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WORK VALUES: DO THEY MATTER?

By

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BScH, Acadia University, 1996

Thesis

Submitted in partial fulfillment of the Requirements for
the Degree of Masters of Science (Psychology)

Acadia University
Spring Convocation, 1998

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0-612-27581-7

Acknowledgements

For a reason I don't quite comprehend, my name goes on the first page on the thesis and the people who helped to make the project more than just fluff in my head are left until this page. Here I express to them my heartfelt thanks. Michael Leiter, my advisor, provided the opportunity, encouragement, and support for me to explore a topic that had kept me awake at nights for several years. He has taught me more than I imagined possible and listened patiently to more unusual perspectives than he imagined possible. I thank staff of Human Resources Development Canada for their cooperation and participation in this study. I have enjoyed my interactions with this organization. Tim Matheson (HRDC) gave me advice, laughter, and organizational insights (some of which he probably learned from Acadia's correspondence course in organizational psychology—which he aced). Darlene Brodeur, Myles Genest, Peter Horvath, Christina Maslach, and Richard Davies offered most helpful feedback, which was gratefully used to develop and strengthen this thesis. Darlene Brodeur also provided invaluable guidance during the process of statistical design and data analysis. Her knowledge and enthusiasm seem endless. Cindy Frizzell gave her technical expertise (often during harrowing computer experiences), useful feedback, and general (much needed) mothering. My husband, Brian, and my daughters, Sarah and Christine, gave me practical and emotional support in countless ways. They, along with extended family, friends, and colleagues, helped me to remember my dreams when I doubted.

While participating in the Community Psychology course taught by Pat O'Neill, I realized why I am involved in organizational psychology. And so, I dedicate this thesis to my mother, Phyllis Brown, and to the memory of my father, David Brown, who, in living their values, taught me that caring occurs in many different situations and in many different ways.

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Abstract

In an increasingly service-oriented environment, congruence between individual and organizational values with respect to the way in which services are provided to clients requires exploration. This may be the aspect that is the most important predictor of employee response in terms of acceptance of change, burnout or engagement, turnover intention, organizational commitment, and meaningfulness of work. The purpose of this study was twofold: to explore the issue of value congruence from a measurement and analytical perspective and to assess the role of value congruence in a model incorporating meaningfulness of work, burnout, and change. A number of questions raised in the literature formed the basis of the analytical exploration. While light is shed on some of these questions, no one method of assessing value congruence can be recommended: different value congruence measures predicted diverse organizational outcomes. Structural equation modeling confirmed the mediating role of burnout in a model incorporating work meaningfulness, burnout, and acceptance of organizational change. As well, the role of the various value congruence measures in the model was established. The problems, as well as the importance, of assessing value congruence are discussed.

Work Values: Do They Matter?

We take our values—what we believe is important—to work with us. So do those in our work group. As well, the organization has values that it encourages and practices. What happens when these values are not the same? On the other hand, if we hold similar values, will we be more effective at our work or healthier or more accepting of changes? "To say that a person has a value is to say that he [or she] has an enduring prescriptive or proscriptive belief that a specific mode of behavior or end-state of existence is preferred to an opposite mode of behavior or end-state" (Rokeach, 1973, p. 25). Values are not merely attitudes towards situations or objects; they act as standards for one's action, attitudes, evaluations, how one presents oneself, compares oneself, and attempts to influence others (Rokeach, 1973). Personal values influence our daily decisions, both large and small, as well as the way in which we interact with others. Many of the decisions we make and contacts that we have occur in the work setting. The importance of values in the workplace has been increasingly appreciated as the concept of values has evolved and as instruments to measure the construct have been developed. Likewise, the measurement of values has developed as organizations have changed and the understanding of the relationship that individuals have with their work has grown.

Measurement of Values

The Protestant work ethic espousing of the inherent value of work beyond any external reward was the starting point for a number of the early value scales. Blood (1969) published a value scale based on the ideals of the Protestant work ethic. The eight items assessed perceptions of work as valuable and contributing to personal worth. Items included "Hard work makes a man a better person," and "A good indication of a man's worth is how well he does his job." Correlation was found between the Protestant Ethic scale and job satisfaction. Blood noted that to investigate this relationship further, future

research should consider the influence of congruence between individual and organizational goals.

Development of the Survey of Work Values (Wollack, Goodale, Wijting, & Smith, 1971) was also based on elements of the Protestant Ethic. The original scale covered three intrinsic aspects of work: pride in work, activity preference, and job involvement. It addressed the extrinsic reward components of attitudes toward earnings, and social status of the job. As well, two work aspects considered to be intrinsic and extrinsic in nature were examined: upward striving and responsibility to work. Six factors (a total of 18 items) were identified using principal components analysis: Intrinsic values (e.g., "A worker should feel some responsibility to do a decent job whether or not his supervisor is around"); organization-man ethic (e.g., "A man should feel a sense of pride in his work"); upward striving (e.g., "If a man likes his job, he should be satisfied with it and should not push for a promotion to another job" – reversed scoring); social status of job (e.g., "Having a good job makes a person worthy of praise from his family and friends"); conventional ethic (e.g., "Doing a good job should mean as much to a worker as a good paycheck"); and attitude toward earning (e.g., "A man should choose the job which pays the most"). The measure used a 6-point agreement rating scale. While this measure expanded on the Protestant work ethic, the duty associated with work still predominated.

From this relatively simple beginning, work value measurement has developed with a growing emphasis on the importance individuals place on specific values rather than general values that were assumed to apply equally to all workers. This can be seen in the ranking approach used by Rokeach (1973), who developed a value scale with 18 terminal and 18 instrumental values that respondents arranged in order of importance as guiding principles in life. Examples of terminal values include a comfortable life, a world at peace, freedom, pleasure, social recognition, self-respect, true friendship, and wisdom. Examples of instrumental values include being ambitious, capable, cheerful, honest,

loving, logical, obedient, and responsible. Although not specific to the workplace, Rokeach's scale offered the notion that values could be either end-states that the individual valued or characteristics that were valued because of their potential to assist the individual in reaching desired outcomes. Emphasis was also placed on the possibility of variation among individuals in what values they considered important. Both the format of the Rokeach scale and the concept of different values were reflected in subsequent studies. Following the format of Rokeach (1973), Ravlin and Meglino (1987) developed a measure that asked respondents to rank definitions of 48 values according to how the values should be emphasized in their behavior.

Further, there has been increased exploration of the role of separate aspects or facets of work as motivators. This refining of the concept and measurement of work values allowed more sophisticated examination of characteristics of the workplace as potential predictors of behavioral outcomes. Several examples of this type of scale development are presented. The evolution of ideas and measurement from previous work is also evident. Based on the work of Jurgensen (1978), Elizur (1984) developed items that were tested using facet analysis to identify the distinct components of the work value concept. Two theorized basic facets were verified with smallest space analysis: modality of the outcome (affective, cognitive, or instrumental), and type of outcome-performance relationship (reward or resource). The instrumental facet included pay, security, hours of work, and working conditions; the cognitive facet included advancement, status, type of work, and pride-inducing company; the affective facet included views of supervisor and co-workers. While pay, status, and advancement were considered to be rewards, the rest of the values were classed as resources in terms of outcome-performance relationship.

The work of Elizur (1984) formed the basis for Knoop's (1994d) value scale which classified items into three value factors: characteristics of the work itself (e.g., influence over the work, doing meaningful work, using knowledge and abilities, making a contribution to society); work outcomes (recognition for work well done, influence in

the organization, pride in working for the organization); and characteristics of the particular job (e.g., benefits, job security, working hours and conditions).

The impact of the changing nature of organizations and our views of work can also be seen in the development of value scales. Workers were no longer pictured as part of an efficient machine. The importance of employee influence in a successful operation required employers to appreciate workers' need for involvement that was meaningful and skill-enhancing. The Job Diagnostic Survey (JDS, Hackman & Oldham, 1975) had its origins in the problem of employee alienation from work. Although designed to measure the outcome of job enrichment programs, rather than values per se, the JDS examines properties of the job that may motivate employees. The authors noted that employees will be motivated by these core dimensions if they value the sense of accomplishment and growth associated with the dimensions. In this way, the measure explores elements of work that employees value. The measure was evaluated with data from 658 employees (blue collar, white collar, and professional) in seven organizations. Three of the JDS scales consider job dimensions (e.g., skill variety, task identity, autonomy, feedback from the job and from others); psychological states (e.g., meaningfulness of the work and responsibility for the work); and affective responses to the job (e.g., internal work motivation, job security, satisfaction with pay, supervision, and social aspects).

The importance of self-leadership as a motivating factor in the work place led to the development of the Conditions for Self-management Scale (Leiter, 1992b). The 22-item scale assesses respondents' perceptions of self-determination (e.g., "I am my own boss when it comes to pursuing the tasks that I am assigned"); self-evaluation (e.g., "My supervisor provides me with clear feedback about my job performance"); purpose (e.g., "If I didn't need gainful employment, I would volunteer to do a similar job"); and skill enhancement (e.g., "This job regularly challenges my problem solving abilities").

Using these scales, researchers have found that work values correlate with a number of organizational behavior outcomes. Significant correlations have been reported

between work values and absenteeism (negative relationship) and performance effectiveness (Hackman & Oldham, 1975). Performance effectiveness was also related to intrinsic work values in a study by Shapira and Griffiths (1990). Work values have been significant predictors of job satisfaction (Knoop, 1994a; 1994b) and organizational commitment (Knoop, 1994c). Values of the Protestant ethic were correlated with organizational commitment, job involvement, and career salience (Shore, Thornton, & Shore, 1990). Intrinsic work values were related to normative (norm-based) commitment and extrinsic work values were related to instrumental (reward-based) commitment (Butler & Vodanovich, 1992). Five work values (influence over work, independence in work, influence in organization, convenient work hours, and having responsibility) contributed significantly to predicting the variance in participative decision-making (Knoop, 1991). Most of the intrinsic work values correlated negatively with stress, while four work values (being esteemed by others, achieving through work, doing meaningful work, and being able to utilize one's skills and knowledge) were significant negative predictors of physical, emotional, and mental stress (Knoop, 1994d). Likewise, work values have been related to the components of burnout, with self-determination predicting emotional exhaustion and depersonalization (negative relationships), skill enhancement predicting depersonalization (negative relationship), and purpose in work predicting emotional exhaustion and depersonalization (negative relationships) and personal accomplishment (positive relationship) (Leiter, 1992b).

Values and the Organization

From this review, it can be seen that the emphasis of work values measures has changed from the importance of positive attitudes toward work in general to characteristics of work within the organization that individuals value. There has been movement away from the concept of work as a duty toward aspects of work and organizational life as sources of fulfillment and motivation. As the emphasis on

interaction between individuals and the environment has increased, organizational values and culture have also taken a more central role in organizational theory and practice. The importance of acknowledging the values of individuals and the values of organizations is increasingly appreciated. This can be seen in the attraction-selection-attrition process. Individuals are attracted to, choose to work for, and tend to stay with organizations that practice values that are in keeping with their individual beliefs. At the same time, organizations attempt to attract, select, and keep employees with values similar to the significant values of the organization (Schneider, Goldstein, & Smith, 1995). Peters and Waterman (1982) noted that "every excellent company...is clear on what it stands for, and takes the process of value shaping seriously" (p. 280). These authors questioned whether it is possible for a company to be excellent without clarity of values.

In keeping with this, Enz (1988) defined organizational values as "the beliefs held by an individual or group regarding means and ends organizations 'ought to' or 'should' identify in the running of the enterprise, in choosing what business actions or objectives are preferable to alternate actions, or in establishing organizational objectives" (p. 287). Beyers (1981, cited in Posner, 1992) contended that through values, organizations justify their actions and decisions to both members and the external environment. Individuals within organizations will consider organizational values when making decisions about their actions and interactions in the workplace. These shared values are referred to as organizational culture.

Schein (1985) defined organizational culture as "a pattern of basic assumptions— invented, discovered, or developed by a given group as it learns to cope with its problem of external adaptation and internal integration—that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (p. 9). Like individual values, organizational culture is viewed as a relatively stable set of values. This is necessary if the culture is to provide strong and consistent guidance to the operation of the

organization. Organizational culture is an asset in a relatively stable environment. It provides the stable base for the organizational and individual decision making required for continued success. The difficulty arises when changes in the organizational environment require significant, disruptive changes in the organizational culture.

Adjustment to the external environment is rarely optional for survival of the organization. The repercussions within the organization, however, are shaking previously firm foundations as well as our perceptions of organizations. One of the results of environmental adjustment has been the widespread practice of downsizing—the elimination of previously valid organizational positions. Considering only jobs held for at least three years, Cascio (1993) noted the planned reduction of 5.6 million permanent jobs in the United States between 1987 and 1991. He claims that "companies large and small are slashing jobs at a pace never before seen in American economic history" (p. 95). Hitt, Keats, Harback, and Nixon (1994) noted that in 1993 more than 615,000 workers were laid off in the United States, with the trend of 3100 layoffs per day in 1994. Since employee costs constitute 30-80 percent of organizational costs, downsizing is viewed as a rational method of cost reduction which can produce lower overhead, eliminate unneeded layers of bureaucracy, and increase productivity (Cascio, 1993). Many, however, contest the efficacy of this cost containment strategy in terms of dollar savings (Cascio, 1993; McKinley, Sanchez, & Schisk, 1995) and work productivity (Buch & Aldridge, 1991; Rousseau, 1995).

Change in the Psychological Contract

Employment relationships are currently in a state of transition. Relational contracts which emphasize long-term, stable, committed employer-employee interaction are being replaced by transactional contracts which emphasize short-term exchange of labor for money (Rousseau, 1995). While the latter are in keeping with downsizing, retrenchment, and mergers, the work environment in this transition is one of uncertainty,

distrust, low job and organizational satisfaction, and high turnover or termination (Robinson & Rousseau, 1994).

Relational contracts have been particularly important in both public and private sector organizations with mandates to adapt high quality services in unsupervised settings to clients with complex needs or demands. The employer requires from staff commitment to the organization and to professional values, while providing support in terms of reasonable workloads, recognition of professional autonomy, opportunity for professional growth, and an acceptable level of job security (Burke & Leiter, in press).

