

The Relationship Between Person-Environment Fit and Outcomes:
An Integrative Theoretical Framework

Jeffrey R. Edwards
Kenan-Flagler Business School
University of North Carolina
Chapel Hill, NC 27599
919-962-3144
jredwards@unc.edu

Abbie J. Shipp
University of North Carolina

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A considerable amount of research has investigated the relationship between person-environment (P-E) fit and outcomes. This research has examined various types of P-E fit, such as the fit between the needs of the person and the supplies available in the environment (Edwards & Harrison, 1993; Locke, 1976; Porter & Lawler, 1968), the fit between the demands of the environment and the abilities of the person (Edwards, 1996; McGrath, 1976), and the fit between the values of the person and those of the organization and its members (Cable & Judge, 1996; Chatman, 1989; Judge & Bretz, 1992; Meglino, Ravlin, & Adkins, 1989). Outcomes of P-E fit have included occupational choice, job satisfaction, job performance, organization commitment, turnover, and psychological and physical well-being (Edwards, 1991; Kristof, 1996; Spokane, Meir, & Catalano, 2000; Verquer, Beehr, & Wagner, 2003).

Research on the effects of P-E fit reflects three overriding assumptions. First, it is generally assumed that P-E fit leads to positive outcomes. This assumption is evident in theoretical discussions of P-E fit (Chatman, 1989; Dawis & Lofquist, 1984; Holland, 1997; Wanous, 1992; Werbel & Gilliland, 1999) and underlies most empirical studies of P-E fit (Edwards, 1991; Kristof, 1996; Spokane et al., 2000; Verquer et al., 2003). Second, it is often assumed that the effects of P-E fit are the same across different person and environment constructs. This assumption is demonstrated by studies using measures that collapse different types of P-E fit (Bretz & Judge, 1994; Mitchell, Holtom, Lee, Sablinski, & Erez, 2001; Saks & Ashforth, 1997; Spokane et al., 2000) or combine substantively different person and environment dimensions (Caldwell & O'Reilly, 1990; Meglino, Ravlin, & Adkins, 1992; O'Reilly, Chatman, & Caldwell, 1991). Third, it is widely assumed that the effects of P-E fit are the same regardless of the absolute levels of the person and environment or the direction of their difference. This assumption is manifested by research that operationalizes P-E fit as the similarity between person and environment profiles (Cable & Judge, 1996; Caldwell & O'Reilly, 1990; Meglino et

al., 1992; O'Reilly et al., 1991; Rounds, Dawis, & Lofquist, 1987; Vancouver & Schmitt, 1991) or asks respondents to directly report their fit with the environment (Cable & DeRue, 2002; Judge & Cable, 1997; Lauver & Kristof-Brown, 2001; Saks & Ashforth, 1997). Although these assumptions have been occasionally questioned (French, Caplan, & Harrison, 1982; Edwards, 1996; Rice, McFarlin, Hunt, & Near, 1985; Schneider, Kristof, Goldstein, & Smith, 1997), they remain widespread in theoretical and empirical P-E fit research.

In this chapter, we outline an approach to conceptualizing the effects of P-E fit that probes the assumptions summarized above. As with any science, the assumptions that underlie P-E fit research should be open to scrutiny, as they represent boundaries that constrain inquiry and leave fundamental questions unanswered. One way to gauge the advancement of a science is by whether its key assumptions are evaluated and either affirmed or set aside as too limiting or simplistic (Kuhn, 1996). The conceptual approach we describe is intended to encourage P-E fit researchers to critically examine assumptions that characterize the investigation of the effects of P-E fit on outcomes, with the ultimate goal of advancing our collective understanding of P-E fit.

The approach we set forth addresses three key issues concerning the effects of P-E fit on outcomes. The first issue involves the concept of P-E fit itself, based on the premise that any discussion of the effects of P-E fit should begin by stating what is meant by P-E fit. As noted earlier, different types of P-E fit have been investigated, yet the boundaries between these types of fit are sometimes obscured or confound multiple distinctions. We present a framework for describing P-E fit that integrates, clarifies, and extends existing typologies. The second issue concerns the conceptual mechanisms that explain the effects of P-E fit on the outcome. We suggest that these mechanisms should be drawn from theories of the outcome, such that P-E fit operates through causes identified through research on the outcome itself. Most outcomes of interest in P-E fit research, such as satisfaction, commitment, well-being, and performance, have

generated enormous amounts of research intended to explain their causes. This research provides an appropriate starting point for conceptualizing the effects of P-E fit. The third issue involves the functional form relating P-E fit to the outcome. The assumptions underlying P-E fit research translate into a function relating the person and environment to the outcome that is simplistic and represents one of many possibilities. Rather than accepting this function as the default, we show how alternative functional forms can result from developing conceptual arguments that describe the joint effects of the person and environment on the outcome.

Before we proceed, we should clarify the nature of the theoretical contribution we intend to offer. We do not presume to develop a grand theory relating P-E fit to outcomes. Such a task is impractical, given the numerous ways in which different types of P-E fit and outcomes can be combined. Rather, our goal is to demonstrate a general approach to theorizing the effects of P-E fit (Weick, 1995) that can be applied and extended in various specific streams of P-E fit research. Although some aspects of our presentation suggest hypotheses to be tested, our chief objective is to provide some initial conceptual spadework that delves into assumptions that underlie P-E fit research, with the hope that these assumptions will be further probed in future P-E fit research.

The Concept of Person-Environment Fit

P-E fit has been conceptualized in various ways. In its most general sense, *P-E fit* can be defined as *the congruence, match, similarity, or correspondence between the person and the environment*. Within this general definition, different types of P-E fit have been distinguished (Dawis & Lofquist, 1984; Edwards, 1991; French et al., 1982; Kristof, 1996; Muchinsky & Monahan, 1987). In this section, we integrate and extend different ways of distinguishing P-E fit, resulting in a framework that resolves ambiguities in the P-E fit literature and highlights distinctions that have received little attention. This framework clarifies the meaning of P-E fit and provides a useful basis for conceptualizing the effects of P-E fit on outcomes.

Supplementary and Complementary Fit

One key distinction in the P-E fit literature is between supplementary and complementary fit (Kristof, 1996; Muchinsky & Monahan, 1987). *Supplementary fit* occurs when the person “supplements, embellishes, or possesses characteristics which are similar to other individuals” in the environment (Muchinsky & Monahan, 1987, p. 269). Thus, supplementary fit concerns the comparison between the person and his or her social environment, such that the environment is defined by the people in it. Although the terms “supplement” and “embellish” imply that the person brings something unique to the social environment, further discussions of supplementary fit have equated it with interpersonal similarity (Cable & DeRue, 2002; Day & Bedeian, 1995; Kristof, 1996; Muchinsky & Monahan, 1987).

Complementary fit exists when a “weakness or need of the environment is offset by the strength of the individual, and vice versa” (Muchinsky & Monahan, 1987, p. 271). In other words, complementary fit involves the extent to which the person and environment each provide what the other requires. Complementary fit can be further distinguished in terms of whether requirements are imposed by the environment or the person (Dawis & Lofquist, 1984; Edwards, 1991; French, Rodgers, & Cobb, 1974; Kristof, 1996; Wanous, 1992). Requirements of the environment refer to demands placed on the person and may emanate from the task, work role, or broader social context. The degree to which these demands are fulfilled by the knowledge, skills, abilities, and resources (e.g., time, energy) of the person signifies *demands-abilities fit* (French et al., 1982; Kristof, 1996; McGrath, 1976). Requirements of the person reflect his or her needs, which include biological requisites for survival and psychological desires, motives, and goals (French et al., 1974). The degree to which the person’s needs are fulfilled by supplies in the environment represents *needs-supplies fit* (French et al., 1982; Kristof, 1996).¹ Although Muchinsky and Monahan (1987) discussed complementary fit in terms of demands and abilities,

other researchers have expanded this concept to include needs-supplies fit (Cable & DeRue, 2002; Kristof, 1996). We adopt this expanded perspective in the present discussion.

Although the distinctions between supplementary fit, demands-abilities fit, and needs-supplies fit are fundamental to P-E fit research, they are sometimes overlooked or obscured. For instance, studies have asked respondents how well a person fits a job (Feldman, 1976) or organization (Adkins, Russell, & Werbel, 1994; Kristof-Brown, 2000) without specifying whether fit should be interpreted as supplementary or complementary. Other studies have combined different types of fit into a summary index (Bretz & Judge, 1994; Mitchell et al., 2001; Saks & Ashforth, 1997). A prominent example of this approach is vocational fit research that assesses the person using the Self-Directed Search (Holland, 1979), which combines abilities (i.e., activity competencies) and desires (i.e., activity preferences, occupational interests) into a single score (Assouline & Meir, 1987; Spokane et al., 2000; Tranberg, Slane, & Ekeberg, 1993). When used to gauge person-vocation fit, this score effectively confounds demands-abilities fit with needs-supplies fit. These types of fit should be distinguished because they are conceptually distinct and have different effects on outcomes (Dawis & Lofquist, 1984; French et al., 1982).

Levels of the Environment

Another approach to distinguishing P-E fit involves the level at which the environment is conceptualized (Kristof, 1996). Although P-E fit research treats the person at the individual level, it frames the environment at different levels. For supplementary fit, the environment refers to the people in it (Muchinsky & Monahan, 1987), so environmental levels refer to varying degrees of aggregation of people in the environment. Thus, research on supplementary fit has examined similarity between the person and other individuals, such as supervisors (Barrett, 1995; Tsui, Porter, & Egan, 2002), subordinates (Engle & Lord, 1997; Murphy & Ensher, 1999; Yukl & Fu, 1999), and coworkers (Antonioni & Park, 2001; Schaubroeck & Lam, 2002; Strauss,

Barrick, & Connerley, 2001), and between the person and social collectives, such as incumbents of a particular job (Chatman, Caldwell, & O'Reilly, 1999; Costa, McCrae, & Kay, 1995) and members of work groups (Ferris, Youngblood, & Yates, 1985; Hollenbeck, 2000; Kristof-Brown, Jansen, & Colbert, 2002; Kristof-Brown & Stevens, 2001), departments (Enz, 1988; McCain, O'Reilly, & Pfeffer, 1983), organizations (Chatman, 1989; Kristof, 1996; Verquer et al., 2003), and vocations (Hildebrand & Walsh, 1988; Hoeglund & Hansen, 1999; Upperman & Church, 1995).

Different levels of the environment can also be distinguished for complementary fit. In the case of demands-abilities fit, demands can be unique to the experiences of an individual or shared by all incumbents of a job or members of a work group, department, organization, or vocation. Research on demands-abilities fit often frames demands as unique to the individual, as illustrated by studies in which respondents describe the demands they personally face (Cable & DeRue, 2002; Edwards, 1996; French et al., 1982; Lauver & Kristof-Brown, 2001). Although the demands faced by an individual might be shared by others in the same job, this research does not attempt to generalize demands beyond the individual level. Other studies examine demands at the job level, as when job seekers rate the fit between their abilities and the demands of jobs for which they interviewed (Cable & Judge, 1996) or raters assess the demands of a position or job (Caldwell & O'Reilly, 1990; Higgins & Judge, 2004; Kristof-Brown, 2000; Kristof-Brown, Barrick, & Franke, 2002). This research reflects the premise that the same demands are encountered by all incumbents of the position or job. Studies also frame demands at higher levels, such as teams (Hollenbeck, Moon, Ellis, West, Ilgen, Sheppard, Porter, & Wagner, 2002), functions (Chan, 1996), and vocations (Greenberg, 2002; Holland, 1997; Spokane et al., 2000).

For needs-supplies fit, supplies can be framed at levels analogous to those of demands. Typically, supplies are conceived at the individual level, such that needs-supplies fit concerns the

supplies available to a particular person irrespective of whether those supplies are available to other people (Cable & DeRue, 2002; Edwards, 1996; French et al., 1982). A few studies have treated supplies at the group level (Burch & Anderson, 2002; Shaw, Duffy, & Stark, 2000), and numerous studies has examined supplies at the organizational level (Bretz & Judge, 1994; Chatman, 1991; Christiansen, Villanova, & Mikulay, 1997; O'Reilly et al., 1991; Tziner & Falbe, 1990; van Vianen, 2000; Vigoda & Cohen, 2002) and vocational level (Assouline & Meir, 1987; Spokane et al., 2000; Tranberg et al., 1993). In principle, supplies could also be conceived at the job level, reflecting the assumption that all incumbents of a job have access to the same supplies, but research that adopts this approach is rare.

