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Individual-organizational Value Congruence: Operationalization And Consequents

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INDIVIDUAL-ORGANIZATIONAL VALUE CONGRUENCE: OPERATIONALIZATION AND CONSEQUENTS

by

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ABSTRACT

Organizations can no longer rely on traditional means of competitive advantage (financial, strategic, and technological capabilities) to maintain a footing in the global marketplace. Recent literature has emphasized *organizational capability* (managing people in a manner that generates commitment) as a means to sustain competitive advantage.

The central thesis of this dissertation is that employees whose personal values are congruent with the cultural values of the organization will be more committed to the organization, experience higher satisfaction, have lower turnover intent, behave in a more prosocial manner, and be less absent, than those employees whose values are incongruent. While this proposition is intuitively appealing, it has been subject to very little empirical validation. Advancements have been impeded by the absence of a conceptual lexicon to compare employees and the normative aspects of their work environments.

This two-stage research study operationalizes the construct of individual-organizational value congruence and tests hypothesized associations with positive employee consequents. The first stage describes practitioner interviews to gauge the relevance of individual-organizational value congruence and establish commensurate dimensions of congruence. The second stage describes survey research to operationalize individual-organizational value congruence and assess its construct validity in a corporate setting. This stage utilizes questionnaire data from a random stratified sample of 334 employees within a single organization.

This study makes five major research contributions: First, interview data support the importance of shared values in organizations and the integration of vision and values within a conceptual framework. Second, a typology of twenty-four shared value dimensions relevant in the context of modern business and commensurate across individual and organizational levels is derived from content analysis of interview data. Third, multiple-method instrumentation to operationalize individual-organizational value congruence is

developed based on the shared values typology. Fourth, survey data support the construct validity of individual-organizational value congruence and hypothesized relationships with employee outcome variables including commitment, satisfaction, and turnover intent. And fifth, factors affecting employee awareness of the organization's required values are identified.

It is concluded that individual-organizational value congruence is a valid psychological construct capable of being operationalized. Furthermore, individual-organizational value congruence is an important consideration in establishing organizational capability.

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CHAPTER 1 - INTRODUCTION

> "Consider any great organization -- one that has lasted over the years -- I think you will find that it owes its resiliency not to its form of organization or administrative skills, but to the power of what we call beliefs and the appeal these beliefs have for its people."
>
> *Thomas Watson, Jr.*
> *Former Chairman, IBM*

Traditional sources of competitive advantage -- financial leverage, strategic foresight, technological leadership -- may no longer be sufficient to sustain a firm footing in the global marketplace. To remain viable organizations need to develop *organizational capability* -- the ability to generate commitment from their people (Ulrich & Lake, 1991). Organizational capability recognizes human resources as a critical variable in the competitive advantage equation. Managers and human resource (HR) professionals face the responsibility of orchestrating greater integration between individual employees and the strategic nature of their organizations (Tichy, Fombrun, & Devanna, 1982). Organizational science (e.g., O'Reilly, Chatman, & Caldwell, 1991) currently advocates the creation of work environments manifesting strongly shared values as a means to achieve greater individual-organizational integration and generate higher employee commitment.

Values-based management, as an organizational prescription, is a recent phenomenon. For the better part of this century, metaphors of organizations as machines and systems (Morgan, 1986) dominated managerial thinking. Paradigmatically, there was little room for concepts such as ideals, values, rituals and beliefs, notwithstanding progressive works by researchers such as Barnard (1938), Selznick (1957), Clark (1970), and Pettigrew (1979). In 1978, author John Gardner lamented (p. 28): "Most contemporary writers are reluctant or embarrassed to write explicitly about values."

At around the same time and on a similar note, McKinsey consultants Julien Phillips and Allan Kennedy (1980) concluded that managers and consultants alike rarely pay much attention to the notion of values. In the hard world of business, values were considered too "soft." The limelight remained focused on concepts like strategy, structure and systems.

During the 1980's the tide turned dramatically. The metaphor of organizations as social realities complete with cultures and shared values (Morgan, 1986) rose to prominence in the management literature. Fombrun (1983: 142) notes "a veritable explosion of writing and a plethora of seminars and conferences on corporate culture." Tunstall (1986: 110) suggests: "When future historians look back they may commemorate the 1980's as the decade of 'cultural revolution' in corporate America." Ott (1989) predicts that this new metaphor will significantly advance the field of organizational science.

This research study rests on the emergent metaphor of organizations as social realities. Its focus is the study of shared values within an organization. Specifically, the congruence between individual employees' personal values and those required by the organizational culture is addressed. The basic proposition underlying this research is intuitively appealing, although it has been subject to very little empirical validation. This proposition holds that employees who experience high individual-organizational value congruence will be satisfied in their roles and will exhibit high levels of organizational commitment and prosocial citizenship behavior.

The purpose of this first chapter is to introduce the topic of shared values within the corporate context and to recognize its study as a worthwhile scholarly endeavor. The chapter outlines the current research environment and identifies a number of outstanding theoretical and operational issues. It concludes that in spite of recent interest in shared values in organizations there has been very little empirical validation of intuitively appealing person-situation fit propositions. Anticipated contributions to scholarship and the practice of management are also recognized. The chapter ends with an overview of the main elements comprising this dissertation.

1.1 VALUES IN BUSINESS

The topic of shared values in business has become increasingly popular in both academic journals and the business press. Numerous books and articles exist, including works by inveterate academicians (e.g., Schein, 1985). Some authors have proposed superior organizational performance as a consequence of strongly-held shared values (Barney, 1986; Deal & Kennedy, 1982; Peters & Waterman, 1982). Others have positioned value congruence as a critical factor in the successful integration of organizations involved in mergers and acquisitions (Frost, Moore, Louis, Lundberg, & Martin, 1985; Ivancevich, Schweiger, & Power, 1987).

Values have been theorized as potent antecedents at both the individual and organizational level of analysis. At the individual employee level, values have been conceptualized as the basic antecedents to behavior. Rokeach (1973: 24) describes values as omnipresent in social behavior:

> Values are determinants of virtually all kinds of behavior that could be called social behavior - of social action, attitudes and ideology, evaluations, moral judgements and justifications of self and others, comparisons of self with others, presentation of self to others, and attempts to influence others.

Schmidt and Posner (1982: 13) describe values as: "deep-seated pervasive standards that influence almost every aspect of our lives -- from the books we read to our religious beliefs."

At the organizational level, values have been conceptualized as relatively meaningful and measurable elements in the study of organizational culture. Wiener (1988: 534) states: "The study of organizational culture may benefit from a focus on shared values, one of its measurable core elements." Aside from their role in the operationalization of the culture construct, Wiener suggests (p. 544) shared values "offer unique meaning and perspective to the understanding of organizational phenomena."

Chatman (1991: 459) recognizes values as a meaningful way of assessing person-situation interaction in organizations.

> Although multiple aspects of organizations and people influence behavior and attitudes, person-organization fit is a meaningful way of assessing person-situation interaction because values are fundamental and relatively enduring and because individual and organizational values can be directly compared.

A review of the literature indicates that shared values impact across a broad spectrum of organizational effectiveness issues including:

Strategic Decision-Making. A number of researchers have concluded that the values of the dominant individual or coalition within an organization affect its basic purpose and direction (England, 1967; Guth & Tagiuri, 1965; Hambrick & Mason, 1984; Schmidt & Posner, 1982). Conger (1991: 34) describes values as: "the mechanical guts that power the vision's acceptance and accomplishment," and suggests shared values are essential in framing the organizational mission.

Corporate Ethics. Shared values may preclude or enhance the likelihood of questionable competitive practices (Kram, Yeager, & Reed, 1989). "It is in the area of corporate ethics that one can clearly see how the values of top management set the course for the organization" (Reece & Brandt, 1987: 175).

Operational Decision-Making. Shared values guide day-to-day decision-making in organizations (Deal & Kennedy, 1982; England, 1967; Liedtka, 1989). With reference to shared values, Schmidt and Posner (1982: 14) state: "They silently give direction to the hundreds of decisions made at all levels of the organization every day."

Interpersonal Conflict. "Differences in personal value systems help to explain the nature of conflict between individuals in an organization" (England, 1967: 68). In fact some researchers go as far as to conclude that the major cause of conflict in organizational settings is the clash of personal value preferences (McMurry, 1963).

Quality of Working Relationships. "When the manager (or employee) realizes consciously or unconsciously, that his or her basic values are different from those of the other member of the dyad, respect and confidence are reduced or disappear; honest open communication suffers; and grounds for conflict are present" (Brown, 1976: 18).

Career Choice and Progression. Research has shown that personal values affect one's choice of career (Costa, McRae, & Holland, 1984). Also, once having selected a career personal values influence career progression (Wallach, 1983). Deal and Kennedy (1982: 31) conclude: "Values play an important role in determining how far one will rise in the organization."

Employee Motivation and Commitment. A number of researchers have postulated shared values as antecedents to employee motivation and organizational commitment (Chatman, 1988, 1991; Posner et al., 1985; Steers & Rhodes, 1978). Brown (1976) recommends the assessment of value congruence at the employee-manager interface as a method of enhancing employee satisfaction and motivation.

Given the organizational breadth and strategic depth of these studies, it is easy to appreciate Hambrick and Brandon's recent appeal to the academic scholars to devote more attention to the topic of values in the workplace. They state (1988: 30): "The role of values in influencing organizational processes, memberships, and outcomes is enormous. We encourage researchers to explore this topic of great organizational and social importance."

1.2 THE RESEARCH ENVIRONMENT

This section examines the current environment of shared values research and identifies five outstanding issues as follows:

1. Organizational scientists studying values in the workplace face conceptual complexity and a disorderly array of theory. It is proposed that this confusion is a direct consequence of epistemological differences in the basic disciplines underlying organizational values research. There is little evidence in the literature of any attempt to reconcile disciplinary disparities.

2. Despite many stimulating conceptual pieces in values research, few organizational scholars presently writing about values are specifically engaged in enumerating relevant values from the perspective of the modern business corporation. All three of the prominent values typologies currently in use (Allport, Vernon, & Lindzey, 1960; England, 1967; Rokeach, 1973) were developed in the social psychology literature quite some time ago. The relevance of these typologies in the context of present management practices is open to question.

3. The measurement of values remains a controversial operational issue. As scientific constructs, values have tended to be elusive. Research studies to date (e.g., Chatman, 1988, 1991; Feather, 1975) have produced relatively small correlation coefficients. It is proposed that operational improvements are possible at both the individual and organizational level of analysis.

4. The premise that value congruence produces positive work outcomes is implicit across much of the recent management literature. Notwithstanding its intuitive appeal this relationship has received very little empirical validation. O'Reilly, Chatman, and Caldwell (1991: 490) point out that: "previous research has generally failed to describe people and situations in a comprehensive manner along commensurate dimensions," thereby hindering the development of a coherent body of theory. The question of individual-organizational value congruence needs to be addressed in a rigorous manner using representative data from the domain of business enterprise.

5. In order to behave appropriately within the normative framework of an organization's culture individual employees must first be cognizant of expectations.

There is a requirement to identify factors (organizational and individual) which contribute to increased employee awareness of the organization's required values. While there is a considerable body of literature on the socialization of new entrants (e.g., Feldman, 1981; Fisher, 1986; Jones, 1986, Louis, 1980; Van Maanen, 1978), there appears to be a gap in terms of propagating required values across an existing workforce. One organization interviewed as part of this study was grappling with the reality of making more than 50,000 employees aware of its shared value priorities.

1.2.1 Reconciling Theoretical Foundations

Values research has diverse theoretical foundations stemming from five disciplines - anthropology, economics, philosophy, psychology and sociology. Numerous researchers have noted a high degree of conceptual disarray in values research (Abbasi & Hollman, 1987; Smith, 1969; Zavalloni, 1980). There exists a need to reconcile theoretical differences.

Anthropologists have traditionally viewed values as the essential core of culture. Philosophers have used the concept of values to describe ideals. In the sociological world, values represent basic normative standards characteristic of society. From the psychological perspective, values are key elements within the organization of individual personality and important determinants of attitudes and behaviors. Economists view the concept of value in keeping with their understanding of utility functions.

Conner and Becker (1975: 551) state: "Although little attention has been paid specifically to the study of values and the organization, the sociological, psychological, and administrative theory literature does contain numerous studies of values as a general human property." It is suggested that more work is necessary to integrate these underlying disciplines in order to provide organizational scientists with a more coherent and relevant perspective.

In order to address the issue of conceptual disarray this research study poses the following question:

> *Question 1: Is there a theoretical framework capable of reconciling existing disparities in the conceptualization of values across the foundation disciplines of anthropology, economics, philosophy, psychology and sociology ?*

1.2.2 Deriving a Relevant Typology of Values

Three values typologies figure prominently in the current management literature. These typologies are: Allport, Vernon and Lindzey's Study of Values (1960), England's Personal Value Questionnaire (1967) and Rokeach's Value Survey (1973). It is suggested that these typologies are no longer relevant to the context of the modern business organization. The opportunity for an alternative typology is raised.

The Allport-Vernon-Lindzey (A-V-L) questionnaire continues to be one of the most popular measures of values in organizational research (Hodgetts, 1987; Price, 1973). Allport and his colleagues' instrument is based on the 1928 work of German philosopher, Eduard Spranger, who defined six types of men: theoretical, economic, aesthetic, social, political and religious. The A-V-L value typology was designed for broad application in society. It is suggested that Spranger's six value dimensions are neither organizationally based nor precise enough to permit operationalization of individual-organizational value congruence.

A second prominent values typology is that of England who initially studied the value systems of American managers (1967) and later investigated value differences across national cultures (1975). England's typology is distinct from the others in that it was specifically designed for the organizational context. England started with an item pool of 200 concepts selected from the literature. He then refined his list down to a set of 66 concepts organized into five categories: goals of business organizations, personal goals of individuals, groups of people, ideas associated with people, and ideas about general topics.

The relevance of England's typology to the modern business organization can be questioned on a number of counts: First, the item pool was not derived empirically, although England did use a panel (including representation from the business community) to reduce his item pool. Second, it is suggested that while some items (e.g., individuality, loyalty, equality) do constitute values; other items (e.g., money, labor unions, skills) do not in and of themselves constitute values. England himself does not refer to his list as a typology of values, but rather a set of concepts indicative of personal work-related values.

England has not attempted further refinements to his set of 66 concepts. This is unfortunate because in addition to evidence of overlapping concepts (e.g., owners, stockholders), his typology is operationally unwieldy. A final point questions the currency of England's conceptual framework as a means to address shared values in organizations. It is over twenty years old and subsequent applications have focused primarily on value differences across national cultures.

The third prominent values set is that of Rokeach (1973). A renowned psychologist in values research, Rokeach developed a typology of 36 values (18 instrumental values and 18 terminal values) in order to study personal value differences across groups in society (e.g., race, religion, gender, age). His typology continues to be very popular, perhaps the most popular conceptual structure in current organizational research. Brown (1976: 22) recommends the application of Rokeach's typology in organizational settings.

> Among a surprisingly small number of scales measuring values directly, the Rokeach Value Survey seems the best instrument. It is simple in design, economical to administer, provides reasonably reliable and valid measures, is easily grasped by the literate users, is reported by participants to be

interesting, thought-provoking, and ego-involving, and produces responses directly expressed in quantitative terms.

Rokeach's value typology, consistent with his research objectives, focuses on individual values within the broad context of society including concepts such as "inner harmony," "salvation," and "a world at peace." The relevance of such concepts to the discussion and operationalization of individual-organizational value congruence within a corporate context can be questioned. Furthermore, Rokeach relied heavily on the literature and as he states (1973: 30) his own intuitive ability to derive a typology of values.

In conclusion, all three value typologies, while significant contributions in their respective periods and domains, are deemed inappropriate for the effective management of human resources -- both in terms of timeliness (the 1990's) and context (the modern corporation). Clearly a relevant lexicon of shared value concepts, one expressed in the current idiom and language of business, is required. The following research question is designed to address this need:

Question 2: Is there a convergent set of shared value concepts manifest across the current domain of business enterprise?

1.2.3 Developing Operational Enhancements

A variety of approaches has been used to deal with the abstract nature of values. At one extreme, there are those researchers who conceptualize values as deep, subconscious phenomena which defy operationalization (e.g., Cavanagh, 1976; Nisbett & Wilson, 1977). Organizational scientists working under this assumption have tended to either avoid the problem of measurement by limiting their discussions to the theoretical level, or have shifted their research to parallel conceptualizations, for example - cognitive functioning (e.g., Zavalloni, 1980).

In the middle ground, there are those researchers who suggest that although values within individuals (Locke and Henne, 1986) and within organizations (Schein, 1985) do not manifest themselves directly, they are reflected in visible actions, artifacts and creations. Organizational scientists working under this assumption infer value preferences based on observation of overt manifestations. A major liability in such operationalizations is the potential for spurious epistemic interpretations.

At the other extreme of the operationalization issue, there are those researchers who simply assume values exist in full cognizance. These researchers favor the use of paper and pencil tests. Such instrumentation usually presents respondents with a list of value concepts and asks them to rank, rate, sort, or choose items characteristic of themselves or their organizations (e.g., Allport, Vernon & Lindzey, 1960; Chatman, 1988, 1991; England, 1967, 1975; Rokeach, 1973). These researchers argue that people are aware of their own personal values and those salient within their organizations. The degree to which we are aware of our values remains controversial (cf. Carver & Scheier, 1981; Fenigstein, Scheier & Buss, 1975).

In addition, these researchers assume social desirability biases can be overcome. In some studies, steps have been taken during the development of instrumentation to minimize this effect (e.g., Ravlin & Meglino, 1987a). In other cases, response set bias has been measured as part of the research design. For example, Chatman (1988) built a manipulation check into her study and concluded the effect of response set bias was negligible.

Similarly, Kelly, Silverman and Cochrane (1972) studied the effects of social desirability bias on the Rokeach Value Scale. They ruled it out as a factor in the ranking of terminal values. A second and more recent evaluation of Rokeach's scale suggests that it is "relatively immune from significant social desirability influence;" however, the authors of this study caution that the magnitude of the correlation coefficients varies from group to group (Goldsmith, Stith, & White, 1987: 554).

Accurate measurement in values research remains a challenge for organizational scientists. One objective of this research is to improve operational accuracy in this area. An extensive methodological review (Chapter 3) indicates the majority of operationalizations have relied on single measurement procedures. The comprehensiveness and power of multi-methods research designs (e.g., Ravlin & Meglino, 1987a,b) have tended to be the exception rather than the rule. It is suggested that a multi-methods approach, one which triangulates (Jick, 1983) on the abstract concept of values, has the potential to improve the amount of variance explained. This study incorporates a multi-methods approach in the operationalization of values in order to address the question:

> *Question 3: To what extent do multiple operationalizations converge to improve measurement accuracy in values research?*

1.2.4 Testing the Consequents of Value Congruence

Proponents of values-based management suggest a variety of positive consequents. Chatman (1988) proposes individual-organizational values fit to be instrumental in motivating employees, achieving shared frames of reference and satisfying employees' need to be comfortable in their work environments. She points out (p. 27): "A number of authors in the field of management have implicitly suggested why a match between individual and organizational values is important" (cf. Argyris, 1957; Etzioni, 1975; Keisler, 1978; Schein, 1968).

Strong culture proponents (Allen & Kraft, 1982; Davis, 1984; Deal & Kennedy, 1982; Denison, 1984; Kilmann, 1984; Ouchi, 1981; Peters & Waterman, 1982; Pascale & Athos, 1981) suggest shared values contribute positively to organizational performance.

On a similar note, social psychologists, Diener, Larsen and Emmons (1984: 582) conclude based on their studies of person-situation congruence that: "People tend to be happier when they are in settings that meet their particular needs or are congruent with their predispositions."

Empirical support for hypothesized positive consequents resulting from individual-organizational value congruence in corporate settings is very limited. The entire set of empirical attempts at this question from an organizational science perspective appears to be limited to six studies: Chatman (1988, 1991), Enz (1986), Feather (1975), Graham (1976), Posner, Kouzes, and Schmidt (1985), and Tom (1971). And out of this set, only two studies - Chatman (1988, 1991) and Feather (1975), calculate actual congruence based on independent measurement of values at both the individual and organizational level of analysis. The remaining studies rely on individuals' perceptions of value congruence or in some cases (Graham, 1976; Tom, 1971) trait congruence as proxies.

Of the two studies which directly address the issue of individual-organizational value congruence, only Chatman's study exhibits high external validity in the workplace. The generalizability of Feather's study is open to question. He asked 3000 high school students to rank their own personal values and those salient in their school systems using Rokeach's instrument.

The topic of value congruence requires further empirical investigation, particularly within organizational settings. The primary objective of this research is to study individual-organizational value congruence within a large corporation in order to address the question:

> *Question 4: To what extent does individual-organizational value congruence influence employee attitudinal (commitment and satisfaction), intentional (turnover intent) and behavioral (absence and citizenship) work outcomes?*

1.2.5 Facilitating Awareness of the Organization's Required Value Set

What factors enhance employee awareness of the organization's required values set? Training programs? Propinquity with executives? Reward systems? Individual employee's predisposition to attend to social stimuli? As more and more organizations attempt to grapple with this question, there appears to be a need for more research to identify relevant organizational and personal antecedents to employee awareness of the organization's required values. There is a need for research that is broader than the socialization literature which tends to emphasize new entrants. And, it is suggested there is a need for research that utilizes developments in social cognition theory, particularly social information processing. Social information processing examines the sequence through which individuals attend to and utilize social information.

In this regard the following research question is advanced:

> *Question 5: To what extent is individual employee awareness of the organization's required values influenced by organizational (e.g., propinquity to executives), and personality (e.g., predisposition to attend to social stimuli) factors?*

This chapter has presented evidence to suggest that shared values research in the context of modern business organizations is a worthwhile scientific pursuit. The concept of shared values with its long tradition in the basic social sciences has now emerged in organizational science. Based on a review of the current research environment, this section proposes next steps including: reconciling conceptual differences in the definition of values, deriving a relevant shared values typology, enhancing operational accuracy in measuring values, testing for positive consequents to individual-organizational value congruence, and identifying antecedents to employee awareness of the organization's value requirements.

The following section discusses potential contributions from a managerial perspective.

1.3 RESEARCH CONTRIBUTION: A MANAGERIAL PERSPECTIVE

Changes in the basic nature of our competitive environment are causing business practitioners to re-examine traditional human resource practices. Motivational models moving away from control toward commitment are being advocated (Ulrich & Lake, 1991; Walton, 1985). Powerful forces in the environment driving this transition include:

The Advent of a Post-Industrial Society. There are indications of a move toward a society in which information is the key commodity. With this trend the fundamental nature of work is changing. Instead of physically handling hard goods, many employees now deal intellectually with soft informational goods. More frequently one hears these workers referred to as "information workers." Information workers and the intangible aspects of their labor make explicit control techniques difficult to apply. Managers are searching for ways to achieve implicit control. Walton (1985) suggests future coordination and control systems will be based on shared goals, values, and traditions.

A Generation of Democratically-Minded Baby Boomers. The baby-boom generation now accounts for more than one-half of the work force in North America. These individuals, raised in relatively affluent, benevolent, social conditions are demanding more from their work environments. In addition to economic returns they expect psychological returns and a sense of shared meaning. Organizational values need to be managed in order to create psychologically meaningful work situations.

Global Competition. The carrying costs of uncommitted employees across North American industry have become an onerous burden -- one increasingly exacerbated by the realities of global competition. Over one million workers on average are absent in the United States on any given work day and current estimates of lost productivity understate the real magnitude of the problem (Dalton & Enz, 1987).

In addition to being absent from work, uncommitted employees are also more likely to change employers. Futurists, John Naisbitt and Patricia Aburdene (1985) note a trend toward increased job mobility in the United States stating (p. 87): "Planned or not, America has become a job-hopping society..." Recent meta-analytic studies have shown that employee satisfaction and organizational commitment are significantly related to absence (Farrell & Stamm, 1988; Hackett & Guion, 1985) and turnover (Cotton & Tuttle, 1986) behavior.

This research study is designed to address the issue of shared values in organizations and to test the proposition that employees who lack a sense of "fit" with their organizations are likely to experience dissatisfaction and deterioration in their level of organizational commitment.

The concept of a "fit" between individual employees and their organizations has been investigated from a variety of perspectives. Particularly salient in the literature is the notion of task fit -- achieving a good match between task requirements and human resource skills and abilities. The size and extent of the literature on task fit denotes the dominance of the mechanistic / systemic metaphor. Under this metaphor humans are modelled as one of several inputs (e.g., human resources, capital resources, informational resources, raw materials) contributing to the organization's transformation process.

A second popular avenue of inquiry is the notion of compensation fit. Adams' (1963) equity theory suggests positive personal and work outcomes when employees perceive on the basis of social comparison that their efforts are being rewarded equitably. When inequity is perceived, absenteeism and turnover are theorized as possible behavioral responses. Similar to task fit this aspect of the employee-employer relationship has received significant attention in the literature. For example, Lawler (1981) has conducted extensive research on the design of effective compensation systems.

Prompted in part by the emergence of new metaphors, organizational researchers are beginning to investigate novel facets of the employee-employer relationship including the notion of cultural fit. The conceptualization of cultural fit focuses on employee personality in relation to organizational culture, values, and norms. Chatman (1988: 13) defines person-organization fit as: "the congruence between the cultural characteristics of organizations and the values and personality characteristics of persons." And, Chatman (1991) has subsequently found empirical evidence to indicate that person-job fit and person-organization fit are distinct constructs.

A recent article by Bowen, Ledford, and Nathan (1991) promotes the idea of hiring for the organization, not the job. This article recommends considerations beyond the traditional selection model including an emphasis on the whole person and his or her personal values. The rationale implicit in their article is to produce self-motivated, committed people capable of producing in the information age.

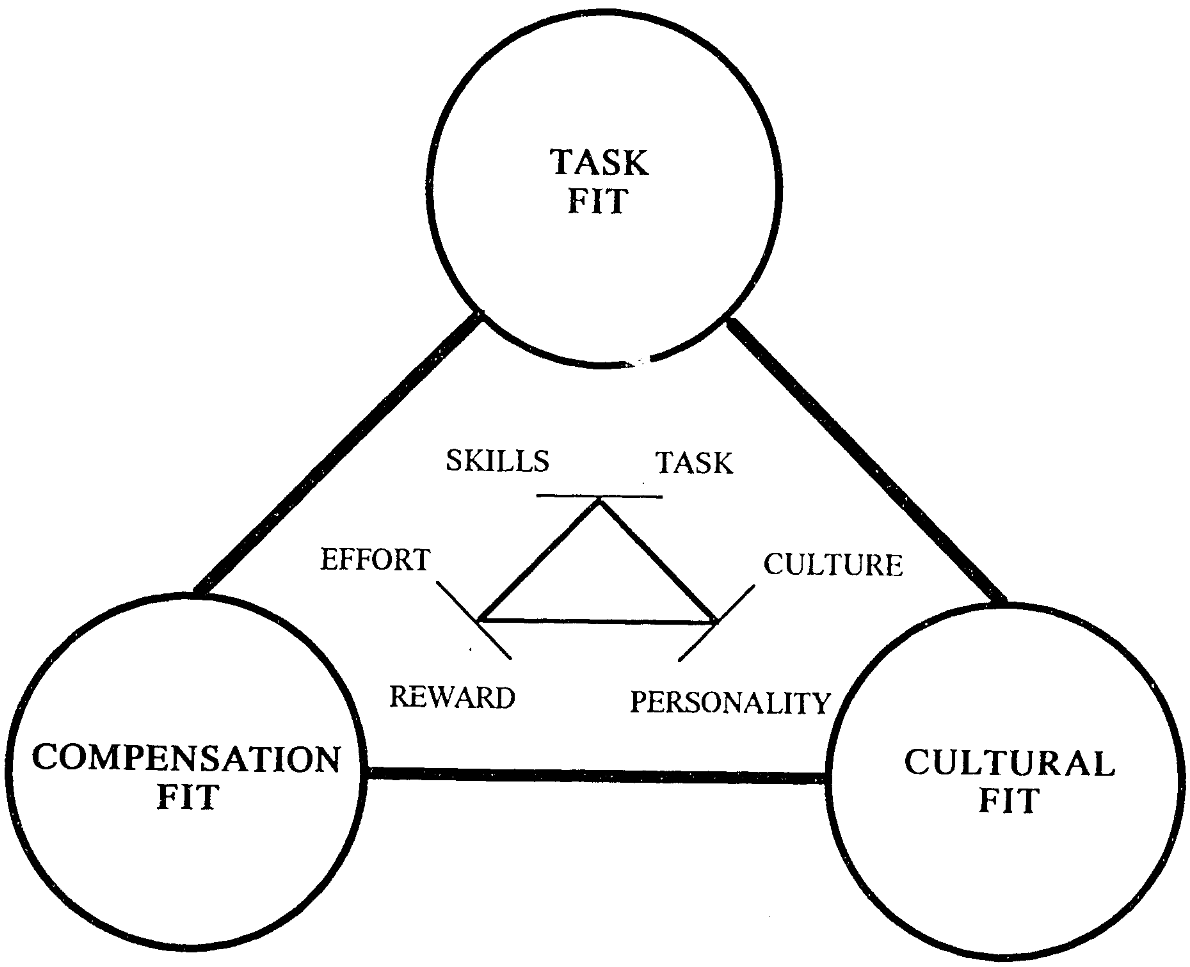
In addition, the social psychology literature provides substantial theoretical rationale for achieving high individual-organizational fit from a shared values perspective. Of particular relevance are need reinforcement and cognitive consistency theories. Jahoda (1961: 25) emphasizes the significance of individual-situational value congruence.

> Culture patterns and the values and beliefs of an individual can, but need not coincide. Where they do not coincide, an individual will experience a strain between his own inclinations and what the culture of the group requires. Where they do coincide, people will feel at ease in their environment without the experience of situational strains.

From this discussion it is proposed that all three aspects of fit (task, compensation and cultural) are critical to a viable employee-employer relationship. An imbalance along any one dimension will be dysfunctional. This multi-faceted conceptualization of "individual-organizational fit" is shown in Figure 1.

FIGURE 1

The Dimensions of Individual-Organizational Fit



While the concepts of task and compensation fit have been integrated into management practice, the topic of cultural fit between individuals and their organizations is only just starting to emerge. It is along this dimension that this study aims to provide practitioners with relevant findings.

1.4 OUTLINE OF THE DISSERTATION

The purpose of this first chapter has been to present evidence from the literature in support of the conduct of shared values research. The choice of topic for this study reflects the anticipated potency and relevance of the emergent social reality metaphor. It is a topic which appears to have the potential to yield a number of contributions for both the advancement of organizational science and the practice of management.

Following a review of the literature five specific research questions relating to the concept of individual-organizational value congruence have been identified. These outstanding issues are: the need to resolve current conceptual disparities, the need for a relevant typology of shared value dimensions, the need for greater operational accuracy, the testing of hypothesized positive consequents from individual-organizational value congruence, and the identification of organizational and personality factors associated with employee awareness of the organization's required values set.

Chapter 2 defines the concept of a value and value congruence. In order to achieve definitional clarity for this research, current conceptual disarray within the social science literature is addressed. This disarray appears to stem from diversity across the disciplinary foundations underlying shared values research including anthropology, economics, philosophy, psychology and sociology.

The second chapter systematically reviews each of the social science foundations in order to demonstrate how differences in theoretical and methodological orientation have produced disjoint conceptualizations. These differences are reconciled using Quinn and

Hall's (1983) competing values framework and a definition of individual-organizational value congruence is presented.

Chapter 3 presents an extensive review of values measures in the literature. In all, nearly one hundred studies are reviewed including measures of personal values, measures of organizational values and measures of value congruence. A number of measurement issues are raised including: social desirability response set bias, the amount of variance explained, qualitative versus quantitative procedures, and measuring congruence in terms commensurate for individuals and organizations. Conclusions are presented regarding procedures which appear to work well and areas where operational enhancements are warranted.

Chapter 4 presents the results of exploratory research conducted in order to: (1) assess the relevance of this research topic to the business practitioner community, (2) empirically derive a typology of values appropriate within the context of the modern business corporation, and (3) assess the current state of values-based management practices.

Chapter 5 provides the theoretical rationale for this research. The basis for hypothesizing positive work consequents from high individual-organizational value congruence is found in cognitive consistency theory. Factors which influence individual awareness of the organization's required values have been identified based on social cognition theory. These two theoretical frameworks are used to develop a research model. Using this model, twenty-eight hypotheses are presented which relate to the consequents of individual-organizational value congruence and the antecedents to employee awareness of the organization's required values.

Chapter 6 describes the methodology used to test the research model. It discusses the criteria applied to select the corporate research site and the random stratified sampling plan used to obtain a sample of 500 employees from across (hierarchically and functionally) the organization. Survey instrumentation used to operationalize the research model is described in detail along with the rationale for its application. Potential threats to this study's validity are identified and a number of precautionary actions designed to maintain rigor are described. A systematic framework for the analysis of survey data is presented based on Schwab's (1980) recommendations on the establishment of construct validity in organizational behavior.

Chapter 7 presents the results of the data analysis with particular emphasis on the construct validity of individual-organizational value congruence. Evidence of reliability and convergent validity across value ranking and value rating methods is presented. Higher order cultural dimensions (e.g., task, relationships, change, and status quo) from the principal components analysis of value rating data are identified. The predictive validity of individual-organizational value congruence is discussed using results from a variety of bivariate and multivariate statistical procedures. And, the discriminant validity of individual-organizational value congruence relative to social desirability response set bias is addressed.

Chapter 8 is the final chapter in this dissertation. Its purpose is to draw together a number of theoretical and empirical threads into a meaningful pattern of implications and conclusions. In this chapter a number of contributions to the advancement of organizational science are discussed, as are a variety of lessons for the practice of values-based management in business. The strengths and weaknesses of this study are also identified and discussed. The chapter concludes with a discussion of avenues for future research on shared values in organizations.

CHAPTER 2 - THE CONCEPTUALIZATION OF VALUES

In 1969, Brewster Smith, a psychologist interested in studying values, noted a high degree of conceptual disarray in the literature (p. 98): "The handful of major attempts to study values empirically have started from from different preconceptions and have altogether failed to link together to yield a domain of cumulative knowledge." In 1975, organizational theorists, Conner and Becker, stressed the need for one operational definition of values. Again in 1980, the failure of values research to converge into an autonomous body of cumulative knowledge was raised (Zavalloni, 1980). Recent statements in the literature indicate that this problem continues to persist (e.g., Abbasi & Hollman, 1987).

This chapter presents evidence suggesting that the conceptual disarray in values research is a product of differences in epistemological origin. Current values research theory and method as applied in organizational settings has evolved from distinct streams of thought in the social sciences, in particular, the disciplines of anthropology, economics, philosophy, psychology and sociology. This chapter discusses each discipline including its conceptualization of values and associated methodological traditions. Using Quinn and Hall's (1983) competing values framework, it attempts to reconcile these perspectives thereby addressing the first research issue raised in Chapter 1. This chapter concludes with a working definition of individual-organizational value congruence.

2.1 THE ANTHROPOLOGICAL PERSPECTIVE

Anthropology literally means "the study of human beings." It is the social science devoted to patterns of life in small-scale societies. The discipline has traditionally been divided into two branches: physical anthropology, focusing on humans as biological organisms, and cultural anthropology, focusing on humans as cultural animals. One major approach to organizational values research stems from cultural anthropology, particularly its sub-field of ethnology which is defined as the study of contemporary cultures (Barnouw, 1987).

Culture, ethnology's central concept, subsumes shared values, ideals and standards of behavior (Haviland, 1985). It is the common denominator characteristic of homogeneous groups of people whether they be the Copper Eskimos of Canada or Kung Bushmen of Botswana. The anthropological conceptualization of culture unfortunately lacks operational clarity to the same degree as does the concept of values. One review of the literature (Kroeber & Kluckhohn, 1952) uncovered more than 150 definitions of culture. A variety of themes exist, for example: symbolic anthropologists (e.g., Geertz, 1973) define culture as systems of shared meaning; structural anthropologists (e.g., Rossi & O'Higgins, 1980) define culture as a manifestation and expression of the mind's unconscious operation; and more recently, the field of cultural anthropology has shifted its focus to cultures as cognitive phenomena (e.g., Agar, 1982). The main intersections of anthropology and organizational theory are discussed in detail by Smircich (1983a).

Anthropology's traditional operational strategy is intensive field work. Gestalt principles guide methodological procedures. This holistic imperative obliges researchers to study culture in the broadest context possible in order to understand its interconnections and interdependencies. To be operationally effective the anthropologist must immerse himself or herself in the phenomenon and become a participant-observer. Research findings are usually presented in the form of comprehensive reports containing precise notes collected over extensive periods of observation. Detailed discussions of this methodological approach can be found in the literature (e.g., Sanday, 1979).

Numerous anthropologists adhere to the principle of cultural relativism (Evans-Pritchard, 1951) which requires emic operationalizations. Cultural relativism is based on the proposition that cultures are unique and can only be evaluated against their own standards. To do otherwise, proponents of cultural relativism suggest, would be ethnocentric. Cultural relativism unfortunately precludes cross-cultural comparison, a prominent research interest in organizational science.

The relative merits of emic (a focus on the identification of concepts and theories *held by the subjects* of the research) versus etic (a focus on concepts and theories *held by the researchers*) designs continue to be a topic of debate in the anthropological literature. From an organizational science perspective, it is proposed that relativism becomes less of an issue as the analytical focus becomes more fine-grained. In other words, relativism may indeed be a significant issue across national cultures, but it is less so across corporate cultures in North America, a cultural subset of Western industrial society.

The most prominent anthropological conceptualization of values in organizational science is Kluckhohn's (1951: 395) definition of a value as: "a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available means and ends of action." Kluckhohn, who was interested in cross-cultural comparison, developed a set of universal dichotomies or value orientations based on five problems common to all human groups: the innate nature of man, the relation of man to nature, the temporal focus of life, the modality of human activity and man's relationship to other men.

Numerous organizational researchers have adopted an anthropological orientation in their investigation of organizational values and culture. A prominent example is Pettigrew's (1979) seminal study of a private British boarding school which incorporated distinctive operational features including a longitudinal time horizon, multi-methods and unobtrusive measurements.

The application of an anthropological orientation to organizational research remains controversial. There has been considerable debate in recent years between those researchers who favor thick description and conclude quantitative assessments of organizational values are relatively unhelpful (e.g., Daft, 1980; Evered & Louis, 1981; Schein, 1985; Wilkins & Dyer, 1988) and those who advocate adherence to logical-positivist principles (e.g., Cooke & Rousseau, 1988; Denison, 1984; Kilmann & Saxton, 1983; Reynolds, 1986; Tucker & McCoy, 1989).

In summary, the anthropological perspective conceptualizes values as "conceptions of the desirable," focuses on groups and operationalizes values using ethnographic techniques.

2.2 THE SOCIOLOGICAL PERSPECTIVE

The *International Encyclopedia of the Social Sciences* defines sociology as "the study of social aggregates and groups in their institutional organization, of institutions and their organization, and of the causes and consequences of changes in institutions and social organization" (Jahoda, 1982). Three theoretical perspectives influence current sociological thought: structural-functionalism, conflict theory and symbolic-interactionism. Structural-functionalism, the study of social structures and their effects on behavior in society, was dominant during the 1940s and 1950s; however, its influence has diminished in the face of competing theory (Haralambos, 1985). Structural-functionalists emphasize consensus and stability as central elements in an effective society. Conflict theorists emphasize stress and conflict as important mechanisms of change in society. At a more micro level, symbolic-interactionists study the subjective meanings of human acts and processes through which people come to develop and communicate shared meanings.

As a concept, values are most prominent in the structural-functionalist literature. The basic proposition underlying this paradigm is that society works best when it is structured through the instrumentality of normative elements. Effective society manifests patterned, consistent and harmonious social interaction. In this context, values function as general guidelines for behavior.

American sociologist, Talcott Parsons has been most influential with respect to values as normative phenomena. Parsons (1951) considers sociology's main task to be the examination of the institutionalization of patterns of value orientations in the social system.

He defines a value as (p. 12): "an element of a shared symbolic system which serves as a criterion or standard for selection among the alternatives of orientation which are intrinsically open in a situation," and suggests that values are neither alien nor transcendent, but the product of interaction processes between roles (elements of individuals) and institutions (higher order units of social structure).

Parsons proposes five dichotomous value patterns: affectivity-affective neutrality, self-other orientation, universalism-particularism, ascription-achievement and specificity-diffuseness. These five pattern variables constitute the entire domain of choice in his theory of action. Kluckhohn (1956: 129), comparing Parsons' schematization to his own, states: "he takes the actor and the social system as his central concepts, whereas I take the 'qualities' or emphases in cultural values."

A number of sociologists have used Parsons' values typology to research modern societies. Lipset (1963) compared the four largest English-speaking democracies, Australia, Canada, Great Britain and the United States, using Parsons' value patterns. Consistent with *verstehen* tradition, sociologists have relied on their own analytical powers to operationalize values. Verstehen sociology, from the German word "understanding," is one of Max Weber's many contributions to social science. Weber proposed that an accurate understanding of human behavior necessitates an understanding of the meanings the individual attaches to the behavior. The verstehen tradition was popularized in the United States by a group of sociologists at the University of Chicago, in particular, W.I. Thomas (Volkart, 1968). It requires the researcher to become totally familiar with the phenomena under study. Operationally, it is similar to anthropological procedures of participant-observation.

Noted American sociologist, Robin Williams (1970: 4) who followed the verstehen tradition in his analysis of values in American society states: "If we want to comprehend how and why men behave as they do, we must look at what they do (and do not do), listen to what they say (and do not say). We must observe persistently, be alert to recurring patterns and far-from-obvious causal connections." Williams defines values as "standards of desirability" (p. 24) and concludes the central values in American society are: hard work, practicality and efficiency, achievement and success, and moral integrity.

Sociologists have made seminal contributions to the study of values in organizational settings. In 1948, William F. Whyte used participant-observation to study the restaurant industry. In 1957, Philip Selznick was one of the first researchers to use the term "organizational culture." Following Barnard (1938), Selznick advocates the construction and maintenance of shared values as a critical management task. Ott (1989: 151) states: "Selznick's conceptual and methodological approaches to studying organizations, as well as his use of value systems to distinguish between organizations and institutions, have recently been lauded as models of insightfulness and usefulness by several members of the organizational culture school (Martin & Powers, 1983; Siehl & Martin, 1984; Wilkins, 1983)." In 1970, Burton Clark used organizational sagas to study the evolution of values at three distinctive liberal arts colleges - Antioch, Swarthmore and Reed. Clark's use of sagas to operationalize organizational values represents a significant methodological contribution.

In each of the above studies, the sociologists remained committed to a longitudinal focus and qualitative data in their research designs. Similarities between anthropological and sociological approaches to the study of values are clearly evident. Both disciplines focus on macro levels of analysis, conceptualize values as normative phenomena and defend the application of qualitative procedures. The key distinction between these two disciplines is anthropology's emphasis on naturally forming groups versus sociology's concern with institutionalization and structure in modern technological/bureaucratic societies.

2.3 THE PSYCHOLOGICAL PERSPECTIVE

Psychology, the science of human and animal behavior, is a broad discipline encompassing a variety of fields including clinical, cognitive, developmental and social psychology. The concept of values is most salient in the field of social psychology, the study of how thoughts, feelings and behavior of individuals are influenced by the actual, imagined or implied presence of others (Allport, 1968).

"Znaniecki (1918) is credited with being the first to introduce to the social sciences the notion that values could be approached empirically, and could form the center of a new discipline, social psychology, which he conceived as a general science of the subjective side of culture" (Zavalloni, 1980: 77). Znaniecki's expectations for the role of values in social psychology have never been realized. Values have not become central constructs in social psychology. The field's long-standing focus on attitudes has overshadowed other concepts including needs, values and intentions. In fact, it is not uncommon to see values subsumed under the concept of attitudes in the social psychology literature.

Milton Rokeach, a prominent social psychologist who devoted his career to the study of values, disagrees with this conceptual aggregation. He stresses (1973: 18) that values are distinct from attitudes in a number of important respects: a value is a single belief whereas an attitude is an organization of several beliefs, values transcend objects and situations whereas attitudes are situationally specific, values are standards whereas attitudes are not, and values are more central and enduring. Controversy continues as to which construct is more efficacious with respect to behavioral change (cf. Sawa & Sawa, 1988). Rokeach and his followers suggest attitudinal changes are short-lived because underlying values remain intact. They advocate making subjects aware of contradictions within their own value systems as a means of achieving long-term behavioral change.

From the psychological perspective, values are motivational elements central in the organization of personality. Psychologists define values as individual behavioral preferences gained, usually at an early age, through developmental processes (Hall & Lindzey, 1978: 48):

> Freud was probably the first psychological theorist to emphasize the developmental aspects of personality and in particular to stress the decisive role of the early years of infancy and childhood in laying down the basic character structure of a person. Indeed, Freud felt that personality was pretty well formed by the end of the fifth year . . .

Cultural anthropologists and sociologists view values as normative phenomena representative of large groups. They emphasize the "ought"/"should" aspects of values. Psychologists, in contrast, tend to de-emphasize this normative connotation. Rokeach (1973: 5) explicitly avoids terms such as "ought," "should" and "conceptions of the desirable" in his conceptualization of values. He suggests that the term "preferable" be used as a predicate adjective to specify that a mode of conduct or end-state of existence is preferable to an opposite mode or end-state.

Organizational scientists studying values from the psychological perspective have for the most part based their research on one of three seminal works: Allport, Vernon and Lindzey's (1960) Study of Values, England's (1967) Personal Value Questionnaire, or Rokeach's (1973) Value Survey. All three studies conceptualize values as prescriptive beliefs central in the organization of individual personality. In addition and in sharp contrast to anthropological and sociological approaches, all three studies use paper and pencil instrumentation to operationalize values.

Two methodological approaches dominate psychology. The most influential data-gathering technique is experimentation. It is used to test causal hypotheses relating to the nature of underlying psychological processes (Robinson, 1981). The second most prominent approach is the clinical assessment of personality using interviews, questionnaires and projective techniques (Jahoda, 1982). Values research in psychology has relied on clinical assessment procedures.

The operationalization of values in psychology clearly reflects the natural science model (Behling, 1980; Popper, 1964) whereas anthropological and sociological procedures discussed earlier parallel Husserlian phenomenology. This situation has led to a significant methodological chasm running through the social sciences. Bronfenbrenner (1979: 18), a psychologist commenting on anthropological methodology, states: "the descriptive material in these studies is heavily anecdotal and the interpretation of causal influences is highly subjective and inferential." Anthropologist, Clifford Geertz (1973: 6) declares: "operationalism as methodological dogma never made much sense so far as the social sciences are concerned, and except for a few rather too well-swept corners . . . it is largely dead now."

In summary, psychology focuses on micro-structures (the individual) whereas anthropology and sociology focus on macro-structures (cultural groupings and societies). Psychology conceptualizes values as dispositional elements. Anthropology and sociology conceptualize values as normative phenomena. These differences in conceptualization coupled with distinct methodological traditions help to explain the continuing disarray in values research in organizational settings.

2.4 THE PHILOSOPHICAL PERSPECTIVE

Much of our current thinking in social science can be traced back to philosophical foundations. Defining the study of philosophy in simple terms tends to be problematic. The field has a long tradition of eluding precise definition. The word "philosophy" is derived from the Greek words *philos* (loving) and *sophia* (wisdom) and means "the love of wisdom" (Titus, Smith & Nolan, 1986). Its basic method of inquiry is dialectic, the development of thought through the interplay of ideas. Axiology, the branch of philosophy which deals with values in ethics, aesthetics, education or religion, dates back to the early

Greek philosophers. In fact, Plato introduced logic, values, and instinct as critical elements of the human mind.

