P–E fit as a construct. P–E fit theories are essentially silent as to whether P–E fit is linguistic shorthand for the person and environment considered jointly or refers to a construct that exists separately from the person and environment. Many theories imply that P–E fit is a distinct construct, as evidenced by the inclusion of P–E fit along with the person and environment in models that depict the theory (Breaugh, 1992; Chatman, 1989; Dawis et al., 1964; Harrison, 1978; Werbel & Gilliland, 1999). However, if P–E fit is *defined* as the match between the person and environment, *then P–E fit has no meaning beyond the person and environment*. Rather, P–E fit is a statement about the level of the person and environment relative to one another. If the person and environment are at the same level, whether they are low, medium, or high, then by definition P–E fit exists. If the person and environment are at different levels, then P–E misfit exists, with the direction of misfit indicated by the relative levels of the person and environment. From this perspective, P–E fit does not exist separately from the person and environment, because any statement about P–E fit is completely determined by the person and environment considered jointly. Moreover, propositions that describe relationships between P–E fit and other constructs can be translated into joint propositions that describe relationships

for the person and environment. Thus, if P–E fit is defined as the match between the person and environment, then theories should not treat P–E fit as a construct that is somehow distinct from the person and environment.

P–E fit can be considered a distinct construct when it refers to a *subjective judgment* of the match between the person and environment (Locke, 1969, 1976; Wanous, 1980; Schneider, 1983). However, such judgments are likely to reflect factors other than the relative standing of the perceived person and environment (Chambers & Windschitl, 2004; Medin, Goldstone, & Gentner, 1993; Mussweiler, 2003; Tversky, 1977). Therefore, introducing subjective P–E fit judgments into theories of P–E fit requires us to elaborate our theories to explain the psychological processes that map the perceived person and environment onto judgments of P–E fit and identify factors beyond the perceived person and environment that influence these judgments. Available evidence indicates that relationships linking the perceived person and environment to judgments of P–E fit contradict the theoretical logic that presumably ties them together (Edwards, Cable, Williamson, Lambert, & Shipp, 2006). Incorporating subjective P–E fit judgments in theories of P–E fit is crucial to our understanding of the meaning of P–E fit as a psychological phenomenon and the mechanisms by which it relates to other constructs.

Supplement Process with Content

P–E fit theories have been recognized as process theories (Campbell, Dunnette, Lawler, & Weick, 1970) because they conceptualize P–E fit without respect to the content of the person and environment dimensions involved (Harrison, 1978; Locke, 1976). Some P–E fit theories include frameworks that specify content dimensions, such as the six career types of the RIASEC model (Holland, 1973, 1985, 1997), the 20 need and reinforcer dimensions that accompany the theory of work adjustment (Dawis & Lofquist, 1984; Dawis et al., 1964; Lofquist & Dawis, 1969), and the 54 values of the OCP (Chatman, 1989, 1991; O'Reilly et al., 1991). Nonetheless, these theories treat P–E fit as a general concept that subsumes the content dimensions specified by the frameworks. As noted earlier, some theories suggest that P–E fit relationships are likely to differ across content dimensions (Caplan, 1983, 1987; French et al., 1974, 1982; Harrison, 1978, 1985; Locke, 1969, 1976), but the dimensions used to illustrate these relationships are selected on an *ad hoc* basis, as opposed to being drawn from theoretically anchored frameworks for describing the person and environment.

P–E fit theories must move beyond general statements that disregard the content of person and environment dimensions. As stressed by Cronbach and Gleser (1953), "*similarity is not a general quality. It is possible to discuss similarity only with respect to specified dimensions*" (p. 457, emphasis in original), an admonishment that applies in full to P–E fit. Up to this point, P–E fit theories have distinguished between demands–abilities fit, needs–supplies fit, and

supplementary fit (Kristof, 1996; Muchinsky & Monahan, 1987) and fit between the person and the job, group, organization, and vocation (Edwards & Shipp, 2007; Werbel & Gilliland, 1999). Although these distinctions are useful, they do not bring content to the person and environment, which is essential for understanding the substantive meaning P–E fit. Clearly, excess demands for technical skills differ from excess demands for interpersonal skills, insufficient rewards for pay differ from insufficient rewards for autonomy, and similarity on values that espouse altruism differs from similarity on values that emphasize competition. Furthermore, one of the most significant shortcomings of P–E fit theories is that they do not specify the form of the relationship between P–E fit and other constructs, and any attempt to predict the form of P–E fit relationships depends on the content of the person and environment dimension involved (Edwards & Shipp, 2007; Harrison, 1978). If we are going to predict anything specific about P–E fit relationships, we must take into account the content of person and environment dimensions involved.