In P-E fit research, differences in environmental levels are sometimes confounded with the distinction between supplementary and complementary fit. For instance, person-organization fit often refers to supplementary fit where people in the environment are at the organizational level (Adkins et al., 1994; Cable & Judge, 1996; Chatman, 1991), and person-job fit has been used as a label for demands-abilities fit where demands are at the individual level (Kristof-Brown, 2000; Kristof-Brown, Barrick et al., 2002) or job level (Cable & Judge, 1996; Higgins & Judge, 2004). When conceptualized in this manner, person-organization fit and person-job fit confound differences between the individual, job, and organization levels of the environment with the distinction between supplementary fit and demands-abilities fit. This confound is avoided when person-organization fit is defined by its treatment of the environment at the organizational level without restricting the environment to members of the organization (Kristof, 1996) and person-job fit is defined by its characterization of the environment at the job level, where the job can refer to demands, supplies, or other people who hold the same job. This perspective isolates the distinction between person-organization fit and person-job fit to the level of the environment and treats supplementary versus complementary fit as a separate but equally

important distinction.

Content of Person and Environment Dimensions

A third approach to distinguishing conceptualizations of P-E fit involves the content of the dimensions on which the person and environment are compared. These dimensions can be placed on a continuum ranging from general to specific. Here, we consider three points on this continuum that represent global, domain, and facet levels of person and environment dimensions. For supplementary fit, the global level refers to similarity in a general sense, without reference to any dimensions of comparison. This level is exemplified by studies that examine perceived overall similarity between the person and other people or combine broad areas of comparison, such as beliefs, attitudes, and values (Pulakos & Wexley, 1983; Turban, Dougherty, & Lee, 2002; Turban & Jones, 1988; Wayne & Liden, 1995; Zalesny & Highhouse, 1992). The domain level isolates broad areas of comparison but does not distinguish dimensions within each area. Such areas of comparison include values (Adkins et al., 1996; Cable & Judge, 1996; Meglino et al., 1989; Saks & Ashforth, 1997), goals (Kristof-Brown & Stevens, 2001; Vancouver, Millsap, & Peters, 1994; Vancouver & Schmitt, 1991), personality (Chatman et al., 1999; Schaubroeck & Lam, 2002), and demographic characteristics (Chatman, Polzer, Barsade, & Neale, 1998; Tsui, Egan, & O'Reilly, 1992). Research at the facet level examines similarity on specific dimensions within broader areas, as when studies of personality similarity distinguish the dimensions of the Big Five (Antonioni & Park, 2001; Day & Bedeian, 1995) or studies of demographic similarity separately examine similarity according to age, gender, race, and education (Chattopadhyay, 1999; Tsui & O'Reilly, 1989; Vecchio & Bullis, 2001).

Dimensions of comparison for demands-abilities fit can also be arranged hierarchically. The global level concerns the overall fit between demands and abilities without regard to any dimensions of comparison. Studies of demands-abilities fit at the global level either collapse

across specific demand and ability dimensions (Caldwell & O'Reilly, 1990; Rosman & Burke, 1980) or assess perceptions of overall demands-abilities fit (Cable & DeRue, 2002; Cable & Judge, 1996; Kristof-Brown, 2000; Saks & Ashforth, 1997). The domain level captures broad distinctions among demand and ability dimensions, such as training (Chisholm, Kasl, & Eskenazi, 1983), education (Coburn, 1975; French et al., 1982), experience (Johnson & Johnson, 1996), and work load (Beehr, Walsh, & Taber, 1976; Jamal, 1984; Schaubroeck, Cotton, & Jennings, 1989). The facet level examines demands-abilities fit for specific tasks or activities, such as generating new ideas (Choi, 2004; Livingstone, Nelson, & Barr, 1997), motivating and rewarding subordinates (Edwards, 1996), and playing a musical instrument in an orchestra (Parasuraman & Purohit, 2000).

For needs-supplies fit, the global level is illustrated by studies of the overall fit between needs and supplies that assess general perceptions of need fulfillment (Cable & DeRue, 2002; Riordan, Weatherly, Vandenberg, & Self, 2001; Saks & Ashforth, 1997) or aggregate needs-supplies fit across a broad set of dimensions (Hollenbeck, 1989; Rounds, Dawis, & Lofquist, 1987). The domain level concerns fit on general need and supply dimensions, such as job complexity (Edwards & Harrison, 1993; French et al., 1982), job enrichment (Cherrington & England, 1980; Greenhaus, Seidel, & Marinis, 1983), and social relationships (Cook & Wall, 1980; Edwards & Rothbard, 1999; O'Brien & Dowling, 1980; Porter & Lawler, 1968). The facet level involves needs-supplies fit regarding specific aspects of work, as when job scope is separated into autonomy, variety, task identity, and participation in decision-making (Alutto & Acito, 1974; Conway, Vickers, & French, 1992; Cook & Wall, 1980; O'Brien & Dowling, 1980; Wanous & Lawler, 1972) or social relationships refer to different people, such as supervisors, coworkers, and clients (Rice, McFarlin, & Bennett, 1989).

An important issue regarding the content of person and environment dimensions is that

the dimensions must be commensurate (Dawis & Lofquist, 1984; French et al., 1974; Murray, 1938). Commensurate dimensions have two features. The first is *nominal equivalence*, meaning the person and environment are described in the same terms. For instance, when supplementary fit involves personality similarity, the person and members of his or her social environment must be compared on the same traits, such as dimensions of the Big Five (Antonioni & Park, 2001) or the Jungian typology (Schaubroeck & Lam, 2002). Likewise, for demands-abilities fit, demands and abilities must refer to the same dimension, such as required and attained education (Coburn, 1975; French et al., 1982). Similarity, needs-supplies fit must frame needs and supplies in the same terms, such as desired and actual autonomy (Conway et al., 1992; Edwards & Rothbard, 1999; Elsass & Veiga, 1997). Nominal equivalence can be achieved by translating taxonomies that describe people into environmental terms, such as using Maslow's need hierarchy to frame both needs and supplies (Hall, Schneider, & Nygren, 1970; Lawler & Hall, 1970; Porter & Lawler, 1968). Nominal equivalence can also be obtained when taxonomies that describe the environment are adapted to the person, as when job activity frameworks are used to describe the job and the person (Edwards, 1996). Nominal equivalence also results when the person and environment are described on the same dimensions without drawing from preexisting person or environment frameworks, a practice that is common in P-E fit research (Caldwell & O'Reilly, 1990; French et al., 1982; O'Reilly et al., 1991; Wanous & Lawler, 1972).

The second feature of commensurate dimensions is *scale equivalence*, meaning the person and environment are assessed on the same metric (French et al., 1974). For example, supplementary fit regarding supervisor-subordinate goal congruence requires supervisors and subordinates to rate goals on the same metric, such as importance (Jauch, Osborn, & Terpening, 1980; Vancouver & Schmitt, 1991). Similarly, demands-abilities fit for education requires a common scale for required and actual education, such as years (French et al., 1982), and needs-

supplies fit for autonomy requires the same scale for supplies and needs, such as perceived and desired amounts (Conway et al., 1992; Elsass & Veiga, 1997). Metric equivalence is achieved by using the same response scale for the person and environment and different item stems to distinguish between the person and environment. This approach is illustrated by the Porter Need Satisfaction Questionnaire (Porter & Lawler, 1968), which uses the same 7-point response scale to assess supplies and needs with stems that ask “how much is there now” and “how much should there be,” respectively.

In some cases, research framed in terms of P-E fit involves person and environment dimensions that are not commensurate. For instance, the job characteristics model has been cast in terms of needs-supplies fit, where needs refer to growth need strength and supplies refer to the five core job dimensions (Blau, 1987; Kulik, Oldham, & Hackman, 1987). Although growth needs and the core job dimensions are conceptually related, they are not nominally equivalent, given that growth needs refer to the overall desire for an enriched job whereas the core job dimensions describe specific aspects of an enriched job. Nominal equivalence is achieved when needs and supplies both refer to overall job enrichment (Cherrington & England, 1980) or individual core job dimensions (Cook & Wall, 1980; O’Brien & Dowling, 1980; Wanous & Lawler, 1972).

Other research exhibits nominal equivalence but not scale equivalence. For example, studies of needs-supplies fit based on the theory of work adjustment (Dawis & Lofquist, 1984) compare supply amount to need importance (Betz, 1969; Rounds et al., 1987; Scarpello & Campbell, 1983). Although these studies describe needs and supplies on the same dimensions, such as variety, security, and recognition, they assess these dimensions on different metrics. Unless supplies and needs are both assessed on the same metric, such as amount, it is impossible to determine whether supplies exceed or fall short of needs and, hence, the degree of needs-

supplies fit. Scale equivalence is also undermined by studies of value congruence that compare the characteristicness of organizational values to the importance or desirability of personal values (Chatman, 1989; O'Reilly et al., 1991) and studies of demands-abilities fit that compare the importance of job competencies to the degree to which competencies characterize employees (Caldwell & O'Reilly, 1990; Chatman, 1991).

An Integrative Framework

Figure 1 presents a framework that integrates the foregoing approaches to distinguishing P-E fit. This framework shows how distinctions within each approach can be combined to yield different conceptualizations of P-E fit. For example, research on personal and organizational value congruence that collapses across value dimensions (Cable & Judge, 1996; Chatman, 1991; Lovelace & Rosen, 1996) would be classified as supplementary fit with the environment at the organizational level and content dimensions at the domain level. Research on underemployment that examines the overall fit between job demands and employee abilities (Bolino & Feldman, 2000; Johnson & Johnson, 1996) refers to demands-abilities fit with the environment at the job level and content dimensions at the global level. Research on need fulfillment that compares needs and supplies on specific dimensions from the perspective of the employee (Edwards & Harrison, 1993; Wanous & Lawler, 1972) signifies needs-supplies fit with the environment at the individual level and content dimensions at the facet level. Other types of P-E fit research can be organized within the framework to highlight their key similarities and differences.

The framework in Figure 1 has several merits. First, it integrates and expands existing conceptualizations of P-E fit, most of which have been limited to two (Edwards, 1991), three (Cable & DeRue, 2002; Kristof, 1996), or four (Bretz & Judge, 1994) types of fit. Our framework shows that integrating the distinctions in the P-E fit literature considerably expands the types of fit open to inquiry. Second, the framework highlights types of P-E fit that have been

largely overlooked. For instance, person-job fit can refer not only to demands-abilities fit and needs-supplies fit (Edwards, 1991) but also to supplementary fit where the environment involves other people in the same job as the focal person. Likewise, person-organization fit can involve supplementary fit (Cable & Judge, 1996) as well as demands-abilities fit and needs-supplies fit where demands and supplies are conceptualized at the organization level (Kristof, 1996). Third, it increases the precision with which P-E fit can be conceptualized and measured. For instance, the meaning and operationalization of value congruence differs depending on whether the values dimensions are at the domain level (Adkins et al., 1996; Cable & Judge, 1996; Meglino et al., 1989; Saks & Ashforth, 1997) or facet level (Ashkanasy & O'Connor, 1997; Cable & Edwards, 2004; Finegan, 2000; Kalliath, Bluedorn, & Strube, 1999). Finally, the distinctions drawn in the framework have important implications for developing hypotheses regarding the effects of fit on outcomes, as discussed below.