Downsizing challenges the belief that the organization will reward quality work and organizational commitment with seniority and job security. When psychological contracts are broken, there is a decrease in security, trust, and organizational commitment (Buch & Aldridge, 1991). Individuals who remain with an organization often suffer from lay-off survivor sickness (Noer, 1993). Although commitment to clients and to professional values remains, loyalty to the organization no longer seems warranted. Mistrust stifles the open, honest communication essential during the difficulties of transition, leaving the grapevine as the perceived source of factual information. This serves to increase the sense of insecurity and defensiveness. There is increased resistance to change as staff attempt to rely on the organization's former culture. Procedures and knowledge bases that were once effective, however, inhibit needed creativity and risk-taking (Buch & Aldridge, 1991). Implementing minor changes at a pace that is palatable to staff may not be sufficient to deal with sudden environmental pressures that the organization experiences. The old ways may need to be rapidly replaced if the organization is to meet the challenge. Organizational survival may necessitate revolutionary rather than evolutionary change.

Revolutionary Change

Change may be evolutionary or revolutionary. Miller and Friesen (1980) described a model of organizational adaptation to change with three tenets. First, in organizational evolution the direction of change is in keeping with former goals, power structures, programs, and expectations and is likely to be accepted by those involved. Organizations with bureaucratic structures tend to become more bureaucratic; those with loose structures tend to become more so. Reversals in strategy and structure are relatively rare and are likely to be resisted.

Second, the interdependency of factors within the organization and between the organization and its environment produces mutual reinforcement among structure, strategy, and environment. Potential reversals in the evolutionary change process are not easily seen or if envisioned are unlikely to be attempted. This may be because organizations are not inclined to alter strategies or structures that seem to fit with the market environment. Past success can turn an orientation into an ideology and groups with power may block change. Further, information that would dispute the success of current strategies is ignored or rationalized away.

Third, adaptation also involves periods of revolution during which a large number of organizational variables change. This may occur when the pattern of interrelationships among strategy, structure, and environment need realignment following a major event such as new leadership, new strategy, or drastic changes in the environment. This type of change is disruptive and costly; the necessity of change must be imperative or the potential benefit must be large before managers are willing to break down the established, complementary order and develop a new one. While incremental change is effective during some periods of the organization's history, discontinuous or "frame-breaking" change will also be needed. This upheaval will involve drastic and simultaneous shifts in structure, strategy, and power (Miller & Friesen, 1980). The change that many organizations currently face is revolutionary in nature (Handy, 1989; Peters, 1994).

Managing Change

The strategies required to manage frame-breaking change are very different than those needed to manage incremental change. Tushman, Newman, and Romanelli (1986) noted two types of convergent change: fine-tuning and incremental adjustments to environmental shifts. Fine tuning may involve personnel development, clarification of roles and status, fostering commitment to the organization's mission and to excellence of one's department, promoting confidence in norms and beliefs, and refining procedures and policies. The results of effective fine-tuning are greater consistency and a more interconnected social system.

Minor shifts in the environment can be met with incremental adjustments. This involves few changes at any point in time and changes that are compatible with current structures and processes. While uncertainty is created by convergent change, the relatively stable system allows employees to learn and adjust to changes. Core values and mission are unaffected (Tushman et al., 1986).

Over time organizational history develops from the self-reinforcing patterns of behaviors, norms, and values. While this history can be critical to success, it can be a source of resistance when change is essential. Organizations may feel threatened and increase commitment to the status quo if faced with a major environmental challenge. Long-term success can decrease organizational adaptability. Internal stability is greatest when the convergent period has been long. This is particularly true in successful firms, in historically regulated organizations, or in organizations that have been protected from competition such as government services or agencies (Tushman et al., 1986).

During discontinuous, revolutionary change in the organization, alterations occur in the distribution of power and status; systems and procedures; and communication channels and decision-making patterns (Tushman et al., 1986). Gersick (1991) contended that while incremental change leaves the underlying structure of the organization intact, revolutionary change must dismantle this structure. During revolutionary periods, a fixed,

stable structure can limit radical change through decreased awareness of other alternatives, reluctance to initiate change, and a sense of obligation among internal and external stakeholders. The level of change required during revolutionary periods necessitates transformation of the old structure to one that will serve the organization in the environment it now faces. The structure that has provided stability in the past must give way to one that will provide stability to the organization after the revolutionary period.

Change in Organizational Culture

Revolutionary change and altered psychological contracts affect the established culture of organizations. Schein (1990) contended that one cannot understand change or resistance to change without the concept of culture. Shared assumptions can reduce anxiety for staff and can form the underlying basis for the values, climate, and philosophy of an effective organization. In the context of significant environmental changes, however, the culture may become dysfunctional. Although the established culture is a shared understanding of the workplace, it may not be adequate to deal with current and anticipated environmental conditions. As the underlying structure changes, the assumptions implicit in the organizational culture relate less to the actual state of the organization. The organization will need to make significant changes in the espoused culture to match changes that have occurred in the organizational structure.

The new culture being promoted by the organization may be significantly different than the culture that attracted employees to the organization and prompted their loyalty. Individuals adjusting to such revolutionary change may experience culture shock as the familiar is replaced with the unknown. It is not merely a matter of adjusting to new ways of working; staff members may be left questioning the value and meaning of both former and future work roles. This may feel overwhelming for professionals who envision living their values and making meaningful contributions through their work

(Cox & Leiter, 1992; Leiter, 1991). During times of significant change in the organization, incongruence between the values of the individual and the current values of the organization may significantly influence perceptions of work meaningfulness and engagement with work.

Engagement With Work

Engagement with work—an energetic involvement with activities that build professional effectiveness—represents the opposite end of a continuum from burnout (Leiter & Schaufeli, 1996; Maslach, Jackson, & Leiter, 1996). Research has demonstrated that this state predicts the relationship professionals have with their work, as indicated by organizational commitment and turnover intentions, as well as physical and psychological well-being (e.g., Lee & Ashford, 1996). Cherniss (1993) defined professional self-efficacy as the "professionals' beliefs in their abilities to perform in professional work roles" (p. 141). Three domains comprise role performance: task, interpersonal, and organizational. The task domain involves feelings of competence in performing the technical aspects of the job. The interpersonal domain involves perceptions of one's ability to interact successfully with service recipients, coworkers, and supervisors. The organizational domain involves the capacity to influence one's organization. All three efficacy domains are likely to be challenged during revolutionary change, as redefinition of relationships, roles, tasks, status, and influence take place.

Cherniss (1980) described burnout as "a process in which the professional's attitudes and behavior change in negative ways in response to job strain" (p. 5). Burnout has been studied in a variety of human service organizations (Cordes & Dougherty, 1993; Leiter & Harvie, 1996; Maslach, 1982; Perlman & Hartman, 1982). The Maslach Burnout Inventory—General Survey (MBI—GS, Schaufeli, Leiter, Maslach, & Jackson, 1996) permits evaluation of burnout and engagement among professions, with and without direct client contact, that require personal commitment (Leiter & Robichaud, 1997; Leiter

& Schaufeli, 1996). The MBI–GS measures exhaustion (overextension and depletion of one's physical and emotional resources), cynicism (an indifferent attitude towards one's work), and professional efficacy (a sense of professional competence and accomplishment) (Maslach, Jackson, & Leiter, 1996).

Burnout results from the gap between the expectations of individuals to fulfill their professional roles and the structure in place within the organization (Leiter, 1991, 1992b). In spite of the difficulties of organizational life, people value organizations because they provide opportunities for doing meaningful work. When the workplace does not support professional goals, exhaustion and cynicism increase while professional efficacy decreases. Individuals become less effective in their work and less able to cope with the demands and changes in their organization (Leiter, 1992a). When the organization's values change, it becomes increasingly difficult for workers to practice the personal values which were in keeping with former organizational values. The sense of purpose and meaning formerly provided by their work can be maintained to some extent but it will be maintained in spite of the organization, not because of its support. This is a very wearing and costly process.

Meaningfulness of Work

Links have been found between meaningfulness of work and decreased burnout (e.g., Leiter, 1992b; Leiter & Harvie, 1998). In keeping with writings on organizational values and culture, professional efficacy, and psychological contracts, the perception of being involved in meaningful work may be a vital factor in preventing burnout and maintaining organizational commitment (Leiter & Harvie, 1998). Research reviewed on counselors and mental health workers is consistent with the proposition that burnout is most evident in work situations that inhibit workers' capacities to realize their values through their work. Few studies have directly examined workers' values in relationship to burnout, but many of the personal and environmental conditions considered in the studies

reviewed suggest that burnout arises when there are difficulties enacting values through work. Problems arise through conflict of value, as well as excessive caseload demands or personal conflict with clients or colleagues that interfere with adequately meeting the needs of service recipients. Insufficient support in terms of decrease in the resources needed to work effectively exacerbates the situation (Leiter & Harvie, 1996). It is not sufficient for individuals in the organization to value quality service provision as meaningful; there needs to be support from the organization in realizing this value. There needs to be congruence between the values of the individual and the values that the organization espouses and actively supports.

Person-Organization Fit

Compatibility between the organization and the person is the general definition for person-organization fit used by most researchers. Fit can be viewed from a supplementary perspective or a complementary perspective. The perspective of supplementary fit involves similarity between characteristics, whereas the complementary (needs-supply) fit perspective envisions the individual's characteristics adding to the environment what is missing and the environment providing what the individual lacks. Investigation of supplementary fit has predominated. It has focused on characteristics of the organization such as culture, goals, norms, and values in relation to individual personality, goals, attitudes, and values (Kristoff, 1996). O'Reilly, Chatman, and Caldwell (1991) contended that "congruency between an individual's values and those of an organization may be the crux of person-culture fit" (p. 492). Kristoff (1996) noted that value congruence between the individual and the organization has been the most frequently used operationalization of the supplementary fit perspective (e. g., Boxx, Odom, & Dunn, 1991; Chatman, 1989, 1991; Posner, 1992). Goal congruence with management or peers has also been used to operationalize the person-organization fit (e.g., Vancouver, Millsap, & Peters, 1994; Vancouver & Schmitt, 1991).

While sharing values with one's work group may be as important as sharing the values of the larger organization, similarity with one's work group may be better defined as person-group fit (Kristoff, 1996). The degree of fit between person and workgroup and person and organization may be quite different. Person-organization fit is also distinct from person-job fit which Edwards (1991, cited in Kristoff, 1996) defined as the fit between the person's abilities and the demands of the job. In this case the match is between characteristics of the tasks performed and the skills or wishes of the individual. Various approaches have been used to measure congruency between the person and their workgroup, job, and organization.

Methods of Value Congruence Analysis

Five main considerations need to be addressed in choosing or developing and analyzing a congruency measure: supplementary versus complementary fit; direct versus indirect measurement; levels of indirect measurement comparison; component versus composite congruence score calculation; and difference score calculation versus polynomial regression analysis. Supplementary fit involves the measurement of similarity of goals or values between the individual and the organization, whereas complementary fit involves the measurement of needs of the organization being supplied by the individual and needs of the individual being supplied by the organization. Supplementary fit assesses agreement on key beliefs and goals; complementary fit concerns the organization's providing a supportive environment for the individual to use the skills and abilities that the organization requires. In this way the organization and the individual fill needs as well as having needs supplied. Supplementary fit measurement has predominated over complementary fit measurement in published studies (Kristoff, 1996).

When supplementary fit is to be assessed, the use of commensurate measurement, describing both the organization and the person using the same dimensional content, is relevant. Kristoff (1996) contended that one should attempt to maximize the degree of

similarity between the person and organizational measures so that high levels of fit on goals or values will more likely relate to greater similarity between the person and the organization on specific characteristics.

Measures can be either direct or indirect and vary on the level of measurement. Direct measures ask respondents explicitly if they believe a good fit exists. This approach was used in a study of value congruence and organizational commitment by Posner, Kouzes, and Schmidt (1985). Using this perspective, good fit is considered to exist if the individual perceives it to exist, regardless of objective information to the contrary. The disadvantage of this approach is that assessment of the independent effects of person and organizational characteristics is lost (Edwards, 1994).

Indirect measures assess individual and organizational characteristics separately, followed by comparison using difference scores, interactions, or polynomial regressions. Indirect measures are considered to reflect actual or objective fit because they do not ask those in the situation for judgments of fit. Measures of indirect fit have used different levels of comparison between the individual and the organization. In cross-level studies of organizational fit, individual scores are compared to the aggregate score of the responses of individuals in the organization. An aggregate score can be made of responses of all individuals to the individual characteristic questions. Debate arises, however, over whether there is sufficient agreement among individuals to create an organizational level variable for comparison in this manner. Some have argued that when the organizational variable is perceptual (such as values, goals, climate, culture) differences in subculture perceptions may preclude the possibility of one valid organizational score (James, 1982). According to this position, the variance among individuals is not merely error about the true organizational score. Rather, differences between organizational sub-units exist and need to be used as the basis for comparison.

Further, the meaning of aggregated responses is debated (Glick, 1985, 1988; James, 1982). Glick (1985) contended that "individual, subunit, and organizational units

of analysis should be recognized" (p. 603). Accordingly, aggregation of individual values measures what individuals in general value, while aggregation of individual perceptions of the organization constitutes an organizational climate measure (Glick, 1985, 1988). Rather than attempting to draw conclusions about the organization based on aggregation of individual responses to questions about individual values, an aggregate score is formed from responses to organizational level questions. These questions ask individuals what they perceive the organization's values to be.

Kristoff (1996) suggested that to establish an organizational variable requires demonstrating sufficient agreement on individual responses to questions about the organizational level. This is in keeping with Chatman's (1989) description of organizational values as those values agreed upon by the majority of active members. Chatman (1991) provided another alternative for cross-level study by developing an organizational profile from the responses provided by managers and partners who were familiar with the organization. If agreement cannot be found at the organizational level, assessment of the fit between the person and their subgroup may be more appropriate (Kristoff, 1996).

Indirect individual-level measurements offer another approach. Individuals respond to parallel questions about their characteristics and their perceptions of the organization's characteristics. Fit between the individual's characteristics and the individual's perceptions of the organizational characteristics has been assessed with difference scores or polynomial regression. When the characteristics under consideration are difficult to verify (as in the case of values and goals), individuals' perception of the organization may have more influence on individual outcome variables such as stress, commitment, work satisfaction than fit with the actual characteristics of the organization (Kristoff, 1996). The level of measurement chosen is best determined by the construct under consideration. While individual-level analysis may capture the person's perceptions, cross-level analysis may be more appropriate for providing information on

the individual compared with what individuals in general value, with dominant organizational culture, or with the subculture of the work group. Congruency measured in these different ways may relate differently to other organizational measures.