Content dimensions can be incorporated into P–E fit theories using existing frameworks. For instance, content dimensions for demands–abilities fit can be drawn from frameworks that describe job requirements (Borman & Brush, 1993; Fleishman & Mumford, 1991) and employee skills (Fleishman & Reilly, 1992; Lubinski & Dawis, 1990). Likewise, content dimensions for needs–supplies fit can be obtained from typologies of work-related preferences (Amabile, Hill, Hennessey, & Tighe, 1994; Dawis, 1991; Pryor, 1987) and rewards (Dawis, Dohm, & Jackson, 1993; Gagné & Deci, 2005; Hackman & Oldham, 1980). Content dimensions for supplementary fit can be derived from frameworks describing personality (Goldberg, 1992; McCrae & Costa, 1997) and values (Cable & Edwards, 2004; Quinn & Rohrbaugh, 1983; Super, 1973). Drawing from frameworks such as these, P–E fit theories can incorporate content dimensions into the process explanations of P–E fit. Without content, the meaning and implications of P–E fit will remain elusive, and P–E fit theories are unlikely to yield predictions that go beyond simplistic generalizations.

Close the Empirical Loop

Theoretical progress requires not only evaluating theories on their own merits, but also testing theories empirically and using the obtained results to corroborate, modify, or reject theories, in part or whole. Unfortunately, tests of P–E fit theories have been plagued with methodological problems. Perhaps the most serious problem is the use of difference scores and profile similarity indices to represent P–E fit as a single variable in data analyses (Edwards, 1994). The use of such variables is often attributed to theoretical considerations. For instance, a theory might predict that P–E fit is positively related to an outcome, and in response, a researcher will collapse measures of the person and environment into a difference score intended to represent P–E fit and correlate the score with a measure of the outcome. Using the score might seem

theoretically justified, because the theory says that the outcome is caused not by the person and environment, but instead by P–E fit, and therefore some score must be constructed to capture what the theory says.

I will not reiterate the statistical problems with difference scores and profile similarity indices, as these problems have been described elsewhere (Cronbach, 1958; Edwards, 1994; Johns, 1981; Lykken, 1956; Nunnally, 1962), and solutions to these problems are available (Edwards, 1995, 2002; Edwards & Parry, 1993). Rather, my concern is that appealing to theory to justify using difference scores and profile similarity indices is woefully misguided, because doing so presupposes the theory is correct and shields it from being tested. For instance, if a theory predicts that the absolute difference between needs and rewards causes satisfaction, the theory should be tested not by correlating the absolute difference between needs and rewards with satisfaction, *but instead by testing the functional form the absolute difference is intended to represent*. This functional form should be treated as a hypothesis to be tested empirically, not as an assumption to be imposed on the data. When used as theoretical statements, difference scores can be useful, as they provide precision and clarity that can be difficult to convey with words, and the use of difference scores in this manner is illustrated by several of the theories reviewed (Katzell, 1964; Locke, 1976; McGrath, 1976). However, the implications of these statements should be tested empirically in order to complete the cycle that runs from theory to empiricism and back to theory.

Summary and Conclusion

This chapter has reviewed and evaluated P–E fit theories in organizational research. The overarching conclusion drawn from the review is that P–E fit theories have progressed little since their inception, and many theories fall short of standards for strong theory. Recommendations for promoting theoretical progress in P–E fit research are offered, drawing from the best features of the theories reviewed supplemented by suggestions for pushing P–E fit theories in directions that few have considered. These recommendations are intended to facilitate the development of strong P–E fit theories, which are essential to the advancement of P–E fit research itself.

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Endnotes

1. P–E fit researchers have also pointed out that the environment can be distinguished in terms of levels of analysis, such as the individual, job, group, organization, or

vocation (Edwards & Shipp, 2007; Kristof-Brown et al., 2005; Ostroff & Schulte, 2007). Although this distinction is important, it applies primarily to supplementary fit, whereas most of the theories reviewed here concern needs–supplies fit and demands–abilities fit. Therefore, the theories reviewed are not evaluated according to whether they specify the level of the environment. Nonetheless, the importance of this distinction is discussed at the conclusion of the review.

2. These counts were based on searches of citations of the sources for each theory referenced in the present review. The searches were conducted in March 2008 using Google Scholar and Thompson ISI Web of Knowledge.

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