Outcomes of Person-Environment Fit

P-E fit research has examined a wide range of outcomes (Assouline & Meir, 1987; Edwards, 1991; Kristof, 1996; Spokane et al., 2000; Verquer et al., 2003). We organize these outcomes into three broad categories. The first category comprises attitudes, as illustrated by studies relating P-E fit to job satisfaction and organizational commitment (Dawis & Lofquist, 1984; Diener & Lucas, 2000; Locke, 1969; Rice, McFarlin, Hunt, & Near, 1985). The second category involves mental and physical health, as emphasized by research on the P-E fit approach to stress (Edwards, Caplan, & Harrison, 1998; French et al., 1982). The third category consists of task and contextual performance, which signify contributions of the person to his or her employer (Dawis & Lofquist, 1984; McGrath, 1976; Pervin, 1968). In this section, we draw from theories pertaining to these outcomes to explain how they relate to P-E fit. We discuss P-E fit in terms of supplementary fit, demands-abilities fit, and needs-supplies fit, which we consider

the primary distinction in the framework in Figure 1. We later explain how other distinctions in the framework help refine predictions regarding the effects of P-E fit on outcomes. We should emphasize that each outcome we discuss has causes other than P-E fit, we do not intend or claim to give a complete account of all causes of each outcome. Rather, our goal is to demonstrate how theories pertaining to each outcome can be used to conceptualize the effects of P-E fit.

Attitudes

Numerous studies have examined the relationship between P-E fit and attitudes (Assouline & Meir, 1987; Edwards, 1991; Kristof, 1996; Spokane et al., 2000; Tranberg et al., 1993). Here, we consider two widely studied attitudes, job satisfaction and organizational commitment, and examine the theoretical basis for their relationships with P-E fit. We first consider how job satisfaction and organizational commitment have been defined and then draw from relevant theory to examine how these attitudes relate to P-E fit.

Job satisfaction. Although various definitions of job satisfaction have been proposed, most describe job satisfaction as an affective or emotional response that results from the cognitive comparison of actual and desired aspects of the job (Cranny, Smith, & Stone, 1992). For instance, Locke (1969) defined job satisfaction as a “pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating one’s job values” (p. 317), where values refer to what the person consciously wants, desires, or seeks to attain. Likewise, Dawis and Lofquist (1984) defined job satisfaction as “a pleasurable affective condition resulting from one’s appraisal of the way in which the experienced job situation meets one’s needs, values, and expectations” (p. 72). Other researchers have similarly defined job satisfaction as an affective or emotional response to the comparison between actual and desired job characteristics (Katzell, 1964; Lawler, 1973; Locke, 1976; Smith, Kendall, & Hulin, 1969).

The foregoing definitions of job satisfaction combine two distinct features of attitudes,

one that concerns affective reactions to the job, and another that entails the evaluation of the job relative to desires of the person (Olson & Zanna, 1993). As such, these definitions confound job satisfaction as affect with cognitive evaluations that are theorized to cause job satisfaction (Brief, 1998). One way to avoid this confound is to define job satisfaction strictly in cognitive terms (Dawis & Lofquist, 1984; Motowidlo, 1996; Porter, 1961; Weiss, 2002). For instance, Weiss (2002) defined job satisfaction as “a positive (or negative) evaluative judgment one makes about one’s job or job situation” (p. 175). Another way to circumvent the confound is to conceptualize job satisfaction in affective terms and treat cognitive evaluation as a separate and distinct cause of job satisfaction. This view is consistent with the bulk of job satisfaction research, which treats perceptions and evaluations of the job as causes of job satisfaction, not as job satisfaction itself (Lawler, 1973; Locke, 1969, 1976; Smith et al., 1969). This view is also consistent with research that treats satisfaction as a marker of the pleasantness dimension of affect and emotion (Watson & Tellegen, 1985; Russell, 1983). We adopt this perspective in the present discussion.

The effects of P-E fit on job satisfaction can be deduced by drawing from theories of job satisfaction and emotion. As noted earlier, Locke (1969) indicated that job satisfaction results from the appraisal of the job relative to values, where values are what people desire, want, or seek to attain. Locke (1969) further argued that values can be distinguished according to *desired amount* and *importance*. Desired amount is the standard against which perceived amounts of job characteristics are compared to determine job satisfaction, whereas importance moderates the effect of this comparison. The perspective expressed by Locke (1969) is consistent with other theories of job satisfaction (Dawis & Lofquist, 1984; Lawler, 1973; Smith et al., 1969). This perspective is also reflected in discussions of the effects of cognitive appraisal on emotion. For instance, Lazarus (1991) indicated that emotions are influenced by goal congruence, which is “the extent to which a transaction is consistent or inconsistent with what the person wants” (p.

150). According to Lazarus (1991), goal congruence leads to positive emotions, whereas goal incongruence produces negative emotions. This notion is common in theories that address the effects of cognitive appraisal on emotion (Roseman, 1984; Scherer, 1988).

The causes of job satisfaction outlined above have clear parallels with needs-supplies fit. These parallels are apparent in the theory of P-E fit developed by French et al. (1982). French et al. (1982) define needs broadly to include biological and psychological requirements, values developed through learning and socialization, and goals and motives to achieve desired ends. Supplies are the extrinsic and intrinsic resources and rewards available to fulfill the needs of the person. French et al. (1982) indicate that needs and supplies can be either objective or subjective but emphasize that only subjective needs and supplies affect attitudinal and emotional outcomes. Subjective needs in P-E fit theory correspond to valued or desired amounts of job characteristics in theories of job satisfaction (Lawler, 1973; Locke, 1976; Smith et al., 1969). P-E fit theory also indicates that the effects of needs-supplies fit are moderated by the importance of the dimension to which needs and supplies refer (French et al., 1974; Harrison, 1985), which is consistent with the moderating effects of importance described by Locke (1969, 1976; Mobley & Locke, 1970). Hence, subjective needs-supplies fit parallels the comparison process underlying theories of job satisfaction, and therefore we expect needs-supplies fit to directly influence job satisfaction as an affective or emotional response.

In contrast to needs-supplies fit, demands-abilities fit is not expected to directly influence job satisfaction. Rather, the effects of demands-abilities fit on job satisfaction should depend on the implications of demands-abilities fit for fulfilling the desires of the person (Lawler, 1973; Locke, 1976; Smith et al., 1969). Stated in terms of P-E fit, the effects of demands-abilities fit on job satisfaction are mediated by needs-supplies fit, which can be viewed a proximal cause of job satisfaction. Building on Harrison (1978), we suggest three mechanisms by which demands-

abilities fit can affect needs-supplies fit and thereby influence job satisfaction. First, demands-abilities fit can facilitate job performance, which brings intrinsic and extrinsic rewards that fulfill the needs of the person. This mechanism frames demands-abilities fit as instrumental to needs-supplies fit, which in turn enhances job satisfaction. Second, demands can become internalized as desires of the person, as when role expectations are accepted by the person as guidelines for his or her own behavior. The ability to meet these demands effectively yields supplies that fulfill the internalized desires. Thus, for demands that are internalized as desires, demands-abilities fit translates into needs-supplies fit, which should influence job satisfaction. Third, when the person is able to fulfill job demands, he or she is likely to experience a sense of competence that serves as a supply for the need for competence (Feather, 1991; White, 1959).

We also posit that the effects of supplementary fit on job satisfaction are indirect. We suggest three processes that can explain these effects. First, supplementary fit itself connotes similarity, which can serve as a supply for needs for affiliation and belonging (Baumeister & Leary, 1995; Feather, 1991; Koestner & McClelland, 1992), in that people who are similar are likely to develop strong social relationships (Byrne, 1971). Interacting with similar others can also enhance predictability and reduce ambiguity (Kluckhohn, 1951), thereby fulfilling needs for closure and clarity (Ivancevich & Donnelly, 1974; Lyons, 1971; Webster & Kruglanski, 1994). On the other hand, people also have needs to be different (Hornsey & Jetten, 2004) which can be inhibited when supplementary fit is high. On balance, we believe that the similarity associated with supplementary fit is more likely to enhance than interfere with needs-supplies fit, with the caveat that the balance of these effects depends on the relative strength of the person's motives to be similar versus different. Second, the person and environment characteristics involved in supplementary fit can influence needs and supplies, respectively, involved in needs-supplies fit (Cable & Edwards, 2004). Consider value congruence, a widely studied form of supplementary

fit (Cable & Judge, 1996; Chatman, 1989; Judge & Bretz, 1992; Meglino et al., 1989). Values considered important by the person should influence what the person wants from work (Hogan, 1991), and values viewed as important in an organization should affect the rewards it supplies to its members (Schein, 1992). For instance, an employee who considers autonomy important is likely to want high levels of autonomy at work, and an organization with values that emphasize autonomy is likely to promote autonomy in the workplace (Cable & Edwards, 2004). Through these effects, person and organization values can affect needs and supplies, respectively, with the fit between needs and supplies influencing satisfaction. Third, supplementary fit can foster communication and coordination (Adkins et al., 1996), which enable people to fulfill demands (Day & Bedeian, 1995; Motowidlo, 2003). This process enhances demands-abilities fit, which in turn influences needs-supplies fit and satisfaction through the mechanisms described earlier. The beneficial effects of similarity on performance can be diluted when tasks are non-routine or require different perspectives (Adkins et al., 1996; Ancona & Caldwell, 1992; Schneider et al., 1997). For such tasks, supplementary fit could hinder the ability of the person to meet demands, thereby diminishing demands-abilities fit and its effects on needs-supplies fit and satisfaction. We elaborate these points in our discussion of the effects of P-E fit on performance.

Organizational commitment. Another outcome frequently examined in P-E fit research is organizational commitment. The meaning of organizational commitment has been discussed extensively (Cohen, 2003; Meyer & Allen, 1991; Morrow, 1983; Reichers, 1985; Wiener, 1982). Mowday, Porter, and Steers (1982) described organizational commitment as a person's identification with and involvement in an organization. O'Reilly and Chatman (1986) defined organizational commitment as the psychological attachment felt by the person for the organization, and Mathieu and Zajac (1990) viewed organizational commitment as a bond or link between the individual to the organization. These and other definitions of organizational

commitment were reviewed and integrated by Meyer and Herscovitch (2001), who concluded that the essence of organizational commitment is a force that binds the person to a course of action with regard to the organization. Although various courses of action have been considered in organizational commitment research, the central course of action is continued membership in the organization (Meyer & Herscovitch, 2001).

Organizational commitment has been separated into dimensions that describe different forces that bind the person to the organization. The three dimensions proposed by Meyer and colleagues (Allen & Meyer, 1996; Meyer & Allen, 1991; Meyer, Allen, & Smith, 1993) have received considerable attention and integrate other dimensions in the literature (Meyer & Herscovitch, 2001). As articulated by Meyer and Allen (1991), *affective commitment* refers to the person's emotional attachment to, identification with, and involvement in the organization. Employees who are affectively committed stay with the organization because doing so fulfills their needs and desires. *Continuance commitment* is an awareness of the costs of leaving the organization. Employees who experience continuance commitment stay because leaving would mean forfeiting valued rewards or investments made in the organization, such as skills unique to a job or role. *Normative commitment* reflects a sense of obligation to remain in an organization. Employees who are normatively committed stay because they think they ought to do so, based on norms that dictate loyalty to the organization or generate a sense of reciprocity, such that staying with the organization compensates for rewards received from the organization.

Discussions of the antecedents of affective, continuance, and normative commitment (Meyer & Allen, 1991; Meyer & Herscovitch, 2001) suggest various linkages with P-E fit. These linkages are apparent for needs-supplies fit. Meyer and Allen (1991) indicate that affective commitment results when work experiences fulfill the person's needs. Hence, when work experiences constitute supplies that create needs-supplies fit, affective commitment should

occur. Needs-supplies fit is also implied by continuance commitment, which is caused by the belief that rewards from the organization would be lost if the person left the organization. This notion implies that membership in the organization provides supplies that fulfill the person's needs, thereby creating needs-supplies fit, coupled with the belief that leaving the organization would reduce or eliminate these supplies. Normative commitment refers to norms of loyalty or reciprocity that are fulfilled by staying with the organization. When norms are internalized, they may be viewed as psychological needs or desires. By staying with the organization, these needs are fulfilled, creating needs-supplies fit. Thus, normative commitment can result from needs-supplies fit where needs for loyalty or reciprocity are fulfilled by staying with the organization.