Values play an important role in philosophical theories of judgement and action as contraposita to facts. Debate over the fact-value dichotomy has endured for centuries and continues to be a salient topic in the philosophy literature (e.g., Singer, 1989). This debate, which likely intensified during the 16th century following Hume's *Treatise of Human Nature*, centers on the distinction between values (man's passionate side) and facts (man's reasoning side). Numerous contemporary philosophers view this as a false dichotomy recognizing both value-impregnated factuality and factual elements in values (Doeser, 1986).

Values' prominence in the philosophy literature has contributed to a variety of conceptualizations, many of which have been adopted by other disciplines. However, the concept of values as absolute and eternal ideals has tended to remain a unique philosophical perspective.

The ancient Greek philosophers emphasized the values of goodness, truth, beauty and happiness. Hebrew prophets taught the values of compassion, tolerance, honesty and fidelity. The American Constitution recognizes the values of life, liberty and the pursuit of happiness. Philosophy, particularly Western philosophy, assumes the existence of certain ideals provided by God or grounded in the nature of the cosmos. Values from a philosophical perspective are ideological phenomena as opposed to normative (anthropology / sociology) or conative (psychology) elements.

Notwithstanding the study of ethics in business decision-making, philosophical studies of values are seldom cited in the organizational science literature. The work of Morris (1956) is an exception. Building from "Dionysian," "Promethean" and "Buddhistic" ideologies, Morris developed a typology of thirteen values (ways to live). He operationalized these values using paper and pencil instrumentation in which respondents were asked to rate each orientation. Researchers have subsequently criticized Morris for his "exceedingly complex" descriptive paragraphs which were used to describe the thirteen value orientations (Gorlow & Barocus, 1965: 271).

At a cursory glance the philosophical perspective on values appears to parallel anthropology's and sociology's "conceptions of the desirable;" however, an important distinction is evident. The philosophical perspective emphasizes "what ought to be" in an ideal sense. The anthropological and sociological perspectives emphasize "what ought to be" in an operative sense. Argyris and Schon (1978) recognize this distinction in their discussion of "espoused" versus "operating" values. Ideals are espoused whereas norms operate.

Organizational scientists operationalizing values from a philosophical perspective may identify corporate ideals bearing little resemblance to normative elements operating in the organization. This is an example of how underlying conceptual differences can confuse the study of values in organizational settings.

2.5 THE ECONOMIC PERSPECTIVE

Economics is the study of those activities that involve the production and exchange of goods (Samuelson & Nordhaus, 1989). The economic conceptualization of values is oblique to the requirements of this research; however, its pervasiveness in general business is such that it merits some discussion.

In economic terms, the word "value" has a utilitarian connotation. It is a one-dimensional property synonymous with the concept of valence. A typical definition from an economic perspective is: "a thing has or is a value if and when people behave toward it so as to retain or increase their possession of it" (Lundberg, 1947: 26).

Marx's Value Theory is a prominent example of an application of the economic conceptualization of value. Marx suggests that the value of a commodity is the product of the total amount of labor power, direct and indirect, used to produce it (Kast, 1976).

Some researchers (e.g., Campbell, 1963; Handy, 1970) have extended this utilitarian conceptualization of values to behavioral research. Rokeach (1968) disagrees with this extension and presents compelling theoretical reasons for studying values as personal versus objective phenomena. By conceptualizing values as personal elements, he suggests (p. 159):

> We would be dealing with a concept that is more central, more dynamic, more economical, a concept that would invite a more enthusiastic interdisciplinary collaboration, and that would broaden the range of the social psychologist's traditional concern.

Debate over the conceptualization of values as objective valences versus personal criteria is one more example of conceptual disarray in this field.

The discussion to this point has revealed important distinctions in the conceptualization of values across the social sciences. These distinctions are summarized in Table 1.

TABLE 1
The Conceptualization of Values across Foundation Disciplines

	Anthropology	Sociology	Philosophy	Psychology	Economics
Definition:	Values as "conceptions of the desirable"	Values as societal "standards"	Values as ideal "ways to live"	Values as personal "preferences"	Values as objective "utilities"
Source:	Kluckhohn, 1951	Parsons, 1951	Morris, 1956	Rokeach, 1973	Lundberg, 1947
Focus:	Natural Groups	Societies	Universalist	Individuals	Nations
Method:	Ethnography	Verstehen	Dialectic	Psychometric	Archival

As shown in Table 1, organizational scientists studying values in the workplace are faced with a diverse array of conceptualizations. An extensive review of the literature reveals little evidence of any attempt to reconcile these perspectives. The next section will attempt to address this issue through the application of Quinn and Hall's (1983) theoretical framework.

2.6 RECONCILING DISPARATE DISCIPLINES

Morris (1956: 9) states: "The term 'value' is one of the great words, and, like other such words ('science,' 'religion,' 'art,' 'morality,' 'philosophy'), its meaning is multiple and complex." This chapter has exposed differences in the conceptualization and operationalization of values. What is now required is a framework within which these disparate disciplinary views can be reconciled and understood. This section introduces Quinn and Hall's (1983) competing values framework and promotes it as a means of reconciling and understanding differences evident across the conceptualization and operationalization of values.

Anthropologist, William Jones (1961) suggests an understructure to the entire aesthetic production of any high culture including its scientific theory (Quinn & Hall, 1983). He proposes that human knowledge is organized around various "axes of bias," for example: idiographic versus nomothetic, longitudinal versus cross-sectional.

Similarly, Mitroff and Mason (1982) suggest that individuals unconsciously choose metaphysical positions which influence their perceptions and information processing.

Building from these earlier works, Quinn and Hall (1983) have developed a model of human knowledge called the competing values (CV) framework. The central proposition underlying the CV framework is: "all abstract knowledge is organized around a consistent framework of perceptual values" (Quinn & McGrath, 1985: 317).

The CV framework has successfully been applied to organize a number of literatures including: organizational effectiveness (Quinn & Rohrbaugh, 1983), leadership (Quinn, 1984), information processing (Quinn & Hall, 1983), organizational change (Quinn & Cameron, 1983), organizational culture (Quinn & Kimberly, 1984), and organizational decision making (Quinn & Anderson, 1984).

It is suggested that Quinn and Hall's CV framework can be applied to organize and reconcile the observed diversity within the literature (anthropology, philosophy, psychology, sociology, and economics) describing the conceptualization and operationalization of values. As shown in Figure 2, on the following page, the various definitions of value (e.g., Table 1) appear to conform well with the different axes of knowledge as defined in Quinn and Hall's CV framework.

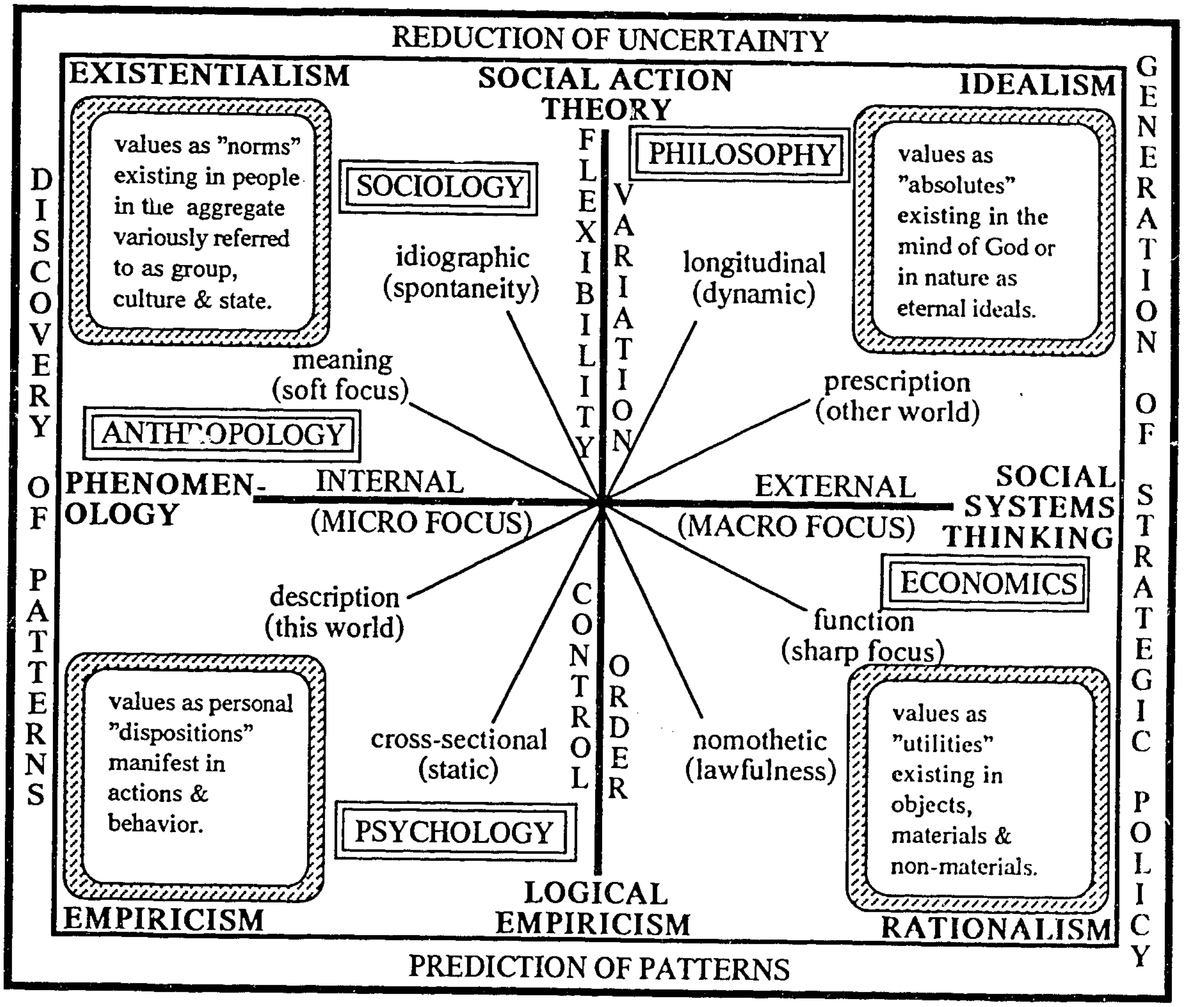
For example, anthropological and sociological perspectives on values appear to be consistent with the top left-hand quadrant of Quinn and Hall's CV framework. This quadrant is bounded by the axes of phenomenology and social action theory. Its research focus is on understanding the phenomena and discovering meaningful patterns. This focus conforms well with anthropology's and sociology's traditional emphasis on qualitative methods and analyses of group behavior. It is also interesting to note that values within this quadrant are conceptualized as existential phenomena ("what is") in contrast to the adjacent quadrant which recognizes an idealist (e.g., philosophical) perspective.

It is suggested that the top right-hand quadrant of Quinn and Hall's CV framework represents the philosophical perspective on values. This quadrant describes a more universalist orientation relative to that of anthropology, sociology, and psychology. Furthermore, its axes are consistent with the prescriptive nature of philosophical ideology.

The economic conceptualization of values as utilities appears to be well represented by the bottom right-hand corner of the CV framework. This quadrant describes the mind set of rationalism. The characteristic "sharp focus" and "lawfulness" orientations of economics are clearly evident. This quadrant also accurately reflects economic theory's level of application as the generation of strategic policy at a national level.

FIGURE 2

Reconciling Value Definitions using Quinn and Hall's Framework [a]



a. Figure 2 was developed by placing the different social science disciplines complete with their associated value conceptualizations (as shown in Table 1) as an overlay on top of the quadrants and axes of bias defined by Quinn and Hall's (1983) CV framework.

The final quadrant in Quinn and Hall's CV framework (the bottom left-hand quadrant) conforms well with the psychological perspective on the conceptualization and operationalization of values. Reflected in this quadrant is the philosophy of empiricism. It is also suggested that the axes of bias (e.g., cross-sectional and descriptive) characteristic of this quadrant are consistent with traditional operational preferences in psychology. In addition, the emphasis on the prediction of patterns described in this particular quadrant conforms with psychological value research's focus on the prediction of patterns of individual behavior.

It is concluded that Quinn and Hall's CV framework is a useful tool for organizing and understanding the disparate conceptualizations of value as outlined in this chapter. Earlier discussion in Chapter 1 recognized conceptual disarray with respect to the definition of values within organizational science. This section promotes the application of Quinn and Hall's CV framework as a valid means to address this issue.

2.7 DEFINING VALUE CONGRUENCE: A CONCEPTUAL SYNTHESIS

The construct of individual-organizational value congruence is central to this research. It represents a synthesis of macro (anthropological/sociological) and micro (psychological) perspectives as follows: value congruence measures the degree to which an individual's personal values agree with normative elements characteristic of his or her reference group, in this case, the individual's employer. Worded in terms of a question, the construct of value congruence asks: "To what extent do the personal preferences (with respect to modes of conduct and end-states of existence) of employees comply with the organization's required values as manifested by its culture?"

For the purposes of this research study the following definitions are advanced:

Values at the Individual Level of Analysis. Values are enduring personal preferences for modes of conduct or end-states of existence relative to converse modes of conduct or end-states of existence. For example, one employee may prefer an informal mode of social interaction relative to another employee who may prefer to maintain his or her social interactions at a formal level.

This definition of values parallels and is consistent with Rokeach's (1973: 5) popular conceptualization: "A value is an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence."

Values at the Organizational Level of Analysis. Values are conceptions of the desirable characteristic of the organizational culture which influence the selection from available modes, means and ends of action. For example, some organizations require strict adherence to detailed plans and processes (e.g., professional audit firms) whereas others permit more experimental (trial and error) approaches to task fulfilment (e.g., movie production companies).

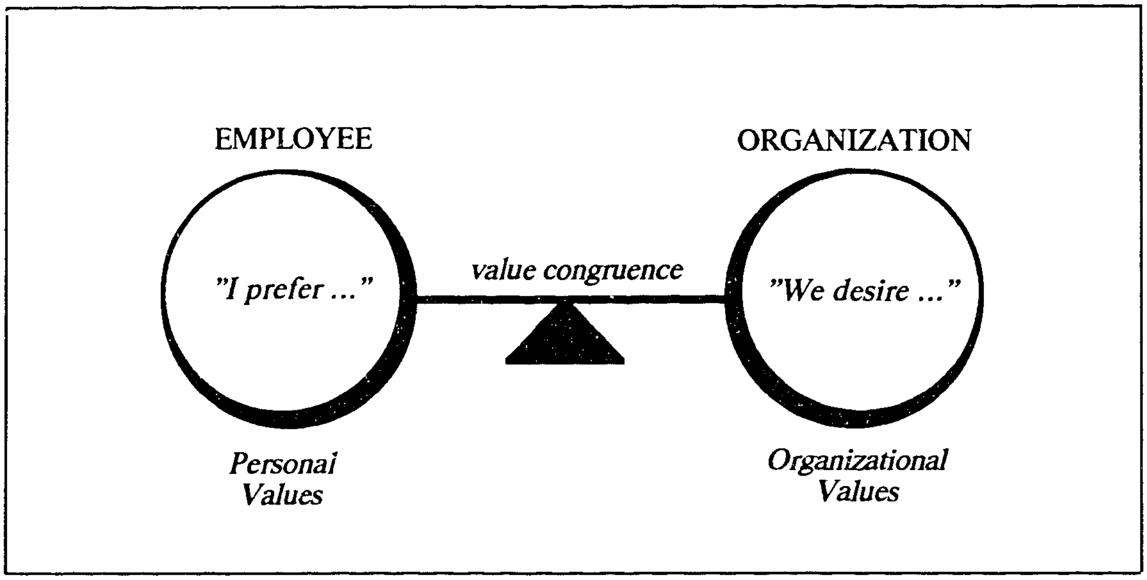
This definition of values essentially paraphrases Kluckhohn's (1951) definition with minor amendments to reflect the organizational context.

Value Congruence. Value congruence is defined as the degree to which an individual employee's personal values (preferences) are congruent with his or her work organization's values (conceptions of the desirable) as manifested within its culture or sub-cultures. This definition assumes a set of work-related value dimensions commensurate at both individual and organizational levels of analysis.

This conceptualization of value congruence (as shown in Figure 3 on the following page) is consistent with Chatman's (1988: 18) definition of person-organization fit (POF): "the extent that the person's values are aligned with the values, or culture of the organization."

FIGURE 3

The Conceptualization of Value Congruence



For Example:

Value Dimension:	Formality:	(formality <------> informality)
Employee:	"I *prefer* to use first names when communicating." (informality)	
Organization:	"We *desire* that you use official titles." (formality)	
Result:	Low Value Congruence	

Value Dimension:	Openness:	(open <------> closed)
Employee:	"I *prefer* to work with my office door open." (open)	
Organization:	"We *desire* an open door policy." (open)	
Result:	High Value Congruence	

In summary, this conceptualization of value congruence integrates perspectives from anthropology, sociology and psychology. The anthropological / sociological perspective recognizes values at the organizational level of analysis as "conceptions of the desirable." The psychological perspective defines values at the individual level of analysis as enduring personal "preferences". By combining these perspectives, the construct of individual-organizational value congruence is created.

This chapter has reviewed the conceptualization of values from a variety of perspectives. An attempt to reconcile disciplinary differences using Quinn & Hall's (1983) competing values framework has been presented. Individual-organizational value congruence has been defined as a hybrid concept recognizing organizational science's diverse theoretical origins.

The next chapter will review the literature with respect to the operationalization of values and value congruence.

CHAPTER 3 - THE MEASUREMENT OF VALUES

A variety of values measures exists in the literature including measures of personal values, organizational values and value congruence. The purpose of this chapter is to review these measures in order to ascertain what has worked well in the past and identify potential operational improvements. In addition, the chapter raises a number of methodological issues which become important considerations in the research design.

3.1 PERSONAL VALUES MEASURES

Personal values have been measured in a myriad of ways. Unfortunately, there is little consensus in the literature with respect to operational procedures. No single methodology dominates. Zavalloni (1980: 77) states: "In sharp contrast with the neighboring and somewhat overlapping field of attitudes, values research has never developed a body of specific measuring techniques comparable to attitudes scales." She suggests this shortcoming is due to the disciplinary diversity underlying values research.

There are very few literature reviews which have taken an eclectic view of values research, particularly from an operational perspective. Beyer (1981) has completed an extensive conceptual literature review on ideologies and values in relation to organizational decision-making. Payne (1988) discusses a number of values measures in relation to teaching business ethics. Zavalloni (1980) has prepared a comprehensive review of values measures from a cross-cultural research perspective. To date, the most substantive test of work values measures appears to be the empirical work of Ravlin and Meglino (1987a,b) who test four types of measures (ranking, point-assignment, forced choice, and Likert-type scaling) against a number of criteria including measures of perception and decision-making behavior.

This section on personal values measures discusses a number of outstanding operational issues. It then classifies and reviews sixty values measures which have been designed for the individual level of analysis. The advantages and disadvantages of each methodological approach are discussed. This section closes with a set of conclusions as to which procedures are most efficacious in the operationalization of personal values.

3.1.1 Measurement Issues - Personal Values

A number of issues affect the measurement of personal values including: response set bias, research objectives, idiographic versus nomothetic focus, cognitive structure, relevant concepts, single measures and small amounts of explained variance.

Response Set Bias - Social Desirability. Social desirability is a significant problem in the operationalization of personal values. It is likely the most significant problem. If this bias is not controlled it can seriously limit variance across respondents.

Enz (1986), in a pretest of her first attempt to operationalize values using a seven point Likert-type scale (very undesirable to very desirable), discovered that over 85% of the respondents found seventeen out of twenty-one values to be either desirable or very desirable. Ravlin and Meglino (1987a: 155) suggest such results should not be surprising: "Because of their 'oughtness' characteristic, values specify forms of behavior that are 'socially desirable' (Fallding, 1965; Kluckhohn, 1951; Rokeach, 1973, Schein, 1985; Williams, 1968)." In order to reduce this bias, these two researchers advocate using forced choice or rank order scales which require individuals to choose between equally desirable alternatives.

Research Objectives. Research objectives affect one's choice of operational procedures. If a study's objective is to simply identify values salient within a population, then semi-structured interviews or open-ended questionnaires should be adequate. However, if a study's objective is to prioritize these values in relation to each other, then rank-order or forced choice methods would be necessary. And, if the study is attempting to explain underlying cognitive processes linking values to behaviors, then none of these above methods would provide much insight.

With respect to understanding cognitive processes, Zavalloni (1980: 109) suggests:

> The emphasis on the study of psychological processes within the individual requires psychological data that are cognitive productions, idiosyncratic in content, such as free categorization or thinking aloud, rather than stimuli or propositions provided by the researcher, as is usually done when studying an aggregate (see Zavalloni, 1978).

Clearly, different methodologies are applicable for different research objectives. However, this issue tends to be dealt with implicitly in the literature and very few studies in values research provide explicit rationale for their choice of methodology. There appears to be little distinction made between the use of enumerative procedures (e.g., open-ended interviews), simple evaluative procedures (e.g., ranking/rating) and more sophisticated procedures (e.g., cognitive mapping) required to uncover underlying psychological processes.

Idiographic versus Nomothetic Focus. Personologists studying values favor idiographic research designs that focus on unique individual differences. Chatman (1988: 3) points out that "this tradition of research has demonstrated that people are vastly different from one another in terms of their fundamental values and beliefs, their personalities, and their attitudes." Situationalists (e.g., cultural anthropologists) favor nomothetic designs. Nomothetic research searches for laws or propositions that hold true for a statistically defined population.

In order to conduct research on individual-organizational value congruence, conceptualizations of persons and situations must be simultaneously idiographic and nomothetic. Chatman (1989: 338) states:

> On the person side, attention to the differential relevance of characteristics and cross-situational data is essential. On the situation side, we may need to assess the relative strengths and weaknesses of a situation and to compare situations and persons in mutually relevant and commensurate terms.

Therefore the value dimensions in this research must be mutually relevant and commensurate to both persons (individual employees) and situations (organizational cultures).

The Cognitive Structure of Personal Values. The cognitive structure of personal values has important implications for their measurement. On the organization side, Schein (1985) has suggested that basic assumptions underlie organizational values. Can a parallel structure be applied on the person side? For example, do basic assumptions (philosophies) about life drive personal value preferences? Philosopher, Charles Morris (1956) defines values in terms of 13 ways to live. Perhaps, there is a typology of basic philosophical orientations which underlie individual value systems?

Rokeach (1960) discusses beliefs (including values) in terms of their centrality. His notion of centrality raises a second issue with respect to the structure of values: Are goal related (end-state) values more central than mode of behavior (instrumental) values? Are there constant linkages between certain end-state values and instrumental values? Are there differences in centrality within a set of values (e.g., instrumental values)? Investigation of this last question has important implications for the validity of value ranking procedures. Ravlin and Meglino (1989) have recently completed a study investigating whether or not subjects could logically preference order work values. They conclude (p. 501):

> These findings provide preliminary evidence that the values described in this study are by their nature hierarchically organized and that ipsative measures used for their assessment in fact capture important qualities of these values.

Relevant Values. A wide variety of values typologies exist. With very few exceptions (e.g., Scott, 1959; Cornelius, Ullman, Meglino, Czajka & McNeely, 1985), all of these typologies were developed from literature reviews and researcher intuition. For example, Rokeach (1973: 30) states in reference to his derivation of instrumental and terminal value sets: "As can be seen, the overall procedure employed in selecting the two lists is admittedly an intuitive one . . . " While his set of eighteen end-state values did incorporate data from thirty graduate students in psychology and one hundred residents from his local area, his list of instrumental values was developed entirely from the literature starting with Anderson's (1968) list of 555 personality-trait words.

A second prominent example already discussed in the first chapter is the work of England (1967) who developed his original set of 200 items from the literature.

A third recent example is the item set used in O'Reilly, Caldwell and Chatman's Organizational Culture Profile which was designed to measure both personal and organizations values. Their item set was developed from "an extensive set of relevant culture instruments and descriptors which have been used in both the academic research on culture (cf. O'Reilly, 1983; Schein, 1983), and, in the more practitioner oriented approaches to measuring organizational culture (cf. Davis, 1984; Deal & Kennedy, 1982; Graham, 1976; Kilmann, 1982; Ouchi, 1981; Peters & Waterman, 1982)" (Chatman, 1988: 88).

Braithwaite and Law (1985: 252) caution: "Reliance on literature searches, on previous questionnaires, or on the researcher's intuitions does not necessarily result in the identification of values that are meaningfully used by the population of interest."

Single Measures. There are very few attempts in the literature to triangulate methodologies in the operationalization of values, Ravlin and Meglino's work (1987a) being a notable exception. Most research designs have relied on single measures. Rokeach's (1973) work, for example, has been criticized (Braithwaite & Law, 1985) for deviating from the well-established psychometric principle of relying on several different measures when operationalizing a psychological construct.

Small Effect Sizes. When a study produces a small effect size, its operationalization is usually called into question. In the case of values research such conclusions may be inappropriate. Small effect sizes, if significant, may well reflect accurate and comprehensive operationalization. Ravlin and Meglino (1987a) suggest that weak relations are entirely consistent with the nature of values research and its tradition of single incident (one occasion) research designs.

The research design for this study, discussed in detail in Chapter 6, incorporates specific steps to address these issues including: anonymity, careful instructions and a control measure to combat social desirability response set bias; methods which clearly reflect research objectives (e.g., open-ended interviews for values identification and ranking/rating procedures for values prioritization); an empirically-derived set of value dimensions designed to be relevant and applicable at both individual and organizational levels of analysis; and multi-method operationalization of these dimensions.

3.1.2 A Review of Measurement Techniques - Personal Values

This section reviews measures of values at the individual level of analysis. In all, sixty measures of personal values are discussed. A classification structure has been developed in order to properly assess this wide array of measures.

The operationalization of personal values entails two basic measurement options: 1) attempt to measure values directly using self-report techniques, or 2) attempt to measure values by inference using needs, cognitions, attitudes, intentions and/or behavior as proxies.

Researchers choosing the first option assume that individuals are cognizant of their values and that social desirability biases can be controlled. The direct measurement of values using self-report techniques can be further categorized into sub-classifications:

1) structured measures which are undisguised, 2) structured measures which are disguised, 3) unstructured measures which are undisguised, and 4) unstructured measures which are disguised. These distinctions parallel Campbell's (1950) classification structure for attitudinal measures.

Structured measures impose a typology of values whereas unstructured measures allow for free responses. Disguised measures attempt to reduce hypothesis guessing and social desirability by hiding the true nature of the measure. A typical structured/undisguised measure would be Rokeach's (1973) value survey. A typical structured/disguised measure would be Kluckhohn and Strodtbeck's (1961) application of structured interviews focusing on short stories describing third parties in hypothetical decision-making situations. A typical unstructured/undisguised measure would involve an open-ended elicitation of values by either questionnaire (e.g., Buchanan & Cantril, 1953) or interview (e.g., Liedtka, 1989). Finally, projective tests are typical of unstructured/disguised measures.

If an individual is not questioned directly with respect to his or her value preferences then inferences must be drawn from other psychological or manifest behavior variables. This approach represents the second basic option open to researchers. It assumes values are inaccessible by direct means but are manifest in other constructs. This approach to values measurement relies on consistency theory which proposes a high degree of consistency across individual needs, values, attitudes, cognitions, intentions, and patterns of behavior.

A classification structure of the personal values measures analyzed as part of this review is shown in Table 2. Personal elements in the table are presented hierarchically (in order of descending centrality) based on the work of Ajzen and Fishbein (1980) and Locke and Henne (1986). This order is as follows: inferences based on personal needs, direct measures of personal values, inferences based on cognitions and inferences based on manifest behavior.

TABLE 2

Classification of Personal Values Measures

Inferences from Needs

White (1951) - Card Sort - 35 items based on Murray (1938)
Edwards (1954) - Personal Preference Schedule

Direct Measures of Personal Values

	Structured:	*Unstructured:*
Undisguised:	Ranking: Allport et al. (1960) Edye (1962) Rokeach (1973) Ravlin & Meglino (1987a)	Open-Ended Questions: Buchanan & Cantril (1953) Gillespie & Allport (1955) Scott (1959) Glicksman & Wahl (1965) Jones et al. (1978)
	Point Assignment: Myers & Myers (1974) Ravlin & Meglino (1987a)	Interviews: Kram et al. (1989) Liedtka (1989)
	Q Sort: Chatman (1988)	Values Clarification: Kirschenbaum & Simon (1973) Simon & Clark (1975) Raths et al. (1978)
	Forced Choice (pairs): Gordon (1960, 1976) Ravlin & Meglino (1987a)	
	Rating Scales: Morris (1956) Eyde (1962) Scott (1965) England (1967,1975) Gorsuch (1970) Wollack et al. (1971) Munson & McIntyre (1979) Braithwaite & Law (1985) Ravlin & Meglino (1987a)	
	Semantic Differential: Senger (1970, 1971)	
	Multi-Methods: Edye (1962) Braithwaite & Law (1985) Ravlin & Meglino (1987a)	

TABLE 2 (Cont'd.)

Classification of Personal Values Measures

Direct Measures of Personal Values (Cont'd.)

	Structured:	*Unstructured:*
Disguised:	Behavior of Peers: Izraeli (1988) Interpretation of Paintings: Morris (1956) Decision Situations: Kluckhohn & Strodtbeck (1961) England (1975) Brenner & Molander (1977) Rest (1980) Fritzche & Becker (1984) Barnett & Karson (1987) Reidenbach & Robin (1988)	Projective Tests: Scott (1959) Cornelius et al. (1985)

Direct Measures of Single Values

Work Ethic:
Blood (1969)
Mirels & Garnett (1971)
Ray (1982)

Inferences from Cognitions	**Inferences from Behavior**
Word Flash: Postman et al. (1948) Ravlin & Meglino (1987b) Motion Pictures: Ravlin & Meglino (1987a) Paper and Pencil: Triandis et al. (1972) Zavalloni (1980) Verbal Protocol Analysis Oviatt (1988)*	Expert Observation: Psychoanalysis: Maccoby & Endler (1968) Sociology: Parsons (1951) Lipset (1963) Peer Observation: Bem & Allen (1974) SYMLOG: Bales & Cohen (1979) Polley, Hare & Stone (1988)

* = recommended but never applied.

Inferring Values from Needs

Edward's (1954) Personal Preference Schedule (EPPS) is one example of a needs based measure which taps personal values through its relative scoring of achievement, deference, affiliation and several other personality attributes (Payne, 1988). A second values study based on needs is that of White (1951) who used a card sort to rank 35 situations in terms of relative satisfaction. White applied Murray's (1938) typology of needs to develop his values analysis technique (Rosenberg, 1956).

While a close theoretical association between needs and values has been established (cf. Locke & Henne, 1986), one could question whether significant operational advantage can be gained using needs to infer personal values. Both concepts are quite abstract and tend to be operationally challenging. It is suggested that a prerequisite for advancement in this area would be an empirical study linking an accepted needs typology with a values typology.

Direct Measures of Personal Values - Structured / Undisguised

Ranking Procedures. Ranking procedures are very popular in the assessment of personal values. One of the most widely accepted ranking instruments is the Rokeach Value Survey (Braithwaite & Law, 1985). A second popular ranking instrument is Allport, Vernon and Lindzey's (1960) Study of Values.

Value ranking procedures have also been applied by Ravlin and Meglino (1987a) using an empirically-derived typology of business-related values (Cornelius et. al. 1985). Ravlin and Meglino's study compares four alternative procedures: ranking, point-score, forced choice, and Likert-type scale. They conclude that the rank order measure of values was more consistently related to the output measures of perception and decision-making behavior than were alternative methods. The weakest performer in their comparative study was the Likert-type rating scale.

Edye (1962) measured values using both ranking procedures and five point Likert rating scales. She concludes that rating scales have lower predictive validity relative to ranking scales.

Ranking procedures appear to be an efficacious means of directly measuring values. They are economical to design and easy to apply. They control for social desirability by requiring respondents to choose between equally desirable alternatives (Ravlin & Meglino, 1987a). Their greatest weakness, however, may be their within-subject (ipsative) design. Brown (1976: 21) following from earlier psychometric work by Hicks (1970) cautions: "Ipsativity holds where value scores for an individual are dependent on his or her own scores or other values; they are not strictly comparable with scores of other individuals."

Ravlin and Meglino (1987a) point out that another weakness of fully ipsative measures (e.g., ranking and forced choice instruments) is that respondents are not allowed to have two or more values equivalent in importance.

The degree to which ipsativity is an issue depends on the cognitive organization of values. Ravlin and Meglino (1987a: 158) state:

> If values are indeed ordered in a hierarchy, a hierarchical or ipsative form of measurement is conceptually most appropriate. On the other hand, if values are organized in groups, with all values in a particular group having near equal levels of importance, we would not want a value ordering *per se*.

A later study by Ravlin and Meglino (1989) addressed this issue. Their conclusion was (p. 505): "individuals are basically transitive in making value-related choices, and that values function as a cognitive hierarchy."

Ravlin and Meglino's finding contradicts an earlier study by Braithwaite and Law (1985) who analyzed the structure of personal values using Rokeach's Value Survey and a set of related multi-item indexes based on the work of Gorsuch (1970). Their conclusion (1985: 262) was: "these data fail to demonstrate that a single rank ordering of values reflects the priorities operating for members of the general population." Furthermore, they propose rating procedures with multi-item measures for each value to be operationally superior to ranking procedures.

Munson and McIntyre (1979) measured Rokeach's value typology using Likert-type scaling procedures in which respondents indicated how important each value was on a seven point scale. They conclude that a rating scale approach is just as reliable as Rokeach's original ranking procedure.

Clearly there is controversy between ranking and rating procedures and the answer lies in the cognitive organization of values. While Ravlin and Meglino's recent empirical results make a strong case for a hierarchical values structure, the debate is by no means over.

Point Assignment Measures. Point assignment procedures are similar to ranking procedures. They are also ipsative in nature. Under these procedures, respondents are asked to allocate points, out of a set total, across a number of values categories. Unlike value ranking these procedures allow for two or more values to be equivalent in importance.

Flowers, Hughes, Myers and Myers (1975) measured personal values in a nation-wide survey of 5000 American managers (1707 responses) using Graves' (1970) theoretical framework of seven levels of psychological existence: 1) reactive (omitted), 2) tribalistic, 3) egocentric, 4) conformist, 5) manipulative, 6) sociocentric, and 7) existential. A scale (Myers & Myers, 1974) requiring respondents to distribute points between the 6 value choices (psychological states) was applied.

Ravlin and Meglino (1987a) have also applied point assignment procedures to operationalize personal values. In their study subjects were asked to allocate a total of 25 points across four values according to how they felt each should be emphasized in their personal behavior. They found the point assignment measure to be significantly correlated ($p<.01$) with the decision task dependent variable but not the perceptual task dependent variable. Whereas thei .anking measure was significantly correlated ($p<.01$ & $p<.05$ respectively) with both dependent variables.

Q-Sort Procedures. Chatman (1988) used a Q-sort methodology (Block, 1978; Stephenson, 1953) to assess both personal and organizational values in large U.S. public accounting firms. Her method required subjects to sort 54 item cards (e.g. flexibility, adaptability, being innovative, being highly organized) into 9 categories ranging from "most-to-least desirable" for personal value sorts and "most-to-least characteristic" for organizational value sorts. Chatman's method imposed forced choice in that the number of items allowed in each category was subject to pre-set limits. Extreme categories were more restrictive than those in the center causing the formation of a unimodal distribution.

Chatman (1988: 88) suggests: "The Q-sort method offers some unique advantages over traditionally used rating scales." She proposes, following from Cattell (1944), that the ipsative nature of the method is advantageous in that it produces a profile of items which are linked (implicitly compared) versus a set of independent categories of items. In a footnote to her research she recognizes that ipsative methods produce items which are not independent in a strict statistical sense. However, she defends this methodology by pointing out that the large size of her 54 item set allows the deck to be sorted in many different ways (3.1×10^{42}). Furthermore, she found the inter-correlation of each item with each other item to be approximately -.02. Chatman concludes (p. 88) that the magnitude of the inter-item dependence was low enough that her analysis could focus on individual items rather than the entire profile (as one would with a conventional rating scale).

The Q-sort method has several other advantages (Chatman, 1988). It recognizes the cognitive limitations of respondents (it would be very difficult for them to rank order 54 items). It allows for finer discrimination among a greater number of items relative to Likert and semantic differential scales. It is more idiographic than traditional rating scales. Finally, it is easy to administer.

There are also potential problem areas associated with this methodology: 1) the item set must be determined with great care such that it represents the full range of descriptives; 2) the relevance of each item must be demonstrated; and 3) items should not vary substantially in terms of their social desirability.

Social desirability was not an issue in original applications of the Q-sort procedure as it was designed to provide trained evaluators (e.g., psychiatrists and clinical psychologists) with a standard language (item cards) and grammar (sort process) to describe patients' personalities (Block, 1961). Edwards (1955) is critical of researchers who apply the Q-sort method as a self-report technique suggesting that they leave themselves open to social desirability biases.

Forced Choice (Comparison Sets). This procedure differs from ranking, point assignment and sorting in that all value choices are not considered simultaneously. In this method, respondents are asked to choose between a small set of items (two or three) representing different value orientations (e.g., Gordon, 1960, 1976; Ravlin & Meglino, 1987a). In comparison with ranking techniques, this method makes it cognitively easier for respondents to assess value choices .

Gordon's (1960, 1976) Survey of Personal Values (SPV) uses 90 items to operationalize six values - support, conformity, recognition, independence, benevolence, and leadership. In what is a hybrid procedure integrating ranking and forced choice, his instrument asks respondents to rank items (least to most important) from comparison sets of three items. Set composition is varied so that each value is contrasted against all others.

Gordon's SPV has been criticized for being more a measure of personality than values (Mueller, 1985).

Ravlin and Meglino (1987a) developed a forced choice values measure using paired comparisons. Four values - achievement, helping, honesty, and fairness were contrasted using 24 pairs of items, with each item representing a specific value orientation. Items were empirically generated and carefully selected based on the degree to which they operationalized each value construct. Response set variance was controlled for by making items in each pair equivalent in terms of social desirability. Ravlin and Meglino's results showed that the paired comparison procedure outperformed the Likert-type measure, but it was weaker than the simple ranking.

The primary disadvantage of paired comparison procedures is they are difficult to develop and cumbersome to apply for large value sets. For example, a set of 12 values requires 66 paired combinations or 220 triadic combinations. And, if more than one item statement is used to represent each value then these numbers are further multiplied. Furthermore, since one item is selected at the expense of another the data produced by these choice comparisons are ipsative in nature.

Rating Procedures. A number of researchers have applied rating procedures (e.g., Likert-type scales) to operationalize values. Rating techniques are methodologically distinct relative to the self-report measures reviewed to this point. Ranking, sorting and other forced choice instruments measure *across* value sets (e.g., rank honesty versus achievement). In comparison, rating techniques measure *within* a single value dimension (e.g., how important is achievement to you?). Scoring high on one value dimension does not preclude a respondent from scoring high on any or all of the other dimensions. For this reason rating scales are judged to be more susceptible to social desirability biases relative to ranking procedures (Ravlin & Meglino, 1987a). It is important to note that both ranking and rating procedures are susceptible to social desirability, however the ipsative nature of ranking affords a means of control which is not available in rating procedures.

Braithwaite and Law (1985) report that the difficulties associated with rating scales are: 1) preventing the indiscriminate use of the more favorable categories, 2) developing accurate category labels, and 3) providing appropriate instructions to limit response set behavior.

Munson and McIntyre (1979), recognizing that normal (Likert-type scale) rating procedures would be susceptible to "end piling" (most scores occurring at the socially desirable end of the scale), have attempted to reduce this bias through an "anchored scaling" procedure. Respondents are asked to scan all values first and to mark the least important value as "1" and the most important as "7". Respondents are then instructed to use these two anchors as their reference points when scaling the rest of the items. The Munson and McIntyre study compares ranking procedures as per Rokeach with normal scaling (Likert-type) and anchored scaling. Unfortunately, the anticipated benefits of anchored scaling were not realized. The authors state (p. 50):

> It is apparent that the hoped-for improvement from the anchored approach has not been obtained because the reliability is lowest here and significantly below the rank results on both terminal and instrumental values.

Relative to ranking and forced choice procedures, rating scales have certain advantages. Not being ipsative, rating scales facilitate between-subject comparisons and support more sophisticated statistical techniques. It has also been suggested that rating procedures provide a "thicker" description of underlying psychological processes than ranking scales. Thompson and his colleagues (1982) have concluded that ipsative or ranking instruments are useful when information about value choice is desired, but, that normative or rating instruments are more important when the research question focuses on the underlying nature of value perception.

One of the most popular rating instruments is England's (1967) Personal Value Questionnaire (PVQ). England's instrument is attractive because of its strong focus on values within the business and organizational context (Payne, 1988). The instrument consists of 66 concepts, developed from the literature. Its primary mode measures the extent to which values are considered personally important versus unimportant. Its secondary mode taps why certain values are considered important in terms of: pragmatism, hedonism, or ethics.

Munson and Posner (1980) conducted a concurrent validation study on England's PVQ and Rokeach's RVS. They conclude (p. 536):

> Each value instrument, when applied to a cross-validation holdout sample, demonstrated an acceptable level of concurrent validity in its capacity to correctly classify employees into management or nonmanagement positions and to distinguish employees with higher from those with lower self-perceived success.

A variety of other rating instruments have been popular with values researchers. Morris (1956) measured values in terms of thirteen ways to live based on Buddhistic (self regulation), Dionysian (indulgence), and Promethean (change your environment) philosophical orientations. He asked respondents to rate his thirteen ways to live on a scale of "like very much" to "dislike very much."

Scott (1965) measured 12 values in college students (intellectualism, kindness, social skills, loyalty, academic achievement, physical development, status, honesty, religiousness, self-control, creativity and independence) using multi-item scales. Scott (p. 40) reports on the scales he developed as follows:

> Though not sufficiently reliable for assessment of individuals they can be expected to yield significant differences between sizable groups of subjects who differ in the values assessed. . . Investigations conducted so far indicate that values measured by this technique tend to behave empirically as one would expect them to if they were tapping attributes of the kind conceptualized here.

Wollack and his colleagues (1971) have developed a Survey of Work Values (SWV) scale based on the principal aspects of the Protestant Ethic as described by Weber (1958). They report (p. 336):

> The internal consistencies of the SWV subscales were not as high as one would prefer. The coefficient alpha reliabilities, which were mainly in the .60s, are about what one would expect, considering the range of scale values in each subscale and the small number of items within each subscale.

Semantic Differential Scales. Semantic differential scales have been applied to values research (Senger, 1970, 1971). Developed by Charles Osgood (1957) and his associates, semantic differential scales were originally designed for the study of meaning. They have also been applied as attitudinal measures (Mueller, 1986). In reference to attitudes research, Mueller reports that the semantic differential procedures have a number of advantages including ease of construction and administration, reliability and high correlations with Likert-type and Thurstone scales. Major drawbacks of semantic differentials are the potential for respondent confusion over the literal interpretation of adjective pairs and the transparency of the instrument's purpose.

Senger (1970) operationalized religious values in business by asking 244 corporate managers to judge religious concepts using semantic differential scales. He found religion-oriented managers to be more socially and humanistically inclined and less economically inclined. In a subsequent study, (Senger, 1971), managers were asked to rank their subordinates in terms of all-around competence. Senger used semantic differential analysis to measure the value orientations of managers and their subordinates. He found that subordinates with the highest ratings tended to have value patterns similar to their managers.

Multi-Method Studies. A small set of researchers have applied multi-method approaches combining ranking and rating procedures (Braithwaite & Law, 1985; Edye, 1962; Ravlin & Meglino, 1987a). As discussed, Ravlin and Meglino and Edye found ranking techniques to be more valid in terms of predictive validity. In contrast, Braithwaite and Law (1985) concluded that the self-ipsatizing nature of ranking instruments is not justified either psychometrically or in terms of empirical validity. Braithwaite and Law recommend multi-item rating measures for each value construct as the best alternative.

In summary, it appears that additional empirical work will be necessary in order to address the outstanding ranking versus rating issue. The research design in this study incorporates a multi-method approach to operationalizing values which includes value ranking and value rating using multi-item Likert-type scales. The results provide important information on the relative strengths of these competing methods.

Direct Measures of Personal Values - Unstructured / Undisguised

Direct values measures discussed to this point have all been structured approaches. Respondents are presented with an a priori values typology. This approach to values measurement has been criticized in the literature. Feather (1985a: 270) suggests: 1) respondents are restrained unnecessarily by a set of standard variables, 2) the values suggested may not be part of respondents' cognitive realities, and 3) there are many different reasons for high or low rankings (e.g., instrumentality versus idealism) which overly structured measures would not be able to address.

Interviews and Open-Ended Questions. To avoid an artificial restriction on the domain range of subjects' evaluative responses, Scott (1959) used an open-question method to evaluate moral values. He admits his measure is a "crude assessment" (p. 301) of any particular value, but points out that it has the advantage of permitting a limitless variety of value concepts.

A wide variety of open-ended techniques have been applied in values research. Buchanan and Cantril (1953) used open-ended questions including: "What are your hopes for the future? What would your life have to be like to be completely happy?" Responses were then coded into categories. Gillespie and Allport (1955) compared the values of university students using an "Autobiography of the Future" instrument which asked students to anticipate their lives from the present out to the year 2000. Glicksman and Wahl (1965) studied the values of university students by asking subjects to write short essays describing what they wanted out of life.

More recently, Jones, Sensenig and Ashmore (1978: 258) elicited spontaneously mentioned values from a large and diverse sample of college students:

> Subjects were given a form with the following instructions printed at the top: We are interested in finding out something about the values that are important to college students. Specifically, we would like to know what social and personal goals you think are worthwhile. In addition, we would like to know the modes of conduct that you feel should guide people's behavior. For example, a valued goal might be world at peace. A desirable mode of conduct might be courage. Please list at least five valued goals in the left hand column below. Please list at least six desirable modes of conduct in the right hand column.

Liedtka (1989) used clinical interviews with 18 managers at 2 firms in a study linking managerial values and corporate decision-making. Liedtka reports that coding the data was a difficult methodological issue. She found that managers were less articulate when describing personal rather than organizational values. She attributes this reticence to Vaillant's (1977) notion of unconscious defense mechanisms.

Kram and her colleagues (1989) measured the values of managers using semi-structured interviews in a research project designed to examine how managers act in ethical dilemmas. A first interview focused on the individual's work history, perceptions of corporate culture and practices, and in-depth consideration of a difficult decision where the right thing to do was not clear or easily implemented. By asking managers to reflect on challenging decisions they proposed deep-seated values conflicts would be revealed.

A second interview was used to: analyze an additional troubling situation, elicit reactions to three scenarios, and gather personal background factors on respondent value formation. This research adopted a grounded theory approach (Glaser & Strauss, 1967; Post & Andrews, 1982). The results suggest organizational dynamics discourage individuals from engaging in productive dialogues about the ethical dimensions of difficult decisions.

The validity of interview techniques remains controversial. On one hand, interview techniques have been praised. People may be more willing to share personal information in a face-to-face mode in which the interviewer has opportunities to build trust and probe ambiguous responses (Mueller, 1986). Liedtka (1989) found the nonverbal behavior conveyed by her sample during interviews to be quite illuminating. Such inferences however are problematic from a validity point of view.

Additional criticisms which have been directed at interview techniques include the possibility that: subjects find it uncomfortable to share personal values directly, interviewers unconsciously fall into the role of evaluator and subjects experience considerable pressure to espouse socially desirable answers. In addition, the likelihood of low reliability exists as a result of: 1) inconsistency in interviewee responses, 2) recording errors by interviewers and 3) biases in the data interpretation (Mueller, 1986).