The two analysis issues with congruence measures are the use of component scores versus difference scores and difference score calculation versus polynomial regression analysis. Since the arguments surrounding these two issues are related, they will be considered together. Calculation of fit between the individual and the organization has been performed in a number of ways. Each has its supporters and detractors. A product term can be calculated that assesses the moderating effect of one measure (person or organization) on the relationship between an outcome variable and the other measure. A second method involves calculating the difference between the two measures in algebraic $(X-Y)$, absolute $(|X-Y|)$, or squared $(X-Y)^2$ form for bivariate congruence. For multiple predictors, profile similarity indices include the sum of algebraic difference (\underline{D}^1), the sum of absolute differences ($|\underline{D}|$), the sum of squared differences (\underline{D}^2), the Euclidean distance (\underline{D}), and correlation between two profiles (\underline{Q}).

Although difference scores have been widely used, they have received criticism in terms of reliability and meaningfulness. Johns (1981) noted that reliability for difference scores (although rarely reported) is generally less than average reliability of its components due to correlations among the components. Johns identified several reasons for this. Asking respondents to answer the same questions to "my workplace should be" immediately following "my workplace is" results in common variance due to response bias. Johns also noted that the use of single items to construct profiles rather than clustered sets of items reduces the reliability of the index.

The issue of meaningfulness concerns whether difference scores provide meaningful information beyond that of their components. Johns (1981) suggested assessing whether correlations between the difference scores and the outcome variables were significant after partialling out the components of the difference score. As well,

hierarchical regression could be used to demonstrate that difference scores significantly supplement prediction of variance in outcomes.

Likewise, Edwards (1993, 1994; Edwards & Harrison, 1993) has questioned the meaningfulness of difference scores and profiles. He claimed that difference scores resulted in the loss of information provided by the individual components. Otherwise useful information could also be discarded by difference techniques that do not take the direction of the difference into account. Further, methods that collapse conceptually distinct components into a profile produce ambiguous interpretation of results. The contribution of individual elements to outcome variables is hidden when an overall score is used. Edward's solution to problems with the difference score was the testing of polynomial regression equations. This method, however, is not without its critics.

Tisak and Smith (1994a, 1994b) acknowledged the concerns about reliability and validity raised by other researchers but suggested that difference scores not simply be dismissed in favor of higher order response surface analysis promoted by Edwards. Tisak and Smith (1994b) noted that they could find no current psychological theories to support the use of higher order polynomial regression analysis. Their concern was that researchers were aiming to explain more variance with an empirical model rather than testing the fit of data to a theory. While Edwards (1994) stated that his proposed approach should only be used if it is guided by theory, this point is not emphasized in much of the work with polynomial regression analysis. Tisak and Smith (1994b) also contended that distinct conceptual and statistical contributions by difference scores need to be considered for each study, rather than making assumptions a priori. Likewise, empirical verification is needed before claims of unreliability or lack of validity with difference scores are made.

In reviewing this debate, Bedeian and Day (1994) noted that a number of issues remain unresolved: are difference scores conceptually distinct from their components and do current theories support the use of polynomial regression techniques proposed by

Edwards (1993, 1994; Edwards & Harrison, 1993)? The importance of the role of theory in choosing analytical procedures is emphasized by the authors. Issues of reliability, meaningfulness, and theoretical justification are not unique to difference score calculations. Difference methods, however, may have received less scrutiny along these lines than other more routine statistical procedures. Kristoff (1996) suggested that future research should use both traditional difference methods for assessing congruence and the polynomial regression technique so that the strengths and limitations of each may be appreciated. The methodological issues identified in this section need consideration when evaluating congruency studies that have been undertaken and when designing studies.

Values Congruency Studies

In a study of 1600 management and professional employees from a large multinational manufacturing firm, Posner (1992) assessed person-organization value congruency for six core company values along the three dimensions recommended by O'Reilly (1989): clarity, consensus, and intensity. Clarity is the extent to which respondents understand the meaning of core values. Consensus is the extent to which respondents perceive a shared meaning of the core values. Intensity refers to respondents' support for the core values. Similar patterns were found for the three dimensions, using a 5-point Likert agreement scale. Respondents who were low on one dimension were low on the other two. This pattern held for those with moderate and high degree of congruency. The linear combination of responses to all 18 statements was used to create a Values Congruency Index. Positive relationships were found between person-organization values congruency and positive work attitudes of motivation ("I feel inspired to do my very best when I'm at work"); commitment ("I would like to be working for this company three years from now"); and teamwork ("In general, employees in this company work well together") (p. 355). Demographic factors (age, gender, ethnicity,

organizational level, length of service, management position) did not moderate the relationships.

Posner, Kouzes, and Schmidt (1985) analyzed survey results from 1498 managers in a variety of settings. Their Shared Values Scale used two questions. The first asked the extent to which personal values were compatible with the values of their organizations. The second assessed the extent to which respondents felt they must compromise personal values to meet organizational expectations. Both questions used a 7-point Likert agreement response scale. The sum of the responses for each respondent placed the individual in one of three value congruence categories: low, moderate, or high congruence. Shared values were significantly related to organizational commitment, the importance attached to organizational goals, concern for stakeholders, self-reported ethical behavior, feelings of personal success, and decreased job and personal stress.

In a study of 387 middle and upper level managers from highway and transportation organizations. Boxx, Odom, and Dunn (1991) asked respondents to indicate (using a 7-point Likert agreement response scale) the extent to which seven characteristics of excellent organizations identified by Peters and Waterman (1982) were evident in their organization. Examples of the characteristics are a belief in being the best, a belief in the importance of the details of doing the job well, a belief in the importance of people as individuals, and a belief in quality and service. Respondents also indicated the extent to which they felt these characteristics should be evident in their organizations. Value congruency was calculated by summing the differences between respondent's perception of their present environment and how the environment should be for each item. Respondents were grouped by thirds into poor fit, good fit, and excellent fit. Using analysis of variance these groups were compared on means for commitment, satisfaction, and cohesion. These three characteristics were significantly greater when there was an excellent fit.

Bretz and Judge (1994) assessed person-organization fit using two questionnaires; one asked how true (on a 5-point Likert scale) each statement was in regard to the organizational environment (job perceptions), while the other asked how true the statements were describing the individual (individual preferences). Four conceptualizations were included in the questionnaires: match between individual skills, knowledge, and abilities and job requirements; match between individual needs and organizational reinforcement system; match between individual values and organizational values; and match between individual personality and organizational image. Three methods of fit evaluation were used in the multiple regression analyses. Using the sum of difference scores for corresponding items on the two questionnaires, the authors reported that overall person-organization fit explained significant variance in tenure (an additional 1%) and job satisfaction (an additional 12%) beyond that explained by demographic variables, human capital (education, hours per week of work and leisure), and job and organizational characteristics (position, salary, number of promotions, and intention to remain). The vector of the difference scores accounted for an additional 4% in tenure and an additional 22% in satisfaction. Further, difference scores were separated into their component parts to assess the independent effects of the vector of individual preference, the vector of job perceptions, and the vector of their interaction. This method explained an additional 11% in tenure and an additional 32% in job satisfaction.

O'Reilly, Chatman, and Caldwell (1991) used a Q-sort technique to assess person-culture fit (Organizational Culture Profile) among 171 new employees and 128 senior accountants in eight public accounting firms. Person-organization fit was calculated by correlating the rankings for the set of 54 individual preferences obtained from the new employees with the rankings for the same values from the senior accountants. Examples of items include flexibility, autonomy, being precise, fairness, informality, achievement oriented, having a good reputation, and low level of conflict. Person-organization fit contributed significantly to predicting the variance in normative commitment (based on

acceptance of the organization's values), job satisfaction, and intent to leave (negative relationship) independent of age, gender, and tenure. Person-organization fit did not contribute significantly to instrumental commitment (based on response to specific rewards).

In a longitudinal study of 171 newly recruited junior audit staff from 8 accounting firms, Chatman (1991) assessed person-organization fit using the Organizational Culture Profile. Recruits whose values matched the firm adjusted more quickly, were more satisfied with their jobs, and were more likely to express intentions to stay as well as to actually remain with the firm. Fit with the firm's values was influenced by the vigor of the socialization process that recruits experienced.

The congruence between individual and organizational goals of educators was examined by Vancouver and associates (1991, 1994). Over 14,000 teachers and 365 principals from 362 schools rated fourteen goals on a 7-point Likert scale indicating importance. The goals included increasing student skills, enhancing extracurricular activities, achieving full racial integration, increasing cost effectiveness, and upgrading discipline programs. Goal congruence between the individual teacher and the principal for that school was calculated using a \underline{D} statistic (subordinate-supervisor congruence). Separate \underline{D} s were also calculated comparing each teacher with every other teacher in that school. These \underline{D} s were averaged for each teacher to produce an index of difference for the teacher's goal priorities compared to the other teachers in the school (member-constituency congruence). Vancouver and Schmitt (1991) reported that supervisor-subordinate correlations with job satisfaction, organizational commitment, and intention to quit dropped below significance when member-constituency was partialled out. Member-constituency correlations essentially maintained their original (significant) levels after partialling out supervisor-subordinate.

Vancouver, Millsap, and Peters (1994) examined the relationships of within-constituency congruence (the general agreement of all individuals on that level) and

between-constituency congruence (agreement between the subordinate constituency and the supervisor constituency) with job satisfaction, organizational commitment, and intention to quit. After controlling for individual level congruence, teachers in schools with high within-consistency congruence had higher scores for job satisfaction and organizational commitment than teachers in schools with lower within-constituency congruence, while teachers in schools with high between-level congruence had lower scores for job satisfaction and organizational commitment.

Meglino, Ravlin, and Adkins (1992) compared subordinates and their supervisors using the Comparative Emphasis Scale. This measure assesses four general values: achievement ("getting things done and working hard to accomplish difficult goals in life"), helping and concern for others ("being concerned with other people and helping them"), honesty ("telling the truth and doing what you feel is right"), and fairness ("being impartial and doing what is fair for all concerned") (Meglino, Ravlin, & Adkins, 1991). The forced-choice measure presents 24 pairs of behavioral statements based on the four values, such that each value is presented 12 times. A rank ordering of the four values results. For the 118 production employees from 18 departments who took part in the study, value congruence scores (after controlling for component scores) were significantly related to overall job satisfaction, and satisfaction with social and growth components of job satisfaction. Organizational commitment was significantly correlated with value congruence prior to the correction procedure, as were satisfaction with coworkers and management.

Summary of Literature Review

Assessment of values is not a new venture. The importance of the values that individuals bring to the workplace has been appreciated for some time. Methods to assess individual values have evolved with our understanding of the influence of these values and the interaction that takes place between individuals and their environment. Likewise,

the concept of organizational values or culture has been developing in response to the need to nurture effective organizations. The current problems facing workers and their organizations add a new dimension to the significant findings regarding the effect of worker values and value congruence between individuals and their organizations.

Organizations are reexamining and changing their guiding principles to fit the revolutionary changes occurring in their environments. This leaves staff members with the difficult task of adjusting to changes that may not be in keeping with the values they brought to the workplace or consistent with their former understanding of the organization's values. Changes in organizational values usually result in restructuring of routine functions and shifting of the emphasis placed on particular aspects of work performance. It is not the philosophical change, itself, that disrupts the practice of individual values in the work place. It is the change in organizational support for daily work practices, reflective of altered organizational values, that influence work life.

While various aspects of person-organization value congruence have been explored, these have been relatively general, rather than focused on the way in which work is carried out on a daily basis. The work of Vancouver and associates (1991, 1994) is quite focused, but evaluates organizational goals rather than values. In an increasingly service-oriented environment, congruence between individual and organizational values with respect to the way in which services are provided to clients requires exploration. This may be the aspect—the daily living of values—that is the most important predictor of employee response in terms of acceptance of change, burnout or engagement, turnover intention, organizational commitment, and meaningfulness of work.

The Present Study

The purpose of this study is to evaluate a measure that examines the congruence between the individuals' values and the organization's values in regard to service provision. As noted, there is no one agreed-upon method to measure value congruency.

This study will explore the five main issues regarding the measurement of value congruency raised in the literature. First, does supplementary congruence (on values) provide different information than complementary congruence (on skills and abilities)? Second, do indirect measures of congruency (asking respondents their perceptions of individual and organizational values with the researcher computing congruency) provide different information than items asking respondents directly how their values match those of the organization? Third, if difference scores are used, is more or different information obtained by examining individual construct differences or a composite score for congruency? Fourth, what level of comparisons ought to be made: within the individual level or across levels of the organization? Finally, what form of congruence analysis is recommended to assess the effect on outcome variables: regression analyses entering individual values separately from organizational values, regression analyses using difference scores, or polynomial regression analysis. Assessment of these issues, of necessity, is exploratory in nature with each step building on the findings of the previous step.

Further, a model will be developed, incorporating value congruency into a model of meaning, burnout, and change (Figure 1) developed by Leiter and Harvie (1998). A brief rationale for this model follows. While meaningfulness of work has been linked to decreased burnout (Cherniss, 1993; Leiter, 1992b; Robinson et al., 1991), the literature has not related this important construct to acceptance of change during major organizational upheaval. Readiness to accept change has been related to employee beliefs about the need for change and the organization's ability to make these changes successfully (Armenakis, Harris, & Mossholder, 1993). While the leadership for change

comes from management, staff perceptions and beliefs are critical to its success. Unless the majority of staff believes that the changes proposed will be beneficial to them, resistance will develop (Fiorelli & Margolis, 1993). Staff need to be assured that they can preserve the meaningful activities of their work in spite of the changes. Resistance to change was correlated with lack of professional efficacy for nurses in general and psychiatric hospitals (Firth, McKeown, McIntee, Britton, 1987). In regard to change acceptance, effective communication is essential. Many interventions have included improvement of communication as a key component (e.g., Sagie & Koslowsky, 1994; Zamanou & Glaser, 1994). Anecdotal evidence also supports the relationship between improved communication and indicators of change acceptance such as perceptions of staff morale and quality of care in health care settings undergoing major change (Boyd, Luetje, & Eckert, 1992; Gershenfeld, 1986). Effectiveness of communication has also been linked to decreased exhaustion (Leiter & Maslach, 1988).