Affective, continuance, and normative commitment can be linked to demands-abilities fit through the mediating effects of need-supplies fit. Affective commitment should result from demands-abilities fit when the ability to meet demands provides rewards that are valued by the person (Harrison, 1978). Analogously, continuance commitment should occur when demands-abilities fit yields rewards that would be forfeited if the person left the organization (Mathieu & Zajac, 1990; Stevens, Beyer, & Trice, 1978). Demands-abilities fit can also lead to continuance commitment when, in order to fulfill demands, the person develops abilities that are specific to the organization. These idiosyncratic abilities can function as "side bets" (Becker, 1960), which are investments that would be lost if the person left the organization. Normative commitment can result from demands-abilities fit when norms of loyalty or reciprocity are perceived as role demands that the person would meet by staying (Wiener, 1982). Meeting these role demands can create needs-supplies fit by generating approval from role senders (Kahn & Quinn, 1970), which serves as a supply for approval needs (Crowne & Marlowe, 1964), or when role demands are internalized as needs that are fulfilled by remaining in the organization.

Supplementary fit can also influence affective, continuance, and normative commitment

through its effects on needs-supplies fit. As noted earlier, supplementary fit provides supplies that can fulfill needs for affiliation, belonging, closure, and clarity. If these needs are stronger than the need to be different, then supplementary fit should enhance needs-supplies fit. Also, as previously explained, the person and environment constructs involved in supplementary fit can influence needs and supplies, respectively, thereby influencing needs-supplies fit. In addition, supplementary fit can enhance task performance, bringing intrinsic and extrinsic rewards that fulfill the needs of the person. Through these mechanisms, supplementary fit can affect need-supplies fit and thereby influence affective commitment. Supplementary fit should be positively related to continuance commitment when the person believes that the benefits of supplementary fit would be foregone by leaving the organization. Finally, supplementary fit may generate normative commitment when the person is similar to others on values of loyalty and reciprocity. Being in the company of others who espouse these values makes them salient and creates social pressures that promote the internalization of values as desires (Cable & Parsons, 2001), which can be fulfilled by remaining with the organization (Weiner, 1982).²

Mental and Physical Well-Being

Another category of outcomes relevant to P-E fit includes indicators of mental and physical well-being, such as anxiety, depression, tension, and somatic health. These outcomes have been studied extensively in research on stress (Baum & Posluszny, 1999; Danna & Griffin, 1999; Ganster & Schaubroeck, 1991; Kahn & Byosiere, 1992; Quick, Cooper, Nelson, Quick, & Gavin, 2003; Schneiderman, Ironson, & Siegel, 2005; Sonnentag & Frese, 2003; Taylor, Repetti, & Seeman, 1997). From a conceptual standpoint, stress has strong linkages to P-E fit, given that many theories of stress implicitly or explicitly incorporate P-E fit as a central concept (Edwards, 1992; French et al., 1982; Hobfoll, 1989; Lazarus & Folkman, 1984; McGrath, 1976; Schuler, 1980). Thus, we draw from the stress literature to examine the connections between P-E fit and

mental and physical well-being.

We begin by considering the definition of stress, which has generated considerable debate in the stress literature (Kahn & Byosiere, 1992; Lazarus, 1991; Parker & DeCotiis, 1983; Schuler, 1980). Several major approaches to defining stress can be distinguished. One approach treats stress as a stimulus in the environment that damages well-being (Beehr, 1998; Cooper & Marshall, 1976; Kahn & Quinn, 1970). Examples of such stimuli include role conflict, role ambiguity, work load, and responsibility for others (Beehr, 1998; Kahn & Byosiere, 1992). Stimulus definitions are problematic in that they overlook individual differences in the appraisal of the environment (Lazarus, 1966; McGrath, 1970) and are circular, given that a stimulus is defined as stressful only when it damages well-being (Edwards, 1992; Lazarus & Folkman, 1984). Another approach defines stress as a psychological or physiological response to demands, constraints, or opportunities faced by the person (Ivancevich & Matteson, 1980; Martin & Schermerhorn, 1983; Parker & DeCotiis, 1983; Selye, 1982). Response definitions are also circular, in that a response is classified as stress only when it results from its assumed causes (McGrath, 1970). In addition, response definitions fail to distinguish situations that are benign from those where responses are ameliorated due to effective coping (Edwards, 1992; Lazarus & Folkman, 1984).

Problems with stimulus and response definitions are avoided by relational definitions, which define stress in terms of the relationship between the person and situation (Eulberg, Weekley, & Bhagat, 1988; Lazarus & Folkman, 1984; Schuler, 1980). Relational definitions fall into two primary categories. One category defines stress in terms of situational demands that tax or exceed the abilities or resources of the person (Lazarus & Folkman, 1984; McGrath, 1976; Shirom, 1982). Another category indicates that stress exists when intrinsic or extrinsic rewards of the situation fall short of the needs, desires, or goals of the person (Cummings & Cooper,

1979; Edwards, 1992; Hobfoll, 1989; Schuler, 1980). Although these definitions appear inconsistent, Harrison (1978) contends that demands that exceed the abilities or resources of the person are stressful only if meeting demands yields valued outcomes or the person believes that meeting demands is inherently desirable (White, 1959). This reasoning is consistent with McGrath (1976) and Lazarus and Folkman (1984), who note that excess demands are stressful only when failure to meet demands is considered costly by the person. Hence, relational definitions converge on the notion that stress arises when rewards that fall short of the person's needs, desires, and goals (Cummings & Cooper, 1979; Edwards, 1992; Hobfoll, 1989; Schuler, 1980), where rewards may depend on whether the person is able to fulfill the demands of the situation (Edwards et al., 1998; Harrison, 1978; Lazarus & Folkman, 1984; McGrath, 1976).

Relational definitions of stress map onto needs-supplies fit, such that stress exists when supplies fall short of the person's needs. This correspondence is evident in the P-E fit theory of stress (Edwards et al., 1998; French et al., 1982; Harrison, 1978), which defines stress as misfit between subjective needs and supplies. This theory also indicates that subjective needs-supplies misfit is the critical mechanism through which the person and environment jointly influence mental and physical well-being. Similarly, cybernetic theories of stress (Cummings & Cooper, 1979; Edwards, 1992) position the discrepancy between perceived and desired states as the proximal cause of well-being. Thus, needs-supplies misfit can be interpreted as stress when needs and supplies are both subjective and supplies fall short of needs. Theories that define stress in terms of needs-supplies misfit also indicate that the effects of stress on well-being are intensified when needs are important to the person (Cummings & Cooper, 1979; Edwards, 1992; French et al., 1982; Schuler, 1980), analogous to the moderating effects of importance on the relationship between needs-supplies fit and of job satisfaction (Locke, 1969, 1976; Mobley & Locke, 1970). Drawing from these theories, needs-supplies fit should directly affect mental and

physical well-being, with greater effects for needs that are considered important by the person.

Based on the conceptualizations of stress reviewed above, the effects of demands-abilities fit on well-being should be indirect, depending on the degree to which meeting demands yields supplies that fulfill the needs of the person. This notion is consistent with theories that treat stress as situational demands that exceed the abilities of the person, given that excess demands are considered stressful only if meeting demands yields intrinsic or extrinsic rewards that fulfill the needs of the person, thereby influencing needs-supplies fit (French et al., 1982; Lazarus & Folkman, 1984; McGrath, 1976). As noted earlier, demands-abilities fit can enhance needs-supplies fit when meeting demands facilitates performance and in turn generates rewards, when demands are internalized as personal desires, or when demands-abilities fit itself is perceived as a supply that fulfills the person's need for competence. Each of these mechanisms treats needs-supplies fit as a mediator of the effects of demands-abilities fit on well-being (Harrison, 1978).

We suggest two pathways by which supplementary fit influences well-being. First, as discussed earlier, supplementary fit can influence needs-supplies fit by serving as a supply for affiliation, belonging, closure, and clarity needs, by influencing needs and supplies involved in needs-supplies fit, and by influencing job performance and its attendant rewards. To the extent these mechanisms enhance needs-supplies fit, stress should be reduced and well-being should improve. Second, based on the similarity-attraction paradigm (Byrne, 1971), supplementary fit promotes the development of relationships that can provide social support, which ameliorates stress and improves well-being (Cohen & Wills, 1985; Coyne & Downey, 1991; House, 1981; Uchino, Cacioppo, & Keicolt-Glaser, 1996). Two models that explain the effects of social support have been proposed, one indicating that social support directly influences well-being, and another that casts social support as a buffer of the effects of stress on well-being (Cohen & Wills, 1985; House, 1981). In terms of P-E fit, the direct effects of social support are consistent

with the notion that support acts as a supply that fulfills affiliation needs. The buffering effects of social support suggest that support from others helps the person meet demands that generate stress, acquire supplies to fulfill needs, or reinterpret the subjective person or environment such that the effects of misfit are diminished (Cohen & McKay, 1984). Thus, social support research suggests a variety of mechanisms by which supplementary fit can ameliorate stress and improve well-being.

Performance

The final category of outcomes we consider involves job performance. We adopt the definition of job performance advanced by Motowidlo (2003, p. 40) as the “total expected value to the organization of the discrete behavioral episodes that an individual carries out over a standard period of time.” This definition focuses on individual behavior as distinct from its results, which can depend on situational factors beyond the control of the individual (Motowidlo, Borman, & Schmit, 1997). Conceptualizing performance in terms of individual behavior is also consistent with the psychological perspective on which job performance research is founded (Motowidlo, 2003).

In this discussion, we focus on task performance and contextual performance. *Task performance* refers to the recurring set of activities or expected behaviors of an individual that are typically described by formal job descriptions (Borman & Motowidlo, 1993; Katz & Kahn, 1978). These behaviors tend to be “highly elaborated, relatively stable, and defined to a considerable extent in explicit or even written terms” (March & Simon, 1958, p. 4). *Contextual performance* refers to behavior that contributes to organizational effectiveness through its effects on the psychological, social, and organizational work context (Borman & Motowidlo, 1993). Contextual performance overlaps with organizational citizenship behavior (OCB), which Organ (1988) defined as “individual behavior that is discretionary, not directly or explicitly recognized

by the formal reward system, and that in the aggregate promotes the effective functioning of the organization” (p. 4). This definition excludes behaviors that are formally rewarded or perceived as non-discretionary. Subsequent OCB research indicated that the boundaries that define formal rewards and discretionary behavior are often unclear (Morrison, 1994). In light of this research, Organ (1997) recently presented a revised definition of OCB that is synonymous with contextual performance. Discussions of contextual performance have separated it into several dimensions, such as following rules and policies, volunteering to carry out tasks, and helping others (Borman and Motowidlo, 1993). However, these dimensions are generally attributed to the same causes (Organ & Konovsky, 1989; Organ & Ryan, 1995). Therefore, we treat contextual performance as a summary concept, while recognizing that it comprises distinct performance behaviors.

Research points to different antecedents of task and contextual performance. Task performance is primarily a function of the abilities and motivation of the person. To successfully complete a task, an individual must have the appropriate abilities, knowledge, and skills and must also be motivated to complete the task (Hunter, 1983; Lawler, 1973; Motowidlo et al., 1997; Organ & Ryan, 1995; Vroom, 1964; Waldman & Spangler, 1989; Wanous, 1992). In contrast, contextual performance is primarily linked to attitudes (Organ, 1990; Organ & Ryan, 1995). For example, individuals are more likely to engage in contextual performance when they feel satisfied or are affectively committed to the organization (Organ & Ryan, 1995; Podsakoff, MacKenzie, Paine, & Bacharach, 2000). Although the primary causes of task and contextual performance have been treated as distinct, some researchers have pointed to causes that are common to both types of performance. For example, performing discretionary tasks should depend on the abilities of the person relevant to such tasks (Organ & Ryan, 1995). We examine the effects of P-E fit on task and contextual performance by drawing from their primary causes and by selectively incorporating other causes that provide linkages to P-E fit.

Demands-abilities fit should strongly predict task performance and, to a lesser extent, contextual performance. The performance literature points to ability as a key predictor of task performance (Hunter, 1983; Motowidlo et al, 1997; Vroom, 1964; Waldman & Spangler, 1989). Ability promotes the development of job knowledge and skills, which in turn facilitate task performance. (Hunter, 1983; Schmidt, Hunter, & Outerbridge, 1986). Some researchers have further emphasized that performance depends upon the degree to which abilities match the requirements of the job (Motowidlo, 2003; Wanous, 1992). The match between abilities and job requirements corresponds to demands-abilities fit, which is linked to task performance in P-E fit research (Dawis & Lofquist, 1984; Muchinsky & Monahan, 1987; Pervin, 1968). Demands-abilities fit may also influence contextual performance which, as noted previously, depends upon the ability to perform the intended behaviors (Motowidlo et al, 1997). Although the demands for such behavior may not be prescribed by the job, the person can gauge them from perceptions of the work role (Morrison, 1994) or infer them on the basis of personality and dispositional factors (Motowidlo et al., 1997).