Values Clarification. There is a stream of values research in the educational psychology literature which has developed a variety of interesting unstructured methodologies (e.g., Kirschenbaum & Simon, 1973; Raths, Harmin & Simon, 1978; Simon & Clark, 1975). These techniques stem from Louis Raths' pioneering work. Rather than focus on any one value or value system, values clarification addresses the *process* of valuing. Its objective is to provide school students with an opportunity to understand their personal valuing processes.

According to Raths, the real measure of a value is the strength of one's reaction when that value is challenged or called into question. Raths developed a set of seven questions which a respondent can use to determine if he or she really values something: 1) Did I choose this value freely, with no outside pressure? 2) Did I choose this value from several alternatives? 3) Did I consider the consequences of my choice? 4) Do I like and respect this value? 5) Will I defend this value publicly? 6) Will I base my behavior on this value? 7) Do I find this value persistent throughout my life?

The intended purpose of values clarification is to enable individuals to clarify their own values, nevertheless, its methods have significant implications for values measurement. Value clarification researchers have identified a number of value proxies including: goals, aspirations, attitudes, interests, feelings, beliefs, and activities (Raths, Harmin, & Simon, 1978). In addition, they (e.g., Raths, Harmin & Simon, 1978, Simon, Howe & Kirschenbaum, 1972, Simon & Clark, 1975) have developed a variety of interesting values clarification techniques designed to uncover underlying personal preferences. These techniques include: the use of provocative statements to stimulate discussion, the analysis of behavior diaries and involvement in role-playing exercises.

In summary, the use of unstructured/undisguised instrumentation provides researchers with a richer perspective on personal values relative to structured/undisguised methods. Respondents are able to use their own syntax in articulating values. The data produced address value priorities as well as underlying psychological processes. Unfortunately, these methods all but preclude between-subject comparisons and quantitative analyses which are important design considerations in many organizational science studies.

Direct Measures of Personal Values - Structured / Disguised

Disguised techniques attempt to control social desirability bias by hiding the true nature of the research question. Disguised measures which are well structured and facilitate objective scoring are difficult and time-consuming to construct (Mueller, 1986). These instruments take a number of forms including vignettes, scenarios and hypothetical decision situations.

Hypothetical situations which disguise the nature of the research question (e.g., vignettes and scenarios) show promise in terms of differentiating between espoused values (ideals) and operating values (reality). These procedures shift respondent focus from "what should be" to "what is" in terms of day-to-day decision-making and behavioral choices. Primary measurement mechanisms incorporate making a choice between alternatives (e.g., Kluckhohn & Strodtbeck, 1961) or evaluating hypothetical situations (e.g., Feather, 1985b).

Seminal research by cultural anthropologists, Florence Kluckhohn and Fred Strodtbeck (1961) used interview schedules comprised of vignettes to test the differences and similarities in the rank ordering of value-orientations in five cultures: Mormons, Navaho, Spanish-Americans, Texans, and Zuni. They (p. 77) describe their instrument as follows:

> Each item of the schedule first delineates a type of life situation which we believe to be common to most rural, or folk, societies and then poses

> alternatives of solution for the problem which derive from and give expression to the theoretically postulated alternatives of the value orientation in question.

Ravlin and Meglino (1987a) found significant correlations between rank order, point assignment and forced choice values measures and the decision-making choices of university students using a within-subject regression analysis of twenty separate decisions. Similarly, Feather (1985b) found respondents' evaluations of events to be closely associated with their personal values.

In a study of the ethical beliefs and behavior of Israeli managers (n = 97), Izraeli (1988) found the best proxy for respondents' ethical behavior was their evaluations of peer behavior.

Morris (1956), in an attempt to introduce a non-verbal check on his "Ways to Live" questionnaire, used a set of 20 standard "letter-size" colored reproductions of paintings. These paintings (e.g., Vermeer's "The Milkmaid," and Renoir's "Self-Portrait") were carefully chosen out of a set of 87 paintings to exhibit a marked range in content and style. Respondents were asked to rate the paintings using a seven point scale ("like very much" to "dislike very much"). Morris concludes (p. 147): "Hence it seems plausible that the value dimensions found in the ratings of Ways are also present in the ratings of the pictures."

The use of vignettes, systematically elaborated descriptions of concrete situations (Alexander & Becker, 1978), to measure values has been popular in the deontology literature. Brenner and Molander (1977) use a series of vignettes to test whether ethical values in business have changed over time. Rest (1980) created the Defining Issues Test (DIT) to measure the degree to which subjects apply principled reasoning. His instrument requires respondents to choose the most important issues from six vignettes each of which contain twelve value concepts.

Fritzsche and Becker (1984) used vignettes to study managerial responses to ethical dilemmas. Similarly, Barnett and Karson (1987) studied personal values and business decision-making behavior using vignettes. They found personal values were valid predictors in three out of five decision situations. Reidenbach and Robin (1988) used scenarios and semantic differential scales to measure value orientations (deontological, utilitarian, relativist, egoist and justice) in the context of marketing decisions.

England (1975) developed five vignettes representing four typical managerial decision situations: budgeting, morally questionable procedures, employee selection and the delegation of authority. He found evidence of relationships between managerial values (measured using his PVQ) and self-reported behavioral intentions. He reports (p. 57): "Across all five incidents, 18 out of 25 expectations are supported by the data."

In summary, vignettes show promise for the operationalization of values. By being indirect they are less susceptible to response biases. By presenting respondents with concrete situation, the high abstraction characteristic of most values measures is avoided. And, by holding the decision stimulus constant over a heterogeneous population, researchers achieve a degree of uniformity and control over situational influences (Alexander & Becker, 1978).

Direct Measures of Personal Values - Unstructured / Disguised

This category consists of measures which are unstructured in addition to being disguised. Respondents are free to choose their own relevant values and true nature of the test is hidden. The majority of instruments used under this classification are projective. Projective techniques have been prominent in attitudinal measurement (Mueller, 1986). For example, Murray's (1943) Thematic Apperception Test asks respondents to tell a story about a picture. Rosenzweig's (1945) Picture Frustration Study presents ambiguous pictorial information in the form of 24 cartoons depicting characters in potentially frustrating situations. Respondents are asked to supply comments for the characters.

There are a variety of projective techniques including: sentence completion, picture arrangement and selective word memory tests.

Scott (1959) used projective techniques to operationalize values. He asked respondents to think about two friends that they admire and then describe their values. A similar methodology was used by Cornelius, Ullman, Meglino, Czajka and McNeely (1985) to develop an empirically based typology of values. Employees were asked to focus on an individual they knew well at work and identify one value which that individual held about life in general. They were also asked to describe an incident at work which substantiated why they felt the individual held a particular value.

Projective techniques have been criticized for being subjective, impractical, unreliable and psychometrically deficient. These criticisms are primarily due to the high level of subjectivity in interpreting the data (Mueller, 1986). In a detailed paper, Cornelius (1983) refutes these views and presents evidence (p. 129) that "projectives are as valid, if not more valid, than traditional aptitude/ personality tests for both managerial and nonmanagerial jobs."

Direct Measures of Personal Values - Single Value Measures

Measures presented up to this point have been designed to operationalize personal value systems. A number of single value measures exist in addition to the more comprehensive techniques discussed.

One of the most salient workplace values is the work ethic (Cornelius et al., 1985). Blood (1969) developed an eight item scale to measure the Protestant Ethic in a study that demonstrated consistent relationships between the Protestant Ethic and work satisfaction. Mirels and Garrett (1971) and Ray (1982) have also developed scales to operationalize the work ethic.

In their comparative study of alternative value operationalizations, Ravlin and Meglino (1987a) hypothesized that respondents who ranked/rated work oriented values high (e.g., achievement) should also report positively associated responses using Blood's Protestant Ethic scale and respondents who ranked/rated helping oriented values high would report positively associated responses using Crandall's (1975) Social Interest scale. Their results for Blood's Protestant Ethic scale were disappointing. The ranking of achievement as either first or second, (versus third or fourth), was not related to scores on the Pro-Protestant Ethic scale. It is interesting to note that this was the one exception in their study in which rating outperformed ranking methods. The authors caution however that this relationship may be the result of common method variance. With respect to Crandall's Social Interest scale (SIS), the rank, point-assignment, and forced-choice measures all resulted in orderings that related to high and low scores on the SIS, as defined by a median split. In this case, the Likert-type measure failed to achieve statistical significance.

It is conceivable that a researcher, even with a lengthy values typology to operationalize, could find in the literature validated single measures for each value he or she planned to operationalize. Ravlin and Meglino's results suggest that such a strategy may be flawed. The need for theoretical consistency within nomological constructions must be taken into account. Bagozzi (1984) suggests that the definition and operationalization of a construct is not insular but includes relationships with antecedent and consequent constructs. In this respect, individual measures which are extracted from unique nomological nets and then aggregated to form a multiple value measure may lack theoretical consistency.

Inferring Values From Cognitions

Cognitive or information processing approaches of inquiry in organizational science have increased in prominence in recent years (Lord & Maher, 1989). This section discusses the operationalization of values from an information processing perspective.

Cognitive researchers, Calder and Schurr (1981), argue human behavior is neither dispositional nor situational; rather, it results from the process of incoming information (short-term memory) interacting with stored information (long-term memory). They suggest human dispositions (e.g., attitudes and values) cannot be measured by simply handing respondents a questionnaire.

Up to this point in the review values measures have tended to operationalize value content - the existence of values and their relative prioritization. Cognitive measures attempt to operationalize at a deeper level by addressing the processes through which values influence behavior.

Postman, Bruner, and McGinnies (1948) found that personal values (Allport-Vernon-Lindzey's typology) act as selective factors in perception. Using a modified Dodge tachistoscope, 36 words chosen to represent Spranger's six values were flashed on a screen before respondents (0.01, 0.02 & 0.03 second exposure times). The researchers conclude (p. 148): "The higher the value represented by a word, the more rapidly is it likely to be recognized."

Ravlin and Meglino (1987b: 669) applied a similar perceptual exercise in their comparative analysis of four values measures:

> A series of 25 nonsense words were flashed on a screen using a Gerbrands Model 300-C digital millisecond timer and a Gerbrands Model 66 shutter. ... They [respondents] were told that although they would not actually see the word, their minds would absorb its subliminal image. They were then asked to guess at the value category that was most closely related to each word.

These results suggest that rank and point-assignment scores are related to perceptual responses, whereas Likert and forced-choice scores are not.

Ravlin and Meglino (1987a) conducted a second test in order to confirm that their initial results were not an artifact of common method variance. The perceptual task measure in their first study was methodologically similar to the rank and point-assignment procedures. Video tapes comprising excerpts from two motion pictures - *Patton* (McCarthy, 1970) and *Gandhi* (Attenborough, 1982) were used in their second study. Scenes from *Patton* emphasized the value of achievement. Scenes from *Gandhi* reflected all four values in their test domain - achievement, concern for others, honesty/integrity and fairness. The subjects (61 MBA students and 63 banking executives) were assigned to two groups. One group watched *Patton* excerpts while the other watched scenes from *Gandhi.* Subjects were asked to rate the extent to which the leader manifested the four value dimensions. Subjects were also asked to choose the leader's dominant value and indicate how satisfied they would be working under the leader.

Ravlin and Meglino's results provide partial support for their initial findings. Subjects found Patton's style of leadership extremely high on achievement whereas Gandhi's style was perceived as more uniform. Subjects also anticipated lower satisfaction under Patton's style of leadership. Analysis was conducted to determine whether subjects saw their own values reflected in each leadership style. Subjects had previously completed rank, point-assignment, forced-choice and Likert-type measures of their own personal values. Ravlin and Meglino conclude that forced-choice and rank measures were equally able to detect subjects' tendency to see their values in a leader.

Zavalloni (1980) recommends the cognitive operationalization of values as a promising development in cross-cultural research. She states (p. 107):

> Recent developments in the field of cognitive and personality research conducted within an information processing perspective permit a clearer understanding of the limits of the nomothetic approach for the study of values, seen as a result of intrapsychic processes. These developments will

> lead to the consideration that a legitimate problem area in psychology is the discovery of how new experiences are processed by a specific conceptual structure that results from a particular life history.

She also proposes that values research should focus on psychological processes that are idiosyncratic and individual rather than central tendencies in an aggregate.

Zavalloni (1980) discusses Triandis and colleagues' (1972) antecedent-consequent method in which values are measured using the implicative logic linking antecedents to consequents. For example, respondents are provided with five antecedents - research, ambition, diligence, courage, endeavor and then asked to fill in the blank in the statement: "If there is ____________ , then there is progress." Triandis suggests that common themes among antecedents and consequents reveal underlying values.

Zavalloni's own instrument (1980), the Multistages Social Identity Inquirer (MSII), can be considered a cognitive measure of values. It probes respondents' perceptions of their environment (subjective ecology) and then traces links to self-concept and basic values. Probes operate at three levels - 1) representations of reality (using free association), 2) focused introspection (respondents reflect and evaluate their representations of reality), and 3) associative network analysis (designed to uncover the basic rules that a person applies to recoding of reality and the links among values, cognition, memories of the past, and actual behavior). Probes at the third level work by addressing what a respondent actually means when he or she states, for example, that he or she values freedom.

Oviatt (1988: 223) postulates that verbal protocol analysis (e.g., Ericsson & Simon, 1984; Isenberg, 1986) may be a useful technique to operationalize values:

> In this procedure, an executive is presented with a simulated business problem, and he or she is asked to think through the problem aloud while

> being tape recorded. The transcript of the executive's thought process can be studied to determine what major influences are apparent.

Actual applications of verbal protocol analysis to operationalize values have not been found in the literature. However, Schweiger (1983) reports verbal protocol analysis has been used to trace decision-making processes across a diverse set of activities including: job choice (Soelberg, 1965); strategic decision-making (Schweiger, 1980); consumer choice (Bettman, 1974; Bettman & Jacoby, 1976); investment trust decisions (Clarkson, 1963); the design of management information systems (Vitalari, 1980); the choice of living quarters (Payne, 1976; Svenson, 1974); aircraft accident investigation decisions (Braunstein & Coleman, 1967); and parole decisions (Carroll & Payne, 1977).

Schweiger (1983) supports earlier conclusions by Ericsson and Simon (1980) which tentatively suggest verbal protocol analysis provides researchers with an accurate and unobtrusive method for studying individual cognitive processes.

In summary, advancements in cognitive psychology show promise for the operationalization of values, specifically in terms of understanding underlying psychological processes.

Cognitive measures within this classification are similar to direct structured/disguised values measures (e.g., vignettes). In many cases it is difficult to make a distinction. The criteria applied in order to distinguish between these two categories were: the measure's theoretical foundation (interactional versus information processing) and evidence of a priori research objectives to uncover cognitive productions.

Inferring Values From Attitudes

Attitude is probably the most widely studied psychological construct in the industrial/organizational psychology literature (Webster & Starbuck, 1988). In many articles the distinction between values and attitudes remains unclear. Some researchers tend to use the terms synonymously.

At a superficial level there is some conceptual overlap. Values are enduring preferences for specific modes of behavior and end-states of existence. Attitudes are evaluations of psychological objects. The point has been made however that these two constructs are theoretically distinct. They differ along the dimensions of: *centrality* - values are more central to personality, *durability* - values are more enduring, and *specificity* - values are abstract whereas attitudes relate to specific psychological objects.

Consensus exists in the literature that clusters of values drive attitudes. Fishbein (1967) viewed attitudes as the algebraic sum of beliefs toward an object. Ajzen and Fishbein (1980: 67) postulate an expectancy-value model of attitude formation:

> A person's attitude toward a behavior can be predicted by multiplying her evaluation of each of the behavior's consequences by the strength of her belief that performing the behavior will lead to that consequence and then summing the products for the total set of beliefs.

They conclude that attitudes are based on the total set of a person's salient beliefs. More importantly with respect to the operationalization of values, they caution that two individuals may have different sets of salient beliefs (values), yet they may nevertheless hold similar attitudes.

The apparent lack of isomorphic (one-to-one) value to attitude relationships makes inferring values from attitudinal measures a complex and problematic undertaking.

Inferring Values From Intentions

Operationalizing values based on statements of behavioral intention has some of the same difficulties as attitudinal inferences. The relationship between values and intentions is complicated. Conventional theory proposes that multiple values can act in concert to drive a single behavioral intention (e.g., Ajzen & Fishbein, 1980). Situational influences may also be operative.

It could be argued that many of the self-report values measures discussed previously (e.g., choosing an action based on a vignette) were not direct measures of values, but measures of behavioral intentions.

For purposes of classification it was decided that all decision situation studies reviewed for this chapter could be classified as direct measures of personal values versus measures of behavioral intention. This classification decision was made for three reasons: First, all studies were taken from the values and ethics literatures and not the general decision-making literature. Second, the decision situations in these studies were specifically designed to reflect values-in-conflict dilemmas. Third, the described situations avoided the use of information on situational norms thereby maintaining a dispositional focus.

Inferring Values From Overt Behavior

Inferring values from direct observations of behavior has a certain intuitive appeal. If conducted in an unobtrusive manner over time and situations, social desirability biases and situational confounds could virtually be eliminated. However, a number of significant issues diminish the appeal of this approach: First, the relationship between values and overt behavior is complex. Our ability to infer relationships may be confounded by the fact that clusters of values are operative. Second, the ethics of such observations, particularly if conducted in a covert manner, are questionable. Third, the interpretation of observed behaviors would be highly susceptible to biases within the researcher's own subjective frame of reference. And fourth, such methods would be time-consuming and expensive.

There are relatively few reports of values inferences based on direct observations of overt behavior. Studies uncovered in the literature using some form of observation fall into three categories: clinical observation (e.g., psychoanalysis), observations by trained scientific experts (e.g., sociological inquiry), and observations by peers and associates. Maccoby and Endler (1968), for example, recommend psychoanalytic techniques as a means to better understand individual values (Bem, 1970).

As discussed in the second chapter, sociologists have relied on their own "expert" perspectives on society as a means to infer values. While such approaches have not been used to infer individual values in a strict sense, they do represent the application of scientific observation in the operationalization of values.

In a study of cross-situational consistency, Bem and Allen (1974) used reports of direct observations from subjects' mothers, fathers and peers. Two constructs, "friendliness" and "conscientiousness" were measured using six indicators: 1) self-report, 2) mother's report, 3) father's report, 4) peer's report, 5) researcher's observations as the subject participated in a group discussion exercise, and 6) researcher's observations as the subject sat in the waiting room.

Bem and Allen conclude some individuals are naturally high in behavioral variability across situations whereas others tend to be behaviorally consistent. Researchers were able to identify in advance those individuals who would be consistent by simply asking for self-report perceptions of behavioral variability. In reference to the predictive utility of dispositions versus situational norms, these researchers conclude (p. 517): "In short, if some of the people can be predicted some of the time from personality traits, then some of the people can be predicted some of the time from situational variables."

Polley, Hare and Stone (1988) recommend SYMLOG (Systematic Multi-Level Observation of Groups) applications as a procedure for assessing individual values. This technique relies in part on the observations of one's peers in a group setting. Bales and Cohen (1979: 30) define SYMLOG as: "a 'system' for the study of groups in the sense that it consists of a number of different parts, integrated to the serve the purpose of making a particular group easier to understand and work with."

One component of the SYMLOG methodology utilizes group members' perceptions of each other. Bales and Cohen (1979: 5) state:

> In some cases the group members can be asked, and are willing or even eager to make SYMLOG adjective ratings of each other. This method has great advantages. It supplies a large amount of information that would otherwise be inaccessible even by extended observation.

The conceptual structure of SYMLOG is defined by a three-dimensional grid: dominant/submissive, friendly/unfriendly and instrumentally controlled/emotionally expressive. Scoring procedures recognize three levels of group interaction: behavioral, content images and value judgement, and include two modes: scoring formats by expert observation and rating formats by peer observation.

The rating format instrument (used by peers) is a paper and pencil instrument consisting of 26 adjective sets. Group members individually rate their peers' behavior using five point scales as follows: never, rarely, sometimes, often, and always. In terms of rating instrument reliability and validity, Bales and Cohen state (1979: 299):

> Our comparative study of the Rating method and the Interaction Scoring method has thus, on the whole, produced very reassuring results. The theoretical construct of the three-dimensional SYMLOG space is strongly supported by the findings from both methods, and the two methods tend to converge, implying that each method produces valid measures, although each produces some independent information.

In summary, while behavior represents a tangible values indicator, researchers must proceed with caution. To be a valid measure it is suggested that research designs focus on patterns of behavior over time and situations. Confounding variables (e.g., situational norms) must also be addressed. More than one judge should be used for data interpretation and adequate inter-rater reliabilities should be established. A behavioral classification structure needs to be developed prior to observation along with specific rules for recording data. Furthermore, it is suggested values inferences can only be drawn when the subjects involved are free to choose from a variety of modes of behavior and/or end-states of existence.

3.1.3 Measures of Personal Values - Conclusions

Two operational perspectives, self-report and inferences based on other psychological elements and overt behaviors, have been presented. Both approaches have their "Achilles heels." Self report methodologies assume a high degree of introspection and ar open to social desirability response biases. Freeman and his colleagues state (1988: 826):

> As Andrews [1980] suggests, and the psychologists have argued persuasively, we do not always know what our values are. An immature or shallow person may be unable to characterize his values even roughly. A neurotic may be profoundly deceived about what he values. An ideologue may claim to value freedom, but may reveal by actions or by more specific pronouncements that what he really values is whatever profits his/her company or party.

Inferring values from other psychological constructs and observed behaviors reduces the probability of social desirability biases, but these measures are confounded by the complexity of their interrelationships and the effects of situational antecedents. Freeman and his colleagues (1988: 826) caution:

> Experience at this sort of thing [referring to self-deception and simple dishonesty] leads us to attribute values by looking at action rather than avowals though in some cases action must be interpreted with care: for example, someone who consistently demands honesty in others but is himself often dishonest may be said to value honesty in that he does act on it, in a way. Values bear a similarity to unobservable entities that natural scientists believe in. We cannot know by observation that they are there, but must instead postulate them in the general case and infer them in the individual case, even sometimes when the individual case is our own.

Despite clear recognition of significant operational challenges, these researchers recommend continued research in the study of values:

> That values are not infallibly reportable by their owners and not readily inferred from behavior, which suffers so many other causal influences, is no reason for pretending they do not exist or for trying to reduce them to something easily identifiable. We have argued that values are important influences on corporate behavior and that therefore they ought to be understood and identified.

In conclusion, the significance of values as influential constructs in organizational life is such that they are worth studying despite numerous operational challenges. Based on this extensive review of personal values measures in the literature, it is suggested:

1. Caution should be exercised when inferring values from needs. Psychological needs are abstract and present operational challenges similar to direct values measures. The nature and consistency of relationships between personal needs (e.g.,

the need of achievement) and personal values (e.g., aggressiveness as preferred mode of behavior), appears to be an area with potential for future research.

2. Out of the many structured-undisguised values measures reviewed, simple value ranking procedures appear to have a lot of merit. They are easy and economical to apply. Their ipsative nature combats response set bias. Furthermore, ranking methods may be theoretically correct given the cognitive structure of values.

Controversy continues to exist as to the degree to which ranking procedures can be used to make between-subject comparisons. And in the case of investigations of underlying psychological processes, they provide little information.

Point-assignment and Q-sort measures are viewed as variations of ranking techniques. Forced-choice procedures also appear to be valid measures, albeit cumbersome to construct. And, Likert-type and other rating scales appear to be susceptible to social desirability biases.

3. Unstructured-undisguised measures may be most useful during the exploratory stages of research (e.g., the development of a values typology) and for individual growth exercises (e.g., values clarification). Without the structure of a typology, however, comparisons across individuals and organizations become problematic.

4. Structured measures which have been disguised (e.g., vignettes) show promise as a means to operationalize values. These measures use structured situations to mitigate the abstract nature of ranking and control response bias. Also, by presenting the same situation across subjects quasi-control over situational variance is achieved.

5. Unstructured-disguised measures (e.g., projective tests) appear to entail a high degree of risk. These measures may only be useful for exploratory studies designed to elicit underlying value dimensions. It is suggested the use of such controversial measures to operationalize values, an already controversial concept, may leave too wide a margin for validity issues.

6. Single values measures (e.g., the work ethic) are applicable when researchers want to focus on one value. However, the aggregation of single measures from different nomological nets to operationalize a values typology will likely be problematic due to definitional and conceptual inconsistencies.

7. Cognitive measures (e.g., verbal protocol analysis) show promise for tapping underlying psychological processes in value formulation and application.

8. The use of attitudinal measures to infer values presents a number of difficulties. Attributing variance in attitudes back to unique values is problematic in view of the equifinality (multiple paths to a single end) in their relationships.

9. Values inferences based on measures of behavioral intention suffer from similar difficulties to attitudinal measures. This is particularly true when these measures are: general in nature, based on a single incident as opposed to a pattern and are not developed to focus specifically on values-related dilemmas.

10. Measures of overt behavior, like intentions, are confounded by external influences. Behavior's primary advantage is its materiality. However, behavioral measures require careful application. Situational variation must be controlled. Interpretations of behavior must be substantiated. And, patterns of behavior should be observed as opposed to single incidents.

It is apparent from this review why no one methodology dominates the operationalization of personal values. While some methods provide advantages, all entail at least one significant operational drawback. Notwithstanding these comments, simple ranking (e.g., Rokeach, 1973) appears to be the most efficacious of all techniques reviewed which may explain its popularity in the literature. It is suggested, however, that the key to enhanced operationalization is not to rely on any single methodology. Clearly, multi-method research designs have much to offer in the operationalization of personal values.

3.2 ORGANIZATIONAL VALUES MEASURES

As a function of the culture metaphor's increasing prominence, organizational values have become salient constructs in the literature. The previous section discussed the operationalization of values as psychological constructs. This section discusses the operationalization of values as organizational constructs. In order to adequately address the concept of individual-organizational value congruence, the central focus of this research, a review of measures at both levels of analysis is necessary.

The study of organizational values represents a relatively new paradigm in organizational theory. As such, numerous exploratory measures exist without the benefit of replication and validation over time. Similar to personal values measures, no single methodology dominates.

Comprehensive methodological reviews are also limited. Frost and colleagues (1991) discuss conventional perspectives (*frames*) on organizational culture: *integration* (emphasis on organizational consensus), *differentiation* (emphasis on subcultures), and *fragmentation* (acknowledgement of ambiguity). These researchers stress the need to go beyond conventional *frames*.

Siehl and Martin contrast qualitative and quantitative methods (1988) and review a variety of organizational culture measures in relation to organizational performance (1990). Rousseau (1990) reviews several quantitative measures of organizational culture. Perhaps the most comprehensive review of organizational culture, from the integration perspective which underlies this research study, is a recent publication by Steven Ott (1989). It includes a detailed chapter on methodological approaches.

This section draws on Ott's work including his methodology classification structure. It outlines a number of outstanding issues with respect to the operationalization of organizational values and reviews thirty-three measures. Similar to the review of personal values measures, the advantages and disadvantages of each methodology are discussed.

3.2.1 Measurement Issues - Organizational Values

A number of issues affect the measurement of organizational values including the role of values within the conceptualization of organizational culture and the degree to which organizations have homogeneous cultures (e.g., widely-shared value sets).

The Conceptualization of Organizational Culture. Controversy continues with respect to the conceptualization of organizational culture. Ott (1989: 100) states:

> Because there is no consensus within the organizational culture perspective about what organizational culture is, what constitutes it, and what the organizational culture perspective can reasonably expect to accomplish, it is impossible to have agreement on its research methodologies.

Clearly to proceed in this area, a researcher must put some "stakes" in the conceptual ground. In this regard and for the purposes of this research the following propositions have been adopted:

Organizational culture includes the concept of shared values. The literature reveals that values, beliefs and expectations shared by members of an organization are central to the definition of organizational culture across a number of theoretical formulations (e.g., Pettigrew, 1979; Pascale & Athos, 1981; Schein, 1985).

Organizational culture influences patterns of organizational behavior. Martin and Siehl (1983: 52) state: "Organizational culture is a powerful lever for guiding organizational behavior. It functions as organizational control mechanisms, informally approving or prohibiting some patterns of behavior." Pfeffer (1981) proposes that organizational culture influences both perceptual and emotional processes that are beyond the reach of standard control systems.

Organizational culture is a function of organizational history, learning and power. The primary determinants of an organization's culture are: beliefs and assumptions brought to the organization by its founding members, current beliefs and assumptions of its dominant coalition, and major episodes of organizational learning resultant from past organizational successes and failures (Sathe, 1983; Schein, 1983, 1985).

Organizational culture comprises a hierarchy of situational antecedents. Schein (1984, 1985) conceptualizes a three level typology of organizational culture which includes: artifacts (the observable level), values (not directly observable but manifest in variety of ways), and assumptions (basic principles which are often taken for granted and invisible).

The utility of Schein's typology has been acknowledged in the literature (cf. Siehl & Martin, 1984; Sathe, 1985). It is theoretically grounded in the work of cultural anthropologist Roger Keesing (1974). Keesing distinguishes between two schools of cultural anthropology - adaptationist and ideationalist. The adaptationist concept of culture is based on that which is directly observable. The ideationalist concept of culture is based on that which is shared in community members' minds. Building from this distinction Schein's hierarchy of abstraction levels emerges:

Level 1 - Artifacts and Creations. Artifacts and creations are the visible, tangible and/or audible results of the organization's culture. For example, typical artifacts and creations in an organization might include: celebrations and ceremonies, dress codes, office jargon, office layouts, reward systems, rites and rituals, organizational structure and organizational symbols. Sathe (1985: 10) cautions that artifacts are relatively "easy to see but hard to interpret without an understanding of the other [two] levels."

Level 2 - Beliefs, Values, and Norms. Schein (1985: 15) discusses this level in terms of "what 'ought' to be", as distinct from "what is." Sathe (1985: 10) describes this level in terms of "how people communicate, explain, rationalize, and justify what they say and do as a community. . ."

For the purposes of this review of operational procedures, Schein's typology has been added to based on the work of Katz and Kahn (1966). The concept of *norms* has been inserted into his conceptual framework. Norms make appropriate behaviors explicit and reflect underlying values which Katz and Kahn (1966: 51) define as: "elaborate and generalized justification both for appropriate behavior and for the activities and functions of the system."

Critical to this research is the distinction between espoused values and operating values. Ott (1989: 60) states:

> Level 2 elements cannot be trusted to provide accurate information about *true* organizational culture (Level 3) because of prevalent incongruences between 'espoused values' and 'values in use' in organizations (Argyris & Schon, 1978). Espoused values often serve important symbolic functions and may remain in an organization for extended periods of time even though they are incongruent with values-in-use. Investigations of Level 2 elements of organizational culture often yield espoused values - what people will say - rather than values-in-use, which can be used to predict what people will do.

The focus of this research is on operating values (values-in-use) as a manifestation of true (level 3) underlying organizational culture.

Level 3 - Basic Underlying Assumptions. Level 3 is the deepest and most abstract level of organizational culture. It represents assumptions that have been ingrained over time and which are now preconscious, invisible, and taken for granted. Level 3 represents the true cultural core of the organization. Operative assumptions at this level include: the organization's enacted environment (e.g., Weick, 1977); the nature of reality, time, and space; and the assumed nature of humans, human activity, and human relationships (e.g., Theory X / Theory Y, McGregor, 1960). These powerful and often unquestioned assumptions guide organizational members on how to perceive, think and feel about things.

An organization's culture represents its enacted reality - "the way things are done around here." Ott suggests (1989: 69) that: "*Truth* is created rather than discovered, so there is no single true definition or concept of organizational culture." While recognizing the social constructionalist nature of Ott's statement, it is concluded that Schein's typology significantly advances the field in terms of organizing the concept of culture and that operating values ("values-in-use") represent a meaningful proxy for operationalizing the true underlying culture of an organization.

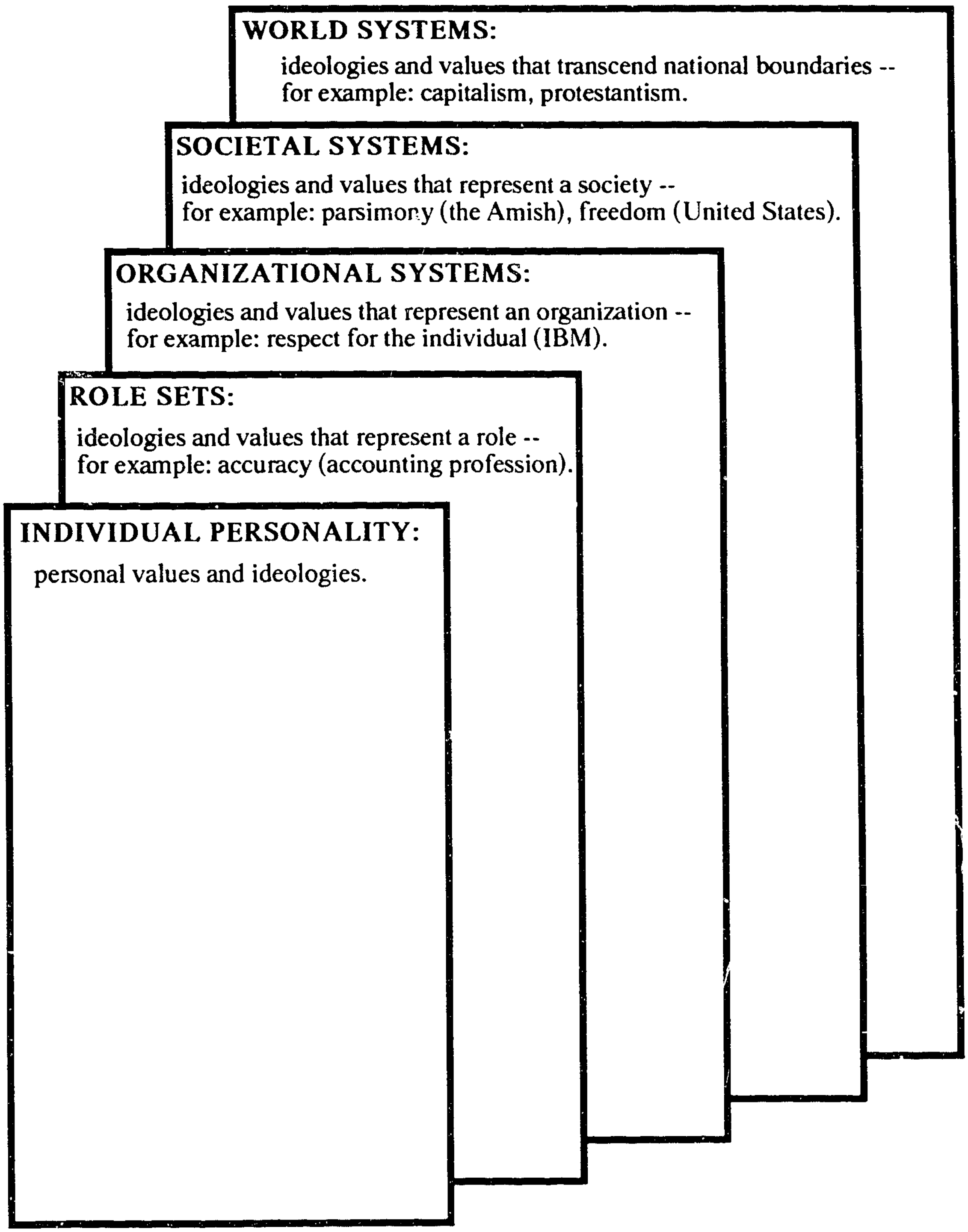
Organizational Culture as a Homogeneous Element. It is important to recognize some caveats with respect to the concept of organizational culture as a homogeneous element.

Clearly, organizational culture as a monolithic descriptive is an oversimplification, albeit a very practical one. Numerous researchers have recognized the existence of sub-cultures within organizational settings (Louis, 1985; Martin & Siehl, 1983; Schein, 1985; Wilkins, 1984). Siehl and Martin (1984: 53) suggest a typology of sub-cultures: "enhancing" (parallels the values of the dominant coalition), "orthogonal" (accepts pivotal values of the dominant coalition but upholds some unique values - e.g., professional values), and "counterculture" (in conflict with the values of the dominant coalition).

Furthermore, organizational culture does not operate in isolation of external (e.g., professional, societal) cultural influences. In fact, organizational culture is embedded within a hierarchy of cultures. Merton (1957) identifies the influence of role sets. Parsons (1951) suggests three systemic levels - organizational, societal, and cultural. Brown (1976) proposes that value influences exist in a hierarchy - employee, managerial, organizational, and societal.

Figure 4 presents the concept of organizational culture embedded within a hierarchy of cultural influences. The development of this hierarchy follows Beyer's (1981) literature review of ideologies, values, and decision-making in organizations, in particular, Haberstroh and Gerwin's (1972) model of strategic decisions and behavior within the context of culture, society, organization, and role.

FIGURE 4
Hierarchy of Cultural Influences



It should also be recognized that cultural influences vary in terms of strength and intensity. Mischel (1977) makes this point in his conceptualization of "strong" versus "weak" situations.

Saffold (1988) discusses a number of measures of organizational culture strength. One construct is "cultural dispersion" - the degree to which cultural characteristics are dispersed throughout the organization. Louis (1985) has operationalized this construct in terms of three types of cultural penetration: sociological penetration (the degree to which cultural manifestations are shared across different groups or subcultures); psychological penetration (the degree to which values and assumptions have been internalized by organizational members); and historical penetration (the stability of the cultural paradigm over time). Saffold (1988) adds a fourth dimension to cultural penetration calling it "artifactual penetration" (the degree to which the intangible elements of the cultural paradigm have become embodied in visible cultural artifacts).

A second index of cultural strength is "cultural potency" - the degree to which the organizational culture influences behavior. Saffold describes four facets of cultural potency - elemental coherence (consistency within and between the three levels of culture); symbolic potency (the existence of powerful symbols); strategic fit (the degree to which the culture facilitates survival in the organization's environment); and alloplasticity (the degree to which the existing culture is capable of incorporating new elements without undue trauma).

The research design (Chapter 6) employed in this study takes into consideration these methodological issues. Organizational values are operationalized as operative (values-in-use) elements within the construct of organizational culture. In addition, the design allows for the possibility of sub-cultural variation (e.g., by function and level in the organization) and external cultural influences (e.g., professional associations). It also recognizes that situational (cultural) influences vary in terms of their strength and intensity within an organization.

3.2.2 A Review of Measurement Techniques - Organizational Values

This section reviews thirty-three measures of organizational values. The classification structure for these methodologies (Table 3) is based on three levels of abstraction - artifacts, norms and values, and basic assumptions, as discussed.

TABLE 3

Classification of Organizational Values Measures

	Quantitative:	*Qualitative:*
Level 1: Artifacts		Technophysical: Steele (1973) Historiographic: Clark (1970, 1972) Pettigrew (1979) Language: Pondy (1978, 1983) Boland & Hoffman (1983) Evered (1983) Louis (1981) Stories and Sagas: Clark (1970, 1972) Martin (1982) Martin & Powers (1983) Wilkins (1983) Taboos: Mitroff & Kilmann (1985) Rites and Rituals: Smircich (1983b) Trice & Beyer (1985)
Level 2: Norms	Paper and Pencil: Alexander (1978) Kilmann & Saxton (1983) Cooke & Lafferty (1983, 1986)	

TABLE 3 (Cont'd.)

Classification of Organizational Values Measures

	Quantitative:	*Qualitative:*
Level 2: Values	Forced Choice Tests: Harrison (1975) Handy (1978) Reynolds (1986) Q-Sort: Chatman (1988) Rating Scales: Graham (1976) Denison (1984) Tucker & McCoy (1989) Yeung et al. (1989)	
Level 3: Basic Assumptions		In-Depth Interviews: Evered & Louis (1981) Schein (1985) Participant Observation: Identity Concealed: Festinger et al. (1956) Goffman (1961) Quasi-Ethnographic: Whyte (1943) Clark (1970) Pettigrew (1979) Van Maanen (1982)

It is interesting to note from Table 3 that measures of artifacts (Level 1) and basic assumptions (Level 3) are all qualitative in nature whereas measures of values and norms are quantitative. Considerable debate exists in the literature as to the relative merits of each approach. Viewpoints characteristic of each side of this debate surface in the following review of methodological procedures.

Inferring Organizational Values From Organizational Artifacts

Ott (1989) suggests that Steele's (1973: 10) list of "technophysical surroundings," (e.g., building exterior, internal office layout, quality of lighting, etc.) might be a good indicator of an organization's culture. However, he cautions that such indications are insufficient to stand alone and must be followed up with more substantive techniques (e.g., interviewing).

Other researchers have used historiographic approaches (see Goodman & Kruger, 1988 for a detailed description). Clark (1970, 1972) and Pettigrew (1979) went through the historical records of organizations (e.g., minutes of meetings, transcripts of speeches, newspaper stories) in order to formulate their impressions of organizational values and culture. Ott suggests researchers need to be particularly cautious in their interpretation of official organizational publications - annual reports, organizational brochures, etc., as these documents primarily reflect public relations concerns.

A number of researchers (Boland & Hoffman, 1983; Evered, 1983; Louis, 1981; Pondy, 1978, 1983) propose the language of an organization is the key to its culture. They suggest that by simply listening to the language, jargon, humor and metaphors of an organization researchers will have insights into its organizational culture and shared values. Pondy (1978) recommends investigators be alert for phrases which are totally foreign to their normal usage and standard words with unusual meanings. Procedures in addition to unobtrusive listening include: interviewing, tape recording discussions, and content analysis of meeting notes (Ott, 1989).

Ideological manifestations (myths, stories, sagas and legends) have also been used to operationalize organizational values (e.g., Martin, 1982; Martin & Powers, 1983; Wilkins, 1983). Ott (1989) recommends saga analysis (e.g., Clark, 1970, 1972) as a particularly powerful approach. Saga analysis focuses on how an organization survived a serious crisis. Ott (p. 113) states: "Thus, sagas can be used not only to describe culture, but also to predict future patterns of organizational behavior."

Taking a different perspective, Mitroff and Kilmann (1985) argue it is not what people talk about that is important, rather it is what people do not talk about. They recommend (p. 184) the investigation of "taboos" as the key to understanding organizational culture - "taboo is so powerful because it lies at the very heart of a culture's basic sense of meaning and order."

Patterns of behavior are also considered tangible manifestations of organizational culture and values. For example, Smircich (1983b) and Trice and Beyer (1985) studied organizational rites and rituals. In fact, Trice and Beyer have developed a typology of modern organizational rites. They propose that rites are not only important manifestations of organizational culture, but their management is critical to the implementation of organizational change.

In summary, the measurement of visible artifacts and human creations (e.g., office layouts, meeting minutes, legends, rituals, behavior patterns) has proven to be an attractive and popular methodology. These indicators are readily apparent and can often be measured in an economical and unobtrusive manner. In addition, researchers do not run the risk of interfering with the phenomenon under study -- as can happen with some of the more in-depth measurement techniques to be discussed.

On the positive side, artifactual indicators offer economy and simplicity. On the negative side, one must question the interpretability of these data. For example, what exactly does an open office layout mean in terms of organizational values? Where do superficial corporate impression management tactics stop and real operating values start? It is suggested that heavy reliance on these indicators without subsequent confirmation from more in-depth procedures could result in spurious attributions.

Measures of Organizational Norms

At a more abstract level, behavioral norms have been used to operationalize organizational culture and values. Despite the fact the many researchers use the terms norms and values interchangeably, they are distinct constructs. Katz and Kahn (1978: 43) distinguish between norms (general behavioral expectations) and values (ideological justifications). Similarly, Sathe (1983: 7) suggests important differences between norms and values:

> Although both have an ought in them, norms are more tactical and procedural than are values. Norms are standards of expected behavior, speech and 'presentation of self' - that is , being on time, disagreeing politely, dressing conservatively. Values on the other hand, represent preferences for more ultimate end-states . . .

Chatman (1988) suggests for a value to become a norm in an organization it must: have an explicit formulation, refer to identifiable behaviors and be systematically enforced.

There is a wide variety of paper and pencil instruments designed to measure norms (cf. Allen & Kraft, 1982). Three prominent measures will be discussed as part of this review: Alexander's (1978) Organizational Norms Opinionnaire, Kilmann and Saxton's (1983) Culture-Gap Survey, and Cooke and Lafferty's (1983, 1986) Organizational Culture Inventory.

Alexander's Organizational Norms Opinionnaire consists of forty-two items representing ten scales. Ott (1989) assessed Alexander's instrument against alternative cultural measures (e.g., ethnomethodology). He concludes that it is an excellent instrument for identifying norms, but that it is not useful for identifying basic cultural assumptions. Ott found only two of the ten scales provided accurate clues about the underlying culture of the organization he was studying.

In fact, Ott found some of the other scales to be quite misleading. For example, the language and actions of the organization indicated that clients were held in very low esteem. However, Alexander's Customer/Client Relations scale indicated that clients were held in high esteem. Ott concludes (p. 117): "In summary, Alexander's Organizational Norms Opinionnaire was at best minimally useful and at worst misleading for identifying basic underlying cultural assumptions . . . "

Kilmann (1985) discusses the Kilmann-Saxton Culture-Gap Survey which is designed to detect gaps between "what the current culture is" and "what it should be." This instrument consists of 28 norm pairs derived from the researchers' clinical experience. Differences between actual norms and desired norms indicate culture gaps within four areas: task support (norms for sharing information), task innovation (norms for being creative), social relationships (norms for socializing with one's work group), and personal freedom (norms for self-expression).

Kilmann reports (p. 364): "Using the Kilmann-Saxton Culture-Gap Survey in numerous profit and nonprofit organizations has revealed distinct patterns of culture-gaps." There is, however, little evidence of consensual validity for this instrument outside its immediate circle of developers.

The Organizational Culture Inventory (OCI) (Cooke & Lafferty, 1983, 1986) measures the profiles of organizations and their subunits in terms of behavioral norms and expectations (Cooke & Rousseau, 1988). These researchers note that culture has traditionally been operationalized using qualitative procedures. Notwithstanding this tradition, they suggest (p. 245) quantitative approaches have important advantages for both cross-sectional organizational research and data-based cultural change programs.

The OCI relies on a cognitive perspective of culture. It is theoretically anchored on ways in which organizational members are expected to think and behave in relation to tasks and peers. Twelve thinking styles have been identified: humanistic/helpful, affiliative, approval, conventional, dependent, avoidance, oppositional, power, competitive, competence/perfectionistic, achievement, and actualizing. There is also a distinction between thinking styles directed toward the fulfilment of higher-order "satisfaction" needs and lower order "security" needs (Cooke & Rousseau, 1988: 252).

The OCI is a paper and pencil instrument containing 120 items (ten for each of the twelve scales). It has been applied extensively to over 20,000 people in over one hundred firms, agencies and associations. Based on a subgroup sample of 661 respondents, Cooke and Rousseau (1988) report acceptable (all > .60) Cronbach's alpha reliability coefficients on all 12 scales. Principal components factor analysis of the data indicates three factors - people/security cultures (relationships), satisfaction cultures (results), and task/security cultures (power and competition). The researchers conclude (p. 267):

> Results of the present study suggest that the behavioral norms and expectations are amenable to quantitative assessment, which can supplement the qualitative study of more semiotic facets of organizational culture.

The validity of organizational norms as manifestations of organizational culture remains controversial. On one hand, Ott (1989: 114) cautions: "It is tempting to use questionnaires to identify norms and then hope those norms reflect basic underlying assumptions." He concludes that many of these instruments are weak because: 1) respondents are not provided with the full domain of norms, 2) the relative strength of competing norms is often not addressed, 3) scales never seem to form a coherent whole in the organization being studied, and 4) the relationship between norms and deeper levels of organizational culture is complex.