In this model (Leiter & Harvie, 1998), emotional exhaustion is an immediate reaction to decreased meaningfulness of work and lack of confidence in communication. Increased exhaustion is related to increased cynicism and physical symptoms of stress (Kahill, 1988; Leiter, 1993; Leiter, Clark, & Durup, 1994). Meaningfulness of work is directly related to cynicism and professional efficacy (Leiter, 1992b) and indirectly related to these burnout components through exhaustion. Likewise, effective communication has a direct relationship with acceptance of change and an indirect relationship through exhaustion. In the relationships between acceptance of change and exhaustion and professional efficacy, the burnout construct is depicted as a mediator

between the individual perception of work and the organizational factor of change acceptance.

Because of the exploratory nature of this study, the proposed model incorporating congruence will be developed following completion of measure assessment. Two hypotheses are made on the basis of findings in previous research on value congruence and organizational commitment and turnover intention. Five additional hypotheses are made about relationships between scores on value congruence measures and other work-related variables in the model incorporating meaning, burnout, and change.

1. Value congruence will be positively related to organizational commitment.
2. Value congruence will be negatively related to turnover intention.
3. Value congruence will be related to burnout such that as congruence increases, a) exhaustion will decrease, b) cynicism will decrease, c) and professional efficacy will increase.
4. Value congruence will be positively related to meaningfulness of work.
5. Value congruence will be positively related to acceptance of change.
6. Value congruence will be positively related to communication.
7. Value congruence will be negatively related to physical symptoms.

While these hypotheses predict correlational relationships, they do not identify predicted paths to be added to the burnout model. In general terms, it is expected that paths from value congruence measures are most likely to connect with meaningfulness of work, communication, and acceptance of change, rather than directly to the burnout components or physical symptoms. Having values that are congruent with organizational values is likely to result in a greater sense that one's work is meaningful or that one's

information sources about developments in the organization are accurate. The confidence created by value congruence could also relate directly to greater acceptance of change.

Method

Setting and Procedure

Data were collected as part of a larger survey requested by a Canadian organization as it attempted to deal with massive changes in structure and policy. All employees in four out of the organization's five regional divisions (approximately 600) were surveyed on a voluntary basis during a three-week period in 1997. The organization administers social programs and services as needed to a population base of 850,000 persons. As a governmental agency, the organization has faced dramatic changes to what had been a relatively stable occupation until 1993. Changes have included amalgamation on the federal and provincial levels, staff cuts of 5000 full-time equivalent positions (from a total of 25,000) across the country (to be completed by April, 1998), and redefinition of both program availability and the way in which services would be provided. Restructuring in the province has resulted in the slated reduction of 200 full-time equivalent positions (from a total of 1000 positions), centralization of services within five geographic zones, relocation of employees, and integration of alternative work arrangements such as flextime and working out of home rather than an office.

Participants accessed the 167-item survey via electronic mail. Responses were made on a scannable form, with the option of providing additional comments on a separate sheet. The scanner form and any written comments were returned in a sealed envelope via internal mail to a central contact who forwarded envelopes unopened to

Acadia University for analysis. While confidentiality was assured, complete anonymity was not. A code was used to link participants to their responses for follow-up purposes. The participant code list and the data base are stored separately at the Centre for Organizational Research & Development at Acadia University. The contract with the client organization stipulates that they will not have access to the participant code file or the other information in the response data base that could allow identification of individual staff members. Random selection for follow-up purposes (e.g., in-depth interviews) may be requested from the Centre for Organizational Research & Development. Instructions given in the survey advised participants of this limitation to complete anonymity, as well as indicating the precautions that will be taken with the data they provided. Further, the instructions encouraged participants to leave unanswered any questions that they preferred not to answer.

Demographic data

Completed surveys were received from 364 of the 600 potential participants (response rate of 62%). Of respondents who indicated their gender, 68.4% were female and 31.6% were male. Eleven respondents did not report their gender. Of respondents who indicated their age category, 6.1% were 20-29 years, 25.4% were 30-39 years, 47.2% were 40-49 years, 21.0% were 50-59 years, and 0.3% were over 60 years. Eleven respondents did not report their age. Of respondents who indicated length of employment, 5.5% had worked less than 1 year, 19.1% had worked 1-5 years, 14.2% had worked 6-10 years, 34.2% had worked 11-20 years, and 27.0% had worked over 21 years for the organization. Nine respondents did not indicate length of employment. Of respondents who indicated work status, 77.7% were indeterminate, 20.2% were term employees, and 2.1% were employed on a casual basis. Thirteen participants did not indicate their work status. Of respondents who indicated employee category, 23.5% were clerical staff,

28.8% were managers and advisors, 46.2% were client service providers and 1.5% did not fit into any of these categories. Fourteen respondents did not indicate employee category.

Measures

Value congruence: Six forced choice statements were presented, to which participants responded on a 5-point scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The statements were presented twice; once near the beginning of the survey and once near the end. The differences between the two presentations were in the title and lead-in statements. The earlier statements had the title "Work Values" and the following lead-in:

"Many factors are important in providing quality service. Four of these factors are being efficient, following policy precisely, having personal contact with clients, and adapting service to client need. Generally, in providing services to our clients, **I believe that:**".

The latter presentation of statements had the title "Organizational Values" and the accompanying lead-in: "Many factors are important in providing quality service. Four of these factors are being efficient, following policy precisely, having personal contact with clients, and adapting service to client need. Generally, in providing services to our clients, **the practices of this organization indicate that:**". The following forced-choice statements were identical for each presentation.

1. Being efficient is more important than following policy precisely.
2. Adapting service to client need is more important than being efficient.
3. Having personal contact with clients is more important than adapting service to client need.

4. Adapting service to client need is more important than following policy precisely.
5. Following policy precisely is more important than having personal contact with clients.
6. Having personal contact with clients is more important than being efficient.

Maslach Burnout Inventory–General Survey. The MBI–GS (Schaufeli, Leiter, Maslach, & Jackson, 1996) is a 16-item measure which produces three scores: exhaustion, cynicism, and professional efficacy. Developed from the Maslach Burnout Inventory (MBI, Maslach, Jackson, & Leiter, 1996), the MBI–GS evaluates burnout among professionals with and without the direct client contact that characterizes human service professions (Leiter & Schaufeli, 1996). With a more team-based approach to service provision, the influence of the less visible members of organizations is being appreciated. While the original MBI would have focused on the service roles of staff with direct contact, use of the MBI–GS allows assessment of all staff members including those who provide indirect or support services. The Cronbach coefficient of internal consistency for the five exhaustion items was $\alpha(5) = .92$; for the five cynicism items was $\alpha(5) = .79$; and for the six professional efficacy items was $\alpha(6) = .79$.

The following scales, used in this study, are part of the Staff Survey (Leiter, 1996) developed and tested with 2000 hospital employees at two time periods (Centre for Organizational Research & Development, 1991, 1992).

Physical symptoms. Three items were used to identify, on a 7-point scale from 0 (never) to 6 (daily), the frequency of headaches, sleeplessness, and anxiety. The Cronbach coefficient of internal consistency for the three items was $\alpha(3) = .79$.

Acceptance of Change. Using a 5-point scale from 1 (much worse) to 5 (much better), participants responded to the question "How do you perceive changes over the

past six months in the following:" for "quality of client service", "your job security", and "the morale of people working for the Department." The Cronbach coefficient of internal consistency for the three items was $\alpha(3) = .61$.

The remaining measures (also from the Staff Survey) employ a 5-point scale from 1 (strongly disagree) through 3 (hard to decide) to 5 (strongly agree).

Meaningfulness of Work. Three items from the Conditions for Self-Management Scale (Leiter, 1992b) were used to measure the meaningfulness of work. Sample item: "This job provides me with opportunities to do work which I feel is important." The Cronbach coefficient of internal consistency for the three items was $\alpha(3) = .66$.

Organizational Commitment. Organizational Commitment was measured by three items from the organizational commitment questionnaire (Mowday, Steers, & Porter, 1979). This scale has been found to be a reliable and valid measure of organizational commitment through a large body of research over the past two decades. Sample item: "I am proud to tell others that I am part of this organization." The Cronbach coefficient of internal consistency for the three items was $\alpha(3) = .62$.

Skill Utilization And Development. Skill utilization and development was measured with three items from Leiter (1992b). Sample item: "My work allows me to make full use of my abilities." This measure assessed complementary value congruence. The Cronbach coefficient of internal consistency for the three items was $\alpha(3) = .74$.

Direct Value Congruence. One item from the organizational commitment questionnaire (Mowday, Steers, & Porter, 1979) assessed participants' perception of value congruency with the organization: "I find that my values and the organization's values are very similar."

Turnover Intention. One question assessed participants' turnover intention: "I hope to find work outside of the organization."

Communication. Three items asked participants' perceptions of the completeness and accuracy of information about developments in the organization. Sample item: "Sometimes the public knows more about what is going on in the organization than I do." The Cronbach coefficient of internal consistency for the three items was $\alpha(3) = .60$.

Construction of Indirect Value Variables

For each respondent, value constructs were derived from the questionnaire value items by averaging the scores (or reversed scores) for items that assessed the construct. For example, efficiency was calculated by averaging, for each individual respondent, the response scores for value item 1 ("Being efficient is more important than following policy precisely"), item 2 reversed ("Adapting service to client need is more important than being efficient"), and item 6 reversed ("Having personal contact with clients is more important than being efficient"). This process was used for both the items that tapped individuals' own values ("Work Values" section of questionnaire) and the items that tapped perceptions of the organization's values ("Organizational Values" section of questionnaire). This resulted in eight variables: individual adapting, individual contact, individual efficiency, individual policy, organization adapting, organization contact, organization efficiency, organization policy. These eight variables were used to construct four within-individual-level indirect value congruency variables by subtracting the individuals' perception of the organization from their own value on each of the four constructs. This resulted in the following variables: individual-organization adapting, individual-organization contact, individual-organization efficiency, individual-

organization policy. Summing the absolute values of these four variables produced the composite within-individual-level indirect congruency variable: sum individual-organization.

Variables were constructed to tap cross-level differences. For cross-level analysis, individual perceptions were compared to the mean perception of the subgroup by subtracting subgroup perception from individual perception for each respondent for each of the four value constructs (adapting, contact, efficiency, policy). Comparisons were made for both individual values and perception of organization values. Subgroups for this study were defined by three employee category groupings: clerical staff, managers and advisors, and client service providers. Subgroups were defined in this way for several reasons. First, although location was an appealing possibility, because those in the same office are likely to share similar values, it was not appropriate due to the variation in number of staff among offices and the insufficient staff number in some office locations. Secondly, staff in different categories varied in the amount of client contact, adaptation of services, efficiency, and following of policy that was expected in their normal routine; each position emphasized some service aspects while downplaying other aspects. Finally, staff in different employee categories were experiencing different changes at the time of the survey; while the mode of service provision was altering drastically for one group, it was less affected for the second, and relatively unchanged for the third.

Cross-level analysis examined both individual values and perception of organizational values. The cross-level variables constructed using subgroup include five comparisons of individuals and their subgroup on individual values (four using the separate constructs and one summation measure). These variables are called

subgroup/individual adapting, subgroup/individual contact, subgroup/individual efficiency, subgroup/individual policy, and sum subgroup/individual (the sum of the absolute values for the four comparisons on individual values). The cross-level variables constructed using subgroup also include five comparisons of individuals and their subgroup on perceptions of the organization's values (four using the separate constructs and one summation measure). These variables are called subgroup/organization adapting, subgroup/organization contact, subgroup/organization efficiency, subgroup/organization policy, sum subgroup/organization (the sum of the absolute values for the four comparisons on perception of organization's values).

I had planned to construct a similar set of variables using a long-term employee reference group for comparison to individual respondents on individual values and perceptions of the organization's values. The reference group was to consist of all employees who had worked for the organization for more than five years. Long-term employees are expected to have a more stable and informed view of the organization. The majority of employees in the organization studied have been with the organization more than five years: only 24.6 percent of respondents indicated they had worked with the organization less than six years. Because most respondents fit the definition for the reference group, reference group comparison variables were not constructed.

Data Analysis

Descriptive statistics and frequency distributions were used to assess items in terms of kurtosis, skewness, and outliers. Variables used in the analyses were assessed in terms of kurtosis, skewness, outliers, and Cronbach's measure of reliability. Reliability values were not calculated for the indirect value congruency measures because of the way

in which these variables were constructed. The same value items were used in different combinations to construct the variables; this resulted in measures that are not orthogonal.

No consensus is reached in the literature as to which method of determining value congruency is most useful. For this study, therefore, value congruency was explored in a number of ways that have been described in the literature. The overall purpose was to determine the predictive ability of the different value measures (indirect, direct, complementary) in explaining variance in outcome variables and their role in a model incorporating meaningfulness of work, burnout, physical symptoms, communication, and acceptance of change.

Indirect Value Congruence

With the use of the indirect value measures constructed, analyses examined several questions raised in the literature: 1) what variance is explained during regression analysis by entering difference scores between individual and organization compared to entering individual value measures and organizational value measures separately 2) what information is provided by comparison within the individual level and across levels of the organization; 3) what information is provided by a composite difference score compared with separate difference scores for each of the four value constructs (adapting, contact, efficiency, policy); and 4) does polynomial regression analysis provide an advantage over linear regression analysis?

Spearman correlations were run to evaluate relationships among indirect value variables and outcome variables. Outcome variables included meaningfulness of work, acceptance of change, physical symptoms, exhaustion, cynicism, professional efficacy, communication, turnover intention, and organizational commitment. Due to the number

of correlations run, a significance level of .01 was used to control for experiment-wise Type I error. Scatterplots of the correlations among the value construct variables and outcome measures were examined for non-linear trends. Edwards (1994) proposed the use polynomial regression analysis for difference scores when nonlinear trends were present or there was a theoretical reason to expect a nonlinear relationship among variables.