Needs-supplies fit should also relate to task and contextual performance. The effects of needs-supplies fit on task performance can be attributed to the motivating properties of supplies that are expected to fulfill needs. Motivation develops from the perception that effort will bring rewards that the person considers desirable (Lawler, 1973; Naylor, Pritchard, & Ilgen, 1980; Porter & Lawler, 1968; Vroom, 1964). Stated in terms of needs-supplies fit, a current unfulfilled need will motivate performance when anticipated supplies are expected to fulfill this need. This reasoning indicates that needs fulfilled by current supplies have no motivating potential. Rather, motivation results when the person experiences current needs-supplies misfit and expects that job performance will yield supplies that produce needs-supplies fit. As noted earlier, the effect of motivation on performance also requires that the person is able to meet task demands. Thus, we

expect that current needs-supplies misfit will lead to task performance when anticipated supplies are expected to meet needs, provided that abilities are sufficient to fulfill task demands.

Needs-supplies fit should affect contextual performance through job attitudes. Attitudes such as satisfaction and commitment are widely viewed as predictors of contextual performance (Morrison, 1994; Organ, 1990; Organ & Ryan, 1995; Podsakoff et al., 2000). When employees are satisfied, they are motivated to reciprocate as part of the exchange relationship with the employer (Organ, 1990). In addition, employees who are satisfied or committed tend to define their job responsibilities broadly, viewing contextual performance as part of their work role (Morrison, 1994). For these reasons, people who are satisfied or committed are likely to engage in contextual performance. As explained earlier, satisfaction and commitment result from the fit between needs and supplies. Therefore, needs-supplies fit can affect contextual performance indirectly, mediated by attitudes. Some researchers have suggested that contextual performance can result directly from the evaluation of job characteristics relative to needs, independent of job attitudes (Organ, 1990; Organ & Konovsky, 1989; Organ & Ryan, 1995). This logic implies a direct effect of needs-supplies fit on contextual performance. Therefore, needs-supplies fit influences contextual performance both directly and indirectly, mediated by attitudes such as satisfaction and commitment.

Finally, supplementary fit can influence task and contextual performance. For task performance, supplementary fit can facilitate communication and coordination with coworkers (Day & Bedeian, 1995; Neuman, Wagner, & Christiansen, 1999), which increase knowledge acquisition, role clarity, and predictability of behavior (Kluckhohn, 1951; Motowidlo, 2003). As a result, individuals may be better able to meet task demands, which in turn should increase task performance. On the other hand, supplementary fit can reduce variation in perspectives and approaches to problem-solving, which can hinder the ability to meet the demands of tasks that

are non-routine or require different perspectives (Schneider et al, 1997; Ancona & Caldwell, 1992; Adkins et al., 1996). In such instances, supplementary fit would reduce demands-abilities fit and hamper task performance. The effects of supplementary fit on task performance should depend on the degree to which the person is interdependent with others in the environment (Ancona & Caldwell, 1992). If the person works independently, then the degree to which he or she is similar to others should have little effect on task performance. If the person is highly interdependent with others, then the effects of supplementary fit should be accentuated.

We suggest three mechanisms by which supplementary fit can influence contextual performance. First, supplementary fit can increase contextual performance because individuals prefer to help others who are similar (Graf & Riddell, 1972; Karylowski, 1976; Sole, Marton, & Hornstein, 1975), and helping is considered an important dimension of contextual performance (Podsakoff et al., 2000). Second, supplementary fit can affect contextual performance through needs-supplies fit. As described earlier, supplementary fit can increase needs-supplies fit when similarity provides supplies for needs for affiliation, belonging, closure, or clarity, when the person and environment constructs involved in supplementary fit influence needs and supplies, and when supplementary fit enhances job performance and brings rewards that fulfill needs. To the extent needs are fulfilled, satisfaction increases and contextual performance is enhanced (Morrison, 1994; Organ, 1990; Organ & Ryan, 1995; Podsakoff et al., 2000). Finally, as described earlier, similarity can promote demands-abilities fit for routine tasks that involve interdependence. Demands-abilities fit in turn can influence task performance, bring desired rewards, and lead to satisfaction and contextual performance.

Summary and Integration

Our discussion of the effects of P-E fit on attitudes, well-being, and performance reveals several general themes. First, the effects of P-E fit depend on the type of fit and outcome under

consideration. For attitudes and well-being, needs-supplies fit is the primary cause, whereas demands-abilities fit and supplementary fit are expected to exert weaker effects. In contrast, task performance is linked to demands-abilities fit and the anticipation that needs-supplies fit will result from effective performance. The effects of supplementary fit on task performance depend on the nature of the task and the degree of interdependence between the person and others in the work environment. Unlike task performance, contextual performance should relate primarily to needs-supplies fit and, to a lesser extent, demands-abilities fit and supplementary fit. Hence, the distinctions between supplementary fit, demands-abilities fit, and needs-supplies fit are crucial for conceptualizing the effects of P-E fit on the outcomes considered here.

Second, the effects of P-E fit on outcomes involve combinations of different types of fit. For example, the conceptual logic relating demands-abilities fit to attitudes and well-being positions needs-supplies fit as a mediating mechanism, such that demands-abilities fit influences needs-supplies, which in turn affects attitudes and well-being. Similar logic applies to the effects of supplementary fit on attitudes and well-being, which are transmitted through needs-supplies fit and, in some instances, demands-abilities fit. For task performance, the effects of demands-abilities fit and needs-supplies fit are interactive, such that both types of fit are required for task performance to occur. These effects underscore the value of adopting an integrative view of P-E fit and casting different types of fit as elements of a broader theoretical model.

Third, our discussion demonstrates that theories pertaining to outcomes can provide a solid foundation for conceptualizing the effects of P-E fit. For each outcome, we were able to derive reasoning from relevant theories that pointed to person and environment constructs that fall within the domain of P-E fit. Drawing from these theories helped explicate the process by which P-E fit influences outcomes, which can enhance the theoretical rigor of P-E fit research. The concept of P-E fit can also enrich theories that explain outcomes. For instance, theories of

performance emphasize ability as a key predictor of task performance, whereas the concept of demands-abilities fit underscores the point that task performance depends on how well abilities fit the demands of the task. Thus, integrating theories of P-E fit with theories of outcomes can yield mutual benefits.

Our discussion of the effects of P-E fit on outcomes focused on the distinction between supplementary fit, demands-abilities fit, and needs-supplies fit. However, other distinctions of the P-E fit concept are relevant to the relationship between P-E fit and outcomes. Referring to Figure 1, the level of the environment has implications for the strength of the effects of P-E fit. For instance, when the environment refers to the organization, as in studies of the congruence between person and organization values, the effects of fit should be strongest for outcomes that are also cast at the organizational level, such as organizational commitment. Value congruence with other individuals or social collectives, such as the supervisor or work group, should relate to commitment framed at the same environmental level, as represented by research that treats the supervisor and work group as foci of commitment (Becker, 1992). The effects of P-E fit on outcomes should also be strengthened when the person, the environment, and the outcome refer to the same content dimension. For example, we would expect needs-supplies fit regarding pay to have stronger effects on pay satisfaction than on satisfaction with other job facets or with the job as a whole (French et al., 1974). Thus, we expect the strongest effects of P-E fit on outcomes when the outcome is commensurate with the person and environment and is at the same level as the environment.

Functional Forms Relating Person-Environment Fit to Outcomes

Thus far, our discussion of the effects of P-E fit on outcomes has examined these effects in a general sense. We now examine these effects in greater detail by considering their functional form. As noted earlier, much P-E fit research is based on the assumption that fit is beneficial and

that the effects of fit are the same regardless of the absolute levels of the person and environment or the direction of their difference. This assumption is reflected by the function in Figure 2a, which depicts a two-dimensional relationship between P-E fit and an outcome. The function shows that the outcome is maximized when the difference between the person and environment is zero and decreases symmetrically as the difference between the person and environment increases in either direction. By using the difference between the person and environment as a predictor, the function also implies that their absolute levels are irrelevant. For instance, the maximum value of the outcome in Figure 2a is expected when the person and environment match, regardless of whether they are low, medium, or high in an absolute sense.

The function in Figure 2a oversimplifies the effects of P-E fit in several respects. First, it reduces the inherently three-dimensional relationship between the person, the environment, and the outcome to two dimensions (Edwards, 1994). This point is illustrated by comparing Figure 2a to Figure 2b, which shows a three-dimensional surface relating the person and environment to the outcome. In Figure 2b, the floor of the graph is bounded by the person and environment axes. The solid line running from the near corner to the far corner of the floor is the *fit line*, along which the person and environment are equal. The dashed line running from the left corner to the right corner is the *misfit line*, which captures varying degrees of deviation between the person and environment.³ The surface in Figure 2b is algebraically equivalent to the function in Figure 2a. However, the surface retains the person and environment as distinct constructs, which is a necessary precursor to conceptualizing the degree of fit between the person and environment. The three-dimensional conceptualization in Figure 2b can also capture a much wider range of hypotheses than the two-dimensional representation in Figure 2a, as we later demonstrate.

Second, the function in Figure 2a represents one of many possible relationships between P-E fit and the outcome. Consider the relationship between needs-supplies fit and satisfaction.

When needs and supplies refer to dimensions such as pay, satisfaction is likely to increase not only as supplies increase toward needs, but also as supplies exceed needs (Locke, 1976). This notion is reflected in conceptual discussions of P-E fit (French et al., 1982; Rice et al., 1985; Naylor et al., 1980) and is consistent with research on need satisfaction (Porter & Lawler, 1968; Wanous & Lawler, 1972), which treats satisfaction as a function of the algebraic difference between needs and rewards. Other functions are conceptually plausible (French et al., 1982; Kulka, 1979; Naylor et al., 1980; Rice et al., 1985), but few have received attention in P-E fit research.

Third, the function in Figure 2a does not address variation in the outcome associated with the absolute levels of the person and environment. It stands to reason that the experience of P-E fit should differ depending on whether the person and environment constructs are high or low. To illustrate, for needs-supplies fit regarding job complexity, wanting and having a simple job is very different from wanting and having a complex job. Likewise, the experience of demands-abilities fit is likely to differ depending on whether demands and abilities correspond to a sixth-grade education or advanced graduate training. In similar fashion, congruence on the value of altruism between an employee and supervisor can have different implications depending on whether both people consider altruism unimportant or extremely important. By construction, the function in Figure 2a is incapable of capturing variation in outcomes produced by the absolute levels of the person and environment.

In this section, we demonstrate an approach to developing hypotheses about the form of the relationship between the person, the environment, and the outcome. This approach focuses on the joint effects of the person and environment along the fit and misfit lines, as shown in Figure 2b. Hypotheses along these lines can be combined to yield a predicted surface relating the person and environment to the outcome. We applying this approach to the effects of needs-

supplies fit, demands-abilities fit, and supplementary fit, using outcomes that are prototypical for these forms of fit. As will be seen, the surfaces produced by this approach go far beyond the simplified surface corresponding to the function in Figure 2a.

Needs-Supplies Fit and Satisfaction

We first consider the effects of needs-supplies fit on satisfaction. For this illustration, we conceptualize the environment at the individual level and content dimensions at the facet level, as is common in needs-supplies fit research (Edwards, 1991). Along the misfit line, satisfaction should increase as supplies increase toward needs (Harrison, 1978). This argument draws from need fulfillment research which indicates that, when supplies are insufficient to fulfill needs, people experience negative affect, which is manifested by decreased satisfaction (Dawis & Lofquist, 1984; Diener, 1984; Locke, 1969; Murray, 1938). This argument is consistent with the surfaces in Figures 3a, 3b, and 3c, each of which indicate that, along the misfit line, the outcome increases as the environment increases toward the person.