On the other hand, Cooke and Rousseau (1988) recommend behavioral norms as valid indicators of organizational culture and suggest (p. 268) that quantitative assessments of culture (e.g., OCI) offer distinct advantages over qualitative assessments including facilitating: 1) the aggregation of responses across organizational levels and functions, 2) the provision of immediate feedback to respondents, and 3) the investigation of cross-cultural differences.

In summary, the validity of measuring norms of behavior as indicative of organizational culture is a complex issue; one which is embedded in the broader debate as to the most appropriate level (artifacts, norms, values, basic assumptions) to operationalize organizational culture. Rousseau (1990) covers this debate in considerable detail. This section concludes, similar to Rousseau (1990), that measures of organizational norms are useful and valid. The OCI (Cooke and Lafferty, 1983, 1986), in particular, is prominent in the literature and has achieved wide acceptance among scholars requiring paper and pencil instrumentation to operationalize organizational culture. Its design which incorporates a theoretical base of twelve cognitive styles and a large item pool overcomes some of Ott's more general criticisms with respect to this type of instrumentation.

Nevertheless, it must be recognized that measures which tap the readily accessible (e.g., artifacts and behaviors) end of culture spectrum run the risk of misinterpreting the base cultural assumptions of the organization. Rousseau (1990), a proponent of the OCI, recognizes this risk and suggests the application of multiple measures aimed at different levels across the cultural spectrum.

Measures of Organizational Values

Relative to artifacts and norms, organizational values and beliefs are less tangible. This level of analysis is conceptually closer to Schein's notion of basic underlying assumptions or *true* culture. Ott (1989: 117) cautions that the practice of making values inferences from observable behavior in an organization is a "risky endeavor."

Paper and pencil surveys and questionnaires are a popular form of instrumentation at this level of analysis. Harrison (1975), for example, has developed a forced-choice instrument comprising fifteen questions. His instrument enables employees to identify where their organizations stand on important ideological dimensions (e.g., power, role, task, person), and understand ideological differences which may be evident.

Ott (1989) tested Harrison's instrument in a client organization. He reports respondents found it caused personal discomfort. Harrison's instrument required them think about things (e.g., ideological differences) that they did not like to think about. Ott concludes (p. 119) that Harrison's instrument has utility in that it provides accurate clues about organizational culture and forces employees to reflect on their own cultural assumptions. However, Ott suggests certain disadvantages including the limited range of ideological positions and the fact that applications of the instrument influenced subsequent data collection.

Building from Harrison's work, Handy (1978) used Greek mythology to develop a classification structure of organizational cultures. He adapted Harrison's questionnaire into a measure of four cultures: "club" cultures (Zeus - e.g., small entrepreneurial entities), "role" cultures (Apollo - e.g., bureaucratic entities), "task" cultures (Athena - e.g., consulting / high technology), and "existential" cultures (Dionysus - e.g., professional groups - doctors, scientists).

Based on a review of the literature, Reynolds (1986) developed a forced-choice instrument to operationalize fourteen aspects of organizational culture: internal-external, task-social, safety-risk, conformity-individuality, individual-group rewards, individual-collective decision-making, centralized-decentralized decision-making, ad hockery-planning, stability-innovation, cooperation-competition, simple-complex, informal-formal, high-low loyalty, and ignorance-knowledge of expectations.

Reynolds collected data across industries, organizational positions and employees in "excellent" and "non-excellent" companies. He reports statistically significant cultural differences in twelve out of fourteen dimensions across industry groups, in eleven out of fourteen dimensions across organizational positions and in four out of fourteen dimensions between excellent and non-excellent companies. He concludes (p. 344): "Relative success in a given industry may be associated with a distinctive organizational culture, but may be quite different from the culture found in successful organizations in other industries."

Chatman (1988) applied the Organizational Culture Profile (OCP), a Q-sort procedure (discussed earlier), in her study of professional accounting organizations. This instrument is one of the few specifically designed to measure values idiographically (single-case) and nomothetically (organizational culture). Chatman operationalized the culture of eight large public accounting firms and reports very little cultural variation in five out of the eight firms. She points out this result should not be surprising given the regulated nature of the industry.

In addition to forced choice and Q-sort procedures, a variety of Likert-type measures have been applied to operationalize values at the organizational level of analysis: Graham (1976) developed a 120-item instrument, the Trait Ascription Questionnaire (TAQ), to describe individuals, groups, and larger social entities such as organizations in commensurate, mutually relevant terms. Instrument scores provide data on six dimensions - ethical, openness to change, disposition, potency, orderliness, and utility. Graham reports (p. 620): "Internal consistency and test-retest reliabilities of the dimensions were found to be reasonably high both for self descriptions and organization descriptions."

Denison (1984) created a 125-item Likert-type questionnaire which includes scales on: organizational climate, work design, leadership, group functioning and respondent perceptions about the way the organization is managed. Denison notes (p. 9) that: "The survey design presumes that certain social processes and relationships are common to all organizations and have a consistent correlation with performance and effectiveness." Denison's results, based on an extensive survey of 43,747 respondents in 34 large organizations, indicate that companies with participative cultures reap higher returns on investment relative to firms with less participative cultures.

Wiener (1988) conceptualized a two by two classification structure of organizational values - entrepreneurial, chauvinistic, strategic and exclusive, based on value focus (functional versus elitist) and value source (charismatic leadership versus organizational traditions). His classification scheme, however, remains to be empirically substantiated.

Based on a two year qualitative study, Tucker and McCoy (1989) identified thirteen dimensions of organizational culture: orientation to customers, orientation to employees, orientation to stakeholders, impact of mission, managerial depth, decision autonomy, openness, people orientation, incentive, cooperation, congruence, behavior under pressure, and theory s / theory t (emphasis on selecting employees versus training employees). These dimensions were operationalized using a multi-item survey. In addition to measuring perceptions of actual culture, they also measured perceptions of desired culture.

To validate their instrument, Tucker and McCoy conducted ten empirical studies. Their psychometric results were impressive. Split-half reliability coefficients were greater than .90 across all studies. Test-retest reliabilities carried out in two studies were .84 and .73. Participating managers rated ten out of thirteen scales above average to superior in realism, salience, significance and usefulness. In addition, instrument scales correlated significantly with a variety of standard individual and organizational performance constructs (e.g., job satisfaction, organizational commitment). Given the strength of their results, these two researchers conclude quantitative measures of organizational culture are valid and compatible with more in-depth ethnographic procedures.

Yeung, Brockbank and Ulrich (1989) conducted an empirical assessment of organizational culture using twelve questions based on Quinn and McGrath's (1985) competing values framework - group culture, developmental culture, hierarchical culture and rational goal culture. They found that organizations are seldom characterized by one pure cultural classification.

In summary, these measures which rely on the quantitative assessment of culture using paper and pencil instrumentation offer an important operational dimension. The advantages of these measures include: ease of cross-sectional assessments and comparisons, ease of replication in different units and by other researchers, and a common articulated frame of reference for interpreting the data (Cooke & Rousseau, 1987).

Notwithstanding the polarized debate between qualitative and quantitative methods and suggestions by some researchers (e.g., Daft, 1980; Wilkins & Dyer, 1988) that quantitative approaches to organizational culture are relatively unhelpful, the position adopted in this research is that both methods are useful and complement each other. As Rousseau (1990) points out quantitative assessment facilitates comparisons and testing relationships between culture and performance variables, while qualitative assessment enables researchers to explore the meanings behind the patterns.

The next section reviews qualitative techniques aimed at operationalizing the basic cultural assumptions in the organization.

Measures of Basic Underlying Assumptions

A number of researchers (e.g., Evered & Louis, 1981; Schein, 1985) have argued that qualitative methodologies such as in-depth interviews and, preferably, long-term ethnographic studies are the only way to uncover the true operative values in an organization. While outsiders may be able to identify cultural indicators, these researchers suggest they will lack the necessary background knowledge to understand the data.

Ott (1989: 120) states: "Clearly, deciphering an organization's Level 3 basic underlying assumptions, richly, thoroughly, and accurately is a substantial undertaking." He suggests successful methodologies at this level of analysis require: 1) lengthy involvement with the organization, 2) the presence of an outside perspective, 3) almost unrestricted access to people and records, and 4) the use of multiple data-collection strategies.

There are currently three prominent methodological approaches to operationalizing the basic assumptions of an organization: participant observation with the researcher's identity concealed, participant observation with the researcher in the role of clinician and quasi-ethnographic techniques.

The method of participant observation with researcher identity remaining concealed was popular in early organizational culture studies (e.g., Festinger, Riecken, & Schachter, 1956; Goffman, 1961). Goffman, for example, worked as a custodian in a mental asylum for one year under a concealed identity. This approach has two primary drawbacks: the ethics of such deception are questionable and the likelihood that a researcher could maintain his or her objectivity over a long period is also questionable.

The second method of participant observation with the researcher in the role of clinician is advocated by Schein (1985: 22) who states:

> I believe that this clinical perspective provides a useful counter-point to the pure ethnographic perspective, because the clinician learns things that are different from what an ethnographer learns. Clients are motivated to reveal certain things when they are paying for help that may not come out if they are only 'willing' to be studied.

Schein provides a ten step iterative interviewing procedure and suggests the clinician-outsider work synergistically with perceptive insiders in order to decipher basic cultural assumptions. Ott (1989) discusses Schein's interview model as "eclectic" in that it incorporates virtually all current research perspectives - grounded theory, logical positivism, and systems and contingency theory. The potential drawbacks of Schein's approach are that it is very time consuming and the ability to sample a wide respondent range is limited.

Ethnographic methods have also been used to operationalize the basic assumptions of an organization. This method's underlying principles (Van Maanen, 1982: 16) are: analytic induction (generalizations built from data), proximity (events witnessed first-hand), ordinary behavior (unobtrusive focus on routine, uninterrupted activities), and descriptive focus (descriptive versus explanatory reporting). In addition, Wolcott (1975) recommends ethnographic studies span at least one full year.

Ott (1989) suggests conforming with all of these principles would be a very difficult chore and points out that even the classical ethnographic studies (e.g., Whyte, 1943; Clark, 1970; Pettigrew, 1979) have violated at least one of Van Maanen's principles.

At a superficial level, one might perceive little distinction between level 1 methods - the observation of artifacts, and level 3 methods - participant observation/ethnography. In actuality, level 3 methods are much more demanding and sophisticated in terms of: time requirements, iterative procedures (probe then confirm), the convergence of multi-methods, and maintenance of an idiographic orientation.

Sanday (1983) classifies ethnographic methods under three headings: *holistic* which includes configurationalism (the interpretation of the cultural whole) and functionalism (relations between functions and structures), *semiotic* which includes thick description (single cases) and ethnoscience (systematic rules across cases), and *behavioristic* which focuses on uncovering covarying patterns in behavioral systems.

Following from his comprehensive review of the organizational culture literature, Ott (1989: 125) concludes that the study of organizational culture requires the use of multiple research methodologies. He also suggests that qualitative methods in general, and ethnographic strategies in particular, are the most useful of these methods.

Tucker and McCoy (1989) disagree with Ott's emphasis on ethnographic strategies. To properly advance one methodology (e.g., ethnography) over another (e.g., questionnaire survey) would require in their view (p. 5) an empirical study of "rather large scope." They point out there is no evidence of such a study. Contrary to Ott, Tucker and McCoy (1989: 5) conclude: "We have generally found organizational culture relatively easy to learn and, more importantly, we have generally found a high degree of correspondence among the various methods of learning it."

Chatman (1988) raises additional limitations with respect to qualitative procedures. From her review of Siehl and Murray's (1987) study she suggests: 1) to measure the strength of organizational culture, responses need to be systematically compared across respondents, 2) to study organizational change, responses need to be systematically compared across time, and 3) to study relationships between culture and performance, organizations need to be systematically compared within industry groups. While qualitative methods certainly do provide "thick" description, it must be recognized they are time-consuming and may preclude systematic comparisons across respondents, time and organizations.

3.2.3 Measures of Organizational Values - Conclusions

In this review, the characteristic operational uncertainty associated with an emerging paradigm is clearly evident. Controversy remains with respect to level (artifacts, norms, values and basic assumptions) and approach (qualitative versus quantitative). More empirical evidence will be necessary before firm operational prescriptions can be made; however, on the basis of this review it is concluded that:

1. Level 1 indicators (artifacts and overt behaviors) have clear advantages in terms of accessibility. For example, one only has to walk into most financial institutions (e.g., banks, trust companies) to observe their preference for conservatism manifested by the dark blue and grey employee attire.

   The critical issue with respect to these indicators is the degree to which valid values inferences can be made. Are the most salient aspects of a culture also the most meaningful? Some researchers suggest not.

   Morgan (1986: 140) recounts a situation early this century in which noted anthropologist Franz Boas entertained a Kwakiutl Indian from the Pacific Northwest in New York City. The native reserved most of his intellectual curiosity for the brass balls on the hotel banisters and the bearded ladies on exhibit in Times Square.

Morgan suggests the native's attention was caught by the bizarre rather than the fundamental aspects of New York's culture. Similarly, Wilkins and Patterson (1985: 271) suggest: "culture is most powerful when it is least obvious."

In conclusion, interpretability appears to be the major drawback of level 1 measures. In light of this conclusion, it is recommended that these measures not be applied as stand-alone operationalizations. Rather, they should be used to alert researchers to areas requiring more in-depth probing and confirm more sophisticated level 2 and 3 procedures.

2. Measures of norms (behavioral expectations) fall between tangible artifacts and values in the conceptual hierarchy adopted for this review. Ott (1989) questions the degree to which norms are representative of deeper levels of culture. In contrast, Cooke and Rousseau (1988) use norms to demonstrate cultural differences across organizations. Their OCI instrument has been applied extensively with good psychometric results. It is suggested that more research is necessary to clarify epistemological relationships between norms and deeper (more abstract) elements of organization culture including operating values.

3. Level 2 measures of organizational values consist primarily of paper and pencil tests. Sathe (1985) suggests Schein's definition of level 2 values should be limited to *espoused* values. Level 2 measures reflect the logical-positivist paradigm. The characteristics of standardization and quantitative measurement facilitate cross-cultural assessment. This benefit must be carefully weighed against the characteristic benefits of "thick description" using level 3 measures.

4. Level 3 measures rely on qualitative procedures. Some researchers believe these procedures to be the only accurate means of operationalizing true organizational beliefs and values. Sapienza (1985: 69) states: "Managers cannot be asked what they believe but must be observed believing." She also quotes Malinowski (1953: 20) who states: "[There] is a series of phenomena of great importance which cannot

possibly be recorded by questioning or computing documents. Let us call them the imponderabilia of actual life."

Based on this review of the literature, it is concluded that qualitative methods (e.g., participant observation / ethnographic studies) are indeed the best methods for operationalizing organizational values. However, there is sufficient evidence to indicate that they are not the only methods. Researchers must be aware that the proper implementation of these procedures is challenging and time-consuming. Furthermore, it should be recognized that qualitative methods present significant difficulties in studies requiring systematic comparisons.

In summary, the focus of the research question and the availability of time and money will ultimately decide the most appropriate methodology. It is proposed that the best validity may not come from any single methodology, rather, "triangulation" is the key. As Duncan (1989: 229) concludes: "The use of obtrusive observation, self-administered questionnaires, and personal interviews made it possible to construct a holistic picture of the organizational culture that was useful to management."

3.3 VALUE CONGRUENCE MEASURES

Value congruence measures are designed to operationalize the "fit" between individual employees' values and those salient within the organizational culture. As discussed in Chapter 1, this construct has significant meaning for organizational science. Traditional human resource practices have tended to emphasize job fit and compensation fit. More recently, the importance of "values" fit (individual to organizational) is being recognized in the literature (e.g., Baker, 1985).

Sathe (1985) has developed a four level typology of individual-organizational fit: The "good soldier" shares beliefs similar to those of the organizational culture and behaves in a manner consistent with organizational norms. The "adapter" does not share organizational beliefs but is careful to conform with behavioral norms. The "maverick" shares the beliefs of the organization but chooses not to conform with its behavioral requirements. And, the "rebel" neither shares the organization's beliefs nor manifests its behavioral expectations.

At first glance, one might view the rebel as totally dysfunctional. However, such an individual can make positive contributions. For example, a rebel in the role of devil's advocate may become a useful source for innovation or an antidote to "groupthink" (Janis, 1982). The rebel who rises to a position of power may also be instrumental in reshaping an obsolete cultures in the face of changing environmental imperatives.

Schein (1968) postulates that newcomers to organizations have three "fit" options: active rebellion, conformity, or creative individualism. Similar to Sathe's notion of "mavericks," creative individualists agree with pivotal organizational values but do not necessarily follow behavioral expectations. Schein also recognizes socialization as a two-way interaction. Organizations attempt to socialize new recruits, who in turn attempt to change organizations through what he calls the process of "innovation." Schein distinguishes between values which are "pivotal" and those which are peripheral. He recommends that organizations select and socialize new employees to become "creative individualists."

Certainly while too much "fit" may result in narrow self-serving ethnocentrism (cf. Janis & Mann, 1977) and a loss of creativity (cf. Amabile, 1988), there is consensus in the literature that a certain level of value congruence is important to organizational performance (cf. Argyris, 1957; Etzioni, 1975; Keisler, 1978; Schein, 1978). Diener, Larsen, and Emmons (1984: 582) having conducted psychological studies on person-situation congruence conclude: "People tend to be happier when they are in settings that meet their particular needs or are congruent with their predispositions." From an organizational perspective, Chatman (1988) suggests a values mismatch can have significant and costly implications for both employee and employer including the high costs associated with employee turnover.

Very little substantive empirical research has been conducted with respect to construct of individual-organizational value congruence. The works of Chatman (1988), Enz (1986), Feather (1979), Graham (1976), Posner, Kouzes, and Schmidt (1985), and Tom (1971) are exceptions. This section presents general issues with respect to the operationalization of individual-organizational value congruence and reviews the congruence measures applied in each of these empirical studies.

3.3.1 Measurement Issues - Value Congruence

Discussion to this point on the measurement of personal and organizational values is relevant to the operationalization of individual-organizational value congruence. In addition to these previous issues, there are operational aspects which are unique to value congruence including the requirement for commensurate dimensions across levels (individual-organizational) of analysis and an acceptable definition of congruence.

Common, Mutually-Relevant and Commensurate Dimensions. In order to establish "fit" the elements under consideration (in this case the values of employees and those salient within their organizations) must be assessed in commensurate terms.

Graham (1976) notes attempts to characterize organizations have followed one of three approaches: 1) adopting concepts from personality structure (e.g., Pace & Stern, 1958); 2) using managerial descriptions of "climate" and "culture" (e.g., Litwin & Stringer, 1968; Schneider & Bartlett, 1968); and 3) identifying objective features like size and structure (e.g., Porter & Lawler, 1965; Pugh, Hickson, Hinnings, & Turner, 1969). Graham concludes (p. 608):

> If human behavior is to be understood in an organizational context, it would seem useful to identify mutually relevant dimensions of personality and organization. Yet, among existing approaches borrowed from the realm of personality theory there exists little evidence that dimensions of personality

> are commensurate or relevant with respect to dimensions of organizational environment. Similarly, with respect to purely objective approaches to organizational description, the aspects of organization which can be observed directly by an investigator may or may not be phenomenologically important to organizational members.

To date, there is little evidence of a commensurate, mutually-relevant set of value dimensions, Chatman's (1988, 1991) work being the exception. Notwithstanding deficiencies in the prominent values typologies (Allport et al., 1960; England, 1967; Rokeach, 1973) already discussed in the first chapter, Graham's (1976) set of 120 commensurate traits has been criticized (Chatman, 1988) for being too individually-oriented. Whereas Chatman's set of 54 items comprising her Organizational Culture Profile (OCP) shows a bias towards organizational analysis. A major objective of this research, addressed in the following chapter, is the derivation of a set of mutually-relevant (individual-organizational) value dimensions.

The Conceptualization of Congruence. The term "congruence" has been used from a variety of definitional perspectives. Therefore, it is important to distinguish between conceptualizations of congruence. For the purposes of this research, Enz's (1986) definition of congruence is adopted. This definition incorporates value similarity (the same set of items) and value strength (the importance of items). Enz (1986: 48) states:

> Two necessary conditions must be met for value congruity to exist in an organization. First, the same set of values must be shared by different organizational members. Similarity on organizational values, while necessary, is not sufficient. The second condition is that the set of organizational values must be regarded as important or desirable. Thus,

value congruity encompasses both the sharing of values and the importance of values.

The research design (Chapter 6) for this study takes into account the requirement for a set of mutually-relevant, commensurate items and the need to operationalize value strength (importance) as well as value similarity.

3.3.2 A Review of Measurement Techniques - Value Congruence

This section reviews six measures of value congruence classified into two groups as shown in Table 4. The first group comprises studies which have relied on subjects' perception of congruence, (e.g., a Likert-type scale item asking: "How well do your values fit with those of your organization?"). The second group of studies calculate congruence by measuring actual values at both levels (individual and organizational) of analysis.

The distinction between perceptions of congruence (e.g., Posner, Kouzes & Schmidt, 1985) and congruence calculated on the basis of actual value measures (e.g. Feather, 1975) follows from the work of Meglino, Ravlin and Adkins (1989). They suggest (p. 425) that measures of perceived fit are more susceptible to methodological and response artifacts than are measures of fit calculated from actual values measures, particularly if the two actual values measures (e.g., individual and organizational) constituting the calculation of congruence remain independent from each other.

TABLE 4
Classification of Value Congruence Measures

Perceived Congruence:	*Calculated Congruence:**
Posner, Kouzes & Schmidt (1985)	Tom (1971)
Enz (1986)	Graham (1976)
	Feather (1975)
	Chatman (1988)

* - based on a calculation using actual measures of values.

Measures of Perceived Congruence

A review of the literature yielded two studies which utilize employee perceptions of value congruence. The first study by Posner, Kouzes and Schmidt (1985) depended entirely on respondents' perceptions of congruence. The second study, Enz's doctoral dissertation (1986), utilized measures of both perceived congruence and calculations of congruence based on value ranking data. Enz's study is discussed under this heading because her significant findings were based on her measure of perceived congruence.

Posner, Kouzes, and Schmidt's study posed the question (1985: 294): "What difference does it make whether or not an individual's values are compatible or congruent with those of his or her organization?" In order to address this question they sent out over 6000 questionnaires to members of the American Management Association and received back 1498 responses.

Posner, Kouzes and Schmidt operationalized value congruence using their Shared Values Scale which comprised two Likert-type items. The first item asked participants to estimate the extent to which their values were compatible with the values of their organization. The second item asked participants about the extent to which they agreed or disagreed with the statement: "I find that sometimes I must compromise my personal principles to conform to my organization's expectations." Participants were grouped in terms of low, medium, and high value congruence based on their responses to these items. Posner, Kouzes and Schmidt found shared values (value congruence) to be positively related to a number of performance measures including organizational commitment, self confidence, and ethical behavior.

A number of issues can be raised with respect to Posner, Kouzes and Schmidt's operationalization of value congruence. As a self-report measure of perceived congruence it may be quite susceptible to response set bias. Furthermore, the degree of confidence one can place in a two-item scale is open to question. One might even question the degree to which these two items represent a uni-dimensional construct. The first item appears to tap value congruence in general whereas the second item has ethical overtones. Unfortunately, the authors do not supply inter-item reliability scores.

Enz (1986) studied value congruence as a determinant of departmental power. She hypothesized that a department's power would be dependent on the degree to which it shares top management's values. Enz distinguishes between two types of value congruity - perceived and latent. Perceived value congruity refers to the similarity of values that the department consciously recognizes (e.g., espoused values). Latent value congruity refers to the similarity of values of which the department is not explicitly cognizant (e.g., Schein's concept of basic assumptions).

Enz applied four measures of perceived value congruity. One measure comprised twenty-four organizational values statements developed from England (1975), the organizational effectiveness literature, and her own interview experience. Participants were asked to indicate perceptions of similarity between their department's values and those of top management and the president. A seven-point scale ranging from very dissimilar to very similar was used. Her three other perceived congruence measures were based on the relative importance of value items discussed during interviews and a one-page survey sent out to top management.

Enz's second value congruence construct, latent value congruity (unrecognized congruity), was also measured in four different ways. Enz (1986: 63) reports:

> The first two measures involved comparisons of the frequencies of response on all value statements ranked first and second by departments and top management. The second measures restrict frequency comparisons to the value statements felt to be most important to the running of an organization.

In addition to measuring congruence with top management values, Enz measured value congruence within departmental groups using two questions on a seven point scale. Her first question was (p. 49): "In general, how similar do you consider yourself to other individuals in your department in terms of what you value in the work environment?" Her second question was (p. 49): "People in my work group vary widely in their values concerning how a business should be run." Based on the responses she received, Enz concluded employees within departments were congruent with respect to work-related values and departments formed a useful unit of analysis.

Enz found top management perceptions of value congruity were better predictors of departmental power than departmental perceptions. Unfortunately, her construct of latent value congruity was found to be "generally insignificant" (p. 88) in terms of explaining differences in departmental power.

Although Enz's work focused on value congruency within the organizational level of analysis (departmental to senior management) her work has important implications for the measurement of individual-organizational values congruence. In particular, she raises the importance of distinguishing between congruency based on espoused values and congruency based on operating values. The focus in this study will be congruency based on operating values (e.g., "the way things are done around here.").

Calculations of Congruence

The above studies relied on perceptions of congruence. The studies discussed in this section attempt to calculate congruence by operationalizing values at both individual and organizational levels of analysis. It should be noted that the first two studies in this review, Tom (1971) and Graham (1976), are not, in a strict definitional sense, pure measures of "values" congruence. Tom's research design focused primarily on "trait" similarity with the exception of his application of Allport, Vernon and Lindzey's (1960) values instrument. Graham's research design focused entirely on trait similarity. However, the operational parallels to calculating value congruence merit some discussion of these studies.

Tom (1971) designed his study to extend Super's (1953) theory of vocational choice to the decision of organizational choice. His central hypothesis was (p. 578):

> The similarity between an individual's description of himself and his description of the organization which he most prefers would be greater than the similarity between an individual's description of himself and his description of the organization which he least prefers.

One hundred degree candidates from a U.S. university participated in his study which applied Gough and Heilbrun's (1965, 1980) Adjective Check List and Allport, Vernon and Lindzey's (1960) Study of Values. His results show the Adjective Check List can be used to assess organizational images as well as individual personality without serious difficulty. However with respect to the Study of Values, Tom recommends caution (p. 589) suggesting that its items are less relevant to the organizational context.

Tom's research provides support for Super's (1953) Subjective Factor Theory which postulates that one's choice of organization is not based on weighing objective factors, rather it involves highly personal and emotional considerations. Chatman (1988: 11) in her review of Tom's work suggests: "The problem with Tom's work is that the personality items could only be metaphorically applied to organizations since the items were really designed to measure personality."

Graham (1976) developed a 120-item instrument designed to operationalize individual-environment fit. He started with over 20,000 traits based on works by Allport and Odbert (1936), and Norman (1967). Concentrating on root concepts and selecting (using a panel of judges) only descriptives applicable to both individuals and organizations, Graham refined his list down to 120 items. His validation study indicates good inter-item and test-retest reliabilities. He was also able to demonstrate statistically significant mean score differences across organizations known to differ and achieved similar factor loadings for both self and organizational descriptions. Graham suggests (p. 615) these results: "offer tentative support for the commensurability of the TAQ dimensions."

Graham's instrument has received little attention in the literature. Chatman (1988: 11) suggests:

> The problem with Graham's work is that he does not make it clear if his scale characterizes people within firms, or the firm as an entity itself. Unfortunately, neither [in reference to both Tom, 1971 and Graham, 1976] of these research efforts have been elaborated beyond a single empirical study . . .

Feather (1979) reports on what he terms two "value congruence" studies. In one study (Feather, 1975) considered congruence between students' personal values and those they attributed to their school environments. The second study by O'Brien and Dowling (1978) investigates congruence between actual work values and desired work values. It is suggested that O'Brien and Dowling's study should more appropriately be classified under task fit research as their study investigates the relationship between desired and actual job attributes and job satisfaction. It does not directly address the construct of individual-organizational value congruence.

In his 1975 study, Feather asked over 3000 high school students (aged 15-17 years) to rank order their personal values and those salient at their schools. Feather applied Rokeach's (1973) value survey to operationalize values at both levels of analysis. Resultant sets of value rankings were correlated for each child to calculate a value congruence index. Significant correlations were found between both terminal and instrumental value congruence and measures of happiness and satisfaction. Feather discusses his results as follows (1979: 134): "The size of the correlations was quite low, however, suggesting that many other factors, in addition to value fit, influence a child's adjustment at school."

Chatman's (1988) work is the only value congruence study that takes place in the context of modern business. Her study investigates the value congruity of new recruits in eight large U.S. public accounting firms (n=171). Personal value measurements were taken on two occasions: once shortly after the new recruits joined their firms, and then again, 9 to 12 months later. This longitudinal design was instituted in order to measure the impact of each firm's socialization activities.

To operationalize values (both individually and organizationally) Chatman utilized a single instrument, the Organizational Culture Profile (discussed previously). Organizational values were assessed by asking established employees (two years minimum tenure with the company) to complete the OCP. Chatman hypothesized high value congruence would relate positively to performance, promotability, commitment, extra-role behavior, intent to leave, and actual length of tenure.

Notwithstanding Ravlin and Meglino's (1987a) earlier comments with respect to the likelihood of small correlation coefficients, Chatman's results were not as strong as one might have anticipated. Only three of her nine outcome variables showed statistically significant relationships ($p < 0.01$ or 0.05) to person-organization fit (value congruence) at the time of recruit entry into their firms. These outcome variables were: job satisfaction (.34), normative commitment (.28), and turnover intentions (-.60).

With respect to person-organization fit at time two (9-12 months after recruits' entry), four out of the nine outcome variables were statistically significant: performance (.21), job satisfaction (.42), normative commitment (.27), and turnover intentions (-.34).

Chatman's work represents an important step forward in terms of the rigor applied to operationalizing individual-organizational value congruence. The OCP instrument in particular shows promise as a means to assess values congruence between individuals and their organizations. The majority of its 54 items are definitionally consistent with the concept of values described earlier -- preferred modes of conduct or end-states of existence.

It is possible to critique Chatman's work from two perspectives: 1) the applicability of the 54 items comprising the OCP in terms of being a mutually-relevant typology of value dimensions commensurate at both individual and organizational levels of analysis, and 2) her inter-person research design which used one sample (new recruits) to measure personal values and another sample (long-tenure employees) to measure organizational values.

With respect to the applicability of the item set comprising the OCP, it is suggested that the items are biased toward the organizational level of analysis with respect to the criterion of being commensurate to both individuals and organizations. It is assumed that this bias reflects the origin of the item set which emphasized (Chatman, 1988: 88): "relevant culture instruments and descriptors," and "more practitioner oriented approaches to measuring organizational culture."

With respect to her inter-person research design, one independent sample (long-tenure employees) was used to define the organizational culture which became the standard bench mark for all calculations of individual-organizational value congruence. The degree to which this aggregate profile was representative of the organizational context as experienced (perceived) by the individual recruits was not tested.

Chatman's study is based on the assumption of an objective reality, the notion of a single cultural profile defined by the aggregate. She assumes that this aggregate profile is shared (has similar meaning within the minds of all individual employees) across the organization. This study, in contrast, is based on the assumption of subjective reality, the notion that the cultural profile of the organization must be addressed at an individual (not aggregate) level.

This distinction over the nature of reality (objective versus subjective) has been a topic of ongoing debate in the literature. Pervin (1968) specifically addresses this issue. Pervin cites (p. 65) the work of Koffka (1935) who distinguishes between the geographical environment (the objective physical and social environment) and the behavioral environment (the environment as perceived and reacted to by the subject). Koffa concludes that behavior can be more meaningfully understood if it is related to the behavioral (subjective) environment. This view is also shared by Heider (1939, 1944, 1958) whose work on consistency theory forms a major theoretical platform underlying this research.

It is important to note, however, that this study's emphasis on subjective reality does not remove the imperative of evidence indicating a cultural consensus across individual respondents. Consideration of individual perceptions of the organizational culture (as opposed to utilization of an aggregate profile derived from an independent sub-sample) is *in addition to* the prerequisite of cultural convergence (homogeneity). It does not replace the need to empirically establish that a homogeneous culture is operative in the organization.

In summary, Chatman's work is exemplary. She has achieved significant advances (firsts) in a number of ways: first to empirically test the construct of individual-organizational value congruence within the context of a modern business organization, and first to apply considerable rigor in the calculation of individual-organizational value congruence. This study builds on Chatman's work while making two significant departures: 1) an empirically-derived typology of shared value dimensions, and 2) an intra-person research design in keeping with Heider's consistency theory.

3.3.3 Measures of Value Congruence - Conclusions

This review suggests that there exists potential for additional enhancements to the operationalization of value congruence in the organizational context. First, a set of dimensions commensurate with both individual and organization levels of analysis may be beneficial. Second, an empirical test of individual-organizational value congruence conducted in a real organizational setting will improve ecological validity in this area of research. Third, the application of an intra-person research design may increase explained variance which to this point in time has been relatively small.

In terms of the measures of value congruence under review, it is concluded that:

1. Measures of perceived congruence are more susceptible to social desirability biases. It is also likely that they emphasize espoused value similarity to a greater degree relative to calculated congruence indices which are based on the measurement of actual individual and organizational values.

2. Indices of calculated congruence, with the exception of Chatman's (1988) work, do not show a great deal of promise. Tom (1971) and Graham (1976) address the issue of values congruence in an oblique manner using trait descriptions. And, Feather's (1975) study uses Rokeach's typology which may not be relevant to individual-organizational fit in the context of a modern business corporation (McDonald & Gandz, 1992a).

Following from this methodological review, the research design for this study of value congruence utilizes: an empirically derived values taxonomy (discussed next in Chapter 4), an intra-person framework appropriate for testing consistency theory (Chapter 5), and multi-method operationalization of values (Chapter 6).

CHAPTER 4 - EXPLORATORY RESEARCH

Chapter 2 discusses the literature from a conceptual perspective in order to define values and value congruence. Chapter 3 discusses the literature from an operational perspective in order to establish appropriate methodologies and identify potential threats to validity. This chapter presents exploratory work undertaken as the first empirical step in this research. The objectives of this exploratory study are to:

1. Gauge the significance of individual-organizational value congruence in the business community.
2. Derive an empirically-based taxonomy of value items commensurate across levels (individual/organizational) of analysis and relevant in the realm of modern business.
3. Gain insights into the current state of values-based management practices in the business community.
4. Provide the basis for the development of survey instrumentation.

The conduct of this exploratory research involved a semi-structured interview protocol with a sample of senior representatives from across the practitioner community. Interviewing was considered the most appropriate method to meet the above objectives for a number of reasons: It would allow flexibility to probe and expand on themes and concepts as they emerged. It would be comprehensive in keeping with the breadth of these exploratory objectives. In addition the methods review (Chapter 3) indicated that interviewing is particularly effective when the research objective is to enumerate a set of value concepts. This rationale is supported by Kerlinger (1986: 440) who states: "When used with a well-conceived schedule, an interview can obtain a great deal of information, is flexible and adaptable to individual situations, and can often be used when no other method is possible or adequate."

4.1 THE RESEARCH DESIGN

This section discusses the research design for this exploratory study. It first describes the selection of participants and then examines procedures used to collect and analyze the data.

4.1.1 Participants

This study involved forty-five in-depth interviews with senior managers, management consultants, executive recruiters and operating employees. Specific comments representing thirty-two distinct organizational entities spanning a variety of industries were collected in addition to more general comments about shared values in business provided by management consultants and executive recruitment professionals. With two exceptions, all interviews were conducted in Canada, primarily in the cities of Toronto, Winnipeg, and Vancouver. Two interviews were conducted in the United States, one with a Fortune 100 company and one with a major consulting firm specializing in employee selection. Most of the Canadian business entities interviewed had operations in both Canada and the United States. The number of respondents was limited to forty-five when interviewing showed convergence and no further values were being derived from the later interviews. Table 5 on the following page details the convenience sample used in this study.

There were four groups of respondents in the sample. The first group of respondents (n = 28) consisted of managers working in private sector businesses. The majority of these respondents were executive level managers (CEOs and Vice-Presidents responsible for the human resource function). These respondents comprised over 50% of the total sample because it was felt that they were important data sources for the derivation of a taxonomy of business values. They are usually the individuals most directly responsible for the development and communication of the organization's set of required values (Schein, 1985).

TABLE 5

Interview Respondents

Managers:		Types of organizations represented:*
private sector	28	- heavy & light manufacturing
public sector	5	- financial services
(crown corporations)		- high technology
		- aerospace
Executive Recruiters &		- consumer products
Management Consultants:	8	- retailers
		- distributors
		- natural resources
Employees:	4	- public utilities
Total:	45	

* - The value profiles of 32 distinct organizational entities are represented in this sample in addition to general comments about shared values in business provided by management consultants and executive recruiters.

The second group (n = 5) comprised public sector managers working at the executive level. With one exception, all public sector organizations represented were responsible for profitability as part of their performance measurement.

The third group (n = 8) consisted of executive recruiters and management consultants who provide selection and recruiting expertise to their clients. The achievement of high value congruence between selected candidates and organizational cultures is a key element in the service these professionals offer. It was felt that this group would have valuable broad-perspective information with respect to salient values in the business context.

The fourth group (n = 4) consisted of operating employees. With one exception, these employees were working for organizations which had also been represented as part of the management sample. In each of these three cases, the operating employees' comments strongly supported data obtained during the respective managerial interview.

The minority strata in this sample, the interviews in the United States and the employee interviews, were simply to test for comprehensiveness in sampling the item domain. Had there been evidence of unique items emanating from these minority strata, then broader domain sampling would have been warranted. In actual fact, the items generated by these minority strata converged with the general pool of items. Nevertheless, the small size of these samples should give rise to some caution about the comprehensive nature of this value set.

4.1.2 Procedures

Data in this study were obtained using a semi-structured interview protocol. Appendix A displays the protocol which was used to collect data. Each interview required one and one-half to two hours to complete. In most cases it was difficult to have respondents articulate their organization's shared values without considerable probing. There were only three cases out of the thirty-two organizations represented where interview respondents were able to produce detailed documentation with respect to their organization's shared values. Most respondents required time to become reflective. Extensive notes were taken during each interview which were then used to generate a typed interview report (average length: four double-spaced pages) within twenty-four hours of the interview.

In addition to the interviews considerable follow-up work was conducted in both academic and practitioner circles to ascertain face validity for the resultant list of shared value concepts. Subsequent to feedback received during this process further refinements were made.

4.1.3 Analysis

The interviews generated over two hundred pages of qualitative data. These data were content analyzed in order to generate a pool of value items. Considerable care was exercised in selecting and aggregating items into a taxonomy of values. In order for a value to be derived, certain *a priori* criteria had to be met:

1. Selected items had to be consistent with Rokeach's (1973: 5) definition of a value: "A value is an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence."

2. Selected items had to represent salient values relevant to the context of business in general. As a rule of thumb, only values which were mentioned in at least four separate organizations (10% plus of the representative sample) were considered.

3. Value concepts had to be both specific enough to define the unique nature of an individual (idiographic) and universal enough to represent an aggregation of individuals (nomothetic), in this case, a work group or organization (Chatman, 1989). For example, the concept of "openness" had to be meaningful in terms of defining the value profile of an individual employee as well as the value profile of an organization as a whole.

4. Selected items were not aggregated into value concepts on an intuitive basis. A dictionary (Funk and Wagnalls) and thesaurus (Roget's 4th edition) were used extensively. The thesaurus provided objectivity. Each value in the proposed taxonomy reflects a root concept defined in the thesaurus. For example, the value of "moral integrity" is based on root concept of probity (#974, p. 748). Included under root concepts in the thesaurus there are hundreds of associated terms and concepts which were used as standards for aggregation purposes in this study.

In addition to these specific criteria, all classification systems must adhere to certain general conventions (Mayr, 1982; McKelvey, 1982). Chrisman, Hofer, and Boulton (1988: 416) building from Mayr's and McKelvey's earlier work, describe the necessary attributes of a taxonomy, one of the most complete forms of classification:

> The taxa of a classification system at all categorical levels must be (a) mutually exclusive, (b) internally homogeneous, (c) collectively exhaustive, (d) stable, and (e) based on relevant language or names. In addition, the classification system itself must be (a) based on all key characteristics of the phenomena being observed, (b) general purpose rather than special purpose, (c) parsimonious, (d) hierarchical in nature, and (e) timeless.

While the list of values provided in the following section falls short of these exacting standards, it is suggested these procedures represent a valid first step toward a taxonomy of business relevant shared values.

4.2 EXPLORATORY RESEARCH RESULTS

The interviews generated a total of 358 value items. Convergence of items into groups which could be thought of as taxa in terms of the criteria outlined above (Chrisman, Hofer & Boulton, 1988) was readily apparent early on in the interview process. Quite often different respondents used the same words, for example: work ethic, integrity, openness. Using root concepts from the thesaurus the 358 items aggregated into twenty-one of the twenty-four value dimensions described below.

Based on subsequent presentations to groups of managers in three companies, a seminar involving other academics, and additional literature search, three additional value dimensions (autonomy, obedience, and orderliness) were incorporated into the original list of value concepts. Although these three values were not derived as a result of the initial interview process, solid rationale exists for their inclusion. First, these dimensions were frequently mentioned as potential missing items by both colleagues and business practitioners during discussions on the face validity of the pilot version of the proposed taxonomy.

Second, all three of these value concepts figure prominently in earlier values research. With respect to "autonomy," Rokeach (1973) refers to the concept as "freedom" and "independence." England (1967) refers to the concept as "autonomy," and Chatman (1988) in her investigation of person-organization fit refers to the concept as "autonomy" and "not being constrained by rules." Furthermore, as one practitioner pointed out during a discussion of the pilot taxonomy: "in professional organizations (e.g., a law partnership) the concept of autonomy is critical to individual-organizational value congruence."

With respect to "obedience," Rokeach refers to the concept as "obedient," and England refers to the concept as "obedience" and "conformity." Obedience is certainly a central characteristic of organizational life. Perhaps it is this centrality (e.g., Schein's notion of a basic assumption) which prevented the concept of obedience from becoming salient during the interviews on shared values.

With respect to "orderliness," the concept has been indirectly recognized by Rokeach (being clean) and Chatman (being highly organized). Also, during a discussion with a group of fifty MBA students -- almost all of whom had at least two years of full-time work experience -- there was consensus that the concept of orderliness was missing from the pilot taxonomy. They pointed out that the maintenance of an orderly workspace is a key aspect of fit in many organizations.

The decision to include these values, which did not surface in the formal interviewing stage of this study, is a judgement call. However, since the long-term objective is to develop a rigorous and usable taxonomy, exclusion at this exploratory stage may breach the requirement for a "collectively exhaustive" list of values (Mayr, 1982; McKelvey, 1982). Therefore it was decided to include them. Table 6 presents the final list of twenty-four shared value concepts.

TABLE 6

Proposed List of Shared Value Concepts

Value: [a]		Frequency and Ranking of Mention in Interviews: [b] Frequency:		Rank:	Thesaurus Root Concept: [c]
1.	Cooperation	33/45	73%	1	Cooperation (786)
2.	Diligence	33/45	73%	1	Activity (707)
3.	Moral Integrity	29/45	64%	2	Probity (974)
4.	Openness	29/45	64%	2	Probity (974)
5.	Initiative	26/45	58%	3	Beginning (68)
6.	Experimentation	22/45	49%	4	Experiment (489)
7.	Aggressiveness	21/45	47%	5	Activity (707)
8.	Fairness	19/45	42%	6	Justice (976)
9.	Adaptability	17/45	38%	7	Changeableness (141)
10.	Creativity	17/45	38%	7	Imagination (535)
11.	Development	17/45	38%	7	Learning (564)
12.	Courtesy	15/45	33%	8	Courtesy (936)
13.	Cautiousness	13/45	29%	9	Caution (provident care) (895)
14.	Social Equality	13/45	29%	9	Equality (30)
15.	Economy	11/45	24%	10	Economy (851)
16.	Consideration	9/45	20%	11	Carefulness (watchful attention) (533)
17.	Formality	9/45	20%	11	Formality (646)
18.	Humor	9/45	20%	11	Cheerfulness (870)
19.	Forgiveness	6/45	13%	12	Forgiveness (947)
20.	Broad-Mindedness	5/45	11%	13	Broad-Mindedness (526)
21.	Logic	5/45	11%	13	Reasoning (482)
22.	Autonomy	-	-	-	Freedom (762)
23.	Obedience	-	-	-	Obedience (766)
24.	Orderliness	-	-	-	Order (59)

a. The values of autonomy, obedience, and orderliness were not derived from the interview process. These values were subsequently added as a result of comments from colleagues and business practitioners in relation to a draft of the proposed taxonomy.

b. These numbers represent the frequency of mention out of the 45 interviews. Although value items were often repeated during a single interview, they were only counted once per interview for the purpose of this table.

c. The numbers in brackets are reference numbers indicating root concepts in Roget's International Thesaurus, 4th edition.

Detailed notes describing the dictionary definition, root concept, behavioral indicators and rationale for the inclusion of each item in the proposed list of shared value concepts (Table 6) were made. These data became the basis for the development of survey instrumentation as discussed in Chapter 6.

A review of Table 6 indicates that the values of: *Cooperation* (working together), *Diligence* (working hard), *Moral Integrity* (working honestly), *Openness* (sharing information), and *Initiative* (taking responsibility) are particularly salient in the current environment of business. Each of these five values was mentioned at least once by over one-half of the interview respondents. This finding is supported by earlier empirical work (Cornelius et al., 1985) to enumerate relevant value dimensions in the context of business.

The relevance of existing values taxonomies to the operationalization of individual-organizational value congruence as discussed in Chapter 1 was a prime impetus behind this exploratory study. Table 7 presents a comparison of the empirically-derived list in relation to earlier works by Allport et al. (1960), England (1967) and Rokeach (1973).

A review of Table 7 shows that the proposed list of empirically-derived values supports earlier research. Of particular note is the fact that twenty-two out of twenty-four values are similar to concepts presented in Allport et al.'s, England's and Rokeach's research. It is suggested that this overlap provides validation for the proposed value dimensions.

While this study's list is similar to earlier works, more similar than anticipated, it is proposed that progress has been achieved. The twenty-four value dimensions in the proposed list are more specific than the six dimensions of Allport et al., yet not as cumbersome as England's set of sixty-six concepts. Nor does the proposed list contain the contextually inappropriate items (e.g., a world at peace, mature love, inner harmony) characteristic of Rokeach's societally-focused structure. Furthermore it translates a number of existing value concepts (e.g., loving, clean) from earlier works into idioms appropriate for business research.

TABLE 7

Empirically-Derived Shared Values List in Comparison to Earlier Research

Proposed List:	Allport et al., 1960:	England, 1967:	Rokeach, 1973:
adaptability		change / org.stability (R)	
aggressiveness		aggressiveness / ambition / force	ambitious
autonomy		autonomy	freedom / independent
broad-mindedness		liberalism / tolerance	broad-mindedness
cautiousness		caution / security / risk (R)	courageous(R)/exciting life(R)
consideration		employee welfare / social welfare	helpful / loving
cooperation	social	cooperation/compromise/competition (R)	
courtesy		dignity / individuality	polite
creativity		creativity	imaginative
development		ability / skill	intellectual / wisdom
diligence		achievement	accomplishment
economy	economic	organizational efficiency	
experimentation*			
fairness		prejudice (R)	
forgiveness		compassion	forgiving
formality		conservatism	self-controlled
humor			cheerful / happiness
initiative			responsible
logic	theoretical	rational / emotions (R)	logical
moral integrity		honor / trust / loyalty	honest
obedience		obedience / conformity	obedient
openness*			
orderliness			clean
social equality		equality	equality
	Corresponding: 3 out of 6	*Corresponding: 34 out of 66*	*Corresponding: 17 out of 18 instrumental values 6 out of 18 terminal values*

* - unique values with no correspondence to earlier works.