Value variables displaying significant correlations with outcome variables were explored with regression analysis. For individual-level variables, a series of sequential regression analyses with pairwise deletion of missing cases was conducted to determine the extent to which the indirect value congruency (difference) variables contributed to explaining the variance in the outcome variables beyond that explained by the separate construct components (individual, organization). For example, does the individual-organization efficiency measure explain variance in meaningfulness of work beyond that explained when measures of individual efficiency and organization efficiency are entered together in the regression equation? Separate constructs (individual and organization) were entered first, followed by the difference variable (individual-organization), followed by the summation variable (sum individual-organization) if several separate constructs were significantly correlated with the outcome variable. For cross-level comparisons (individual compared to work subgroup), the separate construct (i.e. adapting, contact, efficiency or following policy) for individual value and perception of organization value were entered on the first step, followed by the cross-level summation variables (individual and organization) on the second step. When only a summation variable was significantly correlated with an outcome variable, it was the only variable entered in the

regression analysis. Tolerance was set at 0.80 to protect against the inclusion of independent variables that are multicollinear. Residual plots were examined to assess normality, homoscedasticity, and linearity at the multivariate level. Data were also screened for influential outliers.

Direct and Complementary Congruence

These analyses also examined several questions raised in the literature: 1) does complementary congruence (skill use and development) provide different information than supplementary congruence (values); and 2) do direct measures of value congruence provide different information than indirect measures of value congruence. Relationships among outcome variables and the direct supplementary measure of value congruence ("I find my values and the organization's values are very similar") and the measure of complementary congruence (opportunities in one's work to use and develop one's skills) were evaluated. Outcome variables included meaningfulness of work, acceptance of change, organizational commitment, turnover intention, physical symptoms, exhaustion, cynicism, professional efficacy, and communication. Spearman correlations were run first. Due to the number of correlations run, a significance level of .01 was used to control for experiment-wise Type I error. Scatterplots of the correlations among the value variables and outcome measures were examined for non-linear relationships.

Significant correlations were explored further using sequential regression analyses with pairwise deletion of missing cases to determine the extent to which the indirect value congruency variables contributed to explaining the variance in the outcome variables beyond that explained by the direct or complementary (skill) measures. The direct supplementary measure and the complementary measure were entered together on

the first step, as there was no theoretical basis for entering one before the other. Any indirect measures (which also tap supplementary congruence) that contributed to explaining variance in the outcome variable during the previous analysis were added at the second step. In this way, the additional contribution of the more complex indirect measure beyond that of the simpler direct and complementary measures was assessed. Tolerance was set at 0.80 to protect against the inclusion of independent variables that are multicollinear. Residual plots were examined to assess normality, homoscedasticity, and linearity at the multivariate level. Data were also screened for influential outliers.

Model Testing

Congruence measures that significantly predicted variance in the outcome variables were incorporated into a model relating meaningfulness of work, exhaustion, cynicism, professional efficacy, communication, physical symptoms, and acceptance of change. The model was assessed using EQS structural equation modeling. The maximum likelihood (robust) procedure was used in light of the possibility of non-normal distribution of some of the data at this multivariate level (Tabachnick & Fidell, 1996).

Results

Distributions for items were found to be acceptable in terms of kurtosis, skewness, and outliers. Appendix A displays means, standard deviations, skewness, and kurtosis values for survey items. Appendix B displays means, standard deviations, skewness, and kurtosis for study variables. Distributions for variables were acceptable in terms of kurtosis, skewness, and outliers. No trends other than linear were detected on the scatterplots. Since no theoretical basis was evident to justify the use of higher order

polynomial regression analysis for the variables being investigated, this approach was not pursued.

Correlations among Indirect Value Measures and Outcome Variables

As indicated in Appendix C, few significant correlations were found among the indirect congruency variables and the outcome variables. Individuals' valuing of contact (individual contact) was negatively correlated with meaningfulness of work ($r_s = -.15$, $p < .01$). Those who placed more importance on contact over the other value aspects (efficiency, adapting service to client need, and following policy) rated their work as less meaningful. The difference between individuals' valuing of contact and that of their subgroup (subgroup/individual contact) was also negatively correlated with meaningfulness of work ($r_s = -.15$, $p < .01$). Those who placed more importance on contact than their subgroup reported their work as less meaningful than did those who placed less importance on contact than their subgroup.

The sum of values comparing individuals with their subgroup on perception of organization's values (sum subgroup/organization) was negatively correlated with acceptance of change ($r_s = -.21$, $p < .01$). The greater the absolute difference between the individual and the comparison subgroup across the four values, the more negatively the individual viewed change in the organization. Correlations among non-value variables are indicated in Appendix D.

Multiple Regression Analysis with Indirect Measures

Individuals' valuing of contact (individual contact) significantly predicted meaningfulness of work, accounting for 3% of the variance ($R^2 = .03$, $F[1,340] = 11.54$,

$p < .01$). Individuals' perception of the organization's valuing of contact (organization contact) and the difference between individual value and perception of organization value of contact (individual-organization contact) did not explain further the variance in work meaningfulness (Table 1).

Table 1

Sequential Multiple Regression Analysis On Meaningfulness of Work (N=341)

Variables in The Equation	Beta	t	p
Individual Contact	-.18	-3.40	.001
Variables Not in The Equation	Beta In	t	p
Organization Contact	.06	1.10	.273
Individual-Organization Contact	-.06	-.93	.353

Individuals' valuing of contact compared to that of their subgroup (subgroup/individual contact) significantly predicted meaningfulness of work, accounting for 4% of the variance ($R^2 = .04$, $F[1,318] = 11.56$, $p < .01$).

Table 2

Sequential Multiple Regression Analysis On Meaningfulness of Work (N=319)

Variables in The Equation	Beta	t	p
Subgroup/individual contact	-.19	-3.40	.001
Variables Not in The Equation	Beta In	t	p
Subgroup/organization contact	.05	.89	.376
Sum subgroup/individual	.03	.57	.568
Sum subgroup/organization	-.04	-.67	.501

The comparison of individuals and their subgroup on perceptions of the organization's valuing of contact (subgroup/organization contact), the overall comparison of individuals with their subgroup on individual values (sum subgroup/individual), and the overall comparison of individuals with their subgroup on perception of organization's

values (sum subgroup/organization) did not explain further the variance in work meaningfulness (Table 2).

The overall comparison of individuals with their subgroup for perception of organization's values (sum subgroup/organization) significantly predicted acceptance of change, accounting for 4% of the variance ($R^2=.04$, $F[1,319]=11.95$, $p<.01$; $Beta=-.19$, $t=-3.45$, $p<.01$).

To summarize to this point, polynomial regression analysis was not explored due to lack of indicators (theoretical or non-linear trends on scatterplots) to justify its use. Other questions raised in the literature were explored in a minimal fashion due to the relative lack of significant correlations among the indirect value measures and the outcome variables with this sample. For this reason, it is difficult to make a general statement as to 1) whether more variance is explained during regression analysis by entering difference scores(individual-organization) compared to entering separate individual value measures and organizational value measures within the individual level; 2) what information is provided by comparison within the individual level and across levels of the organization; and 3) what information is provided by a composite difference score compared with separate difference scores for each of the four value constructs (adapting, contact, efficiency, policy).

For this sample, three indirect measures significantly explained variance in outcome variables. Individuals' valuing of contact (individual contact) and individuals' valuing of contact compared to that of their subgroup (subgroup/individual contact) explained variance in meaningfulness of work. The overall comparison of individuals with their subgroup for perception of organization's values (sum subgroup/organization)

explained variance in acceptance of change. These indirect supplementary value measures were used in comparison with the direct and complementary (skill) measures.

Direct and Indirect Value Measures

Table 3 displays the Spearman correlation coefficients for the direct and complementary measures with the outcome variables.

In contrast to the indirect measures of value congruence, the direct measure and the complementary measures correlated significantly with most all of the outcome variables. Significant correlations were explored further using multiple regression analysis, entering direct and complementary measures on the first step. Previously identified significant indirect measures were entered on the second step of the analysis to assess any additional contribution of the indirect measure beyond that of the direct and complementary measures.

Table 3

Spearman Correlations between Direct Measure, Complementary Measure, and Outcome Variables

Outcome Variable	Direct Congruence	Complementary Congruence
Meaning	.39	.52
Change	.23	.13
Commitment	.50	.23
Turnover Intention	-.23	-.26
Physical Symptoms	-.09	-.17
Exhaustion	-.18	-.14
Cynicism	-.26	-.35
Professional Efficacy	.20	.33
Communication	.28	.16

Bold: $p < .01$

Together, the direct measure, the complementary (skill) measure, and individuals' valuing of contact compared to that of their subgroup (subgroup/individual contact) accounted for 38% of the variance in meaningfulness of work ($R^2=.38$, $F[3,323]=66.19$, $p<.01$) (Table 4). Individuals' valuing of contact compared to that of their subgroup (subgroup/individual contact) accounted for 2% of variance beyond that explained by the direct and complementary (skill) measures ($\Delta R^2=.02$). Individuals' valuing of contact (individual contact) failed to explain further the variance in work meaningfulness.

Table 4

Sequential Multiple Regression Analysis On Meaningfulness of Work (N=325)

Variables in The Equation	Beta	t	p
Direct	.26	5.53	.000
Complementary	.46	10.03	.000
Subgroup/Individual Contact	-.13	-2.90	.004
Variables Not in The Equation	Beta In	t	p
Individual Contact	.98	1.00	.316

Together, the direct measure and the overall comparison of individuals with their subgroup for perception of the organization's values (sum subgroup/organization) accounted for 8% of the variance in acceptance of change ($R^2=.08$, $F[2,318]=14.19$, $p<.01$) (Table 5). The overall comparison of individuals with their subgroup for perception of organization's values (sum subgroup/organization) accounted for 3% of variance beyond that explained by the direct measure ($\Delta R^2=.03$).

Table 5

Sequential Multiple Regression Analysis On Acceptance of Change (N=320)

Variables in The Equation	Beta	t	p
Direct	.22	3.99	.000
Sum Subgroup/Organization	-.17	-3.16	.002

Together, the direct measure and the overall comparison of individuals with their subgroup for perception of organization's values (sum subgroup/organization) accounted for 5% of the variance in exhaustion ($R^2=.05$, $F[2,316]=8.70$, $p<.01$) (Table 6). The overall comparison of the individuals with their subgroup for perception of organization's values (sum subgroup/organization) accounted for 1% of variance beyond that explained by the direct measure ($\Delta R^2=.01$). The complementary (skill) measure failed to explain further the variance in exhaustion.

Table 6

Sequential Multiple Regression Analysis On Exhaustion (N=318)

Variables in The Equation	Beta	t	p
Direct	-.18	-3.25	.001
Sum Subgroup/Organization	.13	2.32	.021
Variables Not in The Equation	Beta In	t	p
Complementary	-.11	-1.85	.065

The complementary (skill) measure accounted for 2% of the variance in physical symptoms ($R^2=.02$, $F[1,346]=8.45$, $p<.01$; $Beta=-.15$, $t=-2.91$, $p<.01$).

Together, the direct measure and the complementary (skill) measure accounted for 15% of the variance in cynicism ($R^2=.15$, $F[2,341]=29.37$, $p<.01$) (Table 7).

Table 7

Sequential Multiple Regression Analysis On Cynicism (N=343)

Variables in The Equation	Beta	t	p
Direct	-.18	-3.41	.001
Complementary	-.29	-5.46	.000

Together, the direct measure and the complementary (skill) measure accounted for 12% of the variance in professional efficacy ($R^2=.12$, $F[2,334]=23.28$, $p<.01$) (Table 8).

Table 8**Sequential Multiple Regression Analysis On Professional Efficacy (N=336)**

Variables in The Equation	Beta	t	p
Direct	.11	2.09	.038
Complementary	.30	5.52	.000

The direct measure accounted for 7% of the variance in communication ($R^2=.07$, $F[1,344]=26.19$, $p<.01$) (Table 9).

Table 9**Sequential Multiple Regression Analysis On Communication (N=345)**

Variables in The Equation	Beta	t	p
Direct	.27	5.12	.000
Variables Not in The Equation	Beta In	t	p
Complementary	.09	1.67	.09

Together, the direct measure and the complementary measure accounted for 29% of the variance in organizational commitment ($R^2=.29$, $F[2,344]=69.20$, $p<.01$) (Table 10).

Table 10**Sequential Multiple Regression Analysis On Organizational Commitment (N=346)**

Variables in The Equation	Beta	t	p
Direct	.49	10.27	.000
Complementary	.11	2.25	.025

Together, the direct measure and the complementary measure accounted for 10% of the variance in turnover intention ($R^2=.10$, $F[2,338]=18.64$, $p<.01$) (Table 11).

Table 11

Sequential Multiple Regression Analysis On Turnover Intention (N=340)

Variables in The Equation	Beta	t	p
Direct	-.20	-3.60	.000
Complementary	-.19	-3.57	.000

Residual plots for the regression analyses indicated that data were acceptable in terms of multivariate normality, homoscedasticity, linearity, and outliers.

To summarize the regression analyses, the direct measure and the complementary measure significantly explained variance in many of the outcome variables. In this regard they were more useful measures than the indirect value measures for this particular sample of respondents. The direct measure explained variance in meaningfulness of work, acceptance of change, exhaustion, cynicism, professional efficacy, communication, organizational commitment, and turnover intention. The complementary (skill) measure explained variance in meaningfulness of work, cynicism, professional efficacy, communication, organizational commitment, turnover intention, and physical symptoms. Because the indirect measures require more questionnaire items and more complex analysis, their inclusion in a survey and subsequently in structural modeling is only truly useful if they explain variance beyond that explained by the direct or complementary measures. The measure of individuals' valuing of contact compared to that of their subgroup (subgroup/individual contact) met this criterion for meaningfulness of work and the overall comparison of individuals with their subgroup for perception of organization's values (sum subgroup/organization) met this criterion for exhaustion and acceptance of change.

The purpose of this study was twofold: to explore the issue of value congruence from a measurement and analytical perspective and to assess the role of value congruence in a model incorporating meaningfulness of work, burnout, and change (Leiter & Harvie, 1998). A number of questions raised in the literature formed the basis of the analytical exploration. Based on the results of simple correlations, scatterplots, and multiple regression, some questions can be answered directly, while others cannot. A summary is presented at this point to provide an overview and a departure point for further analysis.