As supplies exceed needs, the effects on satisfaction are expected to vary depending on the implications of excess supplies for other needs and for the same need at a later time. Satisfaction should decrease if excess supplies interfere with the fulfillment of needs on other dimensions, as when interaction with coworkers goes beyond the person's need for affiliation and interferes with his or her need for privacy (Eidelson, 1980; French et al., 1974; Harrison, 1978). Satisfaction should also decrease if excess amounts of a supply in the present reduce the availability of that supply in the future, as when an employee receives excess praise from a supervisor in the present and is later bypassed as the supervisor directs his or her approval to other subordinates. These two mechanisms have been labeled *interference* and *depletion*, respectively (Edwards, 1996) and result in a parabolic relationship along the misfit line, as indicated by the surface in Figure 3a.

Two alternative mechanisms produce a positive relationship between excess supplies and satisfaction, corresponding to the surface in Figure 3b. Specifically, excess supplies increase satisfaction when the excess can be used to fulfill other needs, as when autonomy supplies that exceed the person's need for control (Burger & Cooper, 1979) are used to initiate changes at work that fulfill needs on other dimensions. Excess supplies also increase satisfaction when supplies can be saved for later use, as when income that exceeds current economic needs is set aside for future economic needs. These mechanisms are labeled *carryover* and *conservation*, respectively (Edwards, 1996). If excess supplies are not subject to interference, depletion, carryover, or conservation, then an asymptotic relationship is expected along the misfit line, as depicted by the surface in Figure 3c.

Along the fit line, we expect satisfaction to be higher when needs and supplies are both high than when both are low. High needs represent ambitious standards held by the person, and high supplies signify that these standards have been met. Fulfilling high standards can itself serve as a supply for needs concerning growth and self-actualization (Alderfer, 1972; Maslow, 1954; Rokeach, 1973). In addition, high needs and supplies on a particular dimension can relate to high needs and supplies on other dimensions. For instance, jobs that are high in complexity often bring supplies such as pay, status, and recognition, and people who want complex jobs are likely to want high levels of pay, status, and recognition (Harrison, 1978). These relationships compound the benefits of high needs and supplies, further contributing to the fulfillment of needs for growth and self-actualization. If satisfaction is higher when needs and supplies are both high than when both are low, the surface relating needs and supplies to satisfaction will be positively sloped along the fit line, yielding the surfaces in Figures 4a, 4b, and 4c.

Demands-Abilities Fit and Performance

Next, we examine the effects of demands-abilities fit on performance. For illustration,

we frame demands at the job level and content dimensions at the domain level, as represented by dimensions such as training, education, experience, and work load. In addition, we assume the person is motivated to perform, which is necessary for demands-abilities fit to influence performance (Porter & Lawler, 1968). Along the misfit line, we expect performance to increase as abilities increase toward demands, based on the premise that performance is hampered when abilities are insufficient for job requirements (Dawis & Lofquist, 1984; Muchinsky & Monahan, 1987; Waldman & Spangler, 1989; Wanous, 1992) and improves as this deficiency is resolved. This reasoning is depicted by the surfaces in Figures 5a, 5b, and 5c, each of which shows that performance declines as abilities fall short of demands.

The effects of excess abilities on performance can be deduced using the principles of interference, depletion, carryover, and conservation. Interference occurs when excess abilities regarding one demand reduce abilities pertaining to other demands, as when developing a specific ability beyond the level required by the job leaves other abilities underdeveloped. Depletion results when excess ability in the present reduces the level of ability in the future, as when abilities that exceed demands are underutilized and atrophy, making it difficult to meet future demands (Baldwin & Ford, 1988). Interference and depletion produce a parabolic relationship along the misfit line, such that performance decreases as abilities deviate from demands in either direction. This relationship corresponds to the surface in Figure 5a.

Carryover indicates that excess abilities can be applied to demands on other dimensions. For instance, developing technical skills beyond those required for a particular task could yield expertise that transfers to other tasks (Baldwin & Ford, 1988). Conservation applies to abilities that represent personal resources, such as time and energy, for which excess levels in the present can be reserved for future demands. Carryover and conservation would result in a monotonic relationship along the misfit line, where performance increases as abilities increase toward

demands and continues to increase as abilities exceed demands. This relationship is shown in Figure 5b. If abilities are not prone to interference, depletion, carryover, or conservation, then performance would level off as abilities exceed demands and produce an asymptotic relationship along the misfit line, as in Figure 5c.

Along the fit line, we expect performance to be higher when demands and abilities are both high than when both are low, for two reasons. First, high demands coupled with high abilities means that the person is confronted with difficult performance requirements and is equipped to meet them. In contrast, low demands along with low abilities signify that the person faces easy performance requirements and can fulfill them. Assuming motivation is the same in both cases, performance would be higher in the former case than in the latter case, given that a higher performance standard is being met. Second, the combination of high demands and high abilities characterizes situations in which performance goals are difficult but attainable, which can promote motivation and enhance performance (Locke & Latham, 1991). These mechanisms would produce a positive relationship with performance along the demands-abilities fit line, as shown by the surfaces in Figures 6a, 6b, and 6c.

Supplementary Fit and Affective Commitment

We now turn to the effects of supplementary fit on commitment. We discuss these effects in terms of value congruence and affective commitment, which are commonly studied in research on supplementary fit (Verquer et al., 2003). As noted earlier, affective commitment depends on the degree to which work experiences fulfill the needs of the person (Meyer & Herscovitch, 2001). Hence, affective commitment should be influenced by value congruence to the extent that value congruence leads to need fulfillment. We apply this principle as we consider the effects of value congruence on affective commitment along the fit and misfit lines.

In general, we expect a curvilinear relationship between affective commitment and value

congruence along the misfit line, such that affective commitment is maximized when person and organization values are equal. Value congruence signifies interpersonal similarity on dimensions that describe the identity of the person and organization. Because value congruence signifies interpersonal similarity, it can fulfill needs for affiliation, belonging, closure, and clarity, and can also promote coordination and communication that facilitate job performance and bring desired rewards. Given that interpersonal similarity decreases symmetrically as person and organization values deviate from one another in either direction, it follows that outcomes of value congruence that operate through interpersonal similarity will also decrease symmetrically. This reasoning leads to the surface in Figure 7a.

The symmetric effects of value congruence on affective commitment shown in Figure 7a can be altered to the extent that person and organization values influence the needs and supplies of the person and organization, respectively (Cable & Edwards, 2004). These effects follow from the premise that the values of the person should influence what the person wants (Hogan, 1991), and the values of the organization should affect the rewards supplied by the organization (Schein, 1992). The effects of person and organization values on needs and supplies should modify the shape of surface along the misfit line in the region where the values of the organization exceed those of the person. If organization values are related to supplies that are prone to interference or depletion, then the decrease in affective commitment would be augmented, as in Figure 7b. Alternately, if organization values correspond to supplies that produce carryover or conservation, then the decrease in affective commitment would be dampened, as in Figure 7c. These effects follow from the logic used to derive the effects of needs-supplies fit on satisfaction along the misfit line where supplies exceed needs.

The symmetric effects of value congruence can also be modified when person and organization values affect abilities and demands, respectively. These effects are based on the

assumption that people develop abilities that enable them to pursue what they value (Noe & Wilk, 1993; Tharenou, 2001) and that organizational place demands on employees that reflect what the organization considers important (O'Reilly & Chatman, 1996; Schein, 1992). The fit between demands and abilities should influence performance, which in turn relates to intrinsic and extrinsic rewards that can fulfill the needs of the person, thereby enhancing affective commitment. However, as noted earlier, the effects of demands-abilities fit on performance along the misfit line depends on the consequences of excess abilities. If abilities are subject to interference or depletion, then excess abilities should reduce performance. If abilities such as these are linked to personal values, then performance would be hindered when personal values exceed organizational values, which in turn would reduce supplies that fulfill the person's needs, thereby decreasing affective commitment. This reasoning is reflected in Figure 7d. Conversely, if abilities prone to carryover or conservation are linked to personal values, then performance would be enhanced when personal values are greater than organization values. This would in turn lead to increased affective commitment, as shown in Figure 7e. These effects draw from the reasoning associated with the effects of demands-abilities fit on performance along the misfit line when abilities exceed demands.

Finally, along the fit line, we posit that affective commitment will be higher when person and organization values are both high than when both are low, for two reasons. First, if person values are related to needs and abilities and, analogously, organization values are related to supplies and demands, then high levels of person and organization values imply high levels of needs and supplies and high levels of demands and abilities. As argued earlier, high levels of needs and supplies enhance satisfaction, and high levels of demands and abilities increase performance, which in turn brings intrinsic and extrinsic rewards. Both of these mechanisms should strengthen affective commitment, for reasons explained earlier. Second, the effects of

value congruence on affective commitment should be stronger when the person considers the value dimension important. For example, if a person highly values altruism, then congruence with an organization that values altruism will be important to the person, given that the strength of a value signifies its importance to the person (Rokeach, 1973). Importance should moderate the effects of value congruence on affective commitment, given that affective commitment is influenced by need fulfillment, the effects of which are moderated by need importance (French et al., 1982; Kristof, 1996; Locke, 1976; Mobley & Locke, 1970). These mechanisms indicate a positive slope along the fit line, transforming the surfaces in Figure 7 into those in Figure 8.

Summary and Implications

The preceding discussion has demonstrated an approach to developing hypotheses along the fit and misfit lines that yield surfaces relating the person and environment to outcomes. This approach underscores the value of conceptualizing the effects of P-E fit in three dimensions, which maintains the conceptual distinctions between person and environment constructs and captures the inherent complexity of their joint effects on outcomes. Some researchers have discussed relationships between P-E fit and outcomes that go beyond the simplified function in Figure 2a (French et al., 1982; Kulka, 1979; Locke, 1976; Naylor et al., 1980; Rice et al., 1985), but these relationships have been presented as possibilities to be explored. In contrast, the approach demonstrated here applies conceptual logic that leads to hypothesized surfaces to be formally tested. Moreover, previous discussions of P-E fit relationships have rarely considered the effects of the absolute levels of person and environment constructs, as reflected by variation along the fit line. The approach demonstrated here can be extended to other person, environment, and outcome constructs, thereby enhancing the rigor and complexity of P-E fit research.

Conclusion

In this chapter, we have presented an integrative conceptualization of the P-E fit concept,

drawn from outcome theories to explain the effects of P-E fit, and demonstrated an approach to conceptualizing the form of the joint effects of the person and environment on outcomes. Our goal was to provide a foundation for probing basic assumptions that underlie P-E fit research, with the intent of advancing this important area of inquiry. Our discussion indicates that P-E fit is not inherently beneficial and that the effects of P-E fit vary across person, environment, and outcome constructs. We also explained how the effects of P-E fit depend on the absolute levels of the person and environment and the direction of their difference. We hope the conceptual issues we have surfaced will help P-E fit researchers address the challenge of conceptualizing the effects of P-E fit on outcomes. At the same time, the literature relevant to the effects of P-E fit is vast, and we have merely scratched the surface of conceptual issues that are deep and complex. Thus, rather than providing answers that are definitive and complete, we have surfaced questions and assumptions that merit scrutiny and demonstrated how they might be addressed, with the ultimate objective of enhancing the theoretical and conceptual rigor of P-E fit research.

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Footnotes

1. Some studies of the fit between psychological needs and environmental supplies have used the term *supplies-values fit* (Choi, 2004; Edwards, 1996; Edwards & Rothbard, 1999; Livingstone, Nelson, & Barr, 1997; Taris & Feij, 2001) to reflect the distinction between values as conscious desires and biological needs that may operate outside of awareness (Locke, 1969). Here, we refer to needs-supplies fit to encompass both psychological and biological needs and to avoid confusion with value congruence, which is a form of supplementary fit (Chatman, 1989; Meglino et al., 1989; Kristof, 1996).
2. Some researchers include supplementary fit, expressed as value congruence, in the operational definition of organizational commitment (Mowday et al., 1982; O'Reilly & Chatman, 1986). Doing so confounds organizational commitment with one of its causes (Edwards & Bagozzi, 2000). The approach we adopt treats supplementary fit and organizational commitment as distinct constructs, which is necessary to meaningfully examine their relationship with one another.
3. Strictly speaking, any line running parallel to the misfit line reflects deviation between the person and environment. However, the misfit line in Figure 2b encompasses more variation in misfit than any alternative line.