(R) - reverse of the concept.

Supplementary to these results, the forty-five interviews provided a rich commentary on the nature and management of values from a practitioner perspective. These comments are presented in the following section.

4.3 THE MANAGEMENT OF VALUES: PRACTITIONER COMMENTS

In addition to the development of a list of relevant shared values, an objective of this exploratory research was to ascertain the significance of values-based management in the practitioner community.

With only one exception, respondents spoke about managing values in their organizations with interest and enthusiasm. One executive of a multi-business corporation referred to shared values as "the only glue we have." Another executive referred to values as his company's "psychic core." A third used the metaphor of divisional planets revolving around a corporate sun with shared values acting the gravitational force. Clearly, the concept of shared values in organizations has achieved a high level of managerial significance.

Another objective of this exploratory study was to gain insights into strategies and tactics currently applied by managers to achieve value congruence within their organizations. The qualitative data which were received can be classified into three categories: actions designed to recruit and select value congruent candidates, actions designed to socialize employees toward the organization's required value set, and actions designed to radically alter the organization's required value set in response to perceived changes in its competitive environment.

4.3.1 Selecting Candidates for the Required Value Set

From a values management perspective, the thirty-two organizations represented in the sample can be divided into two groups termed "make-values" versus "buy-values" organizations. The typical "make-values" organization selects and hires bright young people, usually right out of high school or university, and attempts to socialize them toward a set of required values. These organizations offer generous growth and career development opportunities and adhere to promotion from within policies in an attempt to keep employees for the long term. The interview data indicate that selection processes utilized by "make-values" organizations focus on candidate aptitude and willingness to learn as opposed to personal work-related values.

The second group comprised what could be termed "buy-values" organizations. In relation to the first group these organizations expressed less confidence in their ability to socialize new recruits toward a specific set of values. They stated a preference for selecting employees on the basis of skills as well as existing personal work-related values. In all cases, these organizations assessed candidate value compatibility using "soft" intuitive procedures during the interview process including: open / informal interview style, hypothetical questions, sensitivity to non-verbal feedback and observations of candidate behavior during social gatherings.

Respondents advocating these procedures expressed a high degree of personal confidence in their "intuitive feel" for recognizing value congruent candidates. One executive representing an organization widely known for its strongly shared values revealed its recruiters simply "go out and hire in their own image."

In the case of executive selection, organizations reported expending considerable time and expense to achieve high value congruence including the use of industrial psychologists. There was no indication during any of the interviews of reliance on the numerous values tests, surveys and questionnaires as discussed in Chapter 3. In summary, the data indicate that managers currently rely on implicit definitions of values and purport to be able to identify value-congruent candidates based on unstructured observation and intuitive insight.

4.3.2 Socializing Employees toward the Required Value Set

During the interviews a number of comments with respect to socializing employees toward the organization's required value set were received. Louis (1980: 229) defines organizational socialization as: "the process by which an individual comes to appreciate the values, abilities, expected behaviors and social knowledge essential for assuming an organizational role and for participating as an organizational member."

Numerous interview respondents suggested that it is more effective to socialize people at the time they enter the organization. Some also cautioned that managers cannot afford to ignore external influences on employees' work-related values including local, ethnic and societal reference groups. Managers representing multi-regional and multi-national corporations appeared to be particularly aware of this point.

Despite some evidence of a dichotomy in terms of "make-values" versus "buy-values" organizations, it is suggested that there are benefits to be gained by greater integration of selection and socialization practices. One executive emphasized the complementarity of selection and socialization practices stating: "You cannot make a beautiful wood carving if you start with a fence post."

The organizational literature describes a wide range of socialization techniques (e.g., Feldman, 1984, 1988; Fisher, 1986; Jones, 1983, 1986; Van Mannen, 1978); however, the business practitioners interviewed in this study tended to apply one or more of only three techniques - training sessions, reward systems and internal corporate communication programs. A number of organizations, for example, have designed training seminars specifically to emphasize corporate values. One organization, with more than 50,000 employees, is in the process of running every employee through a half-day seminar on its corporate values. In addition, this organization's senior managers have committed themselves to have one representative available during each seminar to directly field employee questions.

Several respondents reported their organizations use reward systems to emphasize corporate values. These systems are designed to identify and reward employees who exemplify corporate values in their work behavior. In most cases financial rewards are used. One large organization in the sample has allocated twenty-five dollars per employee into reward pools for the recognition of "value congruent" employees. Another company recommends the use of symbolic in addition to financial rewards. Social events are organized during which token items in recognition of high value congruence are presented. This high "work ethic" corporation awards a brass clock to the senior manager who spends the longest hours at the office. As one executive pointed out during an interview: although the clock is of very little monetary value, it is highly coveted by the members of the senior management team because it symbolizes value congruence.

Many of the organizations interviewed have developed corporate communication programs to promulgate their shared values. In addition to the popular medium of company newspapers, some companies provide employees with wallet-sized plastic cards containing the corporate mission statement and shared values. In one organization, managers who are unable to produce their "values card" on demand are subject to a token fine. A number of senior managers emphasized the power of oral communication (e.g., internal speeches) as a means to proclaim corporate values. However, while on the same topic many also cautioned that one must be very careful to "act on" as well as "speak about" shared values. One organization referred to this as the need to "walk the talk."

In summary, the interview data indicate that organizations explicitly attempt to socialize employees toward a set of shared values. Prior to the interviews it was anticipated that the ethics of values-based management would be a controversial issue. Specifically -- Is it ethical for a corporation to select and socialize employees toward its set of required values?

In actuality the ethics of values-based management was not an issue during the interviews. In most cases respondents took for granted their right to select on the basis of and influence individual employee values. Subsequent thinking to explain this response suggests it may be warranted when one considers that most organizations in our society - scouts, schools, universities and churches, are involved in one form or another in promoting a certain set of values. It is however interesting to note that some respondents did qualify their remarks, stating that the scope of their influence on employee values must be strictly limited to "work-related" values as opposed to personal values in general. As one respondent expressed: "I have no problem with the firm being interested in my work-related values -- for example, my personal preferences for working in a group (cooperation) or working long hours (diligence); but, they have no right to pry into my personal beliefs concerning issues like abortion and capital punishment."

4.3.3 Changing the Required Value Set

Nearly all of the organizations interviewed in the sample were to some degree attempting to modify their traditional set of shared values as a means to gain competitive advantage. The range of these attempts spanned from "fine tuning" to "out-and-out revolution." This section will focus on the actions of a subset of six organizations reporting success in achieving a radical shift in their shared values.

The interview data suggest that changing an organization's traditional shared values set encompasses two broad challenges. First, to define the desired value set which will provide strategic advantage in the marketplace. Second, to make that desired value set become the corporate reality.

Some respondents expressed a caveat with respect to the first challenge -- while companies should be bold, they must also be realistic in terms of what can be accomplished. In the words of one respondent: "The new vision and values must form the base for a viable action plan. 'Wish lists' are useless."

A number of interview respondents reported that their organization's shared values typically have been most influenced by: the philosophical legacy of the founding entrepreneur(s); the personal beliefs of the current dominant coalition, particularly those of the CEO; and, significant learning events (successes and failures) in the history of the organization. These statements confirm earlier findings in the literature (e.g., Sathe, 1985; Schein, 1985). There was also evidence that industry affiliation influences a corporation's shared value set. The results indicate that some industries (e.g., heavy manufacturing) tend to emphasize what might be called male or "machismo" values while others (e.g., health care) tend to manifest female or "caring" values.

Assuming that the corporation is able to articulate a new set of values, the second challenge is to make that set of values, as one executive expressed, "live and breathe." A critical question facing many organizations in North America is: "What does it take to inculcate a new set of work-related values into the minds and behaviors of thousands of employees?" During the interview experience, one pattern stood out in those organizations reporting success in radically changing their shared values. This pattern of change was revolutionary rather than evolutionary.

The data indicate that a radical shift in corporate values is unlikely without the impetus of strong external force. For the organizations reporting a radical change, this impetus came from two sources: 1) a change in corporate ownership (e.g., being acquired); and 2) the advent of a major corporate crisis (usually in terms of profitability) compelling the board to act. In some cases these forces were related and acted concurrently.

The second event in the pattern was dramatic changes to the corporate leadership. In each of the companies reporting a radical shift in their shared values, a new CEO was brought in from outside of the organization. Furthermore, it appears that these new leaders were selected because they personally manifested values the board deemed necessary to "turn the company around." Within a period of six to eighteen months most of the new CEOs had installed their own executive teams. The reality was that the "old school," as they were often referred to in the interviews, had to either quickly convert or leave. In many cases members of the old school chose to leave, and in some cases, they were pushed out. All companies reporting a radical shift in their corporate values experienced significant turnover (50 to 30%) in their executive ranks.

In the reported cases, the corporation's success in transforming its set of shared values was primarily contingent upon the new CEO. In one situation, the new CEO talked, dramatized, rewarded (symbolically and financially) and restructured (physically as well as hierarchically) the organization all in order to emphasize his new set of corporate values. To dramatize the work ethic, this individual personally worked from six in the morning to ten at night. Most of the old school quickly "abandoned the ship or were made to walk the plank." The newly hired executives modelled themselves after the CEO. Word of the new CEO's expectations quickly spread throughout the company. The transition in shared values at this organization has been dramatic, as has been its improvement in financial performance. The details of this case, based on the corporation's self-report, have been corroborated in documentation published by external industry analysts.

This study suggests two critical success factors characteristic of values-change initiatives: 1) achieving adequate salience for the initiative so that all units and employees pay serious attention. (It is for this reason that organizational crises are often the starting points for organizational values change.) And 2), staying the course for the change initiative which, realistically, may take several years. Maintaining positive momentum for values change is important, particularly in the face of negative fluctuations in economic performance.

One organization interviewed discussed its actions to capture the attention of its members. This organization had just been through a crisis in which its CEO had been replaced. The new CEO wanted to institute a set of shared values which included the requirement to be more aggressive and competitive in the marketplace. This individual, realizing the importance of achieving salience for his initiative, gathered people together from all over the organization and then he held a change of command parade full of pomp and ceremony. Employees lined up in ranks in a huge hall. The senior managers used uniforms, corporate flags and jeeps. The CEO inspected "his troops" and then addressed them "en masse" outlining his expectations. His basic message --"We are now at war with the competition" -- was clear, vivid and quickly disseminated throughout the organization.

An organization which was failing to stay the course for its values change project was also represented in the sample. During this particular interview the Senior Vice-President Human Resources vented his frustration at the difficulty in maintaining forward momentum in the face of an industry-wide economic downturn. He stated: "it is next to impossible to stop the corporate 'mind set' from reverting right back to its traditional short-term bottom line perspective." He confided his fear that months of work emphasizing new participative values would be quickly destroyed and stressed that building a new set of shared values is first and foremost an act of executive faith. Success, in his opinion, is contingent on the strength of that faith to sustain the organization through turbulent periods of transformation including the possibility of negative economic performance in the short-term.

In summary, the interview data suggest a consistent pattern of change in the organizations reporting a radical shift in their shared values. First, there is an organizational crisis. Then a new leader emerges who quickly institutes his or her own team and makes salient new shared value expectations. These expectations are reinforced initially by senior management modelling and dramatization and eventually by formal selection, compensation and communication systems. After a period of concentrated attention and unwavering senior management commitment the new shared value set becomes established. This pattern of change supports and has a number of parallels to models published in the management literature, particularly Dyer's (1985) model of cultural change in organizations.

On a cautionary note these data are primarily anecdotal and in this particular case represent only a small portion (n = 6) of the convenience sample. Many patterns of cultural change have been theorized in the literature and there appears to be little consensus as to which strategies are most effective. This issue represents an important avenue for future research, one which will likely require empirical study on a large scale. Similar comments (perhaps to a lesser degree) could be made with respect to this exploratory study's findings regarding the selection and socialization of value congruent employees. Notwithstanding this cautionary note, valuable insights have been gained which facilitate the research design and development of survey instrumentation. These contributions are discussed in the following section.

4.4 CONTRIBUTIONS

This exploratory research makes numerous contributions which facilitate subsequent field study. Of primary importance is the derivation of a typology of twenty-four shared value concepts. This information forms the basis for the development of value ranking and rating instrumentation required to operationalize individual-organizational value congruence.

In addition, qualitative data gained during the interviews provide support for the following propositions:

1. Shared values and their management are a topic of significant managerial relevance. This conclusion supports statements in the current literature as discussed in the first chapter.
2. Managers currently attempt to assess individual-organizational value congruence intuitively without the aid of typologies and instrumentation available in the literature. This finding lends credence to the requirement for a more meaningful typology and better operational procedures as discussed.
3. Managers also attempt to enhance individual-organizational value congruence through the application of socialization techniques, in particular, training sessions, reward systems and communication programs.
4. Pivotal values in an organization tend to originate from: personal beliefs held by founding entrepreneurs, personal beliefs held by the current dominant coalition

(particularly those of the CEO), and significant organizational learning events in the corporate history. This finding supports earlier works by Sathe (1983) and Schein (1983).

5. Organizations do attempt to change their shared values in response to perceived changes in the competitive environment; however, successful transformations demonstrate a revolutionary pattern which usually involves replacing a significant portion of existing senior management. These data support Dwyer's (1985) model of cultural transition.

This chapter presents empirical data from the practitioner community relating to the topic of value congruence in organizations. These data along with knowledge gained from extensive literature reviews discussed in the first three chapters prepare the way for the theoretical development of a research model.

CHAPTER 5 - RESEARCH MODEL AND HYPOTHESES

This chapter describes the development of a research model designed to address two questions:

1. To what extent does individual-organizational value congruence influence employee attitudinal (commitment and satisfaction), intentional (turnover) and behavioral (absence and organizational citizenship) outcomes?
2. To what extent is individual employee awareness of an organization's required value set influenced by organizational (e.g., propinquity) and personality (e.g., attentiveness) factors?

Underlying each of these questions is a specific theoretical rationale. Question One linking value congruence to positive work outcomes is founded on cognitive consistency theory which in general terms suggests (McGuire, 1966: 1):

> The person tends to behave in ways that minimize the internal inconsistency among his interpersonal relations, among his intrapersonal cognitions, or among his beliefs, feelings, and actions.

Question Two linking individual awareness of required values to internal (personality) and external (organizational) factors is founded on social cognition theory which concerns (Fiske & Taylor, 1984: 17):

> how people make sense of other people and themselves. It focuses on people's everyday understanding both as the phenomenon of interest and as a basis for theory about people's everyday understanding.

Of particular relevance to this research are the dynamics of selective attention, the first stage of the social cognition model.

This chapter reviews underlying theoretical rationale, discusses the development of the research model, defines component constructs, and specifies sets of associated hypotheses. In addition, potential structure of the twenty-four shared values dimensions is also discussed.

5.1 THEORY OF COGNITIVE CONSISTENCY

Consistency theory comprises a spectrum of formulations. Its origin is attributed to Heider's (1944, 1946) proposition of balance between person *p*, other person(s) *o*, and their sentiments toward a psychological object *x*. Newcomb (1953, 1961) extended Heider's general theory of balance to focus on interpersonal balance. Other formulations of cognitive consistency include: Festinger's (1957) theory of cognitive dissonance, Rosenberg's (1956, 1960) theory of cognitive-affective consistency, and Osgood and Tannenbaum's (1955) congruity model.

Heider's general theory of balance and Newcomb's extension to interpersonal balance are particularly relevant to the conceptualization of individual-organizational value congruence and constitute the rationale underlying the development of the research model.

5.1.1 Heider's General Theory of Balance

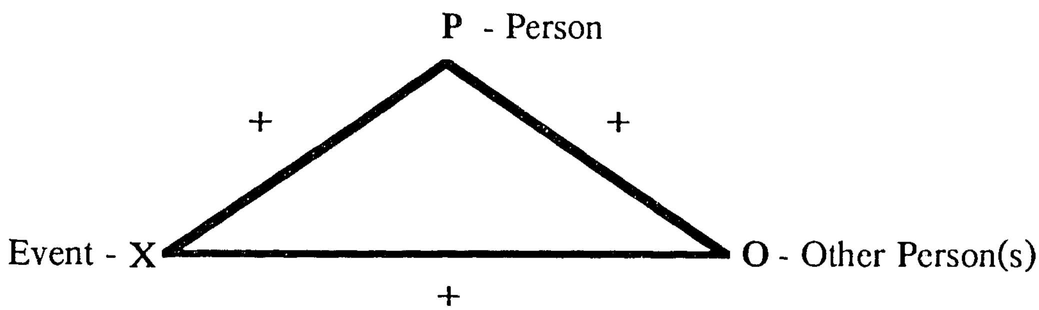
Heider's (1958) general theory of balance reflects the influence of two prominent intellectual streams of the time: existential psychology (in particular, the Gestalt imperative that an adequate understanding of human behavior will evolve only from the study of the whole person), and Lewin's (1951) field theory which suggests individuals release psychical energy to maintain equilibrium within their lifespaces.

Heider proposes the concept of a balanced state, which he defines (1958: 176) as: "a situation in which the perceived units and the experienced sentiments co-exist without stress; there is thus no pressure toward change, either in the cognitive organization or in the sentiment." He posits a triadic unit (Figure 5) comprising three elements: person *p*, other person *o*, and event *x* which are linked by either positive or negative relationships. There are eight resultant modes representing four states of balance and four states of imbalance. In mathematical terms, a triad is balanced if the algebraic product of the three signs is positive, and imbalanced if the product is negative.

FIGURE 5

Balance Theory's Triadic Unit

(indicating a balanced state)



Take as an example the following situation: John supports capital punishment. His best friend, Fred, also supports capital punishment. This represents a "balanced" person-other-event (pox) state denoted by (+,+,+). To contrast this situation assume that John's wife whom he loves dearly is against capital punishment. This represents an "imbalanced" state denoted by (+,-,+) which produces cognitive inconsistency (tension) within John.

Heider distinguishes between two types of relations among p,o and x which he calls *sentiment* and *unit* relations. Sentiment relations refer to (1958: 200): "a person's evaluation of something." Unit relations refer persons and objects that are perceived (p. 201): "as belonging together as in a specially close way," for example, members of a family.

Heider's conceptualization of unit relations is pertinent to this study's focus on individuals' sense of belonging within organizational units. In fact, Heider recognizes (p. 196) similarity of beliefs and values as one variety of cognitive unit relations and quotes Precker (1952: 412) who states:

> Similarity of values allows for increased interaction, . . . allows for similarity of action . . . allows for mutual language. . . . Similarity of values also operates in line with the defenses of the self -- if values are rejected, then the self is rejected.

Heider's work provides considerable rationale for theorizing positive work-related consequents from high individual-organizational value congruence. Further theoretical rationale is presented in the next section which discusses Newcomb's extension of Heider's theory. Newcomb's extension is relevant to this study because of his focus on unit relations. Although Heider theorizes both sentiment and unit relations, he tends to emphasize sentiment relations (a single entity phenomenon). Newcomb, in contrast, emphasizes unit relationships (a dual entity phenomenon) which it is suggested is the more appropriate conceptualization for the study of individual-organizational value congruence.

5.1.2 Newcomb's Theory of Interpersonal Balance

Newcomb builds on Heider's general theory to create a theory of interpersonal balance. He states (1968: 28):

> The human condition, as I have come to view it in social-psychological terms, is such that individuals continually face a three-pronged problem of adaptation. Each of us must somehow come to terms, simultaneously, with the other individuals and groups in our interpersonal environment, with the

> world that we have in common with those persons and groups, and with our own, intrapersonal demands and preferences.

Newcomb's research is distinct from Heider's in a number of ways. As mentioned, he emphasizes unit (associative/belonging) relations as opposed to the traditional emphasis on sentiment (evaluative/liking) relations. Secondly, Newcomb suggests the possibility of *nonbalanced* states in addition to Heider's conceptualization of *balanced* and *imbalanced* states. A nonbalanced state is one which invites (p. 31) "neither modification nor acceptance - whether by reason of indifference, uncertainty, or ambivalence."

Newcomb focuses on four of Heider's eight states suggesting that triads in which the *p/o* relationship is negative may be nonbalanced (and of little consequence) because person *p* is likely to be indifferent to what person *o* thinks about psychological object *x*. He states (p. 32): "Since I dislike *O* (or do not respect him, or trust him) I have no interest in his attitude toward *X*."

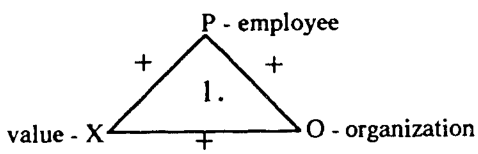
A basic premise underlying this study is that people want to belong to (feel part of) their work organizations. Support for this premise has already been established through statements in the literature (Chapter 1) and practitioner comments (Chapter 4). This premise presupposes triads (person-organization-values) limited to positive p/o relations. In this respect, Newcomb's concept of nonbalance and his resultant reduction of Heider's original set of eight states is quite appropriate for the conduct of this research.

Figure 6 presents four potential states of balance/imbalance presented in the context of individual-organizational value congruence. States 3 and 4 represent imbalance or for the purpose of this research value incongruence. Balance theory predicts that employees in this situation will experience an inconsistency reduction drive. Potential resolution modes include: 1) changing one's level of attraction to the organization; 2) changing one's values (although empirical results discussed shortly suggest this is most unlikely); or 3) changing one's perceptions of the organization's values (either realistically based on additional information and understanding or unrealistically through self-deception).

FIGURE 6

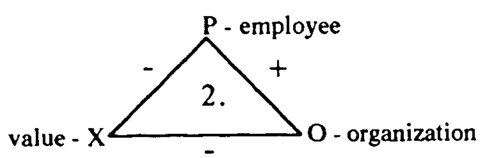
Four States of Value Congruence

State One: Balance = Individual-Organizational Value Congruence



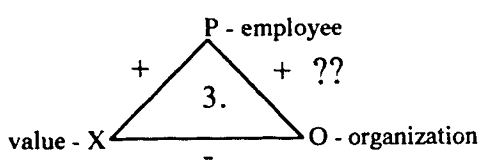
For example: the employee prefers formality and the organizational culture emphasizes formality.

State Two: Balance = Individual-Organizational Value Congruence



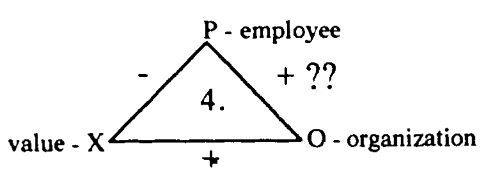
For example: the employee prefers informality and the organizational culture emphasizes informality.

State Three: Imbalance = Individual-Organizational Value Incongruence



For example: the employee prefers formality but the organizational culture emphasizes informality.

State Four: Imbalance = Individual-Organizational Value Incongruence



For example: the employee prefers informality but the organizational culture emphasizes formality.

Two major empirical studies validate Newcomb's theory. On the basis of data provided from a twenty-five year longitudinal study of alumnae from Bennington College, Newcomb (1952) concludes that personal attitudes (under which personal values are subsumed) remain stable over time and the most likely response of individuals experiencing interpersonal imbalances is to search for more congruent reference groups, be it in the context of work or personal (e.g., marriage) relationships.

In a second study Newcomb (1961) provided seventeen previously-unacquainted college transfer students with reduced-rent accommodation in one large house near the campus in exchange for longitudinal data on their attitudes, values and levels of interpersonal attraction for each other. Newcomb concludes that mutually-shared orientations (including values as operationalized by Allport, Vernon and Lindzey's instrument) are critical to the development of stable interpersonal relationships. He states (p. 261):

> Collective systems may be in balance -- or at any rate not out of balance -- without mutually shared orientations of importance, providing attraction is not high, whereas high-attraction collective systems will not remain in balance without them. And it is high-attraction systems that are most dependably stable throughout the vicissitudes of time and space.

Griffitt and Veitch (1974) conducted a field study to clarify what they perceived as inconsistencies in Newcomb's results and similarly found that participants were progressively more attracted toward others whose attitudes were similar to their own.

In addition to these studies, the social psychology literature (e.g., Byrne, 1971; Kaplan, 1972; Griffitt, 1974) provides evidence based on experimental research to suggest similarity of values, beliefs and attitudes causes interpersonal attraction. However, experimental procedures have been challenged (Levinger, 1972; Wright & Crawford,

1971) as being artificial (short-term and abstract) in their treatment of group formation. Newcomb, himself suggests (1961: 258) that longitudinal studies which begin at the first point of acquaintance offer valuable perspectives relative to experimental conditions in which acquaintance history "scarcely exceeds one hour" and natural groups whose history is long but "relatively unknown."

In summary, balance theory provides substantial theoretical rationale for hypothesizing positive work-related outcomes (at the individual level) as a result of high individual-organizational value congruence. Prior to completing this discussion, it should be noted that consistency theory is not without its critics. Zajonc (1968), for example, suggests individuals welcome inconsistency. It has also been postulated that attraction effects (the human propensity to like others) and agreement effects (the human propensity to agree) may overpower the drive for balance (Petty & Cacioppo, 1981). It is proposed, however, that these moderating effects are most influential in the context of short-term direct interactions (as one might observe in an experimental procedure) as opposed to long-term relationships such as one's choice of work environment. In the long term the real self will emerge as will more accurate perceptions of others (Newcomb, 1961).

After a hiatus during the mid-1970s, the concept of inconsistency reduction remains prominent in the literature (Abelson, 1983), albeit there is now more emphasis on the interplay between social and cognitive factors. Berkowitz (1986: 176) states: "balance theory has received encouraging support from a considerable body of research . . ." Luthans (1989) promotes balance theory (in particular Newcomb's extension) as one of the more comprehensive explanations of group formation. He states (p. 371):

> Persons are attracted to one another on the basis of similar attitudes [Luthans' use of attitudes subsumes personal values] . . . Once this relationship is formed, the participants strive to maintain a symmetrical balance between the attraction and the common attitudes. If an imbalance

occurs, an attempt is made to restore the balance. If the balance cannot be restored, the relationship dissolves."

5.2 SOCIAL COGNITION THEORY

Social cognition theory focuses on how people understand themselves and others. It is an emerging field which integrates concepts and methods from social and cognitive psychology (Fiske & Taylor, 1984). Individual-organizational value congruence, the focal construct of this study, is a phenomenon existing within a social context. As such social cognition theory is relevant to the development of the research model, especially, to the issue of employee awareness of his or her social context. As discussed, one objective of this research is to gain insights into factors (personal and organizational) which influence employee awareness of the organization's set of required values.

Social cognition theory encompasses the study of cognitive elements (e.g., attributions), structures (e.g., schemata) and processes (e.g., information processing). Social information processing focuses on the sequence through which individuals attend to and utilize social information. Figure 7 describes the four stage process (Kreitner & Kinicki, 1989: 111) from initial awareness of socially relevant stimuli to information retrieval for decision-making and judgment.

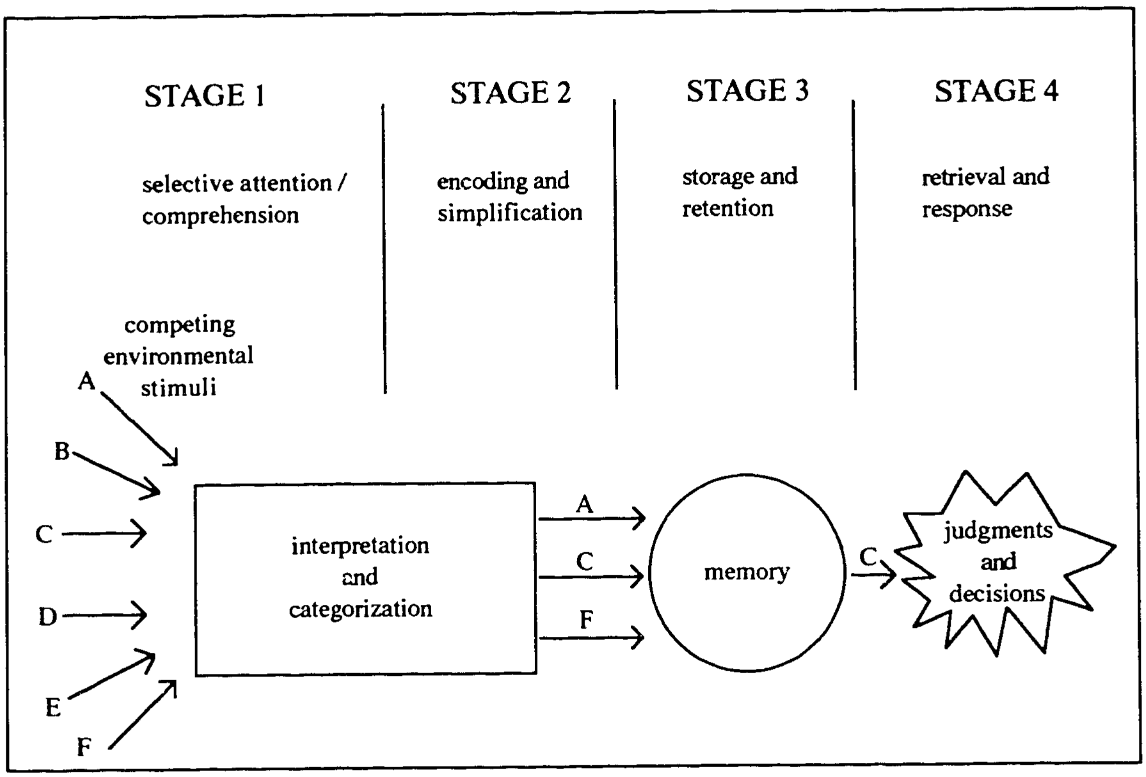
Of particular relevance to this study are the dynamics of selective attention. Kreitner and Kinicki (1989) point out that people are bombarded by physical and social stimuli. They do not have the mental capacity to attend evenly to all aspects of their environment. Therefore certain aspects are selected to which they attend while other aspects are ignored altogether. Kreitner and Kinicki define (p. 111) selective attention as :

> The process of becoming consciously aware of something or someone. Attention can be focused on information either from the environment or from memory.

FIGURE 7

Social Information Processing Model

(from Kreitner & Kinicki, 1989: 111)



Fiske and Taylor (1984) postulate three external determinants of attention: people attend to stimuli that are salient; people attend to stimuli that are vivid; and, people attend to stimuli based on situational (self-awareness) cues. For example, if an individual were being interviewed in front of a television camera it would heighten his or her sense of self-awareness.

Salience is a property of stimuli in context. A stimulus (e.g., a person dressed in a swim suit) can be very salient in one context (e.g., the corporate annual meeting), but not in another (e.g., the beach). Stimuli include people, events and objects - both tangible and psychological. For the purposes of this research, organizational values are psychological objects capable of being made salient by managerial intervention. For example, corporate values could be made more salient by having employees attend training seminars in which they are the focus of discussion.

The second determinant of attention is vividness. Fiske and Taylor (1984: 190) point out: "Whereas salience is determined by the relation of an object to its context, vividness is inherent in a stimulus itself." Intuitively, one would expect vivid stimuli to have similar effects to salient stimuli; however, there is little empirical support for vividness effects (Taylor & Thompson, 1982). In addition, the concept of vividness is one which lends itself more to physical rather than psychological objects. For these reasons, vividness does not appear in the research model as a determinant of individual employee awareness of the organization's required values.

The third external determinant is self-awareness, the act of attending to oneself or the environment in reaction to environmental stimuli. Fiske and Taylor use the example of an individual standing up to address a group. At first the presenter may be self-aware with the focal point being himself or herself (e.g., what do people think of me?). After the presenter relaxes he or she may retain his or her heightened sense of awareness but its focus may shift to the environment (in this example - a keen awareness of the audience).

The above example implies a self-environment attentional dichotomy the simplicity of which has been called into question (Carver, 1979; Carver & Scheier, 1981a). It is now accepted that attentional focus continually oscillates between self and environment. In addition, self focus can be quite complex including different perspectives on numerous facets of one's self (e.g., thoughts, feelings, values, physical appearance, tone of voice, etc.).

Salience, vividness and self-awareness cues are determinants of attention external to the individual in the social situation. In this respect they are open to managerial intervention. For example, over the employee entrance to the Four Seasons Hotel in San Francisco are words which in effect state: through these doors pass the most courteous people in San Francisco. It is suggested that this is an example of a managerial intervention designed to heighten employee self-awareness with respect to behaving in a courteous manner.

In addition to external cues, individuals differ in their predispositions toward attentional contingencies. Most people have witnessed some individuals who appear to "live in their own world" and others who are keenly aware of themselves as social objects. As a general proposition of social cognition theory, ego-centric introverts tend to look inside (introspect) for guidance while ignoring stimuli from their social context whereas socio-centric extroverts are sensitive and carefully attend to social stimuli in order to guide their behavior.

The degree to which individual employees are predisposed to attend to stimuli within their work environments is an important concept as it influences individual awareness of organizational value requirements. Fiske and Taylor (1984) note a variety of personality dispositions which account for individual differences in attention including: self-consciousness (Fenigstein, Scheier, & Buss, 1975), locus of control (Rotter, 1966), and self-monitoring (Snyder, 1974, 1979).

Social cognition theory, therefore, presents theoretical grounds to identify a variety of situational and dispositional determinants capable of influencing the degree to which individual employees are aware of the organization's required values. Of particular interest in this research are the degree to which the organization's required values are salient in the social context and the degree to which individual employees are predisposed to attend to such stimuli.

This section has outlined the two theoretical planks, cognitive consistency theory and social cognition theory, underlying the construction of the research model. The next section presents the research model which links: 1) attitudinal, intentional and behavioral work-related outcomes to individual-organizational value congruence, and 2) organizational and personality antecedents to individual awareness of organizational value requirements.

5.3 THE RESEARCH MODEL

The conceptual framework delineating this research has evolved from three perspectives: theory, empirical results from earlier research, and interviews with business practitioners. The theoretical rationale for hypothesizing positive work outcomes resultant from individual-organizational value congruence reflects consistency theory, in particular Heider's (1946, 1958) balance theory and Newcomb's (1961, 1968) extension to interpersonal balance. The degree to which individuals are aware of social cues, in this case the required values of the organization, is based on social cognition theory (Fiske & Taylor, 1984), in particular the dynamics of social information processing.

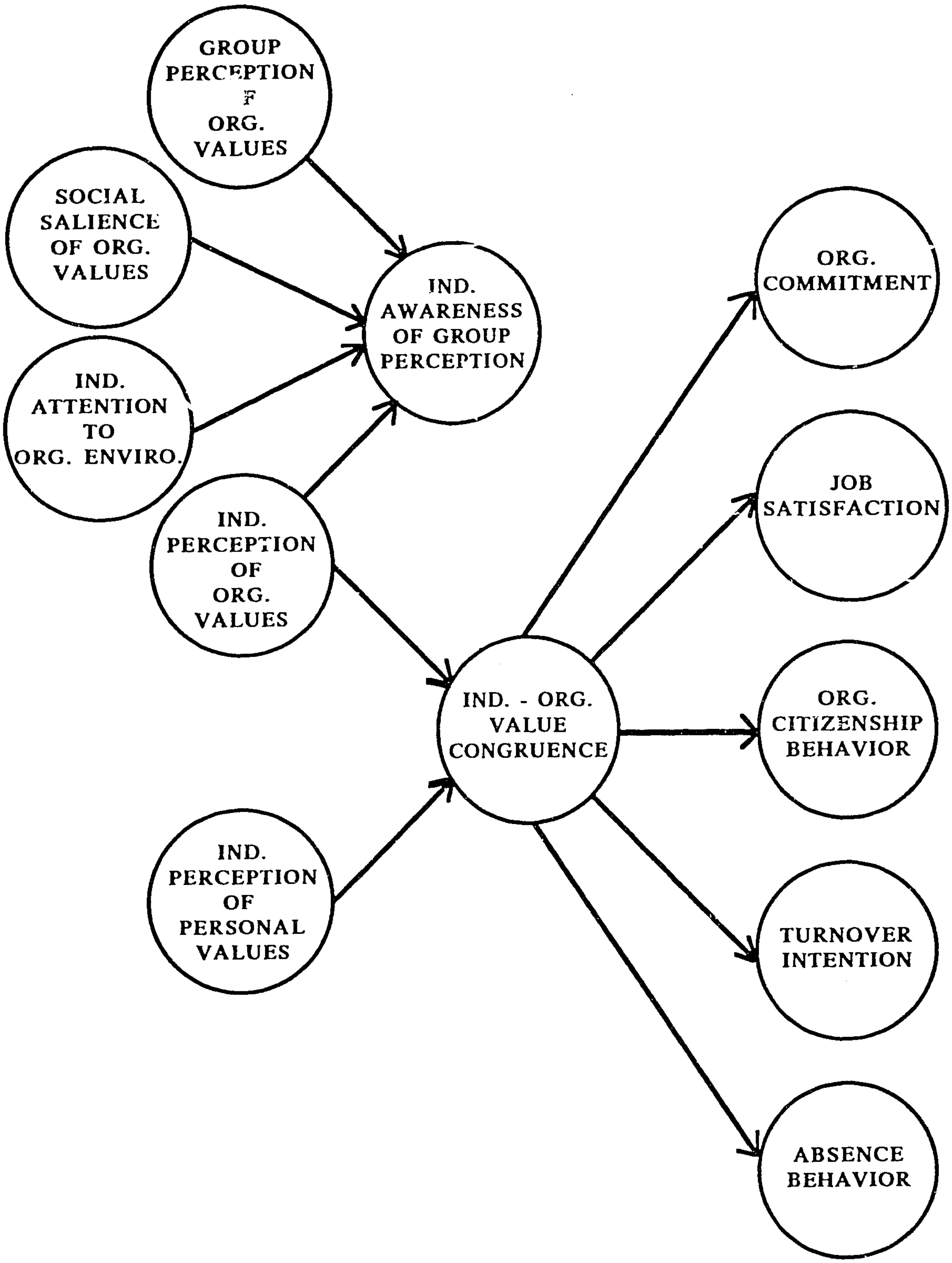
There is also empirical evidence from earlier studies (Chapter 3) in support of various aspects of the research model. Of particular note is the work of Chatman (1988, 1991) and Posner, Kouzes and Schmidt (1985). Using the construct of person-organization fit, Chatman hypothesizes a variety of positive consequents including: job satisfaction, organizational commitment, extra-role behavior, and turnover. Similarly, Posner, Kouzes and Schmidt hypothesize positive consequents, as a function of their conceptualization of perceived value congruence, including: organizational commitment, self confidence in understanding personal and organizational values, ethical behavior, and feelings of stress.

From a practitioner perspective, comments received during the forty-five interviews (Chapter 4) support the notion of positive work outcomes as a function of individual-organizational value congruence and recognize the application of managerial interventions (e.g., training seminars) to enhance the salience of organizationally required values.

The research model (Figure 8) underlying this study encompasses twelve major constructs some of which are multi-dimensional and subsume minor constructs. For example, organizational commitment includes the dimensions of affective commitment, continuance commitment, and normative commitment. Each of these constructs is defined in detail in the following section. This model becomes the basis for hypotheses presented in Section 5.5.

FIGURE 8

Research Model: Individual-Organizational Value Congruence



5.4 DEFINING THE CONSTRUCTS IN THE MODEL

This section defines each of the twelve constructs comprising the research model. The central values-related constructs: personal values, organizational values, individual-organizational value congruence, have already been defined in detail in the second chapter. The brief definitions presented here summarize that discussion. The remaining constructs (e.g., organizational commitment, job satisfaction, etc.) are for the most part prominent in the organizational science literature. Definitions for the purposes of this study reflect generally accepted usages, recognizing in some cases the existence of conceptual discord.

Individual Perception of Personal Values. This construct focuses on individual employees' perception of their personal value system as a central element of personality. Personal values are defined as enduring personal preferences for modes of conduct or end-states of existence relative to converse modes of conduct or end-states of existence. This definition paraphrases Rokeach's (1973) popular definition found in the social psychology literature.

Individual Perception of Organizational Values. This construct focuses on individual employees' perception of the organization's required values as a normative element of its culture. Organizational values are defined as conceptions of the desirable characteristic of the organizational culture which influence the selection from available modes, means and ends of action. This definition paraphrases Kluckhohn's (1951) popular definition found in the anthropological literature.

Individual-Organizational Value Congruence. Individual-Organizational value congruence is defined as the degree to which an individual employee's personal values (preferences) are congruent with his or her work organization's values (conceptions of the desirable) as manifested in its culture. This definition parallels Chatman's (1988: 13) conceptualization of "person-organization fit" (POF): "the congruence between the cultural characteristics of organizations and the values and personality characteristics of persons."

The calculation of individual-organizational value congruence requires a set of work-related value dimensions relevant and commensurate at both individual and organizational levels of analysis. In order to fulfil this requirement, a set of twenty-four value dimensions has been derived as discussed in Chapter 4.

Organizational Commitment. The construct of organizational commitment has received a great deal of attention in the literature. Underlying this prominence is empirical evidence to indicate that committed employees are less likely to leave their organizations relative to uncommitted employees (Angle & Perry, 1981; Porter, Steers, Mowday, & Boulian, 1974).

Allen and Meyer (1990) note a number of definitions of this construct including Porter and his associates' popular definition of organizational commitment as: "the strength of an individual's identification with and involvement in a particular organization" (Porter et al., 1974: 604) and Becker's (1960: 33) conceptualization as the tendency to engage in "consistent lines of activity" because of the perceived cost of doing otherwise. They provide empirical evidence to suggest a three-component conceptualization of organizational commitment as follows: affective commitment which refers to employees' emotional attachment to, identification with, and involvement in, the organization; continuance commitment which refers to commitment based on the costs that employees associate with leaving the organization; and normative commitment which refers to employees' sense of obligation to remain with the organization. Allen and Meyer state (p. 3): "Employees with strong affective commitment remain because they *want* to, those with strong continuance commitment remain because they *need* to, and those with strong normative commitment because they feel they *ought* to do so."

Allen and Meyer's three component conceptualization of organizational commitment is used for the purposes of this research.

Job Satisfaction. This construct pertains to individual employees' level of satisfaction with various aspects of his or her work environment including: overall satisfaction with the organization, satisfaction with present job, satisfaction with supervision, satisfaction with co-workers, satisfaction with opportunities for promotion and satisfaction with pay.

Job satisfaction is one of the most frequently studied constructs in organizational science (De Meuse, 1986). A variety of definitions have been put forward (cf. Wanous & Lawler, 1972) and controversy continues as to the most appropriate conceptualization of this prominent construct. Notwithstanding this controversy, in terms of general convention job satisfaction is an attitudinal construct which refers to specific psychological objects (e.g., the work itself, the supervision, the co-workers, etc.) representing various aspects of the job domain.

For the purposes of this research, Smith, Kendall and Hulin's (1969) widely acknowledged definition has been adopted. Job satisfaction is defined as (p. 6): "the feelings a worker has about his job" which are derived from the comparison of expected outcomes received from the work environment and actual outcomes. Smith et al. provide empirical evidence in support of a five-factor conceptualization of satisfaction, including satisfaction with: 1) work on present job, 2) present pay, 3) opportunities for promotion, 4) supervision on present job, and 5) co-workers on present job.

Turnover Intention. This construct focuses on individual employees' behavioral intention to leave the organization in order to undertake employment elsewhere. Similar to organizational commitment and job satisfaction, the construct of employee turnover has been extensively studied including several literature reviews and a recent meta-analysis (Cotton & Tuttle, 1986).

This research relies on turnover intention as a proxy for actual turnover. The measurement of actual turnover is problematic requiring a longitudinal research design. In recent years behavioral intentions have become accepted in turnover research. Fishbein and Ajzen (1975: 369) suggest: "the best single predictor of an individual's behavior will be a measure of his intention to perform that behavior." A meta-analysis (Steel & Ovalle, 1984) of research on the relationship between behavioral intention and employee turnover found support for the use of behavioral intention. These researchers calculated a weighted average correlation of .50 between behavioral intentions and employee turnover. In addition, Cotton and Tuttle's meta-analytic study reports strong confidence (p<.0005) in behavioral intention as a correlate of turnover.

Organizational Citizenship Behavior. This construct focuses on the extent to which individual employees engage in good citizen (extra-role) behavior within the organization. The organizational significance of work activities "above and beyond the call of duty" has been implicitly recognized in the literature for some time: Barnard (1938) points out the informal aspects of an organization are critical in overcoming gaps and slippages inherent in its formal design. Roethlisberger and Dickson (1939) found evidence of the informal organization (p. 558) in their Hawthorne studies which they suggest is a necessary prerequisite for effective collaboration. Katz and Kahn (1966: 337) identify "spontaneous behavior" beyond role requirements as one of three critical behavioral patterns in effective organizations.

More recently, organizational citizenship behavior (OCB) has been recognized and researched as an explicit construct. Prominent in this regard is the work of Organ and his associates (Bateman & Organ, 1983; Organ, 1988; Smith, Organ & Near, 1983). For the purposes of this research Organ's definition (1988: 4) is adopted: "OCB represents individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes effective functioning of the organization."

Absence Behavior. This construct focuses on the degree to which individual employees are absent from work excluding periods of absence as a result of authorized vacation and/or prolonged illness (e.g., a serious illness to the extent that it may entail hospitalization). This construct's emphasis is on what is referred to in the literature (cf. Hackett & Guion, 1985) as "voluntary absence" as opposed to "involuntary absence" (e.g., absence due to factors beyond the control of the employee such as having to attend a family funeral or being incapacitated by serious illness or accident).

Absence behavior continues to be a central topic in the industrial/organizational psychology literature. Staw (1984) identifies it as one of the four most researched variables. Similar to other prominent constructs discussed in this section there is evidence of conceptual disaccord. For example, Lyons (1972: 279) reviews the absenteeism literature and concludes that it relies upon "a hodgepodge of conceptually and operationally differing definitions."

This study adopts Adler and Golan's (1981: 545) generic conceptualization of absence behavior: "Employee absence refers to employee non-appearance for scheduled work and is recorded when it involves hours or days but not minutes." One indication of this definition's acceptability is its adoption for Farrell and Stamm's (1988) extensive meta-analytical review of the correlates of employee absence. In addition, this study recognizes Farrell and Stamm's distinction between "total time lost" and "absence frequency" operationalizing absence behavior from both perspectives.

Group Perception of Organizational Values. This construct focuses on the organizational value profile as the collective (aggregate) perception of the dominant coalition (executive management). There are a number of organizational groups represented in this study: by management level, by function, by division, by product area, and any one of them could be used for the purpose of computing an aggregate profile. However, the dominant coalition (executive management) is of primary interest because it is this group which has traditionally had the greatest influence over the culture and values of the organization (Sathe, 1985; Schein, 1985).

A major design feature of this study is its emphasis on intra-person reality -- a focus in accordance with cognitive consistency theory. Notwithstanding this emphasis, it is possible to compute an aggregate (inter-person) profile of the organization's values using the collective perception of a group. In fact, the research design and administration costs of such a calculation are negligible. In comparison, the benefits are considerable. For example, one can address the degree to which members of other groups are aware of the dominant coalition's perception of the organization's value priorities and what factors (organizational and individual) influence this awareness.

Clearly, the validity of this construct is contingent on evidence of "crystallization" (homogeneity of perception) across group members, in this case executive managers. This issue (discussed in detail in the research methodology - Chapter 6) is addressed using reliability (inter-rater) and analysis of variance calculations.