1. Supplementary congruence (based on values) does appear to provide different information than that provided by complementary congruence (on skill utilization and development).

2. Indirect measures of congruency (e.g. asking respondents their perceptions of individual and organizational values with the researcher computing congruency) provided different information than a one-item measure asking respondents directly how their values match those of the organization.

3. Difference scores provided distinct information from that obtained by examining individual construct differences or a composite score for congruence.

4. For this sample of workers, cross-level comparison, specifically the comparison of individuals with their subgroups, provided the most information.

5. Polynomial regression analysis was not explored in light of the lack of nonlinear trends or theoretical support with the variables in this study. Due to the limited number of significant correlations between the indirect variables and the outcome variables, few regression analyses were performed to assess the effect of order of variable entry. No definitive statement can be made whether regression analyses

entering individual values separately from organizational values or regression analyses using difference scores is the better choice.

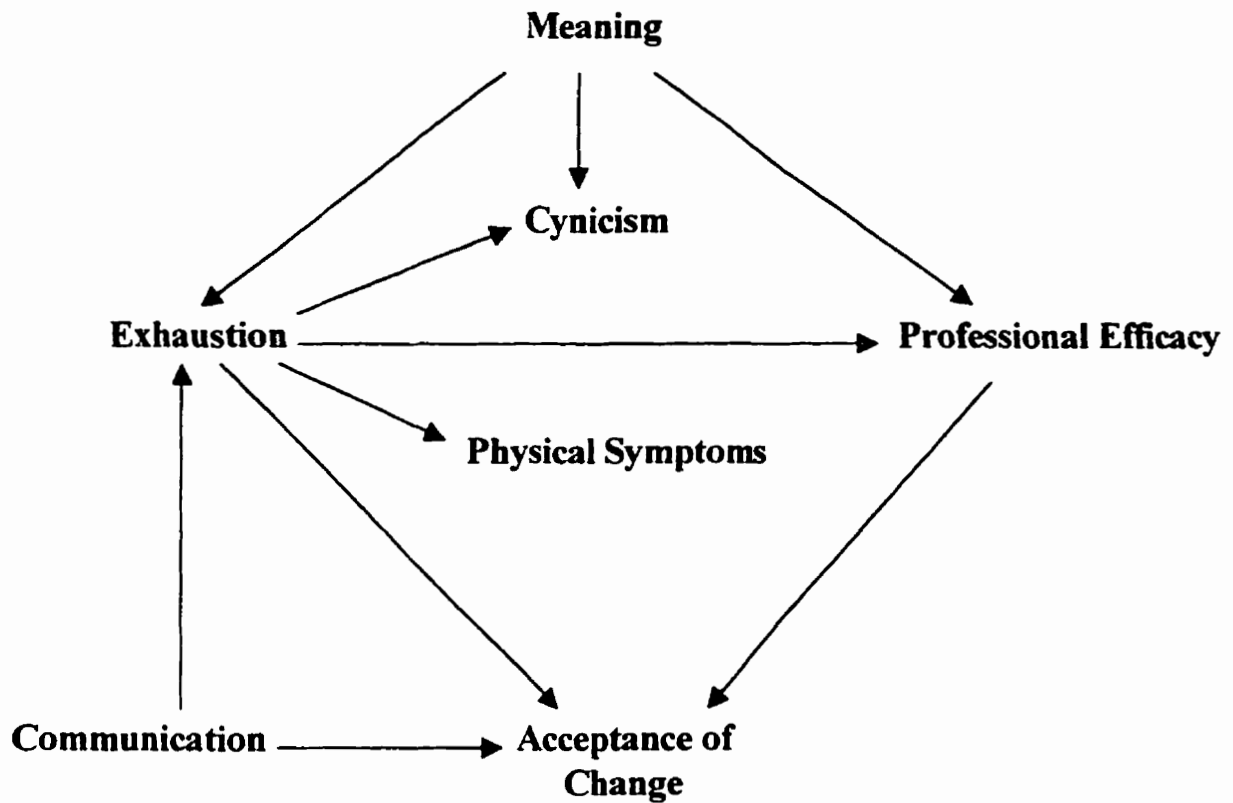
Structural Equation Modeling

Congruence measures that significantly predicted variance in the outcome variables were incorporated into a model relating meaningfulness of work, exhaustion, cynicism, professional efficacy, communication, physical symptoms, and acceptance of change. The congruence variables included were the direct value measure, the complementary (skill use and development) measure, the measure of individuals' valuing of contact compared to that of their subgroup (subgroup/individual contact) and the overall comparison of individuals with their subgroup for perception of organization's values (sum subgroup/organization).

The model in Figure 1 was used as the starting point for EQS structural equation model testing using the maximum likelihood (robust) procedure (Bentler, 1995). This model differs from that of Leiter and Harvie (1998) in that the organization in the present study was moving to a team-based approach to work and lacked the supervision and management components that were a part of the original model. As with Leiter & Harvie's original study, this analysis used three indicators for each of the latent variables when possible. Three of the value measures had only one indicator each. Restricting the number of items to three for each variable reduces the complexity of the analysis but still provides sufficient indicators of each construct. The correlations among the eleven latent variables are displayed in Appendix E. The correlations for the three-item burnout measures are comparable to the correlations among the full-scale burnout measures (Appendix D).

Figure 1

Replication Model



The modeling process took place in several steps. To test the replicability of the model in Figure 1 in the present study, the value congruency variables were not added to the model. Thus, only seven variables were included in the first analysis: exhaustion, cynicism, professional efficacy, meaningfulness of work, physical symptoms, acceptance of change, and communication. Value variables were then considered in the model.

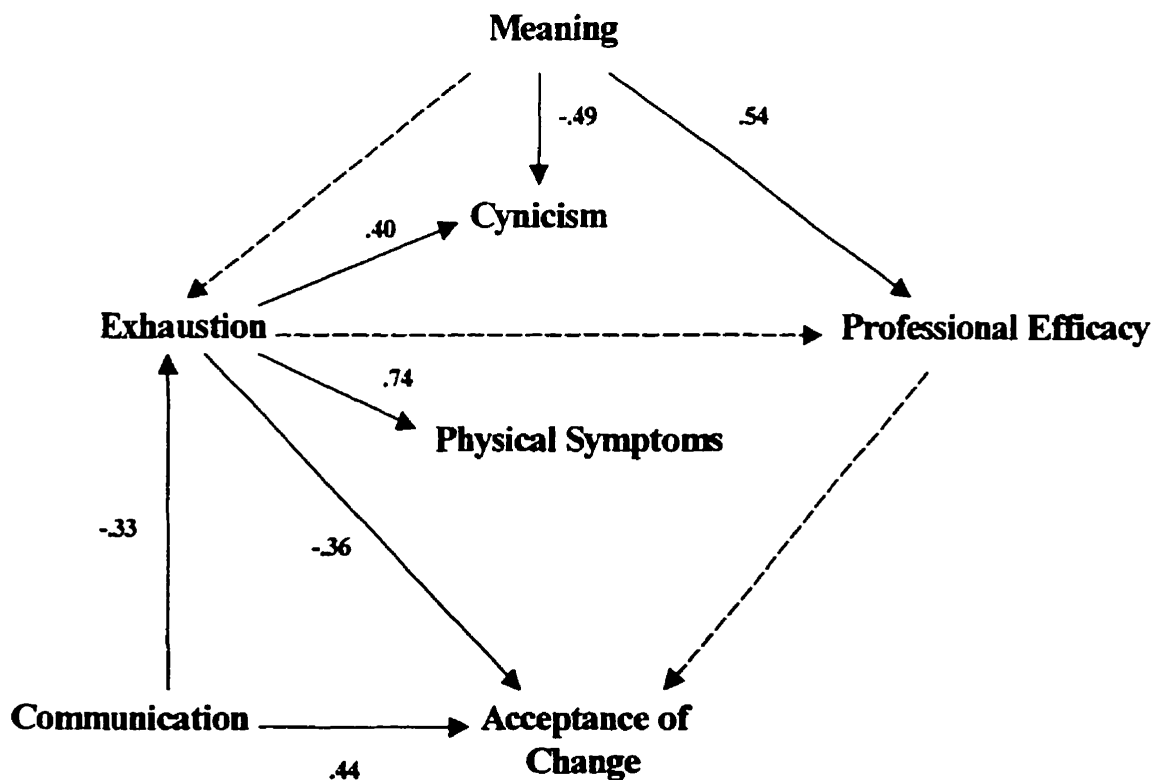
Improvement among nested models was assessed as described by Bentler and Bonnett (1980). Three criteria are used as indication of improved fit: significant change in chi-square corresponding to the change in degrees of freedom (χ^2/df), improvement in the Bentler Non-Normed Fit Index, and improvement in the Comparative Fit Index. The

Bentler Non-Normed Fit Index was used to provide better fit assessment for the relatively small sample in this study.

A Structural Null Model (with no paths among the latent variables) was compared to an Independence Model (with no specified relationships among the latent variables and no items loaded onto the latent variables). As indicated in Table 12, the improvement in fit with the Structural Null Model supports assignment of items to their appropriate latent variables (Difference $\chi^2_{(24)} = 1885.05, p < .001$). Although the Replication Model improved the fit over the Structural Null Model (Difference $\chi^2_{(10)} = 346.3, p < .001$), the Bentler Non-Normed Fit Index of .81 and the Comparative Fit Index of .83 indicate a less than acceptable fit between the model and the data.

Figure 2

Reduced Model



Three paths in the Replication Model were not significant: from meaningfulness of work to exhaustion, from exhaustion to professional efficacy, and from professional efficacy to acceptance of change. The nonsignificant drop in chi-square after removal of these paths (Table 12) is indicative of a more parsimonious model (Difference $\chi^2_{(3)} = 6.12$, n.s.). The Reduced Model (with the three non-replicated paths removed) is displayed in Figure 2.

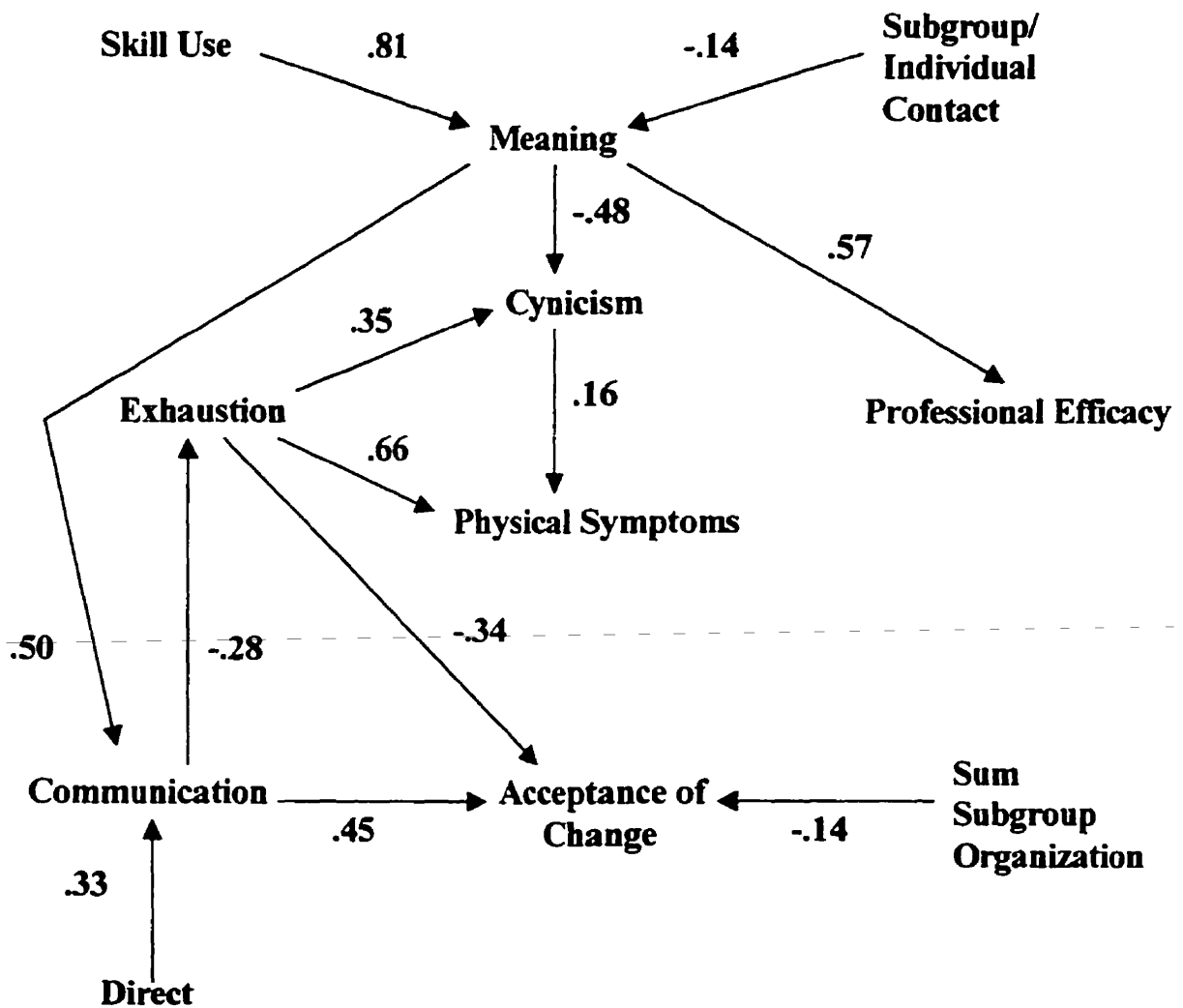
At this point, paths relating value congruency to the Reduced Model were explored. Because the constructs under consideration had not been researched in relation to a burnout model, it was not possible to draw directly on past findings when deciding which paths to include. The Lagrange Multiplier test of the EQS analysis lists paths that would likely improve data-model fit. Such paths were included in the model only if they were consistent with burnout theory or in keeping with potential hypotheses about the influence of value congruency, and supported by the results of earlier data exploration. For example, the suggested path from cynicism to physical symptoms meets these criteria.