Figure Captions

Figure 1. An integrative conceptualization of P-E fit.

Figure 2. Two-dimensional and three-dimensional conceptualizations of the effects of P-E fit.

Figure 3. Relationships between needs-supplies misfit and satisfaction.

Figure 4. Relationships between needs-supplies misfit and satisfaction with positive slope along the fit line.

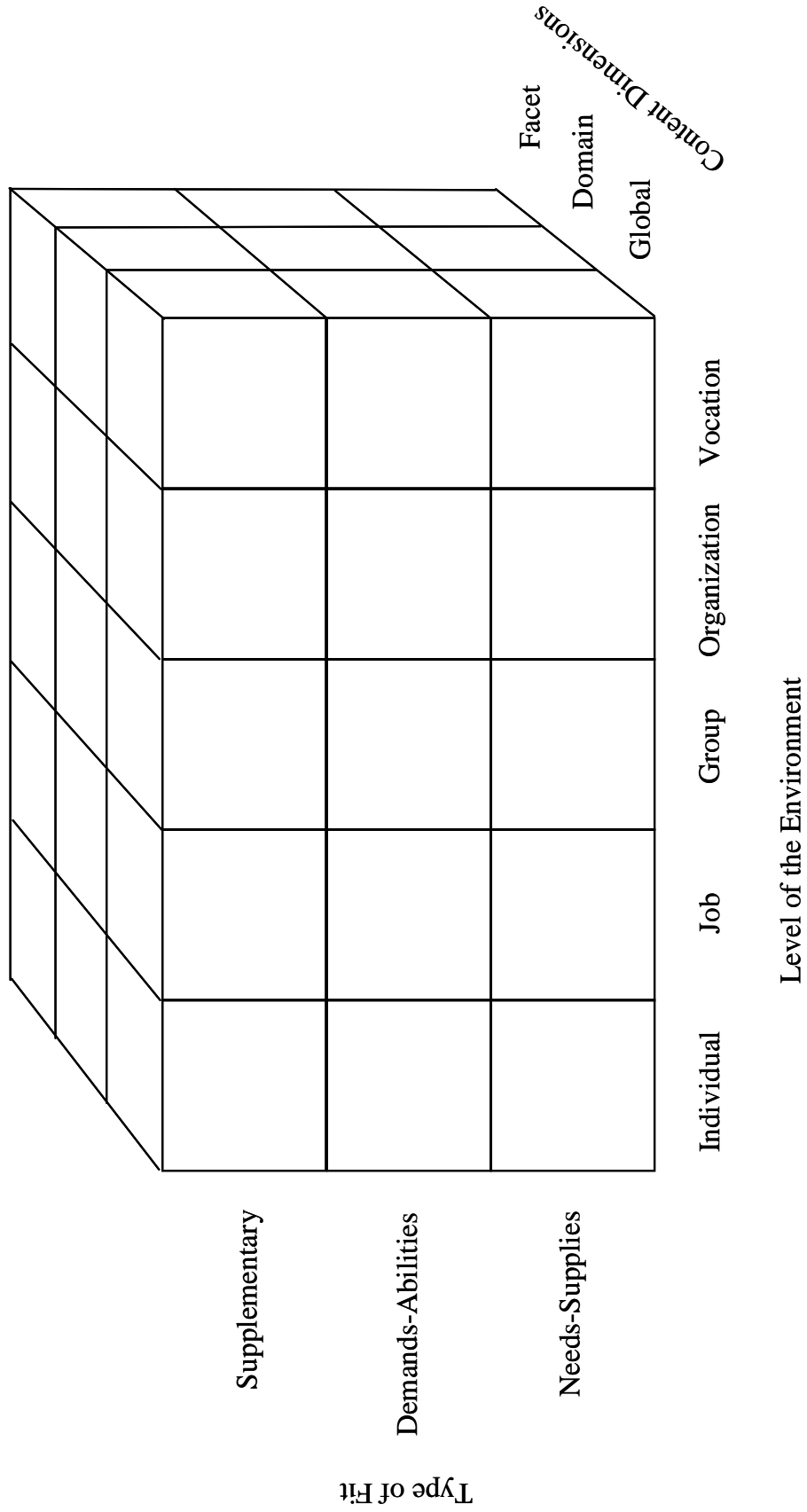
Figure 5. Relationships between demands-abilities misfit and performance.

Figure 6. Relationships between demands-abilities misfit and performance with positive slope along the fit line.

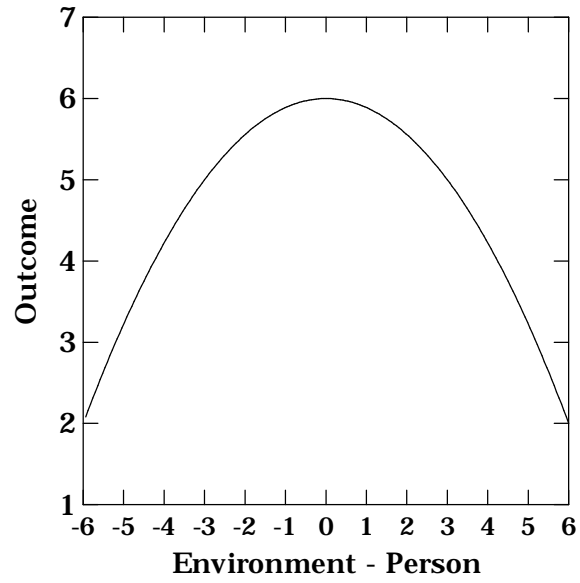
Figure 7. Relationships between values congruence and affective commitment.

Figure 8. Relationships between values congruence and affective commitment with positive slope along the fit line.

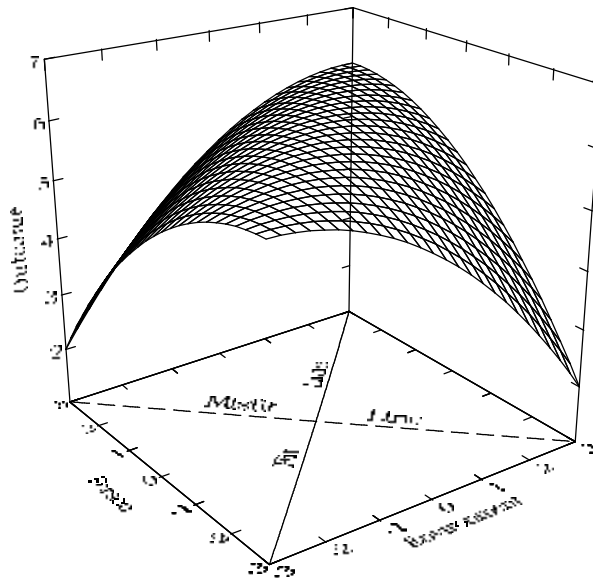
The Conceptual Domain of Person-Environment Fit