The use of aggregate perceptions to represent organizational culture is supported in the literature. Chatman (1988, 1991) used aggregates of responses (n = 16 on average) from long-tenure (8 years on average) informants to represent organizational value profiles in her study of selection and socialization in public accounting firms.

Social Salience of Organizational Values. This construct focuses on the extent to which the organization's required values (as defined by the collective perception of executive management) are salient in the work environment as a result of explicit managerial interventions (e.g., corporate training programs) and implicit influences (e.g., working in close proximity with a member(s) of the dominant coalition).

Salience is a property of a stimulus in relation to its context. Fiske and Taylor (1984) suggest that social stimuli typically capture attention by their salience (the degree to which they stand out relative to other stimuli in the work environment) and vividness (inherent properties of the stimuli). They note (p. 187) a number of causes of social salience including: being novel and figural relative to the immediate context, being unusual relative to prior knowledge and/or expectations, being goal relevant, being dominant in the visual field, and by the perceiver being specifically instructed to observe and pay attention.

Individual Predisposition to Attend to the Organizational Environment. This construct focuses on individual employees' predisposition to attend to external cues in their work environment including: self-monitoring, self-consciousness and locus of control.

Fiske and Taylor (1984) postulate that predispositions cause individuals to differ in their attentional style and focus. A predisposition is defined as: an individual characteristic or trait which has more than a nominal existence and which is dynamic or at least determinative in behavior (Allport, 1966). A high self-monitor, for example, may be more disposed to attend to the organization's normative elements (including its required values) relative to a low self-monitor (Snyder & Campbell, 1982).

Fiske and Taylor's (1984: 184) definition of attention as the focus and amount of selective cognitive work an individual does is adopted for the purposes of this study.

Individual Awareness of Group Perception of Organizational Values. This construct focuses on the extent to which individual employees are aware of the organization's required values (as defined by the collective perception of the dominant coalition) Individual awareness is conceptualized as a function of the individual's predisposition to attend to social stimuli and the social salience of organizational values in the workplace environment.

This construct is defined as an index based on the profile similarity between the individual employee's perception of the organization's value priorities (using the twenty-four value dimensions - Chapter 4) and the collective perception of organization's value priorities (based on the aggregate perception of members of the dominant coalition).

5.5 RESEARCH HYPOTHESES

The opening chapter identified a number of research questions including: To what extent does individual-organizational value congruence result in positive individual attitudinal, intentional and behavioral work outcomes? And, to what extent do individual (personality) and organizational factors influence employee awareness of the organization's required value set? This section expands on these questions by presenting hypothetical statements of relationship capable of being empirically tested using the survey methodology described in Chapter 6.

5.5.1 Consequents of Individual-Organizational Value Congruence

A variety of work-related consequents subject to the influence of individual-organizational value congruence have been identified including: organizational commitment, job satisfaction, turnover intention, and organizational citizenship and absence behavior.

Organizational Commitment. Commitment to an organization as a consequent of personal identification with its values has been recognized in the literature. Etzioni (1961) describes three types of organizational involvement: moral, calculative and alienative. He suggests moral involvement is based on internalization of the organization's goals, values and norms, whereas calculative is based on an exchange of benefits. Alienative involvement represents an exploitative relationship (e.g., a prison). In a similar fashion, Kanter (1968) defines three dimensions of commitment: continuance (based on financial considerations), cohesion (based on social ties) and control (based on an attachment to organizational norms and values).

Mowday, Porter and Steers (1982), following Porter and Smith (1970), define organizational commitment as (p. 27): "the relative strength of an individual's identification with and involvement in a particular organization." They suggest organizational commitment is characterized by at least three factors: 1) a strong belief in and acceptance of the organization's goals and values; 2) a willingness to exert considerable effort on behalf of the organization; and 3) a strong desire to maintain membership in the organization. By means of an extensive literature review, they identify over twenty-five antecedents to organizational commitment including: personality characteristics (e.g., age, tenure, education); role characteristics (e.g., job scope, role conflict); structural characteristics (e.g., formalization, functional dependence, decentralization); and work experience correlates (e.g., organizational dependability, personal importance of the organization, extent to which employee expectations were met, co-worker attitudes, perceived pay equity and group norms regarding hard work). In addition these researchers propose five related consequents to organizational commitment as follows: job performance, tenure, absenteeism, tardiness and turnover. Empirically, turnover has achieved the strongest degree of association while job performance has yielded mixed results.

Porter and his colleagues' work on organizational commitment approaches the construct uni-dimensionally. More recently, Meyer and Allen and their associates (Allen & Meyer, 1990; Meyer & Allen, 1988; Meyer, Paunonen, Gellatly, Goffin & Jackson, 1989) have raised the importance of distinguishing between the bases of an employee's commitment to the organization, specifically: affective commitment (based on emotional attachment to, and identification with, and involvement in the organization); continuance commitment (based on perceived costs associated with leaving); and normative commitment (based on a moral sense of obligation). Evidence was found, for example, to suggest (Meyer et al., 1989) that affective commitment is positively correlated with job performance, whereas continuance commitment is negatively correlated with job performance.

Based on this discussion, it is concluded that: 1) the nature of organizational commitment must be taken into account in specifying hypotheses, and 2) affective commitment is the most appropriate conceptualization of commitment as a consequent of individual-organization value congruence.

In terms of statistical associations, it is expected that individual-organizational value congruence will have a strong positive correlation with affective commitment, a relatively weaker positive correlation with normative commitment, and no positive relationship with continuance commitment. The conceptualization of both affective and normative commitment both incorporate value overtones. Allen and Meyer (1990) found a correlation of .51 between these two commitment variables. In contrast, the conceptualization of continuance commitment incorporates financial considerations.

Following from this discussion it is hypothesized that:

Hypothesis 1a: Individual-organizational value congruence will be positively associated with affective commitment to the organization.

Hypothesis 1b: Individual-organizational value congruence will be positively associated with normative commitment to the organization.

Hypothesis 1c: The degree of association between individual-organizational value congruence and affective commitment will be greater than the degree of association between individual-organizational value congruence and normative commitment.

Job Satisfaction. Despite the long-standing controversy in the literature with respect to this construct, it is proposed that job satisfaction serves as an important and relevant dependent variable. Brayfield and Crockett reviewed the literature in 1955 to conclude no appreciable relationship between job satisfaction and individual productivity. Vroom (1964) updated Brayfield and Crockett's review and reached the same conclusion based on a median correlation of .14 between measures of satisfaction and performance. Notwithstanding these empirical results, practitioners and academics remain fascinated with the notion that high job satisfaction pays off in enhanced job performance. Locke estimates that as of 1976 over three thousand studies involving the construct of job satisfaction had been conducted.

More recent meta-analytic studies of job satisfaction have not allayed the controversy surrounding this construct. Petty and his colleagues (1984: 309) found: "higher and more consistent correlations between overall job satisfaction and performance were indicated than those previously reported." Their calculations produce a mean corrected correlation of .31

between job satisfaction and performance. In contrast, a meta-analysis by Iaffaldano and Muchinsky (1985) supports Vroom's early findings with a "relatively low" (.17) estimate of the "true population correlation." It has been suggested (Organ, 1988) that the differences between these two reviews can be attributed to study selection criteria. Petty et al. concentrate on more recent works which utilize the most popular and standardized measures of satisfaction. Iaffaldano and Muchinsky take a more comprehensive selection of studies including some of the early works reviewed by Brayfield and Crockett, and by Vroom.

Locke (1976: 1304) provides extensive theoretical and empirical support for the relationship between the perception that one's job facilitates the fulfilment of one's important job values and satisfaction. Chatman (1988) suggests Locke's notion of "job values" may be partially related to organizational values. In fact, her empirical results show support for a relationship between overall job satisfaction and her value congruence construct (person-organization fit). In addition, she hypothesizes that value congruence should exhibit stronger associations with cultural/interpersonal facets of the job satisfaction (e.g., satisfaction with co-workers) than with extrinsic facets of job satisfaction (e.g., satisfaction with pay). Unfortunately, her empirical results show no statistically significant relations between any of the facet (JDI) satisfaction variables (work, supervision, co-workers, promotion, pay) and person-organization fit.

Based on this discussion, a positive relationship between individual-organizational value congruence and job satisfaction can be hypothesized. In addition, it appears that individual-organizational value congruence may exhibit greater association with certain facets (e.g., broad organizational aspects) of the job satisfaction object domain relative to other facets (e.g., more job-specific aspects like satisfaction with pay).

Specific hypotheses with respect to job satisfaction are as follows:

Hypothesis 2a: Individual-organizational value congruence will be positively associated with overall satisfaction with the organization.

Hypothesis 2b: Individual-organizational value congruence will be positively associated with satisfaction with work.

Hypothesis 2c: Individual-organizational value congruence will be positively associated with satisfaction with supervision.

Hypothesis 2d: Individual-organizational value congruence will be positively associated with satisfaction with co-workers.

Hypothesis 2e: Individual-organizational value congruence will be positively associated with satisfaction with promotion opportunities.

Hypothesis 2f: Individual-organizational value congruence will be positively associated with satisfaction with pay.

Hypothesis 2g: The degree of association between individual-organizational value congruence and overall satisfaction with the organization will be greater than degree of association between individual-organizational value congruence and the more job specific facets of satisfaction, namely satisfaction with work, supervision, co-workers, promotion opportunities, and pay.

Turnover Intention. The fit between individual characteristics and job expectations and values is identified in Steers and Mowday's (1981) model of voluntary employee turnover as a major factor influencing employee intent to leave the organization. In addition, Lofquist and Dawis' theory of work adjustment (1969) suggests that when high correspondence between person and the work environment is achieved, workers remain at their jobs.

Traditionally, the construct of job satisfaction has received primary attention as a predictor of turnover. More recently, Chatman (1988) suggests and finds partial empirical support for the hypothesis that person-organization fit is a better predictor of turnover. Her rationale is as follows: in many of today's organizations job dissatisfaction can be addressed by an internal move / transfer, whereas organizational dissatisfaction usually necessitates changing firms.

Based on this discussion, a negative relationship between individual-organization value congruence and employee turnover intention is hypothesized.

Hypothesis 3: Individual-organizational value congruence will be negatively associated with employee behavioral intention to leave the organization.

Organizational Citizenship Behavior. In order to function effectively organizations require acts of cooperation, helpfulness, gestures of goodwill, and other instances of what might be called citizenship behavior (Smith, Organ & Near, 1983). Katz (1964: 132) suggests: "An organization which depends solely upon its blue-prints of prescribed behavior is a very fragile social system." The need for "pro-social" or "extra-role" behavior in organizations has been implicitly recognized in the literature for some time (cf. Barnard, 1938; Katz & Kahn, 1966; Roethlisberger & Dickson, 1939).

More recently, researchers have explicitly addressed the antecedents and consequents of good citizenship behavior within organizations. This recent focus on the construct of citizenship behavior rests on the emergent proposition that tasks critical to organizational effectiveness will be discharged without formal role responsibility and control provided members share similar values. Ouchi (1980) advances the concept of a clan structure in which citizenship behavior is promoted because individual interests are parallel to community interests. Similarly, Sathe (1985) and Schein (1985) recommend a strong organizational culture (pervasively shared values, ideals, and norms) as the primary dimension of control.

Empirical evidence to suggest a link between value congruence and prosocial behavior can be found in the literature. O'Reilly and Chatman (1986) found significant relationships between internalization (defined as involvement based on congruence between individual and organizational values) and extra-role, prosocial behaviors in samples of university employees (n = 71) and graduating business (MBA and undergraduate) students (n = 162). A positive association was reported between the dollar amount MBA students (n = 73) pledged to the school during annual fund-raising and the degree to which they perceived their values to be congruent with those of the school.

Using principal components analysis of organizational citizenship data, Organ (1988) substantiates the existence of two citizenship factors - altruism (e.g., helping behavior - assisting a colleague with his or her responsibilities) and conscientiousness (e.g., compliance behavior - making an effort to be punctual). Organ points out that (p. 10) altruism involves inter-personal behavior whereas conscientiousness is defined by actions of a more impersonal nature.

Based on this discussion, a positive relationship between individual-organizational value congruence and organizational citizenship behavior in general is hypothesized. In addition, the nature of individual-organizational value congruence is such that interpersonal altruistic behaviors are more likely to be associated than impersonal compliant behaviors. The following hypotheses are advanced:

Hypothesis 4a: Individual-organizational value congruence will be positively associated with organizational citizenship behavior.

Hypothesis 4b: Individual-organizational value congruence will be positively associated with altruistic (e.g., helping) behavior in the organization.

Hypothesis 4c: Individual-organizational value congruence will be positively associated with conscientiousness behavior (e.g., punctuality) in the organization.

Hypothesis 4d: The degree of association between individual-organizational value congruence and altruistic behavior (e.g., helping) will be greater than the degree of association between individual-organizational value congruence and conscientiousness behavior (e.g., punctuality).

Absence Behavior. Employee absence from work is a significant and costly problem across North American industry. The academic community recognizing the relevance of this construct has devoted extensive resources to its antecedents. Despite considerable scientific attention, research results focusing on this construct have a long history of low reliability and weak predictive validity. Some attribute this to an overemphasis on simple bivariate models concentrating on employee attitudes (Brooke & Price, 1989). Others suggest a lack of reliable measures (Latham & Frayne, 1989).

More comprehensive theorization, for example, Steers and Rhodes (1978) multivariate model, and increasingly powerful analytical procedures including meta-analysis (Hunter, Schmidt & Jackson, 1982) and structural equation modelling (Joreskog & Sorbom, 1984) characterize recent research approaches to this important topic.

Steers and Rhodes (1978) made a seminal contribution to absence research when they introduced their multivariate model of employee attendance. Included in their model are theoretical grounds for hypothesizing a negative relationship between individual-organizational value congruence and absence behavior while recognizing employee satisfaction with his or her job situation as an intervening variable. Steers and Rhodes (1978: 394) state: "based on the limited evidence that is available, it would appear that the extent to which an employee's values and expectations are met does influence the desirability of going to work."

It is, however important to note controversy in the literature concerning the predictive validity of psychological correlates of employee absence. A recent meta-analysis (Farrell & Stamm, 1988) found work-environment and organization-wide correlates to be better predictors of employee absence than psychological or demographic correlates. These researchers conclude that there is little promise for individualistic theories of absence behavior which typically emphasize age, sex and employee attitudes (e.g., job satisfaction).

In contrast, Brooke and Price (1989) conduct an empirical test of a modified and extended version of Steers and Rhodes' model using structural equation modelling (LISREL estimates of the parameters). They find support for the retention of job satisfaction as a key intervening variable in the Steers and Rhodes model.

Clearly, absence behavior is a complex phenomenon. Psychological correlates (e.g., individual-organizational value congruence) may have low predictive validity and hypothesizing a direct relationship may be overly simplistic. Notwithstanding these caveats, testing for a negative association between individual-organizational value congruence and absence behavior is of interest in this study. Hypotheses relating to absence behavior in terms of total time lost and absence frequency are advanced as follows:

Hypothesis 5a: Individual-organizational value congruence will be negatively associated with absence behavior conceptualized in terms of total time lost.

Hypothesis 5b: Individual-organizational value congruence will be negatively associated with absence behavior conceptualized in terms of absence frequency.

5.5.2 Correlates of Employee Awareness of Organizational Values

Theoretical rationale has been presented to suggest that employees are aware of the organization's values to the extent that information concerning organizational values is salient in the social environment of work and individuals are predisposed to attend to such information. A variety of specific hypothesis can be drawn from this general proposition.

Social Salience of Organizational Values. Fiske and Taylor (1984: 187) list a number of antecedents of social salience including: being distinct from the immediate context, being unusual in terms of existing expectations and norms, being relevant to goal achievement, dominating the visual field, and being specifically instructed to pay attention.

From a values-management perspective it is suggested that organizational values become salient to individual employees to the extent that there exists: 1) Visual Salience - individual employees interact and/or work in close physical proximity of members of the dominant coalition (e.g., senior managers - see Schein, 1985) who manifest the required organizational values, 2) Temporal Salience - individual employees have spent time in the organization, 3) Instructed Salience - individual employees have been instructed (e.g., seminars, training, corporate documentation) to pay attention to the organization's required values or are required to discuss the organization's values with others (internally and/or externally) as part of their role, and 4) Goal Relevant Salience - individual employees are recognized and rewarded for attending to the organization's required values.

A number of hypotheses result from this discussion as follows:

Hypothesis 6a: Propinquity with members of the dominant coalition through interaction and/or close physical proximity will be positively associated with awareness of the organization's required values.

Hypothesis 6b: Tenure in the organization will be positively associated with awareness of the organization's required values.

Hypothesis 6c: Being specifically instructed to pay attention to the organization's required values will be positively associated with awareness of the organization's required values.

Hypothesis 6d: Having a role which involves discussing the organization's required values with others inside and/or outside the organization will be positively associated with awareness of the organization's required values.

Hypothesis 6e: Being recognized and rewarded for adherence to the organization's required values will be positively associated with awareness of the organization's required values.

Individual Predisposition to Attend to the Organizational Environment. In addition to information concerning required values being salient within the social context of the organization, individual employees need to be predisposed (sensitive) to attend to such information. Fiske and Taylor (1984) describe a number of personality variables which influence the degree to which individuals attend to data emanating from their social environment. These variables include: self-consciousness (Fenigstein, Scheier, & Buss, 1975); locus of control (Rotter, 1966); and self-monitoring (Snyder, 1974, 1979). Hypotheses relating to each of these constructs will be presented in order of their mention.

Self-consciousness reflects a general tendency to attend to the self across situations (Fenigstein, Scheier, & Buss, 1975). Self-consciousness comprises three factors: *public self* (awareness of one's self as a social object), *private self* (awareness of one's internal thoughts and feelings), and social anxiety (a feeling of discomfort in the presence of others). These researchers state (p.523): "Public and private self-consciousness refer to a process of self-focused attention; social anxiety refers to a reaction to this process."

Research (Fenigstein, 1974) has shown that women who were high in public self-consciousness were more sensitive to rejection by their peer group than were low public self-conscious women. In contrast, private self-consciousness was unrelated to reaction to rejection. It is therefore suggested that individuals who perceive themselves as social objects (high public self-consciousness) are motivated to maintain membership in their social group, which in turn will predispose them to attend to stimuli concerning group norms and values.

The same point can be made from the perspective of impression management. Scheier (1980) found that people who are publicly self-conscious are more likely to adjust their attitudes so as to fit with their social context. In this regard, publicly self-conscious individuals are more likely to seek out information concerning social expectations, norms and values. Based on this discussion it is hypothesized that publicly self-conscious employees will be more aware of the organization's required values.

Hypothesis 7a: Public self-consciousness will be positively associated with awareness of the organization's required values.

In contrast, it is suggested that individuals who are high on private self-consciousness (a predisposition to attend to one's inner thoughts and feelings) will be less likely to attend to external stimuli relating to the organization's norms and values. Therefore a negative association is hypothesized between private self-consciousness and awareness of the organization's required values.

Hypothesis 7b: Private self-consciousness will be negatively associated with awareness of the organization's required values.

It is also suggested that socially anxious individuals (those who experience discomfort in the presence of others) will tend to limit their social interactions. It follows that these individuals will be less likely to become aware of the organization's social norms and values.

Hypothesis 7c: Social anxiety will be negatively associated with awareness of the organization's required values.

A second personality variable which influences the degree to which individuals attend to stimuli within their external environments is locus of control. Rotter (1966) distinguishes between individuals with an "internal" locus of control and those with an "external" locus of control. Individuals who believe that reinforcements are contingent on their behavior, capacities and attributes have an *internal* locus of control. Individuals who believe that reinforcements are contingent on external forces such as luck, fate, chance and the influence of powerful others, have an *external* locus of control. Fiske and Taylor (1984) suggest *internals*, motivated by the expectation that they can exert control, attend carefully to their environments. Whereas *externals*, believing in their inability to exert influence, pay less attention to their environments.

Based on this discussion the following hypothesis is presented:

Hypothesis 7d: External locus of control will be negatively associated with awareness of organization's required values.

A third personality variable which influences the degree to which individuals attend to stimuli within their external environments is self-monitoring. Snyder (1974) developed the concept of self-monitoring which describes the extent to which people attend to social situations in order to gain knowledge of appropriate behaviors. He states (p.536):

> Individuals differ in the extent to which they monitor (observe and control) their expressive behavior and self-presentation. Out of a concern for social appropriateness, the self-monitoring individual is particularly sensitive to the expression and self-presentation of others in social situations and uses these cues as guidelines for monitoring and managing his own self-presentation and expressive behavior. In contrast, the non-self monitoring person has little concern for the appropriateness of his presentation and expression, pays less attention to the expression of others, and monitors and controls his presentation to a lesser extent.

In the context of an organization, Snyder's concept of self-monitoring provides insights into individual differences in attending to social norms including salient values manifest in the organizational culture. It is suggested that high self-monitors will make themselves more aware of required values than low self-monitors.

Hypothesis 7e: Self-monitoring will be positively associated with awareness of the organization's required values.

This section has detailed twenty-seven hypothetical statements of relation under a variety of headings including attitudinal consequents to individual-organizational value congruence such as affective commitment, and situational (e.g., corporate training) and personality-based (e.g., self-monitoring) antecedents to employee awareness of the organization's required values. The operationalization of the constructs underlying these hypothesized relationships will be described in the following chapter on research design. The results of empirical tests designed to address these hypotheses will be presented in Chapter 7.

5.6 THE STRUCTURE OF INDIVIDUAL - ORGANIZATIONAL VALUES

The central theme of this research is the degree of fit between individual employees and the normative aspects of their work situations. O'Reilly, Chatman and Caldwell (1991) suggest that organizational science has failed to describe people and situations along commensurate dimensions thereby limiting scholars' ability to develop a coherent theory of person-situation interactions. This study relies on a typology of twenty-four value dimensions to operationalize individual-organizational value congruence. To be useful (commensurate) these dimensions of person and situation should be comparable.

It is proposed that separate factor analyses of individual and organizational value profiles will address the issue of commensurability. If there is evidence of similar factors across persons and their work situations, then this will add support to the meaningfulness of the concept of individual-organizational value congruence.

The literature describes a variety of value structures for both persons and organizations (e.g., cultural typologies). Using his set of thirty-six personal value dimensions, Rokeach (1973) found seven factors accounting for 41% of the variance. These factors were labelled: immediate versus delayed gratification, competence versus religious morality, self-constriction versus self-expansion, social versus personal orientation, societal versus family security, respect versus love, and inner versus outer directed. While Rokeach makes a good case for the low interdependence across his value items, strictly speaking his results must be viewed with caution given the ipsative nature of his ranking data.

A number of cultural typologies have been suggested from a qualitative perspective (e.g., Deal & Kennedy, 1983; Handy, 1978; Ouchi, 1980). From a quantitative perspective, Hofstede, Neuijen, Ohayv, and Sanders (1990) used principal component factor analysis with orthogonal varimax rotation to examine 57 values items. They found three factors (need for security, work centrality, and need for authority) which together accounted for 62% of the variance.

O'Reilly, Chatman and Caldwell (1991) used principal component factor analysis with orthogonal varimax rotation to examine the 54 value items comprising their OCP (Organizational Culture Profile) instrument. Their analysis is of particular interest as their value dimensions are designed to be commensurate at both individual and organizational levels of analysis. Using individual preferences data, they found eight factors: innovation, attention to detail, outcome orientation, aggressiveness, supportiveness, emphasis on rewards, team orientation, and decisiveness. Using organizational values data, they found seven factors: innovation, stability, respect for people outcome orientation, attention to detail, team orientation, and aggressiveness. They report (p. 504): "An inspection of the two factor analyses reveals that five of the eight factors are replicated almost exactly - innovation, outcome orientation, aggressiveness, detail orientation, and team orientation."

Of particular appeal to this research is Quinn and his colleagues' (e.g., Quinn & Hall, 1983) competing values model which was introduced in Chapter 2. Built on the axes of internal-external focus and flexibility versus control, this generic model has been successfully applied in a variety of fields including organizational culture.

Using the competing values model, Quinn and McGrath (1985) derive a typology of four organizational cultures: *the market* - emphasizing efficiency and productivity, *the* *adhocracy* - emphasizing transformation and growth, *the clan* - emphasizing morale and group cohesion, and *the hierarchy* - emphasizing stability and the execution of regulations..

Yeung, Brockbank and Ulrich (1989) applied Quinn's cultural typology in their empirical assessment of organizational culture and human resource practices. They state (p. 3):

> Quinn's typology is chosen to guide this study because of its theoretical soundness in integrating cultures to other organizational components (Miles & Snow, 1978; Mintzberg, 1979; Quinn & McGrath, 1984) and it operationalization through a psychometrically sound instrument (Cameron, 1985; Zammuto & Krakower, 1988; Quinn & Spreitzer, 1989).

It has been postulated in earlier work (McDonald & Gandz, 1992b) that the twenty-four shared values dimensions central to this research can be superimposed (as shown in Figure 9) on Quinn and McGrath's (1985) model of cultural types as follows:

Relationship-oriented organizations (Quadrant I) will emphasize and reward the shared values of: broad-mindedness, consideration, cooperation, courtesy, fairness, forgiveness, humor, moral integrity, openness and social equality.

Change-oriented organizations (Quadrant II) will emphasize and reward the shared values of: adaptability, autonomy, creativity, development and experimentation.

Task-oriented organizations (Quadrant III) will emphasize and reward the shared values of: aggressiveness, diligence and initiative.

Status-quo-oriented organizations (Quadrant IV) will emphasize and reward the shared values of: cautiousness, economy, formality, logic, obedience, and orderliness.

FIGURE 9

Shared Value Concepts Embedded in Quinn & McGrath's Cultural Typology

RELATIONSHIPS | **CHANGE**

THE CLAN **Quadrant I : The Consensual Culture** **Purpose: Group Cohesion** **Salient Values:** Broad-Mindedness, Consideration, Cooperation, Courtesy, Fairness, Forgiveness, Humor, Moral Integrity, Openness, Social Equality **Information Processing Styles:** Discussion, Participation, Consensus	*THE ADHOCRACY* **Quadrant II : The Developmental Culture** **Purpose: Broad Purposes** **Salient Values:** Adaptability, Autonomy, Creativity, Development, Experimentation **Information Processing Styles:** Insight, Invention, Innovation
THE HIERARCHY **Quadrant IV : The Hierarchical Culture** **Purpose: Execution of Regulations** **Salient Values:** Cautiousness, Economy, Formality, Logic, Obedience, Orderliness **Information Processing Styles:** Measurement, Documentation, Computation	*THE MARKET* **Quadrant III : The Rational Culture** **Purpose: Pursuit of Objectives** **Salient Values:** Aggressiveness, Diligence, Initiative **Information Processing Styles:** Goal Clarification, Individual Judgement, Decisiveness

STATUS QUO | **TASK**

Objectives of this study include testing: the underlying structure of the twenty-four shared value dimensions, their commensurability across persons and organizations, and the proposition that Quinn and McGrath's model represents a relevant higher level framework.

This chapter has presented theoretical rationale underlying empirical procedures and statistical analyses which will be described in subsequent chapters. Building from consistency theory and social cognition theory, a research model (Figure 8) has been developed. In addition, each construct in the model has been defined. The research model becomes the basis for a variety of hypotheses relating to the positive consequents of individual-organization value congruence, and to the personal and situational antecedents to employee awareness of the organization's required values as presented in Section 5.5. In addition, the commensurability and underlying structure of the proposed shared values dimensions has been addressed in Section 5.6.

The next chapter describes the design of the survey including: selection of the research site, stratified random sampling procedures, instrumentation used to collect the data, and an analytical framework to guide statistical analyses of the data.

CHAPTER 6 - SURVEY RESEARCH METHODOLOGY

This chapter describes the methodology used to test the research model. Based on conclusions drawn from the review of previous methodological procedures (Chapter 3), this research design incorporates:

1. A two-part set of paper and pencil instrumentation distributed by means of a large-sample mail survey.
2. A typology of twenty-four shared value dimensions derived from content analysis of interview notes (Chapter 4) in order to be relevant in the context of a modern business organization.
3. Multiple methods (value ranking and value rating) to operationalize individual and organizational values.
4. An intra-person framework, in accordance with consistency theory, to operationalize individual-organizational value congruence.
5. A variety of precautionary steps designed to counteract threats to validity, in particular, social desirability response set biases.

This chapter starts by discussing the research design including: the selection of a research site, the sampling plan used to produce a stratified random sample, data collection procedures, and respondent demographics. The next section describes the operational measures used for each construct in the research model. This section culminates with a detailed measurement model showing all of the variables and their hypothesized relationships. There are also sections which address precautionary actions taken in order to reduce threats to validity and assess the accuracy of the data input file. The final section in this chapter describes the framework and statistical methods used to analyze the data.

6.1 THE RESEARCH DESIGN

This first section describes the research design. Criteria for the selection of a research site are discussed, the sampling plan is presented, and data collection procedures are described.

6.1.1 The Research Site

A single large Canadian corporation was selected as the research site. The rationale for a single site was as follows: Testing the consequents of individual-organizational value congruence and the antecedents to employee awareness of organizational values does not require organizational variation. Focusing on a single site allowed for a more in-depth investigation of values within the organization. It also removed the potentially confounding effects of variation across organizational cultures. However, focusing on a single corporate research site would not remove the effects of sub-cultural variation within the organization. To reduce the likelihood of this threat, cultural homogeneity was an important consideration in site selection.

The criteria for site selection were as follows: 1) a corporation representative of the mainstream of the Canadian business community, 2) a corporation with a CEO who believes in values-based management and who would be supportive of this research, 3) a corporation large enough to permit random sampling across its divisions, functions and hierarchical levels, and 4) a corporation manifesting indications of a homogeneous organizational culture including consensus on its shared values.

It was fortunate that one of the top ten Canadian companies (based on The Financial Post 500 ranking) met all of the above criteria and was available as a research site. This corporation has a CEO who is publicly known to emphasize certain values. It has over 9,000 employees. In addition it is over 100 years old and has a long tradition within one industry.

6.1.2 Sampling Plan

A sampling plan was carefully developed in order to ensure adequate representation across horizontal (position) and vertical (function) strata in the organization. By doing so, sub-cultural variations based on functional or hierarchical differences, if any, could be identified. Horizontal strata were defined by position in the organizational hierarchy (e.g., executive managers, senior managers of professional / technical, professional and technical staff workers, and clerical / administrative staff workers). Vertical strata were defined by major functional areas (e.g., general services, production / distribution, retail sales, industrial sales, and technological / research services).

While the company had a number of divisions, at the request of senior management, this study only sampled salaried employees at the corporate head office and within one of its major divisions. This resulted in a sampling frame of 3,502 employees.

The sampling plan is shown in Table 8. In order to ensure adequate representation from the dominant coalition (executive management) a census was taken of all fifty-five executive managers. For the remaining strata, participants were sampled at random from within their sub-group populations. For example, the sample of thirty professional / technical staff (as shown in Table 8) was selected from a sub-group population of 702 professional / technical staff working in retail sales by selecting every twenty-third label from the address list (supplied in alphabetical order by corporate data services) of all professional / technical staff working in retail sales.

This procedure increased the likelihood of adequate sub-population representation from across the organization in terms of position in hierarchy and functional orientation. It was also anticipated that a variety of other sub-population groupings based on demographic information supplied (e.g., males / females) would be represented, however, explicit actions to facilitate representation were not incorporated in the sampling plan.

TABLE 8
Sampling Plan

	Gen. Svc.	Prod./Dist.	Retail Sale	Indus. Sale	Tech./Res.	Totals:
Executive	13 / 13	15 / 15	14 / 14	7 / 7	6 / 6	55 / 55
Mgrs. P/T	26 / 26	34 / 88	30 / 86	30 / 42	30 / 49	150 / 291
P/T staff	30 / 203	30 / 741	30 / 702	30 / 147	30 / 317	150 / 2110
Adm. staff	30 / 165	30 / 293	30 / 494	30 / 69	25 / 25	145 / 1046
Totals:	99 / 407	109 / 1137	104 / 1296	97 / 265	91 / 397	500 / 3502

Note: the ratio indicates the number sampled out of the total pool of potential respondents.

6.1.3 Data Collection

Mailing and follow-up procedures used in this study are based on guidelines established by Dillman (1978). Each of the five hundred selected participants (as per the sampling plan) was sent via the organization's internal mail system four pieces of mail as follows:

1. March 25, 1991 - A University of Western Ontario (9" x 12") envelope containing: 1) a corporate cover letter in support of the research signed by a senior human resources manager, 2) the first questionnaire booklet which included an open letter to participants on University of Western Ontario letterhead, and 3) a pre-addressed return envelope for sending the completed questionnaire directly back to the University of Western Ontario.

In the university letter at the start of the questionnaire booklet, participants were informed that a second questionnaire (Part 2) would follow in about two weeks, time.

They were asked to complete and return the first questionnaire prior to the arrival of the second questionnaire. They were also asked to create a five-digit code number which would be used to match their completed questionnaires without having them reveal their identity. In addition, the letter to participants asked for "open and candid" responses while stressing confidentiality and the anonymous nature of all returns. There was also a contact telephone number for those participants with questions and concerns.

2. April 2, 1991 - A follow-up letter on University letterhead which encouraged immediate return of the first questionnaire, if not already done so.

This follow-up letter also contained a contact number for participants who had not received the first mailing. Given the recency of the sampling frame and use of the corporate internal mail system, very few calls (less than ten) were received. These individuals were sent a package containing the first questionnaire direct by courier on the day their call was received.

3. April 8, 1991 - A University of Western Ontario (9" x 12") envelope containing: 1) the second questionnaire booklet, and 2) a pre-addressed return envelope for sending the completed questionnaire directly back to the University of Western Ontario.

Similar to the first questionnaire booklet, there was an open letter to participants asking for candid responses and assuring confidentiality.

4. April 22, 1991 - A final follow-up letter on University letterhead which encouraged the immediate return of both the first and second questionnaires, if not already done so.

This letter also contained a contact telephone number in the event that the final follow-up letter was the first piece of correspondence received or the participant had misplaced his or her questionnaires. In addition, the letter offered participants the opportunity to receive a research summary of the results (distributed July 22, 1991).

These materials, with the exception of the corporate cover letter, are contained in Appendix B. Certain items in the questionnaire booklets and associated correspondence have been blacked out in order to maintain the confidentiality of the corporate sponsor.

The data collection procedures went well. There were only five cases reported in which questionnaires could not be delivered because the individuals selected were on extended leave or had left the employ of the corporation. In addition, nearly all (99% plus) of the returned questionnaires were usable (properly completed).

Over two hundred first questionnaires were received prior to the distribution of the second questionnaires indicating that many participants were complying with the instructions. The first and second questionnaires were separated by a two-week time period in order to reduce the likelihood of hypothesis guessing and to break participants' time requirement into two parts. The first questionnaire focused on personal value preferences whereas the second questionnaire focused on individual perceptions of the organization's value preferences.

Because of reservations concerning the degree to which some of the value concepts could be meaningfully translated into French, the alternative of French and English versions of the questionnaires, particularly at this early stage in the research, was ruled out. A minor incident occurred during the data collection when thirty-seven participants located in the province of Quebec inadvertently received copies of the English-only questionnaire.

Subsequent discussion with the corporation's human resources department revealed that nearly all of their Quebec salaried employees are fully bilingual. However, it was in violation of a recent provincial law to distribute English-only surveys to non-managerial personnel. In response, a letter of apology was drafted (in French) and sent to these participants along with the offer of a translator via telephone.

An unsystematic review of postage-marks on return envelopes indicated that some participants from Quebec (at least ten) did respond in English without any indication (e.g., extensive missing data) of misunderstanding the items contained in the questionnaires.

6.1.4 Response Rate and Respondent Demographics

Despite some initial reservations concerning the total length of the instrumentation and cognitive complexity involved in completing two value rankings, participant response was very gratifying. The response rate and resultant demographics are displayed in Table 9.

TABLE 9

Response Rate and Respondent Demographics

Response Rate:

	Questionnaire One:	Questionnaire Two:
Total Number Selected:	500	500
Undeliverable (e.g., had left / on extended leave):	5	5
Returned - unable to use:	2	1
Returned - usable:	375	337
Matched Sets - Q#1 & Q#2:	334	
Final Adjusted Response Rate:	334 / 495 = 67.5 %	

Organizational Demographics:

By Position:

Executives:	42 out of 55
Senior MPT:	94 out of 150
Prof. / Tech.:	119 out of 150
Adm. / Clerical:	74 out of 145
Missing Data / Other:	5

By Operational / Functional Area:

General Services:	55 out of 99
Production / Distribution:	81 out of 109
Sales (Retail and Industrial):	106 out of 201
Research / Technology:	27 out of 91
Missing Data / Other:	65

Head Office / Division:

Corporate Head Office:	92
Operating Division:	238
Missing:	4

Pre-Merger Information*:

Original Firm:	252
Acquired Firm:	66
Joined After Merger:	8
Missing:	8

* In 1989 the corporation acquired a competitor within its industry group. The relative size of this competitor was approximately 50%. The nature of the competitor's business was identical. These data were collected in order to test for sub-cultural variation.

TABLE 9 (Cont'd)

Response Rate and Respondent Demographics

Personal Demographics:

Age: (years)

Under 20:	0
20-25:	12
26-30:	19
31-35:	45
36-40:	64
41-45:	67
46-50:	63
51-55:	39
56-60:	21
60+:	3
Missing:	1

Work Experience:

Years in current position:
mean = 3.5 range = 0.1 to 28.0 years

Years with organization:
mean = 16.3 range = 0.2 to 40.0 years

Years of full-time work experience:
mean = 20.2 range = 0.2 to 47.0 years

Gender:

Male: 213 Female: 103

Salary Level:

Under $40,000:	59
$40,000 to $60,000:	73
$60,001 to $80,000:	40
$80,001 to $100,000:	62
Over $100,000:	92
Missing:	8

Education Level:

Less than High School Graduate:	8
High School Graduate:	45
Some Community College:	33
Community College Diploma:	29
Some University:	34
Bachelor's Degree:	120
Master's Degree:	57
Ph.D. Degree:	6
Missing:	2

Professional Designation:

Professional Engineer:	65	Lawyer:	7
Chartered Accountant:	13	C.E.T.	6
C.G.A. / C.M.A.	2	C.F.A.	1
M.D. / R.N.	5		

Table 9 provides a breakdown of respondent data along a number of dimensions. In general the response rate of 67.5% was very good, especially when one considers the demands in terms of questionnaire complexity and length. This response rate may have been favorably influenced by the supportive corporate cover letter and by respondent interest in the topic (e.g., over eighty respondents pursued the offer of a research summary). There were also indications that the two follow-up letters worked well as manifested in changes to the daily flow of completed questionnaires.

Table 9 indicates that corporate executives (76% response rate) were very supportive of this research thereby providing a good base (n = 42) against which other individual and group perceptions of the organization's required values can be compared. The relatively lower response rate (51%) from clerical and administrative workers may in part reflect the cognitively demanding nature of the questionnaires.

In addition, there was reasonable representation across each of the four (retail and industrial sales were amalgamated into one classification) functional areas as follows: general services, production and distribution, sales, and research and technology. There was also good representation across corporate head office (92 respondents) and the operating division (238 respondents).

Approximately two years prior to the collection of data for this study, the corporation acquired and began to merge operations with a competitor within its industry group. At the time of and subsequent to the merger a number of industry experts speculated on cultural differences between the two firms. This sample contains 66 respondents who were originally members of the acquired firm. This sub-group, along with others mentioned (e.g., by position and function), will be systematically analyzed in order to uncover any indication of sub-group differences in perception of organization's required values.

Respondents' personal demographics were as one would expect given the nature of this industry. It is engineering-oriented and many roles require a high level of technical competence. Typical entrants to this industry are well-trained (over one-half of the sample had a university degree) and remain for the long-term (average tenure of the sample was 16.3 years). As reflected in the salary data, individuals working in this industry are relatively well-paid. While this industry has tended to be male-dominated, the sample includes representation from both males (213) and females (103). However a cross-tabulation of gender and position in the hierarchy indicates that females are most prevalent (75%) at the administrative / clerical level.

It is suggested that the size and composition of this sample is well-suited to test the research model. In addition, adequate representation by various sub-groups will provide data for investigating sub-cultural differences.

6.2 OPERATIONALIZING THE MODEL

This section provides a detailed discussion on the operationalization of each construct in the research model. The operationalization of individual-organizational value congruence, the central construct in this research, is novel. It comprises calculated indices based on the correlation (Spearman rank and Pearson product-moment) between respondents' perception of their personal value priorities and their perception of the organization's value priorities across the twenty-four shared values dimensions identified in Chapter 4. The operationalization of the remaining constructs, with some minor exceptions, relies on prominent scales found in the literature.

6.2.1 Operationalizing Personal and Organizational Values

An extensive review of values measures at both the personal and organizational level of analysis reveals the dominance of two procedures: value ranking (e.g., Rokeach, 1973) and value rating (e.g., England, 1967, 1975). The relative merits of each procedure have been discussed in detail in Chapter 3.

Value ranking is attractive because its hierarchical or ipsative form may conceptually mirror how individuals cognitively organize values (Ravlin & Meglino, 1989). On the other hand, the completion of ranking instrumentation is cognitively demanding for many respondents and the ordinal data produced are ipsative.

An alternative procedure, one which some promote to be superior (e.g., Braithwaite & Law, 1985), is value rating. One advantage of rating scales is the provision of interval measurement data which facilitate between-subject comparisons and the application of sophisticated statistical analyses. The major drawback of rating scales is their increased susceptibility (relative to ranking procedures) to social desirability response set biases: a major threat to validity in values-based research.

This study operationalizes personal and organizational values using both ranking and rating procedures. While there exists sufficient rationale in the literature to justify exclusive dependence on either procedure, it is proposed that this multi-method approach offers a more rigorous test of measurement, in addition to an opportunity to address the ongoing ranking versus rating debate.

Value Ranking. The value ranking procedures applied in this study were modelled after Rokeach's (1973) work. At the start of the first questionnaire (refer to Appendix B), respondents were asked to rank the twenty-four value concepts (Chapter 4) from "1" (most important to you) to "24" (least important to you). Each of the twenty-four value concepts was presented along with a brief definition (consistent with its usage during practitioner interviews). The addition of brief definitions for each value concept represents a methodological enhancement which Rokeach found to be beneficial. Also included in the detailed instructions were statements designed to reduce any social desirability tendency the respondent may have been experiencing. It should be noted that the rating instrumentation also contained anti-social desirability instructions designed to focus respondent thinking on operative as opposed to espoused values.

At the start of the second questionnaire, respondents were asked to rank the same twenty-four value concepts, only this time in terms of what is important to the organization. The ranking went from "1" (most important to this organization) to "24" (least important to this organization). The detailed instructions included statements asking respondents to focus on "true" operative values of the corporation ("the way things are done around here") as opposed to espoused values promulgated in promotional / public documentation (e.g., annual reports).

As mentioned briefly, there were several reasons for using a two-part survey with a two-week separation between the first and second questionnaires: 1) it separated the cognitively demanding task of personal value ranking from organizational value ranking, 2) it split a lengthy survey into two parts each of which was capable of being completed in less than forty-five minutes, and 3), it reduced the likelihood of hypotheses guessing and consistency effects (Salancik & Pfeffer, 1977) by respondents.

Completed questionnaires were matched for each respondent using a confidential five-digit code. Respondents were asked to invent their own five-digit code (avoiding popular combinations such as *99999* or *12345*) and insert it in a space provided on the back cover of Questionnaire One while tearing off a stub containing their code for later attachment to the back cover of Questionnaire Two.

Out of the 337 second questionnaires returned, 334 were able to be matched to first questionnaires. Despite the odds against two or more individuals inventing the same five-digit code, two respondents did supply the same code number. In this situation, their questionnaires were easily matched by examining differences in handwriting styles.

The value ranking exercises appear first in each of the two questionnaires because they are demanding tasks, both cognitively and in terms of time. Indications are that most respondents conscientiously applied themselves to the completion of these rankings. For example, if the "1" to "24" rankings were completed properly without repeating or missing a rank number, then the totals of these rankings must equal 300. Ninety percent of those who completed the first ranking (personal values) had a ranking total of 300 (range = 276 to 316) with only 12 cases of missing data. Eighty-seven percent of those who completed the second ranking (organizational values) had a ranking total of 300 (range = 213 to 315) with only 16 cases of missing data. For analysis purposes, rank data which did not total exactly 300 for both personal and organizational value rankings were treated as missing data.

Value Rating. Tables 2 and 3 in Chapter 3 demonstrate the popularity of rating procedures for the operationalization of values at both the individual and organizational level of analysis. In keeping with Braithwaite and Law's (1985) recommendation, this study uses multi-item rating scales to operationalize the twenty-four shared values dimensions. There are four items per scale (value concept) which were developed based on descriptives used during the interviews and the need to maintain definitional consistency as validated by a thesaurus (Roget's International Thesaurus, fourth edition).

In addition, content validity of the shared value domain and representativeness of associated items were pre-tested using a sample of 79 MBA students. The indications were (based on discussions with students following the test administration and the paucity of missing data) that most students felt comfortable with the value concepts and the items used to operationalize them.

In this present study, Part Two of Questionnaire One asked participants to describe their typical characteristics using seven-point Likert-type scales. Respondents rated 96 words / word phrases from "1" (this word phrase describes me *not at all*) to "7" (this word phrase describes me *perfectly*). In a similar fashion, Questionnaire Two asked participants to describe the typical characteristics of the organization using 96 items / four per value concept.

For example, in Questionnaire One participants rated themselves in terms of the value of openness (defined as being straightforward, sincere and candid in discussions) using the descriptives: *speak-directly, candid & open, frank, and straightforward & direct*. In Questionnaire Two, participants rated the organization in terms of its openness using: 1) To fit well into this organization, you have to: *be careful about what you say* (strongly disagree to strongly agree - reverse scored); 2) This organization rewards employees who:

speak their minds (strongly disagree to strongly agree); 3) This organization is characterized by: *frank and open meetings and discussions* (strongly disagree to strongly agree); and 4) In this organization, employees are: *encouraged to speak candidly* (strongly disagree to strongly agree).

Out of the 375 individuals who responded to the first questionnaire, 332 (89%) completed the personal value rating exercise with no missing data. Out of the 337 individuals who responded to the second questionnaire, 318 (94%) completed the organizational value rating exercise with no missing data. In those few cases where rating data were missing an individual means substitution (using the individual's responses to related scale items) was instituted provided that the individual had responded to at least two of the items.

6.2.2 Calculation of Individual-Organizational Value Congruence

This study relies on three operationalizations of individual-organizational value congruence based on: 1) the rank correlation between each individual's personal value ranking and their organizational value ranking, 2) the product-moment correlation between each individual's personal value rating and their organizational value rating, and 3) each individual's perception (using a four-item Likert-type scale) of how well he or she fits with the organization on the basis of shared values.

The calculation of an index of individual-organizational value congruence is an assessment of profile similarity. In this specific case it is a question of: "How similar is the employee's profile of his or her personal value priorities to his or her profile of perceived organizational value priorities using the same twenty-four value dimensions?"

Cronbach and Gleser (1953) review a variety of techniques used to assess profile similarity including: distance ("D" - Osgood & Suci, 1952); distance for standardized variates ("CRL" - coefficient of radical likeness - Pearson, 1928); transformed distance for standardized variates (r_p - Cattel, 1949); product-moment correlation across variates ("Q" -

Stephenson, 1950); correlation across scores ranked within a profile ("Rho" - Spearman, 1904); correlation based on rank arrangements (Tau - Kendall, 1948); and correlation based on tally of similarity of slope along profiles ("r_{ps}" - du Mas, 1946).