Although not described in previous research, the path does make theoretical sense; it is reasonable that those who defensively disengage from their work would experience more anxiety, headaches, or sleeplessness. Likewise, while a path from skill utilization and development (complementary value measure) to communication would not make intuitive sense, a path from skill to meaningfulness of work would. A total of four paths suggested by the Lagrange Multiplier test results and meeting the above criteria were found to be significant when included in the model: from skill utilization

(complementary value congruency) to meaningfulness of work, from meaningfulness of work to communication, from direct value congruency to communication, and from cynicism to physical symptoms.

Figure 3

Revised Model



On the basis of findings of earlier analyses of the relationships among value and outcome variables and the general hypotheses, the Revised Model (Figure 3) also

included two new paths: from the measure of individuals' valuing of contact compared to that of their subgroup (subgroup/individual contact) to meaningfulness of work and the overall comparison of individuals with their subgroup on perception of organization's values (sum subgroup/organization) to acceptance of change. All the paths included were found to be significant ($z > 2.0$). These six additional paths increased the goodness of fit of the Revised Model (Figure 3) to acceptable levels with a Bentler Non-Normed Fit Index of .90 and a Comparative Fit Index of .91 (Difference $\chi^2_{(6)} = 188.08$, $p < .001$).

Confirmatory factor analysis for latent variables used in the model is shown in Appendix F. Three of the value measures (direct, subgroup/individual contact, sum subgroup/organization) had only one indicator variable each and are not shown.

Table 12

Values Models: Goodness of Fit Indices

Model	df	χ^2	NNFI	CFI
Revised	314	536.47	.90	.91
Reduced	320	724.55	.81	.83
Replication	317	718.43	.81	.83
Structural Null	327	1064.73	.67	.69
Independence	351	2949.78		

Discussion

The general hypotheses of relationships between the value measures and outcome variables were supported to varying degrees, with results forming an interesting pattern. No significant correlations were found between any of the indirect value congruence measures that were calculated and turnover intention or commitment to the organization.

On the other hand, both the direct value congruence measure ("I find my values and the organization's values are very similar") and the complementary congruence measure (skill utilization and development) had significant correlations with both turnover intention and commitment to the organization. This indicates that the direct and complementary measures may be tapping constructs similar to those in earlier research on values and organizational outcomes. It would seem reasonable to expect that incongruity among the value aspects assessed by the indirect measure would also be related to less commitment to the organization and greater intention to find work elsewhere. The lack of relationships noted for the indirect measures may indicate a less than optimum method of calculating the indirect measures or may indicate differences in the underlying constructs being measured by the direct, complementary, and indirect variables. Turnover intention and commitment to the organization were the only two outcome measures examined in this study that had previous literature on which to base hypotheses. The remaining hypotheses were proposed on the basis of intuition.

The pattern for these intuitive hypotheses was similar to that for the literature supported hypotheses. Only three significant correlations with outcome variables were found among the 23 indirect value variables: two with meaningfulness of work and one with acceptance of change. All the correlations with outcome variables, except for two, were significant for the direct value measure and the complementary (skill) measure. Follow-up with these significant relationships through multiple regression analysis and structural equation modeling indicates that two of the indirect measures appear to provide more or different information than that provided by the direct and complementary measures. The measure of individuals' valuing of contact compared to that of their

subgroup (subgroup/individual contact) met this criterion for meaningfulness of work and the overall comparison of individuals with their subgroup for perception of organization's values (sum subgroup/organization) met this criterion for acceptance of change. Although the paths from these indirect value congruency measures to components of the burnout and change model are not strong, they are significant and deserve further study with other populations.

The mediating role of burnout in predicting acceptance of change was affirmed in this study. The importance of inter-relationships of components in the original model was corroborated. Those who experience their work to be meaningful are more likely to report feelings of professional efficacy and less likely to experience cynicism. Through their confidence in organizational communication, they are also less likely to experience exhaustion. Those experiencing less exhaustion are more likely to perceive changes in the organization positively. Some paths in the original model were not significant for this sample of workers: from meaningfulness of work directly to exhaustion, from exhaustion to professional efficacy, and from professional efficacy to acceptance of change. The mediating role of burnout, however, remained strong. One could speculate that the nature of work performed could account for these modifications. The original model was developed with data from hospital staff. Distinct levels of the burnout components have been described in different occupations and countries (Maslach et al., 1996), but these do not provide information on the interaction of the components in a model. The majority of studies on burnout have used correlational data which do not permit examining the effect of interactions among variables that is possible with model testing (Leiter & Harvie, 1996). Further, most of these studies have concentrated on the exhaustion component of

burnout (Maslach, 1993). The result is that we know relatively little about the way in which burnout progresses or what influences the process in different occupations and cultures.

It would not be unreasonable to imagine that for diverse occupations or organizational cultures the links among the components in the model would vary due to the manner in which burnout develops and the implications of the components. Cynicism is viewed as a decrease in the quality of work relationships; lack of professional efficacy can be viewed as reduced quality of task performance. When exhaustion is prolonged or overwhelming, the quality of work relationships or the quality of task performance will diminish. In some cases, both will suffer. Ideally, one would like to maintain both relationship and task quality in spite of exhaustion, but this eventually becomes impossible. Tolerance for cynicism and diminished professional efficacy may vary with type of work. In some work it may be more acceptable to sacrifice the quality of the relationships when exhaustion becomes a significant problem in order to maintain a certain level of task quality. For other types of work, it may be unthinkable to sacrifice the quality of working relationships. In this case when exhaustion is overwhelming, task quality may be sacrificed to some extent. The pivotal role of burnout in connecting the meaningfulness of work that people do on a daily basis within the larger context of a changing organization makes this issue an important one. Until further studies involving model testing are undertaken, the nature of this role in various occupations and organizations remains speculative.

This study highlights the role of value congruity in a model predicting acceptance of change. Individuals who perceive the organization to be providing them with work that

allows them to use and to develop their skills find their work to be more meaningful. As well, the more similar the individual and organizational values were perceived to be by the individual, the greater the confidence in communication. The indirect measures identified two ways in which value incongruity was problematic. First, overall value incongruity compared with one's subgroup (as assessed by sum subgroup organization) was associated with less acceptance of change: the greater the overall difference between individuals and their subgroup on perceptions of organizational values, the worse their evaluation of change. Second, the specific value of client contact had a distinct relationship with meaningfulness of work. Those who valued client contact more than did members of their subgroup on average rated their work as less meaningful. This relationship suggests that valuing client contact can be problematic if that value is not widely shared among one's peers. It implies that a strong emphasis on a seemingly positive value (client contact) may aggravate a career crisis if that value runs contrary to the subgroup culture.

The incorporation of various aspects of value congruence into the model is interesting and provides some information on the relationships among the value variables as well as outcome variables. It can be seen, however, that the issues of measurement and analysis have not been put to rest by this one relatively short study. In fact, more questions have been raised. In particular, the importance of basic research and the application of findings to the organizational setting require further consideration. Understanding the meaning and influence of the various aspects of value congruence is relevant for both endeavours. The measures and analyses chosen should allow maximal use of the data for testing models and developing theory. Development of organizational

theory can, in the long term, provide guidelines for organizational development. The immediate needs of the organization taking part in the study deserve equal consideration. The measure should lead to practical recommendations that the organization can consider as they cope with current challenges.

The number of items required to assess value congruence in the indirect manner which I have chosen creates a problem in survey length. Organizations wish to assess the multiple aspects of the workplace that can influence employee effectiveness. Surveys used for this purpose need to include items that assess all important components but, at the same time, need to be sufficiently short to encourage completion by staff. The information available from any section of the survey must provide a unique and usable perspective on the organization. As a first step in organizational intervention, survey development and implementation necessitates the production of an efficient, effective measurement tool. The twelve items required for the measure developed for this study need to earn their place in a comprehensive survey. It is not clear from the results of this study whether or not the measure met this criterion.

Not apparent from the results of this study is the fact that the organization involved found the information provided to them on value differences to be useful. In the report prepared for the organization, means were compared on each of the four constructs for importance placed by individuals in the organization and their perceptions of the importance that organizational practices emphasized. The organization is moving away rapidly from a well-established, bureaucratic (policy-oriented) and client-contact intensive structure to one that requires both efficiency (due to downsizing in the organization) and unique adapting of services to both internal and external clients. The

pattern of results provided by the indirect value constructs helped the organization to understand areas of resistance to change and to develop strategies to assist staff through the transition. A major objective of a collaborative, action research approach is to provide information that is truly useful to the organization, rather than primarily useful to the researcher for theory development. The potential usefulness demonstrated by the measure to the organization under study indicates that further exploration of indirect measurement of values is warranted.

While a variety of calculation approaches described in the literature were used for this study, they were by no means exhaustive. It would be unwise to write off a measurement tool as ineffectual when the analysis rather than the instrument was inadequate. Stronger relationships may exist among indirect value measures and outcome measures if analysis involves pitting the more people-oriented values of work (adapting service to client needs and contact with service recipients) against the more task-completion-oriented values (being efficient and following policy precisely). This would result in the loss of some information by moving the analysis from consideration of four distinct components to two more general aspects. If, however, strong and significant relationships were identified, organizations would still receive some guidance regarding the impact of change on staff perceptions of and emphasis on values, while permitting the development of a more complete model.

The question is also raised whether the concepts of contact, efficiency, adapting service, and following policy may demonstrate stronger relationships in organizations providing other types of service. Are these values more central and potentially more influential in the health care industry, for example? The measure developed in this study

has been incorporated into two subsequent surveys in health care facilities. It will be interesting to explore value congruence assessment issues using data from the health care setting. One of the goals of this study was to develop a value congruency measure that was focused on one aspect of work (quality service provision), but, at the same time, was sufficiently broad to allow generalization to a wide variety of service-oriented organizations. While it could be argued that the concepts chosen may be part of any service industry, that does not ensure that components are seen by employees in a particular field as influential values in their daily work lives.

Deciding on the most efficacious manner of assessing value congruity is a challenging task: the shorter direct and complementary (skill utilization) provide specific but limited perspectives; the indirect approach is fraught with complexity in terms of items needed, calculation issues, and interpretation difficulties. The challenge, however, is warranted in light of the importance of the topic. While efficiency in the workplace is necessary in a globally competitive environment, it is not sufficient to assure sustainability of human effort or commitment. The level of energy and creativity required to establish an enduring and developing organization demands more than physical or even cognitive commitment from employees; emotional commitment is also critical. It is this latter component, the affective element, which cannot be purchased from staff; it must be earned and nurtured. It is the affective component, the sense of living one's values through work, that is most difficult to define and measure, and to maintain during organizational change. Technology will be developed to alleviate further the physical demands of labour; training programs will abridge the cognitive expectations of work. What device or system will support affective commitment—a vital component that cannot

be mechanized or cognitively trained? In this light, work values do matter. Consistency of values between individuals and the workplace may be the force that sustains both the people and the organization during the revolutionary transformation of work we are experiencing. Addressing the measurement issues and understanding the role of value congruency in the workplace will not be a simple task; it will be an essential one.

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Appendix A

Item Mean, Standard Deviation, Skewness, and Kurtosis

Item	M	SD	Skewness	Kurtosis
Acceptance of Change 1	2.74	.95	.85	.23
Acceptance of Change 2	2.00	.89	.63	.02
Acceptance of Change 3	1.64	.78	1.21	1.18
Organizational Commitment 1	3.88	.93	-.78	.19
Organizational Commitment 2	3.91	1.09	-1.07	.51
Organizational Commitment 3	3.37	1.01	-.42	-.50
Direct Value Congruency	3.27	.92	-.35	-.17
Turnover Intention	2.51	1.13	.32	-.69
Communication 1	3.56	.87	-.92	.34
Communication 2	2.76	1.14	.15	-1.18
Communication 3	2.96	1.10	-.07	-1.06
Exhaustion 1	3.22	1.76	-.07	-1.04
Exhaustion 2	3.39	1.73	-.20	-1.06
Exhaustion 3	2.74	1.79	.22	-1.04
Exhaustion 4	1.75	1.62	.75	-.28
Exhaustion 5	2.16	1.78	.63	-.65
Cynicism 1	1.34	1.59	1.27	.90
Cynicism 2	1.86	1.74	.79	-.36
Cynicism 3	2.42	2.16	.46	-1.19
Cynicism 4	1.29	1.52	1.11	.52
Cynicism 5	1.59	1.67	.97	.07
Professional Efficacy 1	4.89	1.37	-1.31	1.19
Professional Efficacy 2	4.21	1.76	-.72	-.59
Professional Efficacy 3	5.10	1.23	-1.63	2.50
Professional Efficacy 4	3.79	1.61	-.32	-.89
Professional Efficacy 5	3.69	1.60	-.38	-.71
Professional Efficacy 6	4.64	1.38	-1.08	.66

Appendix A (continued)

Item Mean, Standard Deviation, Skewness, and Kurtosis

Item	M	SD	Skewness	Kurtosis
Skill Utilization and Development 1	3.16	1.04	-.24	-1.02
Skill Utilization and Development 2	3.77	.79	-1.25	1.60
Skill Utilization and Development 3	3.56	.91	-.99	.58
Meaningfulness of Work 1	3.38	.94	-.72	-.04
Meaningfulness of Work 2	3.91	.74	-.85	1.26
Meaningfulness of Work 3	3.51	.90	-.65	.00
Physical Symptoms 1	2.39	1.62	.38	-.73
Physical Symptoms 2	2.34	1.80	.43	-.94
Physical Symptoms 3	2.48	1.65	.37	-.75
Individual value 1	3.58	1.05	-.65	-.27
Individual value 2	3.58	.95	-.58	.03
Individual value 3	2.93	.98	.30	-.50
Individual value 4	3.65	.96	-.70	.07
Individual value 5	2.18	.91	.95	.90
Individual value 6	2.78	.97	.43	-.37
Organization value 1	3.22	.97	-.37	-.70
Organization value 2	3.22	.93	-.39	-.68
Organization value 3	2.62	.85	.27	-.28
Organization value 4	3.28	.97	-.58	-.42
Organization value 5	2.82	1.01	.18	-.68
Organization value 6	2.59	.88	.38	-.28