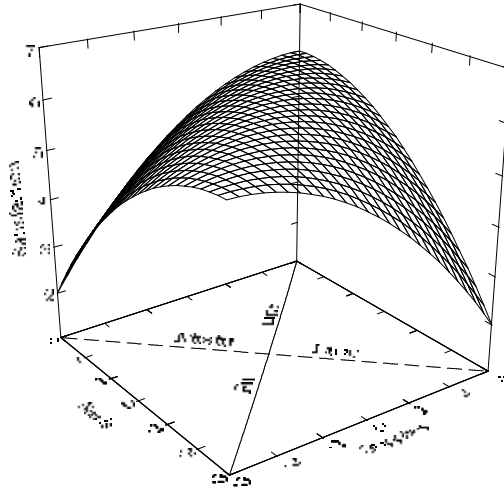
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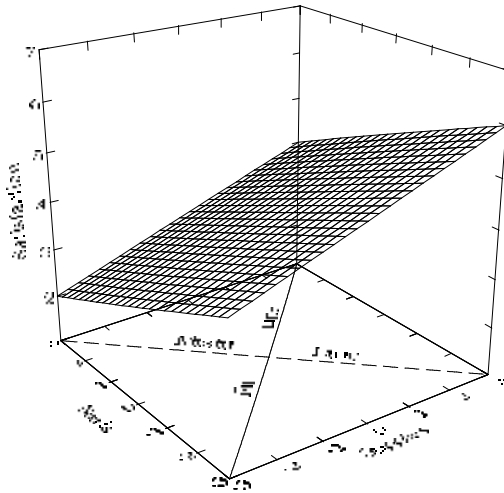
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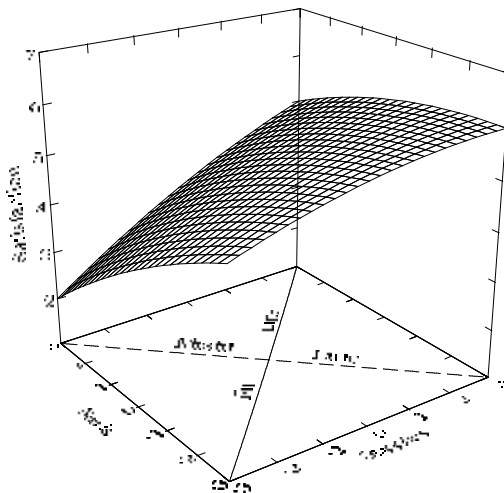
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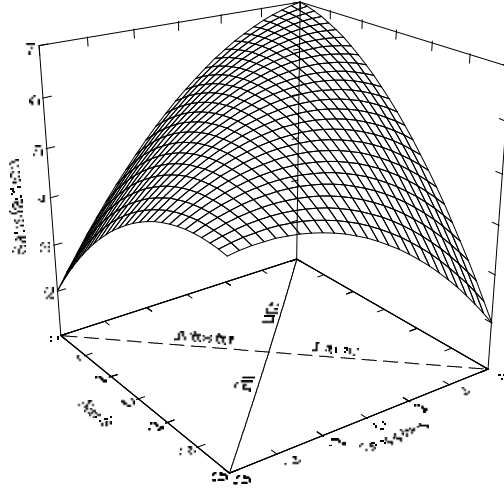
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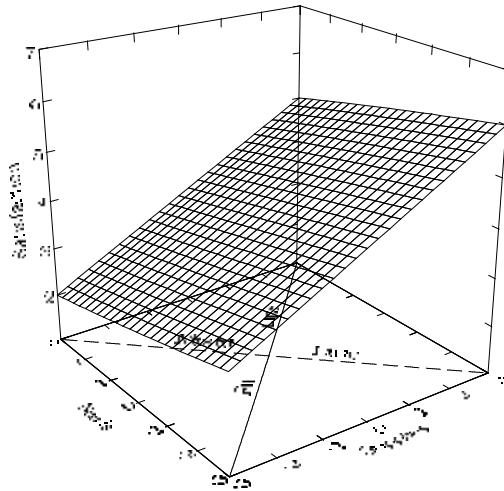
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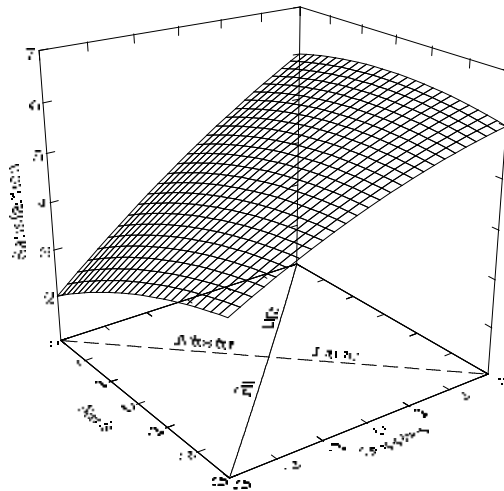
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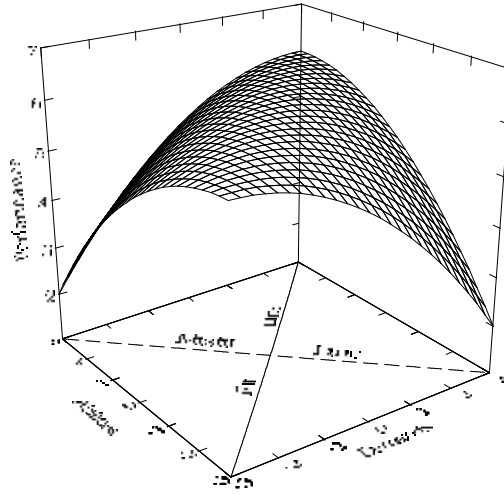
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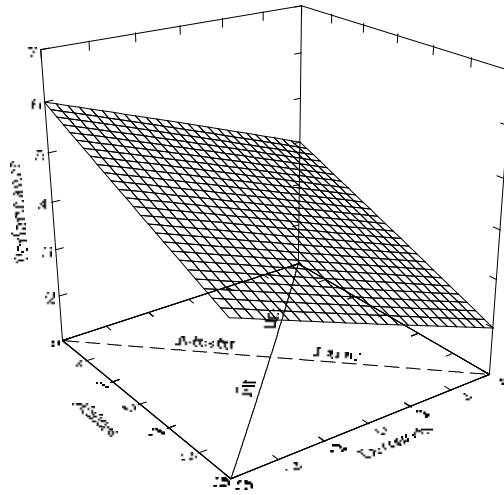
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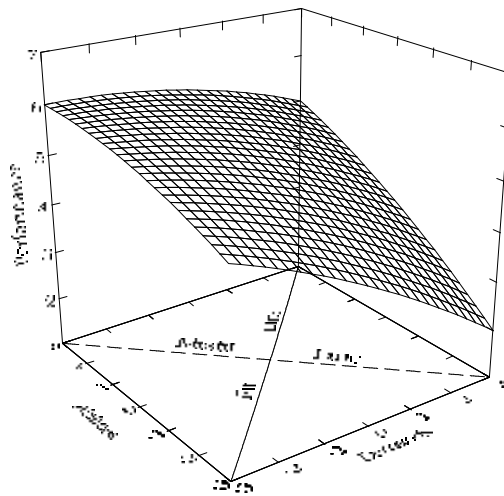
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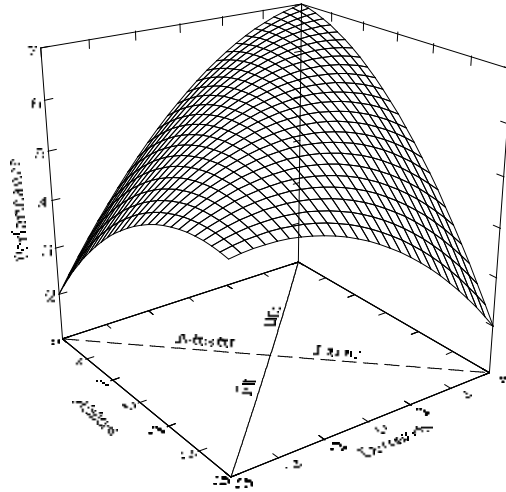
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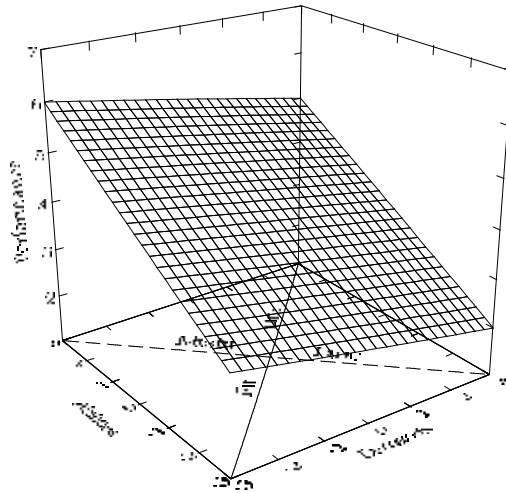
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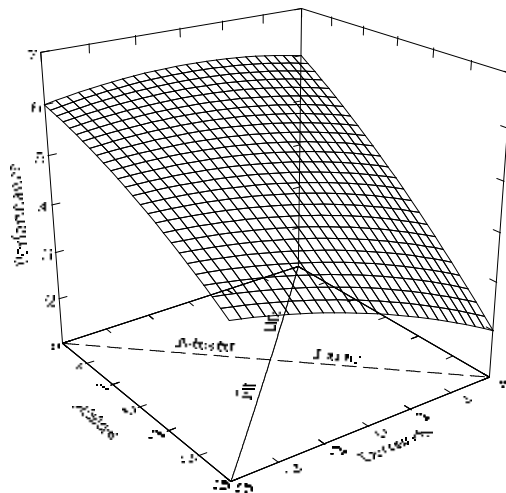
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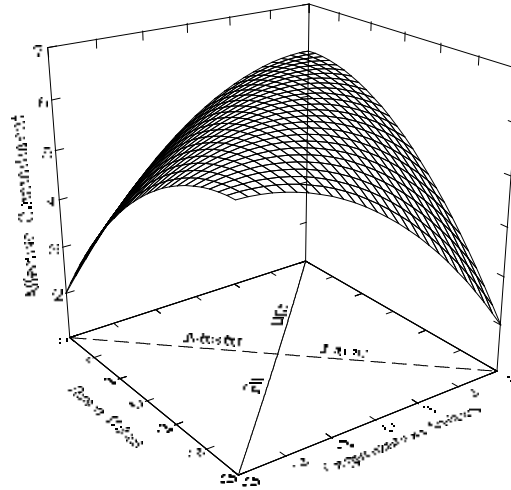
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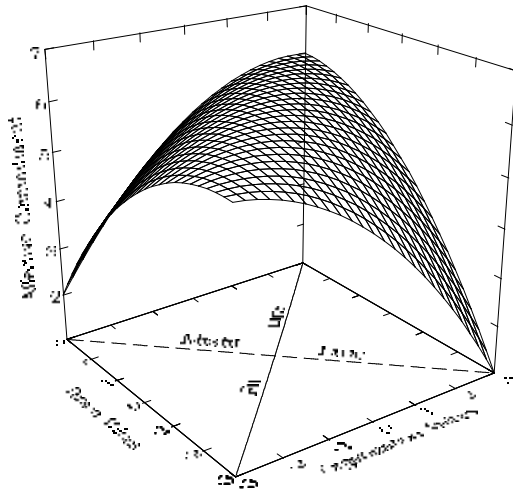
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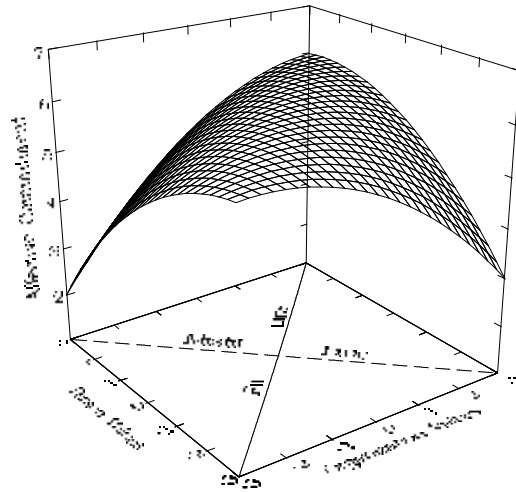
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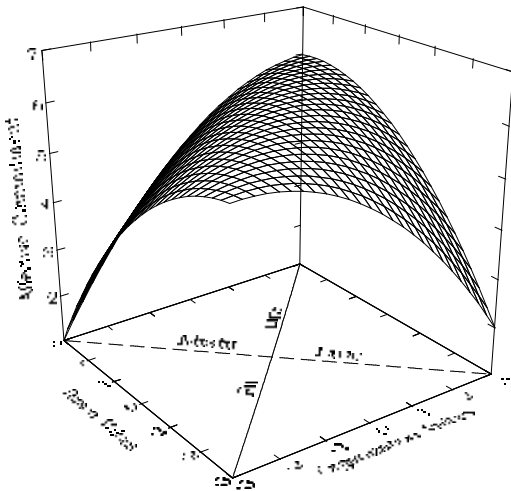
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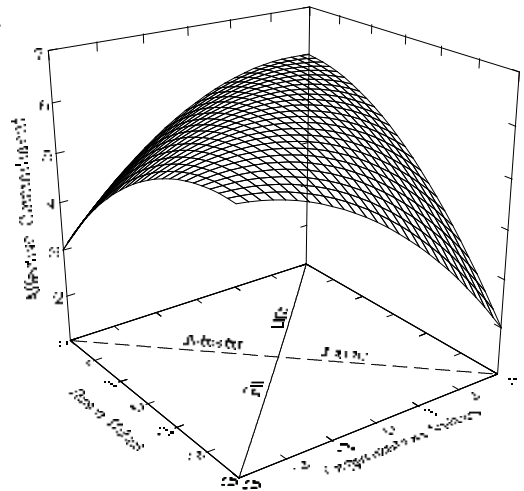
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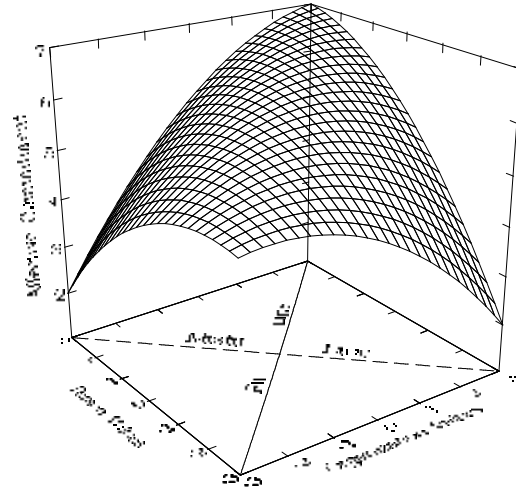
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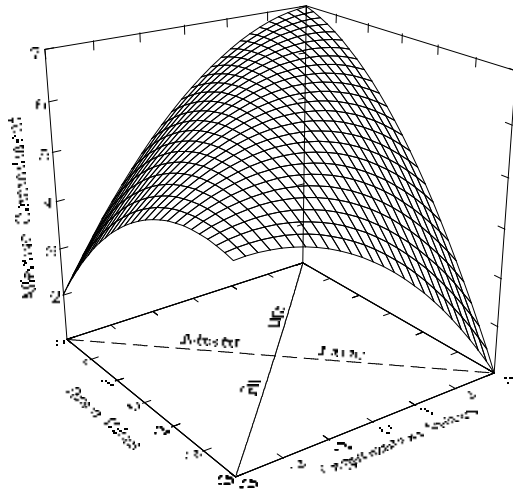
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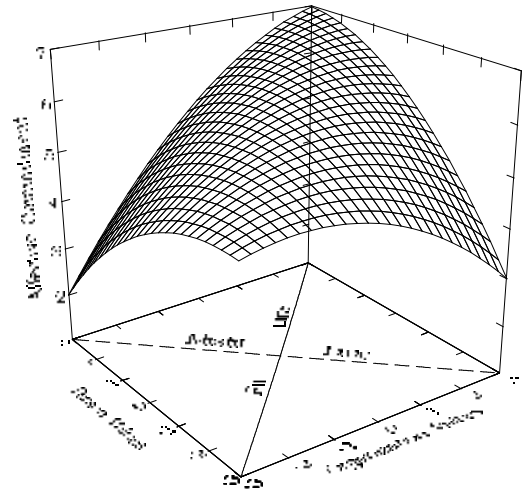
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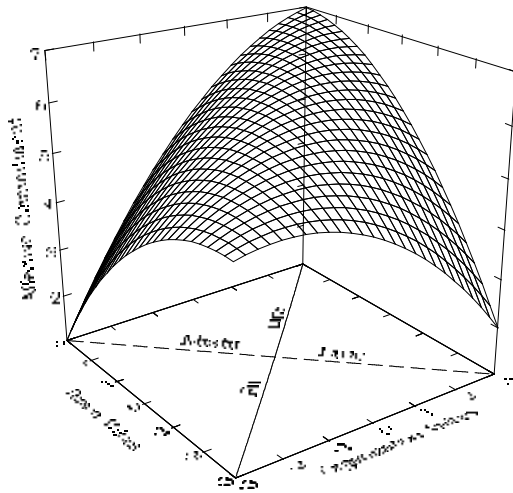
b.



c.



d.



e.