Cronbach and Gleser (1953) are critical of techniques which ignore individual differences in elevation (the individual mean score across variates) and scatter (the individual standard deviation within a profile). They recommend computation of an index of similarity (called "D") in a "k-2" test space (e.g., one in which scores have been adjusted to correct for individual differences in elevation and scatter).

The formulation of value congruence indices applied in this study (VC $_{rate}$ - a product-moment correlation across variates for rating data and VC $_{rank}$ - a Spearman rank correlation across variates for ranking data) are in keeping with Cronbach and Gleser's recommendations. They state (p. 463):

> Several formulas have the effect of measuring similarity in k-2 space. We have already noted that a *Q* correlation based on raw scores gives the same result as obtaining *D* from scores standardized within profiles. Correlation is thus a special case of the *D* measure.
>
> Measures of similarity are at times based on scores ranked from highest to lowest within a profile. The correlation of two such sets of ranks yields *Rho*, which is thus like *Q* in many of its properties.

The rating value congruence index (VC $_{rate}$) based the *Q* methodology used in this study has the added advantage of combating individual social desirability biases. The product-moment calculation relies on each individual's value ratings relative to his or her own mean rating as opposed to treating the data in an absolute manner across cases.

For example, assume that respondent A and respondent B have in reality identical value profiles, but respondent A's reported scores on the scales include social desirability bias. Respondent A (to appear socially desirable) generally inflates his or her personal value ratings to achieve a mean value rating of 5.6 on the seven-point scales. Respondent B who does not inflate his or her personal value ratings achieves a mean rating of 4.6 on the seven-point scales. In absolute terms respondent A and B appear to be different, however, take the inflationary effect of wanting to be socially desirable away and their scores are the same.

The calculation of value congruence as a Q correlation is based on movements (value rating scores) about each individual's own personal mean rating score (be it, for example, 5.6 for respondent A, or 4.6 for respondent B). In this manner individual differences in how well (or poorly) they present themselves are, on average, taken into account.

Individual-Organizational Value Congruence Based on Value Ranking. An index of congruence (VC_{rank}) was calculated for each case using Spearman's rank order correlation equation as follows:

$$VC_{rank} = 1 - \frac{6 \Sigma d^2}{n(n^2 - 1)}$$

where: VC_{rank} = the rank order correlation between an individual employee's ranking of his or her personal values and his or her perception of the ranking of the organization's values.

d = the difference in personal and organization value rankings across the twenty-four value dimensions.

n = the number of paired observations = 24

Support for this formulation as an index of value congruence can be found in the recent literature. Meglino, Ravlin and Adkins (1989) used rank order correlations to assess value congruence across four value dimensions. In their study, correlation coefficients were corrected for skewness by conversion to z scores using Fisher's *r to z* transformation (Fisher, 1921). In the case of this study which uses twenty-four value dimensions, skewness (skewness = -.319) was not problematic in the distribution of rank order correlation coefficients (mean = .24, range = -.79 to +.97). As a result Fisher's transformation was not applied.

Visual examination of the resultant distribution of rank order correlation coefficients from this study indicates a uni-modal bell shaped curve. In addition, a Kolmogorov-Smirnov one-sample goodness-of-fit test was applied to compare the rank order correlation distribution with a hypothetical normal distribution. The results of this test indicate no significant difference ($z = 0.80$, $p = 0.54$) at the $p < .05$ significance level.

Individual-Organizational Value Congruence Based on Value Rating. Value rating data were used to create two profiles for each employee. The first profile reflects the individual employee's perception of how characteristic each of the twenty-four value dimensions is of himself or herself. The second profile reflects the individual employee's perception of how characteristic each of the twenty-four value dimensions is of the organization. Value congruence in this context is the product-moment correlation between the two profiles, personal values and organizational values.

The rationale for calculating the correlation of value profiles for each respondent is based on the *Q* methodology (Stephenson, 1952: 484) which relies on a number of propositions including: 1) the populations are statements, traits, or the like; 2) variates refer to operations of a single person, or about him, in one interactional setting; 3) the transitory postulate (tests of significance) refers to intra-individual differences of significance; 4) variates may interact; and 5) scores are approximately normal and standardized, as in product-moment correlational theory.

The second index of congruence (VC_{rate}) applied in this study was calculated using a product-moment formulation as follows:

$$VC_{rate} = \frac{\Sigma\,(pv_{rating} - pv_{elevation})\,(ov_{rating} - ov_{elevation})}{\sqrt{\Sigma\,(pv_{rating} - pv_{elevation})^2\;\Sigma\,(ov_{rating} - ov_{elevation})^2}}$$

where: VC_{rate} = the Q correlation between an individual employee's rating of his or her personal values and his or her perception of the rating of the organization's values.

pv_{rating} = the individual's personal value rating score on each of the twenty-four value dimensions.

$pv_{elevation}$ = the individual's mean personal value rating.

ov_{rating} = the individual's organizational value rating score on each of the twenty-four value dimensions.

$ov_{elevation}$ = the individual's mean organizational value rating.

The calculation of a product-moment correlation as an index of value congruence is supported in the recent literature. Chatman (1988, 1991) in her study of person-organization fit used product-moment correlations to represent the fit between individual and organizational value profiles. She generated profiles using a Q-sort procedure (Block, 1978) which forced items (n = 54) into a 9-point, uni-modal, symmetrical distribution. Similarly, Caldwell and O'Reilly (1990) operationalized person-job fit using the same procedure.

The Q-sort procedure requires respondents to sort a deck of cards (items) into a specified number of categories (e.g., 1 to 9) while restricting the number of cards in peripheral categories in order to force a bell-shaped distribution. The logistics of administering Q-sorts are such that they were deemed not practical for this mail-survey design. As a result this study relies on a free rating scheme (Likert-type seven-point scales) as opposed to forcing a distribution. Block (1978) concludes that both free and forced rating distributions are reliable, however he cautions that (p. 76) idiosyncrasies of judges (respondents) greatly affect the various shapes of unforced distributions of items. In Chatman's study, judge idiosyncrasies were an issue because one set of respondents supplied personality data (personal values) while another set of respondents supplied organizational data (organizational values). In this study, which relies on an intra-person design, the same judge (respondent) provides data for both profiles.

The shape of the resultant personal and organizational value profiles was addressed using both visual examination and statistical tests. A pseudo-random (generated using SPSSx procedure *Sample*) sample of approximately ten percent (n = 42) of respondents was drawn from the set of matched questionnaires. Visual examination of the frequency distributions for these 42 cases indicated that nearly all distributions were uni-modal and bell-shaped. The personal value ratings, however showed a slight tendency for negative skewness relative to the organizational value ratings. This may reflect a slight social desirability bias operating on the personal but not the organizational value profiles.

In addition, Kolmogorov-Smirnov one-sample goodness-of-fit tests were applied to compare the personal and organizational value profiles to hypothetical normal distributions. The results of these tests indicate no significant differences across all forty-two organizational value profiles and only two significant differences across the forty-two personal value profiles at the $p < .05$ significance level.

VC_{rate}, the resultant distribution of product-moment correlation coefficients, (mean = .15, range = -.65 to +.84) was also examined for normality. Visual examination indicates a uni-modal bell-shaped curve and statistical examination (Kolmogorov-Smirnov one-sample goodness-of-fit test) indicates no significant difference ($z = 0.79$, $p = 0.55$) from a hypothetical normal distribution at the $p < .05$ significance level.

Employee Perception of Individual-Organizational Value Congruence. Posner, Kouzes and Schmidt (1985) operationalized individual-organizational value congruence using their Shared Values Scale comprising two Likert-type items, the first of which asked subjects to estimate the extent to which their personal values were compatible with the values of their organization, and the second assessed extent of agreement / disagreement with the statement: "I find that sometimes I must compromise my personal principles to conform to my organization's expectations." They found significant relationships between value congruence and hypothesized work-related outcomes including personal success, intent to remain, and understanding of the organization's values.

Meglino, Ravlin and Adkins (1989) point out that Posner and his colleagues' study could not rule out methodological and response artifacts because neither the values of the managers sampled nor those of their organizations were actually measured.

This study uses two indices of congruence (VC $_{rank}$ and VC $_{rate}$) calculated from actual profiles of personal and organizational values and one measure of perceived congruence (PFit) similar to Posner et al. The measure of perceived congruence comprises a four-item seven-point Likert-type scale developed for application in this study (e.g., "My personal values are very similar to this organization's expectations." -- agree / disagree).

Psychometric performance of the multi-item PFit scale was pre-tested using a sample of MBA students (n = 79) with favorable results (Cronbach's alpha = 0.85 and perceived value congruence emerged as a separate factor when analyzed (principal components, varimax rotation) along with organizational commitment and satisfaction items).

6.2.3 Operationalizing the Consequents of Value Congruence

The research model proposes five consequents of individual-organizational value congruence as follows: organizational commitment, job satisfaction, turnover intention, organizational citizenship behavior and absence behavior.

Organizational Commitment. Allen and Meyer (1990) have developed Likert-type scales to measure three components of organizational commitment: affective, continuance and normative. Each scale consists of eight items. They report good psychometric results using a sample of 256 employees in clerical, supervisory and managerial positions across three organizations. The reliability (coefficient alpha) for each scale was: affective commitment (Acom) 0.87, continuance commitment (Ccom) 0.75, and normative commitment (Ncom) 0.79. Factor analysis (principal factor method with varimax rotation) of the twenty-four items comprising the three scales produced three factors accounting for 58.8%, 25.8% and 15.4% of the total variance respectively. They report (p. 6): "In all cases, the items loaded highest on the factor representing the appropriate construct."

Allen and Meyer's operationalization of organizational commitment was selected over the very popular Organizational Commitment Questionnaire (OCQ, Mowday, Steers & Porter, 1979) because it distinguishes between types of commitment. It is suggested that this distinction provides for a better test of theory -- it has been hypothesized that individual-organizational value congruence should correlate positively with affective commitment, but not necessarily with continuance and normative commitment. The OCQ which is primarily a measure of affective commitment does not provide data on these other types of commitment. In addition, one of the fifteen items comprising the OCQ is very similar to a measure of perceived value congruence ("I find that my values and the organization's values are very similar.") whereas Allen and Meyer's Acom scale contains no such overlap.

Job Satisfaction. A variety of facets of job satisfaction have been operationalized in this study. The revised version (Smith, Balzer et al., 1987) of Smith, Kendall and Hulin's (1969) Job Descriptive Index (JDI) was used to measure employee satisfaction with: work, supervision, co-workers, promotion opportunities, and pay. The JDI is one of the most popular measures of job satisfaction in the literature. A review of the literature including test manuals reveals numerous positive reports on this instrument's psychometric properties, one test reviewer (Kerr, 1985: 754) states: "In many ways the Job Descriptive Index (JDI) is an exemplary instrument, the development of which was marked by cautiousness and psychometric rigor." Balzer and Smith (1990) provide a recent summary of this instrument's psychometric properties.

In addition to the five facets of job satisfaction operationalized by the JDI, each respondent's overall satisfaction with the organization was measured. Dunham, Smith & Blackburn (1977) operationalized organizational satisfaction using a single-item faces scale as follows: "Consider the organization you work for and circle the face that best expresses how satisfied you feel about your association with this organization." In a similar fashion, this study used two sets of equivalent faces, one for female respondents (Dunham & Herman, 1975) and one for male respondents (Kunin, 1955) to produce a seven-point organizational satisfaction scale. O'Reilly, Chatman and Caldwell (1991) report that recent research (Brief & Roberson, 1989) has shown the single-item faces scale to be the most balanced satisfaction measure in terms of capturing positive and negative affect and cognitions.

Turnover Intention. Employee intent to leave the organization was measured with a two-item Likert-type scale developed for this study. These two items were: 1) "Within the next few years, I intend to be working for another organization.", and 2) "I fully intend to spend the rest of my career at this organization." (reverse-scored).

Organizational Citizenship Behavior. Smith, Organ and Near (1983) have developed a sixteen-item measure of Organizational Citizenship Behavior (OCB) which exhibits acceptable psychometric results (cf. Organ, 1988). The initial OCB study in 1983 involved 77 department heads who rated 442 employees on their citizenship behavior. This study produced two citizenship factors: altruism (helping behavior) with a coefficient alpha of 0.91 and conscientiousness (being punctual, etc.) with a coefficient alpha of 0.81. In addition Smith, Organ and Near found empirical support for hypothesized relationships between these factors and job satisfaction ($r = .31$ and $r = .21$, respectively). Subsequent studies (Konovsky, 1986; Williams, Podsakoff & Huber, 1986) confirm the existence of an altruism factor, however in these studies, conscientiousness broke down further into diligence and attendance behaviors.

This study relies on a self-report measure of organizational citizenship behavior using fourteen items from Smith et al.'s (1983) original sixteen-item scale. Organ (1988) suggests that item #8 ("coasts towards the end of the day" -- reverse-scored) and item #15 ("willingly attends functions not required by the organization, but helps in its overall image") from the original sixteen-item scale may be problematic because of ambiguous factor loadings. As a result these two items were not used in this study.

The application of this scale in a self-report mode has already been successfully applied in a recent study of antecedents and consequents of organizationally-based self-esteem (Pierce, Gardner, Cummings & Dunham, 1989). These researchers report an OCB alpha coefficient of 0.71, in addition to statistically significant relationships as hypothesized between OCB and their central construct OBSE, organizationally-based self-esteem, ($r = .19$, $p \leq 0.01$ for measure one of OBSE and $r = .12$, $p \leq 0.01$ for measure two).

Absence Behavior. Employee absence behavior was operationalized using two self-report measures. The first measure asked respondents to check a space indicating the number of work days they were absent from work last year (excluding vacation absence). Categories (in five-day groupings) went from: "not absent at all" up to "over 30 days." In addition, there was a check box to indicate if most or all of this absence was due to a serious illness (e.g., an illness requiring a period of hospitalization).

The second measure asked respondents to check a box indicating their number of episodes of absence from work last year. An episode of absence was defined for respondents as: "one continuous, unbroken period away from your workplace."

The first measure of absence used in this study is consistent with the concept of "total time lost" in the absence literature (cf. Farrell & Stamm, 1988) whereas the second measure operationalizes "absence frequency." The two questions used in this study measure distinct aspects of absence behavior. For example, one employee could have been absent once (one episode) during the year for a total absence of 26 to 30 days while another employee could have been absent more than fifteen times (episodes) during the year also for the same total absence of 26 to 30 days.

6.2.4 Operationalizing Antecedents to Awareness of Organizational Values

A variety of antecedents to employee awareness of the organization's required values (as defined by the dominant coalition) have been theorized including situational factors (visual salience, temporal salience, instructed salience and goal-relevant salience) and personality dispositions (self-consciousness, locus of control and self-monitoring). These antecedents were operationalized as follows:

Visual Salience. There is evidence in the literature to indicate that employees use overt behaviors by members of the dominant coalition as representations of the organization's required values (Sathe, 1985; Schein, 1985). It has been hypothesized in this study that the degree to which the behaviors of the dominant coalition (corporate executives) are visually salient to employees will be positively associated with employee levels of awareness of the organization's required values.

For the purposes of this study, visual salience has been operationalized using physical proximity and degree of interaction (Homans, 1950). In other words, employees who work in close physical proximity to corporate executives are more likely to be exposed to manifestations of the organization's required values as are those who have cause to frequently interact and work with corporate executives.

Physical proximity was measured using a seven-point Likert-type scale which asked participants to respond to the statement: "The physical location of my workspace (office / desk) relative to each group listed below is *very close*(1) to *very far away*(7)." Scale end-points were anchored. "Very close" was defined as an office within the same area of the same building, and "very far away" was defined as offices in different cities. Referent groups included: corporate executive managers, divisional senior managers, immediate supervisors, peers and colleagues, employees outside my department, and customers and clients.

Level of interaction was measured using a seven-point Likert-type scale which asked participants to respond to the statement: "In the normal course of my job I interact (see / talk) with: referent groups as above, on a scale of *never*(1) to *very frequently*(7).

Temporal Salience. The operationalization of temporal salience relies on the proposition that the longer employees are with the organization the more likely they are to be exposed to manifestations of its required values. This construct was measured using a single demographic item which asked participants to write their number of years of work experience (e.g., 4.5 years) with the organization.

Instructed Salience. Instructed salience is a measure of the degree to which employees have been instructed to pay attention to the organization's required values. Instructed salience was operationalized along two dimensions: 1) having to pay attention to the organization's required values in a passive way (e.g., sitting as a participant in a corporate seminar or reading corporate documentation), and 2) having to pay attention in an active way (e.g., having to speak about / discuss corporate values with others inside and outside the organization).

To operationalize passive instruction a six-item, Likert-type scale was developed using items such as: "I attend training programs focusing on our corporate values and beliefs." To operationalize active instruction a three-item, Likert-type scale was developed using items such as: "I speak to others in and outside of the organization about our corporate values." The range of possible scores on both scales was *never*(1) to *very frequently*(7).

Goal Relevant Salience. Fiske and Taylor (1984: 187) note: "A rather different principle of salience is that attention depends in part on the perceiver's goals. For example, people attend more to others on whom their outcomes are dependent." Goal relevant salience in a shared values context operationalizes the degree to which individual knowledge of required values gets noticed and rewarded in the organization. For the purposes of this study, a two-item, Likert-type scale was developed. These two items are as follows: "Fitting in with the corporate culture here gets noticed and rewarded" and "It pays to be like everyone else in this organization." The range of possible scores was from *not at all* (1) to *to a great extent* (7).

Self-Consciousness. Self-consciousness is the consistent tendency of persons to direct attention inward or outward (Fenigstein, Scheier & Buss, 1975). A twenty-three item rating scale comprising three sub-scales (public self-consciousness, private self-consciousness, and social anxiety) has been developed by Fenigstein, Scheier & Buss (1975). There is evidence in the literature to indicate that the self-consciousness scale (SCS) exhibits acceptable psychometric properties and has become well-accepted as a measure of attentional focus (Carver & Glass, 1976; Carver & Scheier, 1981; Fenigstein et al., 1975; Hollenbeck, 1989; Turner, Scheier, Carver, & Ickes, 1978).

The original SCS study (Fenigstein et al., 1975) provides support for scale reliability in addition to demonstrating a stable factor structure across nine different samples (total n = 1,821). A later test of convergent validity by Turner and his colleagues (1978) found SCS correlated significantly ($r > .40$) with the Guilford-Zimmerman Thoughtfulness Scale and the Pavio Imaginary Inventory as expected. In addition, there is evidence in support of the scale's discriminant validity. Turner et al. (1978) found that the SCS scale was not significantly correlated with measures of social desirability (Crowne & Marlowe, 1964), self-esteem (Morse & Gergen, 1970) and emotionality (Buss & Plomin, 1975). Carver and Glass (1976: 169) conducted a discriminant validity study of the self-consciousness scale (SCS) against mental ability (Otis, 1954), need for achievement (Edwards, 1957), test anxiety (Mandler & Sarason, 1952), and temperament (Buss & Plomin, 1975) to conclude: "The Self-consciousness components of the SCS thus appear to be relatively independent of other measures tested."

Locus of Control. Locus of control was operationalized using Rotter's (1966) I-E scale. This scale measures the internal-external dimension of personality. High internal control refers to individuals who believe that reinforcements are contingent upon their behaviors whereas high externals believe reinforcements are outside their control residing in the jurisdiction of luck, fate and powerful others. For the purposes of this study, nine items were dropped from Rotter's 29-item scale. These items pertaining to school and political behavior (e.g., "There is too much emphasis on athletics in high school" / "Team sports are an excellent way to build character") were deemed inappropriate for the business orientation of this sample. There is support in the literature for similar modifications to Rotter's scale when it has been used in a business context (Mitchell, Smyser & Weed, 1975; Runyon, 1973).

Rotter's scale exhibits acceptable psychometric properties and is the most widely-accepted measure of internal-external orientation. Rotter (1966) provides a full report on his scale's psychometric performance including: split-half and test-retest reliabilities ranging from 0.65 to 0.75, and evidence in support of predictive and discriminant validity (excepting social desirability which exhibited weak negative correlations (r = -.12 to -.41) across six studies). The scoring procedure for this scale is such that a low score indicates an internal orientation whereas a high score indicates an external orientation.

Self-Monitoring. Snyder's (Snyder & Gangestad, 1986) revised 18-item version of his (1974) self-monitoring scale was used to operationalize self-monitoring -- the extent to which individuals observe, regulate and control public appearances of themselves in social situations and interpersonal relationships. Snyder (1987: 181) states that both scales (his revised 18-item measure and his original 25-item measure) will produce similar patterns of findings (the correlation between the two scales is .93). This assertion is supported by Chatman's (1988) empirical results. However, Snyder suggests that his revised 18-item version is a more effective indicator of the latent self-monitoring causal variable.

Snyder reports acceptable internal consistency (coefficient alpha = 0.70) for his revised scale in addition to improved uni-dimensionality (the first unrotated factor now accounts for 62% of the variance versus 51% on the original scale). The dimensionality of Snyder's original scale has been cause for some concern in the literature (Briggs, Cheek, & Buss, 1980; Lennox & Wolfe, 1984). Briggs et al., for example, recommend the use of three factor scores (acting, extroversion and other-directedness) as opposed to the full scale score. Notwithstanding continuing controversy with respect to this scale (e.g., Luechauer & Katerberg, 1989), Snyder maintains that his scale is uni-dimensional, a position for which Chatman (1988) found empirical support in her recent study of person-organization fit.

It is interesting to note that empirical associations between the concepts of self-consciousness and self-monitoring have tended to be weak (Briggs, Cheek & Buss, 1980; Turner et al., 1978). Snyder (1987: 193) states: "although empirical ties have yet to be identified, the concepts of self-monitoring and self-awareness do seem to have shared themes." In contrast, Carver and Scheier (1981) suggest different theoretical antecedents underlie the two scales: "The Self-Consciousness scale was specifically intended to assess attentional focus, whereas the Self-Monitoring scale was not. The latter instrument assesses a more general orientation to the use of private or public information for behavior regulation." They suggest that there may be potential for integration of the two concepts such that self-monitoring differences predict where subjects will look to determine behavioral standards and self-consciousness differences predict the degree to which those standards will be utilized.

6.2.5 Operationalizing Employee Awareness of Organizational Values

The methodological review (Chapter 3) revealed substantial controversy with respect to the operationalization of organizational values. Notwithstanding these arguments which have been discussed, there is support in the recent literature for representing organizational values using an aggregate profile (e.g., Chatman, 1988, 1991).

This study relies on an aggregate profile derived from executive management's (n = 42) collective perception to represent the organization's required values. Any group or number of groups could have been used to derive an aggregate profile representing the organization's required values. However, the collective views of executive management were deemed most appropriate for a number of reasons. Evidence in the literature (Sathe, 1985; Schein, 1985) indicates that this group is particularly influential in terms of defining the culture of an organization. Furthermore, empirical evidence from this study (discussed in greater detail in Chapter 7) indicates that this group (the corporate executive) was the most crystallized (homogeneous as measured using inter-rater reliability) in its collective view of the organization's values.

This statement should not, however, be construed as implying that there were substantive differences in the collective perceptions across groups. In fact, as discussed in detail in the presentation of research results (Chapter 7), the collective perceptions of the organizational culture were quite homogeneous across functions and hierarchical levels.

This study relied on three measures to assess the degree to which individual employees were aware of the organization's required values (as defined by the collective perception of executive management). These measures were as follows:

Awareness Based on Value Ranking (Aware $_{rank}$). In a manner similar to the calculation of an index of individual-organization value congruence using ranking data (Section 6.2.2), it is possible to calculate an index of organizational value awareness using the rank correlation between each individual employee's perception of the ranking of organizational values and the collective perception of the ranking of organizational values based on a composite of executive management's data.

Aware $_{rank}$, therefore, is the Spearman rank correlation between the dominant coalition's composite organizational value ranking profile (derived using the median rank scores (n=42) from the executive management sub-population) and each individual employee's ranking profile of organizational values.

The computation of Aware $_{rank}$ produces a distribution of rank order coefficients for all cases (n = 292, mean = .43, range = -.24 to +.90) except those of executive management which were used to create the composite profile representing the organization's required values. Visual examination of this resultant distribution indicates a uni-modal bell-shaped curve. In addition, a Kolmogorov-Smirnov one-sample test was applied to compare the rank order correlation distribution with a hypothetical normal distribution. Test results indicate no significant difference (z= 0.99, p= 0.28) at the $p < .05$ significance level.

Awareness Based on Value Rating (Aware $_{rate}$). The second index of employee awareness of the organization's required values uses value rating data. Similar to the calculation of an index of individual-organizational value congruence using rating data (Section 6.2.2), this index is based on the product-moment correlation between each individual employee's rating profile of organizational values and a composite profile representing the collective perception (mean scores, n = 42) of executive management. Similar to the ranking index (Aware $_{rank}$), executive management responses were omitted from the set of individual profiles as these data went into the creation of the composite profile. This resulted in a frequency distribution of product-moment correlations (n = 292) representing individual differences in awareness of the organization's required values.

Visual examination of this resultant distribution indicates a uni-modal bell-shaped curve. In addition, results of a Kolmogorov-Smirnov one-sample test indicate no significant difference (z = 0.92, p = 0.37) between the resultant distribution and a hypothetical normal distribution at the $p < .05$ significance level.

Perceived Level of Awareness of Organizational Values (P-Aware). Participants were also asked to indicate their perceived level of awareness of the organization's required values. A two-item Likert-type scale was developed for this purpose. The first item assessed extent of agreement / disagreement with the statement: "I understand the values and culture of this organization." The second item which was reverse-scored assessed extent of agreement / disagreement with the statement: "This organization's norms of behavior and expectations are not clear to me."

In summary, three measures of employee awareness of the organization's required values were used: one based on rank data, one based on rating data, and one based on perceived level of awareness. The triangulation of these measures is discussed in the results chapter.

6.2.6 Method Variables

Following from the methodological review (Chapter 3), social desirability response set bias represents a significant threat to the validity of this study. As discussed later in this chapter, it is a threat which has been addressed along a number of avenues in this research design. One design feature has been to operationalize individual tendency to respond in a socially desirable manner. For the purposes of this study an abbreviated version of the Marlowe-Crowne (1960) Social Desirability Scale (M-C SDS) has been applied.

The Marlowe-Crowne SDS attempts to locate individuals who describe themselves in favorable, socially desirable terms in order to achieve the approval of others. The full scale consists of 33 items (true / false) representing an approximately equal proportion of statements which are culturally acceptable but probably untrue and statements which are true but undesirable. Strahan and Gerbasi (1975) acknowledge the prominence of Marlowe and Crowne's SDS, but suggest several items contribute relatively little to the overall measure. Using Marlowe and Crowne's original set of items, they construct three homogeneous, short-form SDS measures which correlate well (all $r > .80$) with the original ale and exhibit acceptable psychometric properties. This study utilizes Strahan and Gerbasi's M-C 2 ten-item abbreviated SDS scale. Kudar-Richardson formula 20 (K-R 20) reliability coefficients for this scale across four groups were as follows: university males (n

= 64, .62); university females (n = 34, .75); college females (n = 130, .49); and British males (n = 44, .62).

6.2.7 Control Variables

Data were also collected on a number of variables in order to be able to address alternative hypotheses. These data can be included (hierarchically) in various regression equations in which individual-organizational value congruence is used to predict work outcomes (dependent variables) including: organizational commitment, job satisfaction, organizational citizenship behavior, turnover intention and absence behavior. These control variables are:

age - operationalized using ten groupings (five-year spans) ranging from under twenty years to over sixty years.

gender - operationalized with two check spaces, male / female.

annual salary - operationalized using five groupings ($20,000 spans) ranging from under $40,000 to over $100,000.

job tenure - operationalized using a blank space in which each participant was asked to write his or her number of years (e.g., 4.5 years) in his or her current position.

organizational tenure - operationalized in a similar manner to job tenure with reference to "number of years with the organization."

work experience - operationalized in a similar manner to job tenure with reference to "total years of full-time work experience."

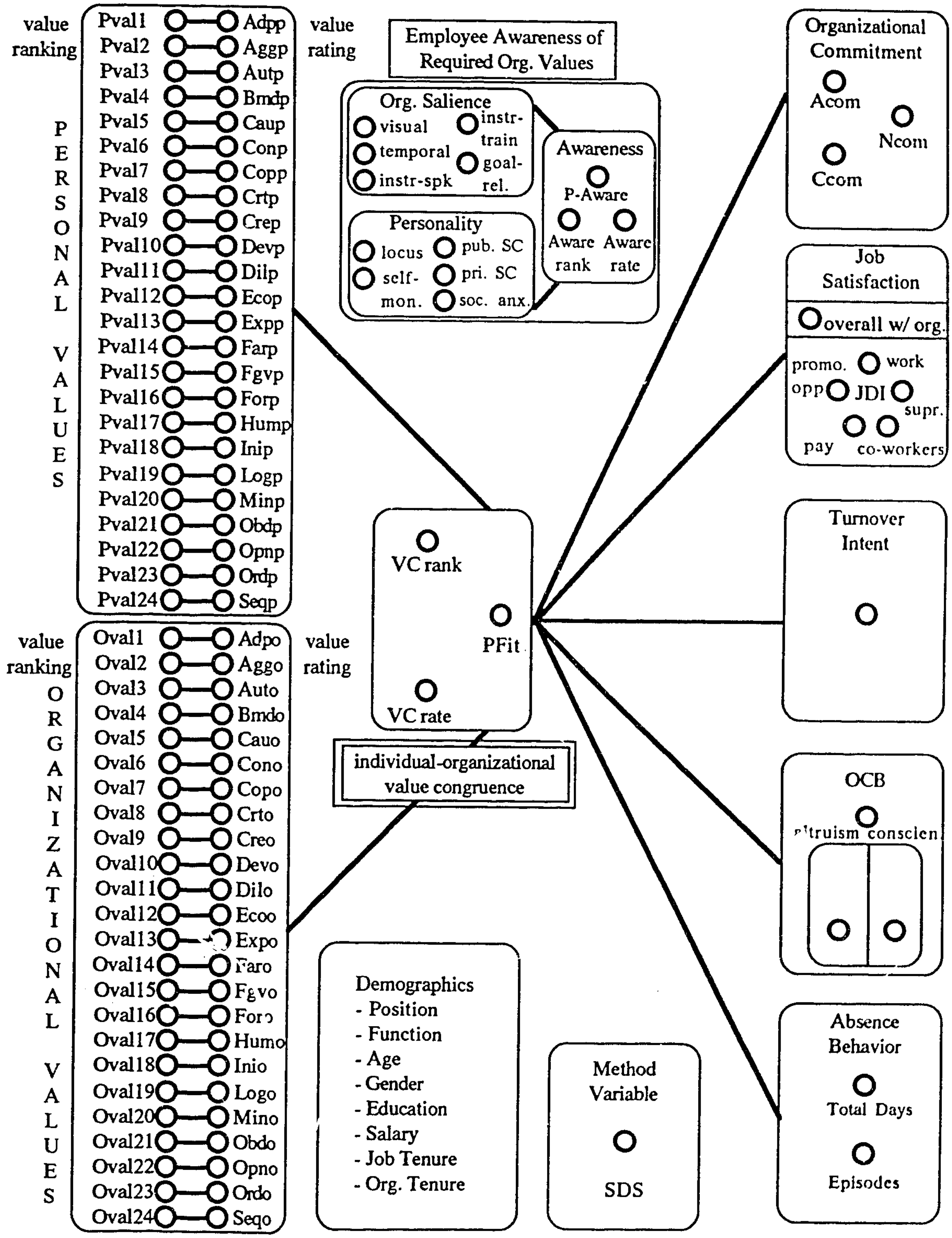
educational level - operationalized using eight categories ranging from "Less than high school graduate" to "Ph.D. Degree."

There exists significant rationale in the literature for the inclusion of these control variables (e.g., Mowday, Porter & Steers, 1982; Organ, 1988; Smith, Kendall & Hulin, 1969). Their effects, if any, will be discussed in the results chapter.

This section has described the measures which were used to operationalize the research model (Figure 8) presented in Chapter 5. When the variety of sub-scales are taken into account, there are in all forty variables in this study including method and control variables. This figure does not include value ranking and rating data (twenty-four concepts measured at two levels of analysis - personal and organizational, using two different methods) which were used to calculate two indices of individual-organizational value congruence and two indices of employee awareness of the organization's required values. Figure 10, on the following page, displays the measurement model used in this study.

FIGURE 10

Measurement Model: Individual-Organizational Value Congruence



6.3 ADDRESSING THREATS TO VALIDITY

Meglino, Ravlin and Adkins (1989: 425) state: "The absence of unequivocal support for the relationship between value congruence and various outcomes is not surprising, because this issue is quite complex methodologically." They caution that apparent effects of value congruence could be the result of a variety of methodological and response artifacts including: social desirability tendencies (Crowne & Marlowe, 1964); response sets (Cronbach, 1950); common methods variance (Campbell & Fiske, 1959); demand characteristics (Orne, 1962); and consistency and priming effects (Salancik & Pfeffer, 1977).

This research design has incorporated a variety of precautionary steps to reduce the likelihood of artifactual relationships. These steps are summarized in Table 10.

TABLE 10

Steps Taken to Reduce Threats to Validity

Threat:	Response:
social desirability / response set biases	• careful instrument design and instructions • anonymous returns / confidentiality • inclusion of a method variable (Crowne & Marlowe, 1964)
consistency effects	• a two-week time separation between individual and organizational values measures
the high level of abstraction associated with the concept of values	• pilot test the value concepts (sample = 79 MBA students) • multi-method operationalization - ranking and rating • provision of definitions for the value concepts • explicit reference to "operative" versus "espoused" values
relevant value items and content validity	• application of empirically-derived value taxonomy
confounding variables	• minimization of situational variation through the selection of a single corporate research site • measurement of seven control variables
the possibility of subcultures	• site selection based on the criterion of cultural homogeneity

6.4 DATA FILE ACCURACY AND SCREENING

Prior to the analysis of the data, steps were taken to assess the integrity of the data file. A number of issues were addressed including:

Accuracy of Data Input. Using the program SPSS *Frequencies*, univariate descriptive statistics for each variable were carefully examined for indications of data input inaccuracies. The results of this review support the accuracy of data input procedures. Variable means and standard deviations were as expected. Additionally, values on all variables were within expected ranges. In the case of rank data, ranking totals (as mentioned in Section 6.2.1) had to add up to 300 if the ranking exercise had been completed in accordance with the instructions. When rankings did not sum to 300, the data file was checked against raw data in the questionnaires to ensure proper data entry.

A variety of other spot checks were conducted including manually testing the various formulae used to compute composite scores and indices (e.g., JDI scores). Indications from these procedures were in support of accurate data entry and proper data formulation.

Variance. There was good variance across the full range for most variables. A notable exception was variance within the two absenteeism measures. 98% of respondents reported total days absent within the first two of eight categories ("not absent at all" and "1 to 5 days"). Similarly, 99% of respondents reported total episodes of absence within the first two of five categories ("no episodes" and "1 to 5 episodes").

Missing Data. The occurrence of missing data was not problematic in this study. For example, across the ninety-six items representing the twenty-four personal value ratings, 89% of respondents had no data missing. Likewise, across the ninety-six items representing the twenty-four organizational value ratings, 85% of respondents had no data missing.

As a general rule, a within-subject means substitution for missing data was applied for multi-item scales. In the event that a single-item variable was missing, the case was dropped for analyses involving that variable.

Outliers. Outliers are cases with extreme values on one variable or a combination of variables that unduly influence statistics. The existence of univariate outliers was assessed using visual examination of variable box plots and numerical calculation of z scores. The results of this procedure indicated that univariate outliers were not overly problematic in the data.

Four cases from the Questionnaire One data set exhibited consistent outliers in the personal values rating exercise. Six cases from the Questionnaire Two data set exhibited consistent outliers in the organizational rating exercise. These outliers were removed for sensitive analyses (e.g., factor analyses, regression analyses, and discriminant analyses) which reduced the matched data set to 324 cases. In addition, multivariate outliers were identified and removed as appropriate during each of the multivariate analyses.

Normality. Screening for normality included visual and statistical assessments. Visual examination of the shape of continuous variable distributions relative to normal bench mark lines generally supported the assumption of normality.

Statistical assessment of normality involved consideration of skewness and kurtosis scores. There was some evidence of skewness (most pronounced in the distributions of personal value ratings); however, no skewness score appeared unusually excessive in relation to scores representing established scales from the literature. Similarly, kurtosis did not appear to be an issue. Tabachnick and Fidell (1989: 74) state: "In a large sample, a variable with significant skewness (or kurtosis) often does not deviate enough from normality to make a realistic difference in the analysis."

Linearity. Linearity between major hypothesized bivariate relationships (e.g., value congruence to affective commitment) was assessed using the procedure SPSS *Scattergram*. The results of this procedure were in support of the assumption of linearity. In addition, diagnostic feedback (e.g., error variance and distribution shape) available from the more complex multivariate procedures (e.g., regression) were also analysed. These analyses indicated that error variance within the data file appeared to be random.

Multicollinearity. A review of the complete correlation matrix for all variables indicated that multicollinearity while evident was not excessive. The highest bivariate relationships (excepting the two absence measures, r = +.91) were all under .80. Tabachnick and Fidell suggest variables are highly correlated at .90, and in such cases the variables should be considered redundant.

In addition to bivariate relationships, the research design addressed the possibility of high multivariate relationships within sets of independent variables. For example, the regression procedure used a hierarchical approach in which variables of greater theoretical importance were given priority in terms of entering the regression equation.

It is concluded from these screening procedures that the data file is an accurate representation of the raw questionnaire data and in a form amenable to further bivariate and multivariate statistical analyses. The next section describes the statistical procedures used to analyze the data.

6.5 ANALYSIS OF DATA

The data analysis plan for this research centers around, but is not restricted to, the construct validity of individual-organizational value congruence within its nomological net of antecedents and consequents as shown in the research model (Figure 8). Guion (1977: 410) states: "All validity is at its base some form of construct validity. ... The most salient of the traditionally identified aspects of validity -- the only one that is salient -- is construct validity. It is the basic meaning of validity."

In order to address the construct validity of individual-organizational value congruence this data analysis framework follows sequencing recommendations from Schwab's (1980) work on construct validity in organizational behavior. Conceptual procedures, such as the role of definition (see Chapter 2) and the role of theory (see Chapter 5), have already been recognized and discussed. Empirical procedures to establish the construct validity of individual-organizational value congruence were as follows:

Measures of the Focal Construct:

1. Reliability
2. Convergence
3. Factor Analysis

Measures of Alternative Constructs

4. Empirical Design of the Nomological Network
5. Differentiation

The remainder of this section discusses each of these data analysis procedures in detail. Hypotheses testing as described in Chapter 5 is subsumed under the fourth analytical procedure, the empirical design of the nomological network. The results from these procedures are presented in the next chapter.

6.5.1 Measures of the Focal Construct

Reliability. Schwab (1980: 15) refers to reliability as the ratio of "true" to total variance in a set of parallel measurements where true variance is defined as systematic variance. He notes a variety of forms of reliability including: internal consistency (across parallel items), inter-rater (across different observers), and stability (across time). In this study, the internal consistency of all multi-item measures has been assessed including the value rating scales. In addition, the homogeneity (or crystallization) of the organizational culture has been assessed using the inter-rater reliability across respondents.

Convergence. Schwab (1980: 17) defines convergent validity as the extent to which responses from alternative measurements of the same construct share variance. He cautions that method convergence provides only limited evidence of construct validity, pointing out that some constructs may be procedure specific. This study incorporates two alternative methods for values measurement, value ranking and value rating. The degree to which alternative measures of the twenty-four individual value constructs and resultant indices of value congruence converge has been assessed. In addition, convergence between the two value congruence indices and respondents' perception of their level of congruence has also been assessed.

Factor Analysis. Schwab (1980) recommends the application of factor analysis in the assessment of construct validity. He cautions, however, that results may be sample specific, particularly when a minimum sample size to items factored ratio of 10:1 is not observed. In the case of this study the sample size to items factored ratio was 324:24 or 13.5:1.

Schwab notes (p. 20): "where factor analysis can have construct validation implications is to test hypotheses about an already developed scale." A rigorous form of this step includes testing a developed scale against a priori specification of both the number of items and the specific items that are hypothesized to load on the dimensions." Procedures for this analysis are described in Nunnally (1967, 333-347) and Schoneman (1966).

The twenty-four shared value concepts developed for this study have been factor analyzed against a priori specification based on Quinn and McGrath's (1985) competing values model of organizational forms: consensual cultures aimed at group cohesion, developmental cultures aimed at broad purposes, rational cultures aimed at the pursuit of objectives, and hierarchical cultures aimed at the execution of regulations. Details of the a priori specification of the twenty-four shared value concepts and results of the factor analysis are presented in Chapter 7 (Results).

6.5.2 Measures of Alternative Constructs

Empirical Design. The orientation of this section focuses on the construct (individual-organizational value congruence) within its nomological net. Schwab (1980: 21) states:

> Theory specified prior to measure development and theory evolving from tests of measures frequently blend together in practice. Nevertheless, a priori theory requires emphasis. Indeed the most important implication of construct validity ". . . is the increased emphasis which . . . (it) . . . places upon the role of theory in . . . validation." In this context theory is viewed as a framework against which to test a given measure or manipulation.

The research model (Figure 8) presents the a priori theoretical context within which the construct validity of individual-organizational value congruence has been assessed. This assessment was conducted on three levels: 1) examination of bivariate relationships as specified by the hypotheses, 2) examination of multivariate relationships using hierarchical regression (Pedhazur, 1982), and 3) the multivariate analysis of variance (MANOVA) across hierarchical and functional groupings within the organization using profile analysis of repeated measures (Tabachnick & Fidell, 1989).

Differentiation Among Constructs. Schwab (1980) suggests a related issue with respect to construct validity is the extent to which (p. 23): "instruments which purportedly measure *different* constructs in fact do so?"

Values, the central constructs in this study, are by their very nature socially desirable constructs. This step in the data analysis assessed the degree to which the construct of individual-organizational value congruence was distinct (discriminant validity) from the construct of social desirability (Crowne & Marlowe, 1960).

In summary, these analytical procedures fulfil a number of objectives. They address the empirical research issues which were introduced in the opening chapter and specified in detail in Chapter 5. They also address the construct validity of individual-organizational value congruence in a systematic manner as recommended by Schwab (1980).

This chapter has described the methodology used to test the research model. It has discussed the criteria followed to select the research site and the sampling plan applied to obtain a stratified random sample. The instrumentation used to operationalize the research model has been described in detail along with the rationale for its application. The operational side of this research has been summarized in Figure 9, the measurement model. The topic of threats to validity has been addressed including a variety of precautionary actions designed to maintain rigor. In addition, steps have been taken to assess the input accuracy of the data file and its suitability to bivariate and multivariate statistical procedures. Finally, a systematic framework for the analysis of the data has been presented. The next chapter reports on the results of the analysis.

CHAPTER 7 - RESULTS

This chapter, following from the research model and operational procedures described in Chapters 5 and 6, presents the results of the data analysis. As discussed in Section 6.5, the analytical framework for this study centers around, but is not restricted to, the construct validity of individual-organizational value congruence.

The reporting of results in this chapter reflects Schwab's (1980) recommended sequence of analyses in the establishment of construct validity. The first section discusses the concept of reliability with particular emphasis on the multi-item value rating scales. The second section discusses the degree to which convergent validity was evident in the multi-method research design. The third section reports on the underlying structure of the twenty-four shared values dimensions based on results from principal components analyses.

The fourth, fifth, and sixth sections review the construct of individual-organizational value congruence within its nomological network. Simple bivariate relationships are discussed in the fourth section including the assessment of hypotheses delineated in Chapter 5. Multivariate relationships are discussed in the fifth section including the results of hierarchical regression analyses. In the sixth section, the degree to which value preferences differ across groups within the organization is addressed using analysis of covariance and multivariate analysis of variance procedures.

The seventh section focuses on differentiation between constructs within the nomological network. Of particular interest is the degree to which the construct of individual-organizational value congruence is distinct from the construct of social desirability.

These results establish a base for more in-depth discussion (Chapter 8) along a number of avenues including: the extent to which individual-organizational value congruence is a relevant and rigorous construct in organizational science; and the degree to which the outstanding research issues introduced in the first chapter have been addressed.

7.1 RELIABILITY

Kerlinger (1986) notes two major issues underlying scientific measurement -- reliability and validity. Reliability addresses the requirement for dependability in measurement. Nunnally (1978: 191) defines the concept of reliability as follows:

> Reliability concerns the extent to which measurements are *repeatable* -- when different persons make the measurements, on different occasions, with supposedly alternative instruments for measuring the same thing and when there are small variations in circumstances for making measurements that are not intended to influence results. In other words, measurements are intended to be stable over a variety of conditions in which essentially the same results should be obtained.

Reliability assessments were conducted in this study from three perspectives: internal consistency - reliability across items within a scale; test-retest - reliability over time given the same set of respondents; and inter-rater - reliability across judges considering a single phenomenon (in this particular study - the cultural values of an organization).

7.1.1 Internal Consistency

Internal consistency addresses the extent to which items within a test are homogeneous (Kerlinger, 1986). A variety of multi-item measures were used in this study including newly developed seven-point Likert-type rating scales to operationalize personal and organizational values. Given the fact that this study was the first substantive empirical test of these value rating scales, internal consistency scores were of particular interest.

Internal consistency was measured primarily through the calculation of Cronbach's coefficient alpha except in the case of dichotomous items for which Kudar-Richardson's coefficient (KR-20) was calculated. The calculation of these reliability coefficients is consistent with psychometric practices. Nunnally states (1978: 230):

> Coefficient alpha is the basic formula for determining the reliability based on internal consistency. It, or the special version applicable to dichotomous items (KR-20), should be applied to all new measurement methods.

Reliability scores for the value rating scales along with results from the value ranking instrumentation are shown in Table 11 (personal values) and Table 12 (organizational values). The value rating scales used in this study originally consisted of four items per value dimension. As might be expected with new scales the reliability analysis indicated that certain items were clearly inconsistent. Reconsideration of these particular items in light of this information usually led to the conclusion that they were inappropriate.

For example, out of the four items used to operationalize the personal value of diligence (working hard): 1) hard-working; 2) easy-going (reverse-scored); 3) tireless-worker; and 4) industrious; the second item (easy-going) was clearly inconsistent. In retrospect, the term "easy-going" might have been interpreted in terms of "a level of stress/worry dimension" as opposed to "a level of effort dimension." Dropping this item from the scale improved the scale's coefficient alpha from .41 to .70. In a similar fashion all of the value rating scales were reviewed. As a result, one item was dropped from each scale. This action resulted in a consistent set of three-item scales for each personal and organizational value dimension. In nearly all cases these revisions maintained or improved original scale reliabilities. This practice of "purifying" the scales is in keeping with Churchill's (1979) recommendations regarding new scale development.

The revised (three-item) scales form the basis for all further analyses in this study.