Appendix B

Variable Mean, Standard Deviation, Skewness, and Kurtosis

Variable	M	SD	Skewness	Kurtosis
Acceptance of Change	1.93	.65	.67	-.14
Communication	4.00	.62	-1.03	.88
Direct Value Congruency	3.23	.92	-.35	-.17
Meaningfulness of Work	3.60	.67	-.62	.87
Organizational Commitment	3.72	.76	-.66	.51
Physical Symptoms	2.40	1.42	.49	-.67
Skill Utilization and Development	3.62	.66	-.74	1.11
Turnover Intention	2.51	1.13	.32	-.69
Exhaustion	2.65	1.50	.29	-.85
Cynicism	1.70	1.29	.76	.16
Professional Efficacy	4.41	1.05	-.69	-.08
Individual Adapting	3.44	.56	-.48	1.16
Individual Contact	3.17	.69	.10	.36
Individual Efficiency	3.07	.59	-.10	.92
Individual Policy	2.31	.78	.64	.60
Organization Adapting	3.29	.56	-.26	.37
Organization Contact	2.79	.69	.01	.44
Organization Efficiency	3.14	.54	.27	.86
Organization Policy	2.77	.79	.39	-.05
Individual-Organization Adapting	.15	.64	.25	1.78
Individual-Organization Contact	.39	.78	1.05	1.85
Individual-Organization Efficiency	-.07	.62	-.67	1.64
Individual-Organization Policy	-.47	.89	-.69	2.45
Sum Individual-Organization	.53	.45	1.26	1.58
Subgroup/Individual Adapting	.01	.56	-.59	1.17
Subgroup/Individual Contact	.00	.68	-.07	.34
Subgroup/Individual Efficiency	-.01	.58	-.05	.96
Subgroup/Individual Policy	.02	.78	.67	.67
Subgroup/Organization Adapting	.00	.55	-.31	.60
Subgroup/Organization Contact	.00	.69	.01	.37
Subgroup/Organization Efficiency	-.01	.54	.18	.84
Subgroup/Organization Policy	.00	.78	.45	.00
Sum Subgroup/Individual	.51	.26	.92	.99
Sum Subgroup/Organization	.50	.25	1.35	1.00

Appendix C

Spearman Correlations With Indirect Value Congruency Measures

Variable	Meaning	Change	Commit	Turn	Symp	Exh	Cyn	Prof eff	Comm	Direct	Skill
I adapt	.04	.03	.01	.03	-.01	-.00	-.01	-.03	-.05	-.04	.06
I contact	-.15	-.06	-.06	.00	-.02	.05	.06	-.03	-.10	-.08	-.08
I efficiency	.06	-.04	.00	-.05	.10	.06	-.02	.00	-.06	.05	.05
I policy	.07	.07	.06	-.01	-.06	-.10	-.04	.05	.11	.05	-.01
O adapt	.08	.09	.02	-.02	.01	.06	-.06	-.01	.07	.10	.12
O contact	.01	.05	.06	.07	-.02	-.07	.01	.02	.03	.10	-.07
O efficiency	-.05	-.09	-.01	-.06	.12	.06	.06	-.06	-.10	-.06	.05
O policy	-.02	-.01	-.03	.00	-.06	-.03	-.02	.03	-.03	-.13	-.04
I-O adapt	-.04	-.03	-.02	.07	-.01	-.09	.03	-.03	-.07	-.11	-.10
I-O contact	-.14	-.09	-.09	-.05	.03	.12	.06	-.04	-.11	-.16	-.02
I-O efficiency	.09	.02	-.00	.02	-.02	.03	-.04	.04	.01	.06	.01
I-O policy	.07	.08	.06	.02	-.00	-.06	-.01	.04	.12	.13	.03
Sum I-O	-.08	-.08	-.13	.02	.09	.10	.05	-.09	-.08	-.16	-.03
Sub I adapt	.07	.02	.03	.00	-.01	-.03	.01	-.03	-.05	-.03	.05
Sub I contact	-.15	-.06	-.06	-.02	-.03	.04	.03	-.04	-.09	-.05	-.04
Sub I efficiency	.04	-.04	.02	-.02	.11	.07	.02	-.01	-.07	.02	-.01
Sub I policy	.07	.06	.04	.01	-.06	-.08	-.05	.06	.11	.05	.02
Sub O adapt	.10	.06	.02	-.05	-.02	.04	-.06	-.02	.06	.08	.16
Sub O contact	-.00	.01	.05	.07	-.01	-.05	.02	-.01	-.02	.09	-.06
Sub O efficiency	-.08	-.07	.00	-.04	.12	.06	.06	-.07	-.09	-.07	.01
Sub O policy	-.02	.00	-.05	.02	-.05	-.01	-.01	.05	.02	-.12	-.02
Sum Sub I	.05	-.10	.05	-.05	.01	.09	.03	.05	-.06	-.01	.13
Sum Sub O	-.07	-.21	.04	-.02	.04	.14	.04	.01	-.08	-.05	.08

Bold: p<.01

Appendix D

Spearman Correlations Among Non-Value Variables

Variable	2	3	4	5	6	7	8	9
1 Meaning	.19	.40	-.28	-.19	-.17	-.44	.44	.20
2 Change		.07	-.04	-.27	-.34	-.33	.11	.20
3 Commitment			-.18	-.10	-.14	-.32	.35	.09
4 Turnover Intent				.12	.08	.26	-.12	-.14
5 Symptoms					.65	.40	-.12	-.15
6 Exhaustion						.44	-.11	-.18
7 Cynicism							-.38	-.10
8 Prof Efficacy								.06
9 Communication								

Bold: $p < .01$;

Correlations Among EQS Latent Variables

Variable	2	3	4	5	6	7	8	9	10	11
1 Meaning	.41	-.26	-.17	-.54	.57	.59	.50	.82	-.14	-.23
2 Change		-.45	-.49	-.50	.26	.55	.30	.26	-.24	-.09
3 Symptoms			.73	.45	-.14	-.41	-.12	-.20	.10	.00
4 Exhaustion (3 items)				.43	-.04	-.30	-.14	-.16	.19	.04
5 Cynicism (3 items)					-.32	-.28	-.28	-.43	.15	.13
6 Professional Efficacy (3 items)						.40	.22	.46	-.03	-.08
7 Communication							.49	.58	-.09	-.13
8 Direct								.39	-.10	-.07
9 Skill Use									-.09	-.14
10 Sum Subgroup/Organization										.19
11 Subgroup/Individual contact										

Bold: $p < .01$

Appendix F

Confirmatory Factor Analysis for Latent Variables

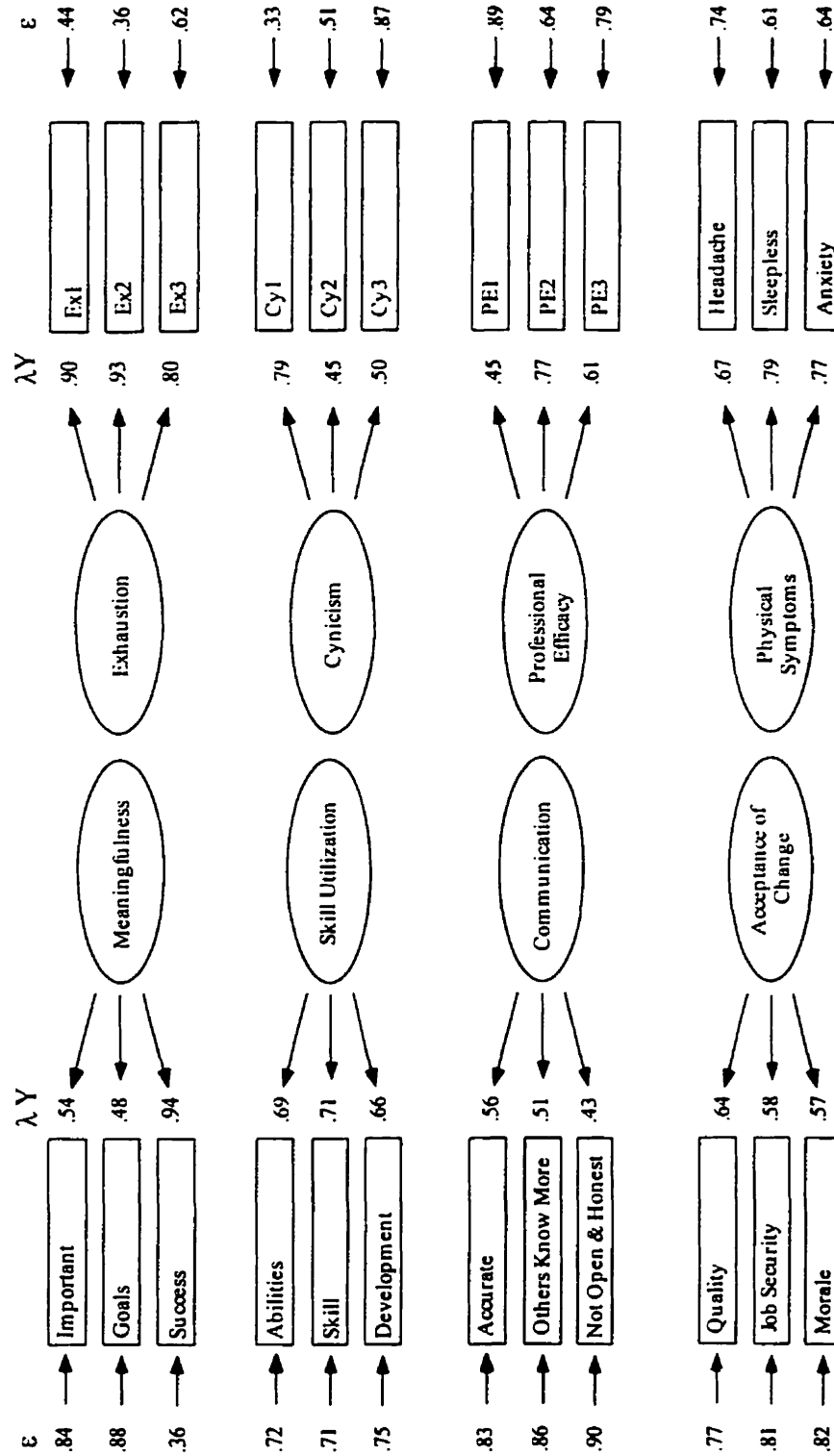
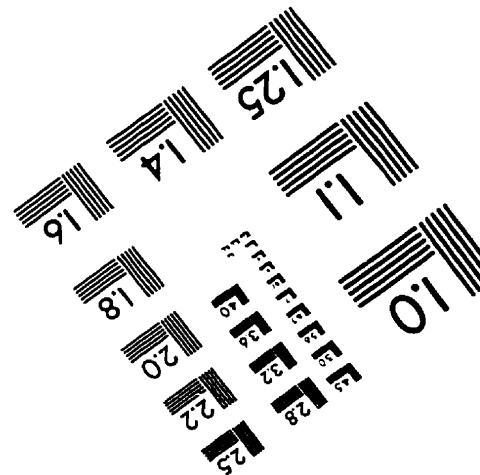
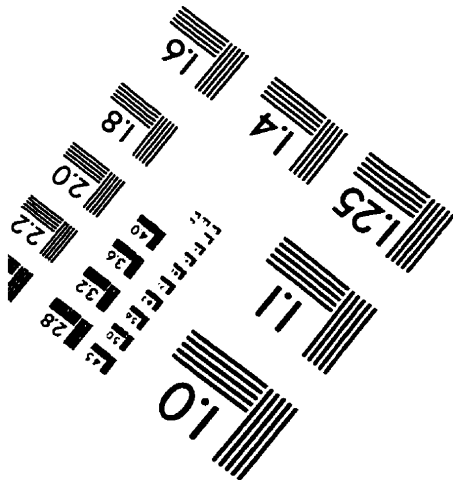
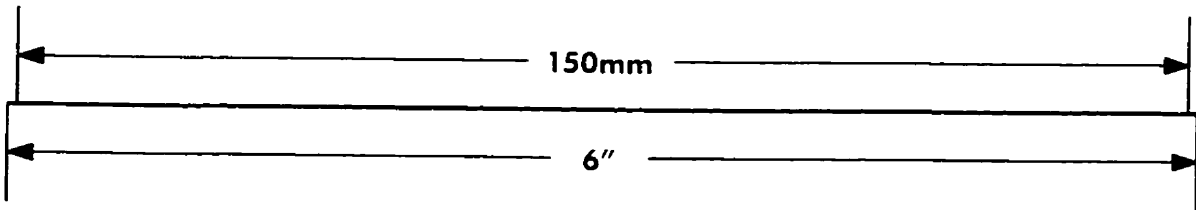
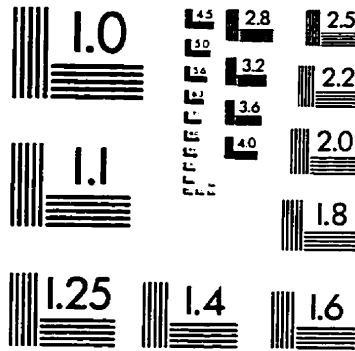
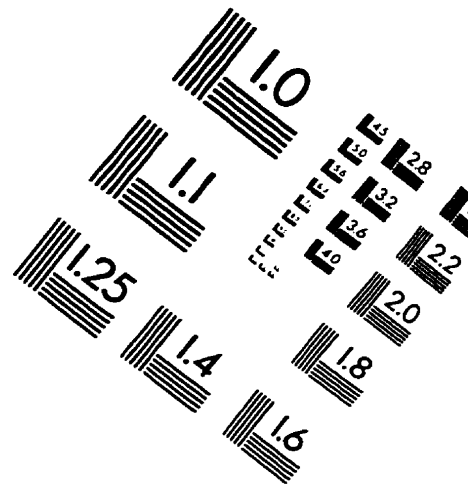
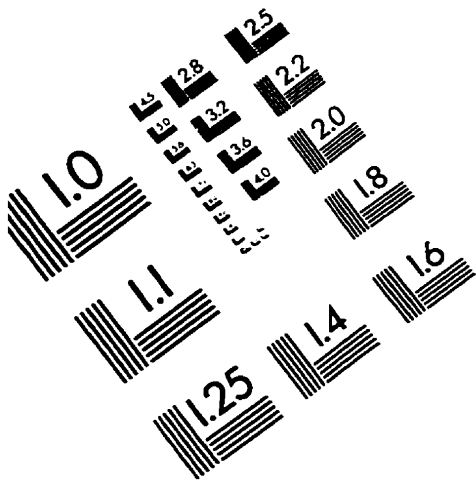


IMAGE EVALUATION TEST TARGET (QA-3)



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