TABLE 11
Personal Values - Value Ranking and Rating Data
(n = 375)

	Ranking Data: (24 rank order)			Rating Data: (7-point scale)			
Value Dimension	Median	S. D.	Rank[a]	Mean	S. D.	Alpha	Rank[a]
adaptability	8	5.3	6	5.1	0.9	.68	13
aggressiveness	17	6.9	18	4.4	1.3	.81	20
autonomy	11	6.5	11	5.5	0.8	.67	6
broad-mindedness	10	4.9	10	5.3	0.8	.70	11
cautiousness	20	5.1	22	3.9	1.1	.62	24
consideration	9	5.5	7	5.3	1.1	.79	10
cooperation	7	5.0	3	5.7	0.9	.80	3
courtesy	9	5.4	8	5.8	0.8	.79	2
creativity	11	6.0	12	4.7	1.2	.86	17
development	10	5.9	9	5.4	0.9	.80	8
diligence	14	6.3	15	5.5	0.9	.70	7
economy	18	5.1	19	4.4	1.3	.85	21
experimentation	18	5.4	20	4.5	1.0	.69	19
fairness	7	5.0	2	5.6	0.7	.68	4
forgiveness	15	5.2	16	4.7	1.2	.77	18
formality	23	3.4	24	4.0	1.4	.81	23
humor	12	6.2	14	4.9	1.1	.76	16
initiative	8	5.5	5	5.2	1.1	.78	12
logic	11	5.9	13	5.5	1.0	.81	5
moral integrity	4	5.9	1	6.0	0.8	.80	1
obedience	20	5.1	23	4.4	1.2	.80	22
openness	8	5.4	4	5.4	1.0	.82	9
orderliness	19	6.4	21	5.1	1.4	.84	14
social equality	16	6.6	17	5.0	1.3	.77	15

a. - An aggregate ranking of personal value ranking data was derived using median scores (in the event of a tie: mode then means data were used). An aggregate ranking of personal value rating data was derived using mean scores. The Spearman rank correlation (rho) between these two aggregate rankings is .81.

TABLE 12
Organizational Values - Value Ranking and Rating Data
(n = 337)

	Ranking Data: (24 rank order)			Rating Data: (7-point scale)			
Value Dimension	Median	S. D.	Rank[a]	Mean	S. D.	Alpha	Rank[a]
adaptability	8	6.4	4	5.2	1.0	.65	5
aggressiveness	10	7.2	8	4.8	1.1	.63	10
autonomy	16	5.7	19	4.9	1.0	.64	9
broad-mindedness	13	5.5	15	4.8	1.0	.71	11
cautiousness	8	7.4	5	4.3	1.1	.70	20
consideration	13	5.9	16	4.3	1.1	.74	19
cooperation	9	5.0	7	5.1	0.9	.49	6
courtesy	12	5.5	12	5.3	1.0	.69	4
creativity	11	6.0	10	4.9	1.0	.79	8
development	12	5.8	11	5.3	1.0	.76	3
diligence	7	6.4	2	5.0	1.2	.67	7
economy	15	6.9	18	4.5	1.2	.60	16
experimentation	19	4.9	23	3.8	1.0	.59	23
fairness	11	6.1	9	4.5	1.2	.76	17
forgiveness	18	5.1	22	4.1	1.1	.79	21
formality	17	7.6	21	4.6	1.1	.69	15
humor	20	5.2	24	4.0	1.1	.63	22
initiative	8	6.2	6	5.4	0.9	.73	2
logic	8	6.1	3	4.6	0.9	.47	13
moral integrity	3	5.5	1	6.1	0.9	.76	1
obedience	13	7.3	13	4.6	1.1	.63	12
openness	13	6.2	14	4.3	1.1	.75	18
orderliness	16	6.4	20	4.6	1.1	.73	14
social equality	14	6.9	17	3.2	1.2	.71	24

a. - An aggregate ranking of organizational value ranking data was derived using median scores (in the event of a tie: mode then means data were used). An aggregate ranking of organizational value rating data was derived using mean scores. The Spearman rank correlation (rho) between these two aggregate rankings is .63.

A review of Tables 11 and 12 indicates that most of the value rating scales achieved satisfactory levels of internal consistency, particularly when one considers the relatively short scale length (three items per scale) and newness of these scales.

Nunnally (1978) recommends reliabilities of .70 or higher in the early stages of basic research. In fact, he cautions that increasing reliabilities beyond .80 for basic research may be a waste of time and funds. Nunnally (1978: 244) also notes that test reliability is a function of the number of items comprising a scale:

> If the average correlation among items in a domain is positive, no matter how small, then as the number of items in a test is made larger and larger, the reliability necessarily approaches 1.00.

The average inter-item correlations across all twenty-four personal value rating scales and all twenty-four organizational value rating scales used in this study were positive. The range across personal value rating scales was .15 to .65. The range across organizational value rating scales was .13 to .53. These values are favorable relative to the typical range (.10 to .30) for items comprising a scale (Nunnally, 1978).

Consideration of the relative ranking of personal value medians (rank data) and personal value means (rating data) shown in Table 11 leads to the conclusion that the personal values of moral integrity, fairness, and cooperation were generally held in high esteem (across both methods) within the sample. In comparison, the personal values of formality, obedience, and cautiousness were generally held in low esteem (across both methods) within the sample.

Consideration of the relative ranking of organizational value medians (rank data) and organizational value means (rating data) shown in Table 12 leads to the conclusion that the organization was generally perceived (across both methods) as holding the values of moral integrity, initiative, diligence, and adaptability in high esteem. Whereas the organization was generally perceived (across both methods) as holding the values of humor, experimentation, forgiveness, and social equality in low esteem. Chapter 8 contains more detailed discussion with respect to the culture and personal value profiles at the corporate research site.

Table 13 on the following page shows mean, standard deviation and reliability scores for the other variables applied in this study. A review of this table indicates good internal consistency across most of the measures. The OCB sub-scale, conscientiousness (.56) and the Social Desirability Scale (.57) being the only two measures with less than expected internal consistency scores. The SDS reliability coefficient achieved in this study, however, is consistent with scores reported in earlier studies (Strahan & Gerbasi, 1975) using the abbreviated M-C 2 version (10 items) of Marlowe and Crowne's scale.

Cronbach's coefficient alpha was not calculated for the two-item scales (turnover intention, goal relevant salience, and perceived awareness of organizational values) in this study. Inter-item correlations have been reported instead. These values relative to Nunnally's findings are judged to be quite favorable. Nunnally (1978: 275) states: "On most tests the average correlation among items is less than .20 and the variance of correlations among items is small."

In conclusion, the results from these internal consistency analyses are judged to be acceptable with respect to traditional psychometric standards (cf. Nunnally, 1978)

7.1.2 Test-Retest Reliability

Values have been conceptualized as beliefs which endure over time (Rokeach, 1973). Therefore one would expect consistency over time from individuals reporting values. Test-retest reliability was assessed for the personal value ranking and rating instrumentation used in this study. A group of thirty undergraduate students enroled in a business course agreed to anonymously complete the personal value ranking and rating instrumentation on two occasions separated by a four-week time span.

TABLE 13

Other Variables - Means, Standard Deviations and Reliabilities

Variable	Code	# of items	Mean	S.D.	Reliability
Organizational Commitment:*					
Affective Commitment*	ACS	8	4.7	1.2	.83
Continuance Commitment*	CCS	8	4.4	1.3	.84
Normative Commitment*	NCS	8	3.7	1.0	.71
Job Satisfaction (JDI):*					
Satisfaction-work*	Satwk	18	39.7	10.4	.32
Satisfaction-supervisor*	Satsp	18	42.1	11.2	.86
Satisfaction-co-worker*	Satco	18	44.8	9.6	.85
Satisfaction-promotion*	Satpr[a]	9	24.4	16.4	.87
Satisfaction-pay*	Satpy[a]	9	44.7	11.0	.80
Overall Satisfaction w/ Org.*	OSat	1	5.4	1.1	n/a
Turnover Intention	Toin	2	2.7	1.8	.65[b]
Organizational Citizenship:*					
Overall Citizenship*	OCB[c]	14	5.7	0.6	.67
Altruism*	Alt	6	5.4	0.9	.72
Conscientiousness*	Con	7	6.0	0.8	.56
Absenteeism:					
Days Absent / Year	Ab-day	1	1.5	0.6	n/a
Episodes Absent / Year	Ab-eps	1	1.5	0.5	n/a
Locus of Control*	Loc	20	5.2	2.8	.68[d]
Self-Monitoring*	SM	18	6.9	3.6	.75[d]
Self-Consciousness*:					
Private Self-Consciousness*	PriSC	10	4.1	0.9	.76
Public Self-Consciousness*	PubSC	7	4.4	1.0	.76
Social Anxiety*	SocAX	6	4.0	1.2	.76
Organizational Value Salience:					
Visual Salience	Exec	4	3.2	1.5	.82
Temporal Salience	Time	1	15.6	8.7	n/a
Instructed Salience-Passive	Inst-P	6	4.3	1.1	.81
Instructed Salience-Active	Inst-A	3	3.9	1.3	.80
Goal Relevant Salience	GoalRel	2	4.5	1.2	.28[b]
Perceived Values Fit	PFit	4	5.4	1.2	.70
Perceived Awareness Org. Values	P-Aware	2	5.5	1.1	.32[b]
M-C Social Desirability Scale*	SDS	10	6.8	1.9	.57[d]

* - designates a scale from the literature.
a.- scores for satisfaction with pay and promotion doubled to be commensurate with other JDI sub-scales.
b.- indicates inter-item correlation (used in the case of two-item scales).
c.- OCB includes items representing altruism and conscientiousness sub-scales.
d.- indicates Kudar-Richardson's (KR-20) coefficient (used in the case of dichotomous data). All other reliability scores are Cronbach's coefficient alpha.

The ranking of value concepts proved to be quite consistent over time. The mean correlation (rho) across test applications was .76. The range of correlations was .23 to .95 with only one respondent below .50 and fourteen out of thirty respondents at or above .80. Similarly, the rating of value concepts was consistent over time. The mean correlation (product-moment) across personal value profiles over time was .81. The range of correlations was .38 to .96 with only one respondent below .50 and nineteen out of thirty respondents at or above .80.

7.1.3 Inter-Rater Reliability

Inter-rater reliabilities on respondent perceptions of the organization's values were calculated in order to assess the strength (consistency in perception across respondents) of the organizational culture at the corporate research site.

The notion of "strong" cultures has been prevalent in the literature. Cultural strength has been characterized in a number of ways: homogeneous (Ouchi & Price, 1978), stable and intense (Schein, 1984), thick and widely-shared (Sathe, 1983), and cohesive and tight-knit (Deal & Kennedy, 1983). Saffold (1988: 548) points out that: "the meaning of *culture strength* is surprisingly difficult to pin down." He suggests two dimensions of cultural strength: 1) measures of cultural dispersion (similar to Louis' (1985) concept of cultural penetration); and 2) measures of cultural potency. Measures of cultural dispersion gauge the culture's diffusion across social and personal dimensions in the organization. Measures of cultural potency judge the power of the cultural paradigm as an influence on behavior.

It is important to note that while numerous authors have addressed the issue of cultural strength in conceptual terms, very few have addressed this issue in operational terms, Chatman (1988, 1991) being a notable exception. She estimated cultural crystallization (homogeneity) within eight accounting firms using two statistics: 1) coefficient alphas on the reliability of respondents' perception of their organization's cultural profile (as defined by the OCP instrument), and 2) average inter-rater correlations with respect to perceived cultural profiles.

Building from Chatman's work, coefficient alphas and average inter-rater correlations were calculated in this study across raters' perceptions of the organizational values at the corporate research site. These calculations were more complicated relative to Chatman's as a result of the large sample size. Chatman used 16 raters on average to calculate coefficient alphas and average inter-rater correlations. This study uses 324 raters who provided a profile representing their perception of the organizational culture along twenty-four shared value dimensions.

Attempting to calculate a coefficient alpha across 324 raters would not be valid. It would be similar to calculating the internal consistency for a 324 item test. As Nunnally (1978: 244), quoted earlier, has stated reliability necessarily approaches 1.00 as the number of items in a test is made larger if the average correlation among items is positive. Similarly, attempting to calculate an average inter-rater correlation across 324 raters would be complex. In order to achieve statistics comparable to Chatman's and overcome these complications, the 324 raters in this study were randomly assigned into groups of approximately ten raters each. Coefficient alphas and average inter-rater correlations were then calculated for each group. Group results were averaged to achieve aggregate statistics.

The results of this study's inter-rater reliability analysis (coefficient alpha) provide evidence in support of cultural crystallization at the corporate research site: With the exception of one group (alpha = .39), alpha coefficients ranged from .66 to .88 across thirty-three groups of approximately ten raters each. The average inter-rater reliability coefficient across groups was .77. These results are in a similar order of magnitude to those found by Chatman (1988: 319). She concluded evidence of cultural crystallization based on alpha coefficients ranging from .84 to .90 (across eight accounting firms) with an average of .88.

In terms of the average inter-rater correlation, all correlations across the groups were positive. The inter-rater correlations ranged from .09 to .42 with an aggregate mean of .30. These results are lower than those of Chatman who found, in one firm shown as an example, inter-rater correlations ranging from .10 to .66 with an average inter-rater correlation of .40.

It is therefore concluded that the organization selected as the research site manifests indications of cultural crystallization with respect to respondents' perceptions of its organizational value profile.

7.2 CONVERGENT VALIDITY

Kerlinger (1986: 421) states: "*Convergence* means that evidence from different sources gathered in different ways all indicates the same or similar meaning of the construct. Different methods of measurement should converge on the construct."

The research design applied in this study relies on multiple methods to assess individual-organizational value congruence including value ranking, value rating, and respondents' perception of their fit (PFit) with the organizational values. Convergent validity in this study was assessed along three dimensions: 1) inter-method correlation coefficients between rating and ranking for each value dimension across both levels of analysis (personal and organizational); 2) rank correlation coefficients between aggregate personal and organizational value profiles comparing profiles based on value ranking (medians) and value rating (means); and 3) correlation coefficients between the three value congruence indices (VC_{rank}, VC_{rate}, and PFit).

Correlations between ranking and rating methods for each of the twenty-four value dimensions are presented in Table 14. These results indicate that each of the twenty-four value dimensions achieved a significant positive correlation across the two methods.

TABLE 14

Correlations Between Value Ranking and Value Rating Methods [a]

(n = 375 personal values and n = 337 organizational values)

Value Dimension	Personal Value Measures Rank Correlation	Organizational Value Measures Rank Correlation
adaptability	.15***	.28***
aggressiveness	.38***	.43***
autonomy	.15***	.21***
broad-mindedness	.19***	.22***
cautiousness	.27***	.37***
consideration	.26***	.28***
cooperation	.20***	.16***
courtesy	.14***	.32***
creativity	.35***	.36***
development	.25***	.29***
diligence	.28***	.36***
economy	.30***	.49***
experimentation	.34***	.22***
fairness	.08*	.34***
forgiveness	.07*	.34***
formality	.17***	.42***
humor	.24***	.35***
initiative	.28***	.35***
logic	.31***	.33***
moral integrity	.35***	.45***
obedience	.28***	.51***
openness	.19***	.42***
orderliness	.37***	.44***
social equality	.30***	.21***

a. - In view of the fact that the ranking data were ordinal, Spearman rank-order correlations were calculated between the two methods. As might be expected, the calculation of product-moment correlations produces results similar to those shown above.

* $p < .05$
** $p < .01$
*** $p < .001$

As noted at the bottom of Tables 11 and 12, shown earlier, the rank correlations between aggregate ranking and rating value profiles provide additional evidence in support of convergent validity. The two aggregate personal value profiles (ranking profile and rating profile) have a rank correlation of .81. The two aggregate organizational value profiles (ranking profile and rating profile) have a rank correlation of .63.

This study relies on the personal and organizational values data (as described in Chapter 5) to calculate two indices of individual-organizational value congruence: VC_{rank} represents the rank correlation between each respondent's personal value ranking and his or her perception of the organizational value ranking. VC_{rate} represents the product-moment correlation between each respondent's personal value rating profile and his or her perception of the organizational value rating profile. In addition, each respondent's perception of his or her degree of values fit with the organization was also measured.

Table 15 presents the correlation coefficients between these three value congruence measures.

TABLE 15

Correlation Matrix - Value Congruence Across Methods [a]

#	Variables:	1	2
1	VC_{rank}		
2	VC_{rate}	.38***	
3	Perceived Fit (PFit)	.30***	.46***

a. n = 324 - all correlations are first-order partial correlations controlling for social desirability.
* p < .05, two-tailed
** p < .01, two-tailed
*** p < .001, two-tailed

In light of previous value congruence research (e.g., Chatman, 1988, 1991; Feather, 1979), which produced correlation coefficients (relative to theoretical consequents) in the .20 - .35 range, the magnitude of coefficients in Table 15 are judged to be favorable. All three congruence measures are significantly correlated at the $p < .001$ level. The particular strength in the statistical association between VC $_{rate}$ and PFit may reflect common method variance, since both measures rely on 7-point Likert-type scales.

Similar in composition to the value congruence measures, this study utilizes three measures of employee awareness of the organizational values: 1) Awareness based on value ranking data (Aware $_{rank}$); 2) Awareness based on value rating data (Aware $_{rate}$); and perceived level of awareness (P-Aware). Table 16 presents correlation coefficients between these three awareness indices.

TABLE 16

Correlation Matrix - Awareness of Organizational Values Across Methods [a, b]

#	Variables:	1	2
1	Aware $_{rank}$		
2	Aware $_{rate}$	.41***	
3	Perceived Awareness (P-Aware)	.28***	.19**

a. n = 282 (Executive management's responses have been excluded as their data (n = 42) were used to define the organization's required values.)
b. All correlations are first-order partial correlations controlling for social desirability.
* $p < .05$, two-tailed
** $p < .01$, two-tailed
*** $p < .001$, two-tailed

A review of Table 16 indicates that all three awareness indicators are significantly correlated at the $p < .01$ level. It is suggested that the relatively weak correlation coefficients associated with the P-Aware construct may be a function of restricted variance. Fifty-three percent of respondents answered within intervals 6 and 7 on the 7-point P-Aware scale.

In conclusion, this section has addressed the issue of convergent validity with respect to: the measurement of personal and organizational values, the calculation of indices of individual-organizational value congruence, and the calculation of indices of employee awareness of the organization's required values. Consideration of the results, particularly in relation to results achieved in earlier values-related research (e.g., Chatman, 1988, 1991; Feather, 1979), suggests evidence in support of convergent validity for the central construct, individual-organization value congruence.

7.3 FACTOR ANALYSES

Two propositions were put forward in Chapter 5 with respect to the structure of the personal and organizational values rating items: It was suggested that similarity in structure across personal and organizational values would be evidence in support of the meaningfulness and commensurability of the twenty-four shared values set. It was also proposed that Quinn and McGrath's (1985) competing values model would be relevant to the organizational value factor structure.

Principal components analyses with varimax rotation were performed through SPSSx (*Factor*) on the personal value rating data and on the organizational value rating data. This statistical procedure is quite sensitive to univariate outliers. As a result the data file was reviewed and ten cases which showed consistently excessive rating scores ($-3.0 < z > +3.0$) were deleted from the analysis. The resultant sample size ($n = 324$) remained well in excess of general guidelines (Tabachnick & Fidell, 1989) requiring at least five cases for each observed variable.

The factorability of the personal and organizational values correlation matrices was assessed by examination of the magnitude of the correlation coefficients and Kaiser's measure of sampling adequacy. In both the personal and organizational values matrices a large number of correlations in excess of .30 were found.[1] In addition, Kaiser's measure of sampling adequacy was .83 and .92 for personal and organizational values, respectively. These values both being well in excess of the recommended value (Tabachnick & Fidell, 1989) of .60.

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1 These matrices are shown in Appendix C.

The principal components analysis of personal values rating data (Table 17) produced six factors with eigenvalues greater than 1.0. These six factors explained 61.4% of the variance. Each one of the twenty-four shared values dimensions achieved a loading of at least .40 on one of the factors.

The pattern structure, shown in Table 17, indicates that personal value preferences in relation to the workplace can be characterized by: values relating to growth and change (factor 1); values relating to task achievement (factor 2); values relating to maintenance of the status quo (factor 3); values relating to relationships with others (factor 4); values relating to moral integrity (factor 5); and values relating to the acceptance of others (factor 6).

These six orthogonal factors were judged to be quite unambiguous. The first four factors provide support for Quinn and McGrath's (1985) dimensions of: clan (relationships), adhocracy (change/growth), market (achieving objectives), and hierarchy (maintenance of the status quo) as discussed in Chapter 5.

The principal components analysis of organizational values rating data (Table 18) produced five factors with eigenvalues greater than 1.0. These five factors explained 66.5% of the variance. Each one of the twenty-four shared values dimensions achieved a loading of at least .40 on one of the factors. The first four factors were relatively unambiguous and parallel results obtained from the personal values analysis. The fifth factor (economy (.71) and adaptability (.63)) is unclear and has not been assigned a name.

The pattern structure shown in Table 18 indicates that respondent perceptions of the organizational value priorities can be characterized by: values relating to change and innovation (factor 1); values relating to interpersonal relationships (factor 2); values relating to task achievement (factor 3); and values relating to the hierarchy and maintenance of the status quo (factor 4).

TABLE 17

Results of Factor Analysis for Personal Value Ratings Data [a]

Personal Value Dimension:	Factor 1 Change	Factor 2 Task	Factor 3 Status Quo	Factor 4 Relationships	Factor 5 Moral Integrity	Factor 6 Acceptance
Development	**.74**	.05	.03	.11	.25	-.01
Creativity	**.71**	.20	-.25	-.05	.13	-.07
Adaptability	**.68**	.23	-.07	.30	-.09	.11
Experimentation	**.63**	.29	-.21	.13	-.08	.13
Autonomy	**.54**	.36	.03	-.15	.11	.16
Logic	**.52**	-.02	-.37	-.37	**.49**	.17
Aggressiveness	.19	**.85**	-.07	-.08	-.01	-.11
Initiative	.40	**.73**	-.07	.07	.06	-.05
Openness	.15	**.70**	-.01	-.09	.28	.17
Obedience	-.06	-.13	**.75**	.23	.03	.11
Formality	-.15	-.12	**.71**	.01	.18	-.11
Cautiousness	-.33	**-.48**	**.56**	-.13	.00	.04
Orderliness	-.12	.13	**.56**	.09	.09	.15
Economy	.16	.03	**.56**	-.14	-.04	**.48**
Diligence	**.41**	.38	**.43**	.08	.19	-.14
Humor	.15	.07	-.02	**.75**	-.11	.10
Consideration	-.01	-.14	.17	**.74**	.18	.09
Cooperation	.03	.10	.14	**.57**	.34	.31
Courtesy	.13	-.27	**.45**	**.45**	.38	-.10
Moral Integrity	.02	.24	.17	.12	**.72**	-.07
Fairness	.21	.07	.13	.14	**.70**	.25
Forgiveness	.05	.04	.09	.18	.07	**.78**
Social Equality	.03	-.15	.07	**.43**	.13	**.52**
Broad-Mindedness	**.41**	.01	-.12	.39	.38	**.41**
Eigen values:	5.23	3.97	2.04	1.30	1.15	1.04
Variance accounted for:	21.8	16.5	8.5	5.4	4.8	4.3

a. n = 324. Boldface statistics represent loadings greater than .40 on that factor.

TABLE 18

Results of Factor Analysis for Organizational Value Ratings Data [a]

Org. Value Dimension:	Factor 1 Change	Factor 2 Relationships	Factor 3 Task	Factor 4 Status Quo	Factor 5
Logic	**-.76**	-.05	-.12	.11	-.11
Forgiveness	**.74**	.25	-.03	-.03	.17
Experimentation	**.71**	.19	.14	-.25	.25
Humor	**.65**	.32	.26	-.09	-.01
Cautiousness	**-.62**	-.18	-.35	.17	-.39
Diligence	**-.56**	-.03	.37	.33	.16
Creativity	**.52**	.39	**.43**	-.11	.24
Courtesy	.11	**.83**	.08	.14	-.07
Moral Integrity	-.14	**.78**	.17	-.04	.15
Fairness	**.45**	**.69**	.10	-.01	-.03
Cooperation	.22	**.68**	-.09	-.13	.06
Consideration	**.49**	**.67**	-.12	.18	-.15
Development	.34	**.60**	.32	-.04	.16
Broad-Mindedness	.40	**.55**	.19	-.06	.34
Openness	**.51**	**.52**	.35	-.20	-.02
Initiative	.29	.32	**.73**	-.11	-.04
Aggressiveness	-.13	-.20	**.72**	.12	.16
Autonomy	.35	.33	**.69**	-.06	.02
Formality	-.30	.05	.03	**.83**	-.07
Orderliness	.14	.23	-.01	**.78**	-.05
Social Equality	.34	.31	-.05	**-.67**	-.22
Obedience	**-.44**	-.31	-.24	**.57**	.13
Economy	.15	-.08	.00	.15	**.71**
Adaptability	.17	**.41**	.21	-.15	**.63**
Eigen values:	8.78	2.67	2.04	1.43	1.04
Variance accounted for:	36.6	11.1	8.5	6.0	4.3

a. n = 324. Boldface statistics represent loadings greater than .40 on that factor.

These two factor analyses taken in conjunction provide evidence in support of the commensurability of the twenty-four shared values dimensions across personal and organizational levels of analysis. The first four factors in each analysis appear to represent similar structural aggregates (change, status quo, task, and relationships). Out of the nineteen values dimensions represented (loading > .40) in first four personal values factors, ten are replicated in the equivalent organizational value factor.

While there is evidence of commensurability across the two factor structures, it is important to also acknowledge differences. There is a distinction between relationships values (factor 4) and moral values (factor 5) at the individual level which is not evident at the organizational level. It is suggested that this finding has a certain intuitive appeal. Moral integrity and fairness remain unique constructs as individual characteristics; however, at the group (organizational) level of analysis they become instrumental and have meaning in terms of interpersonal relationships.

It was proposed in Chapter 5 that Quinn and McGrath's (1985) organizational culture typology would be relevant to the resultant organizational value factor structure. Table 18 indicates empirical support for this proposition. Twenty-two of the shared values dimensions can be explained within Quinn and McGrath's framework. Fourteen of the value dimensions map in the same quadrants as was hypothesized in Chapter 5. The eight revisions indicated by the principal components analysis appear to have good face validity in terms of maintaining definitional consistency within Quinn and McGrath's quadrants. Out of the twenty-four value dimensions, only two values do not appear to be relevant with respect to their theoretical framework. These values are economy and adaptability.

In light of these empirical results the original overlay of the twenty-four shared value dimensions onto Quinn and McGrath's typology of organizational cultures (see Figure 9, Chapter 5) has been revised as shown in Figure 11 on the following page.

FIGURE 11

Shared Value Factors Embedded in Quinn & McGrath's Cultural Typology [a, b]

RELATIONSHIPS | **CHANGE**

THE CLAN **Quadrant I : The Consensual Culture** **Purpose: Group Cohesion** **Salient Values:** ***Courtesy (+)*** ***Moral Integrity (+)*** ***Fairness (+)*** ***Cooperation (+)*** ***Consideration (+)*** ***Development (+)*** ***Broad-Mindedness (+)*** ***Openness (+)*** **Information Processing Styles:** Discussion Participation Consensus	*THE ADHOCRACY* **Quadrant II : The Developmental Culture** **Purpose: Broad Purposes** **Salient Values:** ***Forgiveness (+)*** ***Experimentation (+)*** ***Humor (+)*** ***Creativity(+)*** ***Logic (-)*** ***Cautiousness (-)*** ***Diligence (-)*** **Information Processing Styles:** Insight Invention Innovation
THE HIERARCHY **Quadrant IV : The Hierarchical Culture** **Purpose: Execution of Regulations** **Salient Values:** ***Formality (+)*** ***Orderliness (+)*** ***Obedience (+)*** ***Social Equality (-)*** **Information Processing Styles:** Measurement Documentation Computation	*THE MARKET* **Quadrant III : The Rational Culture** **Purpose: Pursuit of Objectives** **Salient Values:** ***Initiative (+)*** ***Aggressiveness (+)*** ***Autonomy (+)*** **Information Processing Styles:** Goal Clarification Individual Judgement Decisiveness

(note - the values of adaptability and economy do not load significantly on any of these factors)

STATUS QUO | **TASK**

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a. n = 324, organizational value rating data. (+) indicates a positive correlation and (-) indicates a negative correlation between the value dimension and the factor.

b. Presentation of value concepts has been ordered in accordance with the relative size of correlation coefficients in the pattern matrix.

In conclusion, the factor analyses described in this section provide empirical support for the construct validity of individual-organizational value congruence, particularly with respect to commensurability across individual and organizational levels of analysis.

7.4 BIVARIATE RELATIONSHIPS [2]

A number of hypotheses relating to the consequents of individual-organizational value congruence and antecedents of employee awareness of the organization's required values were advanced in Chapter 5. This section reports empirical results with respect to these hypothesized relationships.

The bivariate analyses presented in this section are all first-order partial correlations controlling for social desirability effects. Social desirability response set bias has been identified (Chapter 3) as a significant threat to validity in values-based research. To address this issue an abbreviated version (Strahan & Gerbasi, 1975) of Marlowe and Crowne's (1960) Social Desirability scale was incorporated into the research design.

Respondent results on the ten-item social desirability scale indicate a normal distribution with utilization of categories across the ten-point range. The mean score across 324 respondents was 6.7. Using these data the effects of social desirability have been adjusted for in hypothesized bivariate relations through application of the SPSSx program *Partial Corr.*

7.4.1 Organizational Commitment

It was hypothesized that organizational commitment, in particular its sub-dimension of affective commitment, will be positively related to individual-organizational value congruence. Table 19 presents correlation coefficients relating to this construct.

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2 For purposes of clarity, the correlation matrices shown in this section have been limited to the specific hypotheses under consideration. Master correlation matrices showing relationships between all variables in the research model are contained in Appendix C.

TABLE 19

Value Congruence in Relation to Organizational Commitment [a]

#	Variables:	1	2	3	4	5
1	VC rank					
2	VC rate					
3	Perceived Fit					
4	Affective Commitment	.29***	.40***	.61***		
5	Continuance Commitment	.05	-.08	.03	.04	
6	Normative Commitment	.16**	.02	.20***	.36***	.24***

a. n = 324 - all correlations are first-order partial correlations controlling for social desirability.
* p < .05, one-tailed
** p < .01, one-tailed
*** p < .001, one-tailed

A review of Table 19 indicates that all three value congruence indices were significantly correlated with affective commitment at the $p < .001$ significance level. Also as one might have anticipated there was no indication of a significant relationship between any of the value congruence indices and continuance commitment.

Significant positive relationships with normative commitment across two of the congruence indices (VC_{rank} and PFit) were found as hypothesized. In addition the correlation coefficients between value congruence and affective commitment were all significantly greater (VC_{rank}: $z = 1.73$; VC_{rate}: $z = 5.11$; and PFit: $z = 6.41$) than those between value congruence and normative commitment at $p < .05$ significance level.

Correlation coefficients between the three commitment dimensions (affective, continuance and normative) were similar in relative order of magnitude to those found in earlier research (Allen & Meyer, 1990).

In summary these results provide full support for Hypotheses 1a and 1c, and partial support for Hypothesis 1b: [3]

Hypothesis 1a: Individual-organizational value congruence will be positively associated with affective commitment to the organization.

Hypothesis 1b: Individual-organizational value congruence will be positively associated with normative commitment to the organization.

Hypothesis 1c: The degree of association between individual-organizational value congruence and affective commitment will be greater than the degree of association between individual-organizational value congruence and normative commitment.

7.4.2 Job Satisfaction

It has been hypothesized that job satisfaction, in particular the sub-dimension of overall satisfaction with the organization, will be positively related to individual-organizational value congruence. Table 20 on the following page presents correlation coefficients relating to this construct.

A review of Table 20 indicates that individual-organizational value congruence is significantly related to all facets of job satisfaction measured in this study. All three congruence indices achieved significant positive correlations across the six facets of job satisfaction at the $p < .05$ significance level. The one exception being the correlation between VC_{rank} and Satisfaction with Pay which was not statistically significant.

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3 For purposes of this study, the term full support means statistical significance at $p < .05$ across all three congruence measures, partial support means statistical significance at $p < .05$ across at least two congruence measures, and very limited support means statistical significance at $p < .05$ across only one measure.

TABLE 20

Value Congruence in Relation to Job Satisfaction [a]

#	Variables:	1	2	3	4	5	6	7	8
1	VC $_{rank}$								
2	VC $_{rate}$								
3	Perceived Fit								
	Satisfaction w/:								
4	Organization	.26***	.37***	.55***					
5	Work	.15**	.30***	.39***	.51***				
6	Supervision	.14*	.29***	.31***	.44***	.41***			
7	Co-Workers	.15**	.30***	.29***	.36***	.43***	.42***		
8	Promotion	.19**	.25***	.33***	.46***	.30***	.47***	.25***	
9	Pay	.08	.18**	.12*	.25***	.26***	.25***	.18**	.26***

a. n = 324 - all correlations are first-order partial correlations controlling for social desirability.
* p < .05, one-tailed
** p < .01, one-tailed
*** p < .001, one-tailed

As expected the correlation coefficients were greatest with respect to overall satisfaction with the organization. Tests of statistical difference between the correlation coefficients indicate that relationships between value congruence and overall satisfaction with the organization were in nine out of fifteen cases significantly greater ($z > 1.64$, $p < .05$, one-tailed tests) than the relationships between value congruence and the other (more job-specific) facets of satisfaction.

Coefficient differentials were most pronounced with respect to perceived fit. Differences in variance explained with respect to the two actual fit indices (VC $_{rank}$ and VC $_{rate}$) were mixed. It is suggested that this may indicate dissonance reduction within respondents whereby perceived fit and overall satisfaction with the organization have been internally reconciled.

It is interesting to note that coefficient differentials between overall satisfaction with the organization and satisfaction with pay are statistically different across all three congruence measures. Out of the five JDI facets, satisfaction with pay appears to be the least associated with value congruence. This finding has intuitive appeal given the more extrinsic and financial nature of this facet.

Correlation coefficients between the five dimensions of the JDI (Smith, Kendall & Hulin, 1969) and the Faces scale (Dunham & Herman, 1975) used to measure overall satisfaction with the organization were consistent in terms of order of magnitude to those reported in earlier research (Balzer & Smith, 1990).

These results indicate full support for hypotheses 2a, 2b, 2c, 2d, and 2e, partial support for hypothesis 2f, and very limited support for hypothesis 2g (a significant correlation coefficient differential across all three value congruence indices was limited to the JDI facet - satisfaction with pay):

Hypothesis 2a: Individual-organizational value congruence will be positively associated with overall satisfaction with the organization.

Hypothesis 2b: Individual-organizational value congruence will be positively associated with satisfaction with work.

Hypothesis 2c: Individual-organizational value congruence will be positively associated with satisfaction with supervision.

Hypothesis 2d: Individual-organizational value congruence will be positively associated with satisfaction with co-workers.

Hypothesis 2e: Individual-organizational value congruence will be positively associated with satisfaction with promotion opportunities.

Hypothesis 2f: Individual-organizational value congruence will be positively associated with satisfaction with pay.

Hypothesis 2g: The degree of association between individual-organizational value congruence and overall satisfaction with the organization will be greater than degree of association between individual-organizational value congruence and the more job specific facets of satisfaction, namely satisfaction with work, supervision, co-workers, promotion opportunities, and pay.

7.4.3 Turnover Intention, Organizational Citizenship and Absence Behavior

It has been hypothesized that value congruent employees will be: less likely to express intent to leave the organization, less likely to be absent, and more likely to exhibit extra-role organizational citizenship behaviors. Table 21 presents correlation coefficients relating to these constructs.

TABLE 21

Value Congruence in Relation to Turnover, Org. Citizenship and Absence [a]

#	Variables:	1	2	3	4	5	6	7	8
1	VC_{rank}								
2	VC_{rate}								
3	Perceived Fit								
4	Turnover Int.	-.26***	-.23***	-.44***					
5	OCB	.04	.10*	.17**	-.10				
6	OCB - Alt.[b]	.02	.08	.13*	-.09	.74***			
7	OCB - Con.[b]	.04	.06	.10*	-.04	.76***	.13*		
8	Absent-days	.05	-.02	.08	-.12*	-.15**	-.03	-.22***	
9	Absent-eps.	.08	-.01	.07	-.14**	-.13*	.00	-.22***	.91***

a. n = 324 - all correlations are first-order partial correlations controlling for social desirability.
b. OCB-Alt. (Altruism) and OCB-Con. (Conscientiousness) are sub-scales comprising items also found in the OCB scale.
* p < .05, one-tailed ** p < .01, one-tailed *** p < .001, one-tailed

As shown in Table 21, individual-organizational value congruence exhibits a significant negative relationship with turnover intention across all three value congruence indices at $p < .001$ significance level. These results provide full support for Hypothesis 3:

Hypothesis 3: Individual-organizational value congruence will be negatively associated with employee behavioral intention to leave the organization.

With respect to organizational citizenship behavior, however, the empirical results are less clear. The broad OCB measure manifests relatively weak positive associations with two of the three value congruence indices at $p < .05$ significance level. But, value congruence relationships with the OCB sub-scale dimensions of altruism and conscientiousness achieve very little empirical support. Perceived value congruence (PFit) was the only congruence index to achieve significant positive relationships. Even in this case, correlation coefficients are relatively weak.

In terms of hypothesized coefficient differentials, the magnitude of the association between value congruence and altruism was greater than that of value congruence and conscientiousness. However, the extent of this difference was not statistically significant.

It is suggested that the inability of the OCB measure and its sub-scales to yield stronger coefficients may be a function of measurement error. Although the OCB scale has been used as a self-report measure (Pierce, Gardiner, Cummings, and Dunham, 1989; reported correlations of .19 and .12 ($p < .01$) between OCB and two measures of OBSE (organization-based self-esteem) using a sample of 1,426 school district employees), it was originally designed as a supervisory report measure. The range of self-report responses obtained in this study was more restricted than expected. Most respondents reported behavior at the socially-desirable end of the scale. The OCB mean was 5.7 on a seven-point scale with 38% of respondents answering in the top two categories (6 & 7). This reduction in variance across the scale may have attenuated statistical relationships.

To conclude from these results with respect to organizational citizenship behavior, there is partial support for Hypothesis 4a, and very limited support for Hypotheses 4b and 4c. There is no empirical support for Hypothesis 4d.

Hypothesis 4a: Individual-organizational value congruence will be positively associated with organizational citizenship behavior.

Hypothesis 4b: Individual-organizational value congruence will be positively associated with altruistic (e.g., helping) behavior in the organization.

Hypothesis 4c: Individual-organizational value congruence will be positively associated with conscientiousness (e.g., punctuality) behavior in the organization.

Hypothesis 4d: The degree of association between individual-organizational value congruence and altruistic behavior (e.g., helping) will be greater than the degree of association between individual-organizational value congruence and conscientiousness behavior (e.g., punctuality).

The absence construct in this study did not yield results as expected. Contrary to hypotheses, the two absence behavior measures (absence-days and absence-episodes) showed no statistical relationship with any of the individual-organizational value congruence indices. It is suggested that these results may be measurement artifacts as opposed to indications of alternative theory.

There was very little variance across the two self-report absence measures used in this study. The days absent measure had a range of eight categories from "not absent at all" to "absent more than 30 days." However, 98% of respondents answered in the first two categories (53% not absent at all and 45% absent 1 to 5 days). Similarly, the episodes absent measure had a range of five categories from "no episodes of absence" to "over 30 episodes of absence." For this measure, 99% of respondents answered in the first two categories (54% with no episodes of absence and 46% with 1 to 5 episodes).

It is thought that these range restrictions may be the function of two effects: a sampling effect and response-set bias. The sample used in this study emphasized senior and middle management perspectives. Hourly paid workers were not included in the sample. It is proposed that absence behavior in these ranks may indeed be more restricted relative to absence behavior across all employees in the organization. Second, social-desirability effects in these self-report measures of absence behavior are a possibility. Although neither absence measure manifested a statistically significant relationship with the social desirability method variable.

In a more aggressive (and less rigorous - Nunnally, 1978: 136) attempt to uncover indications of a relationship between individual-organizational value congruence and absence behavior, the two absence behavior variables were transformed into dichotomous variables (no absence versus some absence). Point-biserial correlations were then calculated between the three value congruence indices and the two absence measures.

This analysis did little to clarify the relationship. The days absent measure showed weak negative correlations with VC_{rank} (-.04) and PFit (-.06) and no correlation with VC_{rate} (.00). Similarly, the episodes absent measure showed weak negative correlations with VC_{rank} (-.06) and PFit (-.04) and a weak positive correlation with VC_{rate} (.03).

With reference to the other variables shown in Table 21, the negative correlation between conscientiousness and absence behavior is intuitively appealing. However, the weak negative correlations between turnover intention and absence behavior are difficult to understand. It is suggested that these statistics may be artifacts of poor psychometric performance in the absence measures.

In conclusion, Hypotheses 5a and 5b linking value congruence and absence behavior are not supported:

> *Hypothesis 5a: Individual-organizational value congruence will be negatively associated with absence behavior conceptualized in terms of total time lost.*

> *Hypothesis 5b: Individual-organizational value congruence will be negatively associated with absence behavior conceptualized in terms of absence frequency.*

7.4.4 Consequents of Individual-Organizational Value Congruence

The three preceding sections have examined empirical results relating the three indices of individual-organizational value congruence to employee attitudes, intentions, and behaviors. Eight of the seventeen hypotheses presented in Chapter 5 received full support. Three hypotheses received partial support. Three hypotheses received very limited support. And, three hypotheses were not supported. These results suggest a positive association between individual-organizational value congruence and employee attitudes, particularly employees' level of affective commitment to the organization and overall level of satisfaction with the organization.

With respect to employees' intent to leave the organization, again the results support the hypothesized negative relationship. Findings with respect to employee behaviors (e.g., organizational citizenship and absence), however, are less clear. This relative reduction in empirical clarity may be understandable in light of Epstein's (1979, 1980) comments that empirical explanation becomes increasing challenging as one moves from attitude to intent to behavior. The implications of these findings for organizational science and the practice of management will be discussed in detail in the following chapter.

7.4.5 Situational Antecedents to Employee Awareness of Required Values

A variety of situational antecedents to employee awareness of the organization's required values were hypothesized in Chapter 5. The organization's required values have been defined as those priorities recognized by the dominant coalition (executive management). It was hypothesized that employee awareness of the organization's required values would be positively associated with the degree to which employees: 1) have been in contact with members of the dominant coalition; 2) have spent time in the organization; 3) have been exposed to training seminars and corporate documentation concerning the organization's required values; 4) have had a role requiring them to discuss the organization's required values with others inside and/or outside the organization; and 5) have been recognized and rewarded for value congruent behavior.

Table 22 presents correlation coefficients relating the three indices of awareness (Aware $_{rank}$ -awareness based on ranking data; Aware $_{rate}$ - awareness based on rating data; and P-Aware - employee's perceived level of awareness) to hypothesized situational antecedents.

TABLE 22
Situational Antecedents to Employee Awareness of the Required Values [a, b]

#	Variables:	1	2	3	4	5	6	7	8	9
1	Aware $_{rank}$									
2	Aware $_{rate}$									
3	P-Aware									
4	Contact-Exec	.26***	.16**	.22***						
5	Contact-Peer	.04	-.19**	.08	.14*					
6	Contact-Cust	-.07	-.01	.13*	-.01	.04				
7	Org. Tenure	.05	.11*	.14*	.09	-.02	-.01			
8	Expos - Trng	.22***	.10	.36***	.27***	.09	.07	.17**		
9	Expos - Spk	.11*	.10	.33***	.22***	-.01	.18**	.12*	.61***	
10	Goal Rel.	-.01	.18**	.01	.04	-.05	-.03	-.08	.08	.07

a. n = 282 (Executive management's responses have been excluded from the computation of these correlations as their data (n =42) were used to define the organization's required values set.)
b. all correlations are first-order partial correlations controlling for social desirability.
* p < .05, one-tailed ** p < .01, one-tailed *** p < .001, one-tailed

It was hypothesized that employees who interact with and/or work in close physical proximity to executive managers would be more aware of the organization's required values. In other words, the organization's required values should be more visually salient to those employees. A review of Table 22 indicates full support for this hypothesis. All three awareness indices achieved significant positive correlations at the $p < .01$ level with the variable Contact-Exec (a measure of the visual salience of required organizational values).

It is also interesting to note the absence of any positive statistical relationship between awareness of the organization's required values and Contact-Peer, contact with one's immediate peer group and supervisor. In fact, one of the awareness indices ($Aware_{rate}$) suggests more frequent contact with one's immediate group is negatively associated with awareness of the organization's required values. In considering these results it is important to keep in mind that executive responses (n=42) have not been included as their data form the bench mark against which level of awareness is gauged. In addition, as other executives (Contact-Exec) would also be peers within the executive group (Contact-Peer) discrimination between these two variables would become confused.

Additionally, there is no evidence of any statistical relationship between actual awareness ($Aware_{rank}$ and $Aware_{rate}$) of the organization's required values and Contact-Cust, contact with customers both internal within other departments and external. However, there is an indication that the perception of awareness of the organization's required values (P-Aware) exists within those who frequently interact and/or work with internal and external customers.

It was hypothesized that employees with long tenure (temporal salience) in the organization would be more aware of the organization's required values. Correlation results in Table 22 indicate partial support for this hypothesis. Two of the three indices show small significant correlations at the $p < .05$ level.

It was hypothesized that employees who have been exposed to training and communications programs (instructed salience) which emphasize the organization's required values (Expos-Trng) would be more aware of these values. Table 22 indicates partial support for this hypothesis. Two of the three indices are positively associated with relatively strong correlation coefficients at the $p < .01$ significance level.

This first type of exposure to the organization's required values was deemed to be *passive* (e.g., sitting in a seminar room listening to the presenter outline the organization's value expectations or reading a corporate communications document). A more *active* type of exposure was defined by the variable (Expos-Spk) which measures the degree to which employees who by role requirement have to discuss (actually verbalize) the organization's required values with others either inside or outside of the organization.

Table 22 indicates partial support for a positive association between speaking about the organization's required values and awareness of the organization's required values as defined by the dominant coalition. Two of the three awareness indices are positively correlated at $p < .05$ significance level. One might intuitively expect that actively speaking about the required values should create greater awareness than passively attending a training seminar; however, the results in Table 22 indicate little differential across passive and active exposure.

It is suggested that the significant positive correlations between instructed salience (exposure), visual salience (close proximity to executives), and organizational tenure may be interpreted to indicate the existence of a select group below executive ranks who operate with greater awareness of the organization's required values relative to other groups. To investigate this possibility, analyses of variance were performed on mean differences in visual, instructed, and temporal salience across hierarchical and functional groupings.

In terms of the organizational hierarchy, the analyses of variance indicate that the organization's required values are more salient to middle managers than to professional/technicals and clerical/ administratives. On each of the three salience measures middle managers as a group have significantly higher salience means using the conservative Scheffe test procedure. Statistical results were as follows: visual salience ((contact with executives) $F=12.95$, $p = .000$), instructed salience ((combined passive and active exposure measure) $F=15.79$, $p = .000$), and temporal salience ((time in the organization) $F=11.09$, $p = .000$).

In terms of the organization's functional areas, differences in group means across the salience variables are less clear. Statistical results were as follows: visual salience ($F=3.11$, $p=.001$), instructed salience ($F=.444$, $p=.817$), and temporal salience ($F=2.60$, $p=.025$). The only functional group that was significantly higher (Scheffe test) relative to other groups was the human resources function in terms of visual salience (contact with executives).

These analyses of variance results are interpreted to suggest that required organizational values become less salient as one moves down the hierarchy and the required organizational values are more visually salient to members of the human resource function by virtue of their increased interaction with/ proximity to executive management.

The final situational antecedent to be considered in this section is goal relevant salience (the degree to which fitting in with the organization's required values is explicitly recognized and rewarded). Table 22 indicates very limited support for this hypothesis. Only one of the awareness indices ($Aware_{rate}$) was significantly associated. The other two indices show no evidence of significant statistical relationships.

The lack of statistical association with goal relevant salience might be explained by the fact that this particular organization does not recognize and reward value congruence in an explicit sense. Howard (1990) notes that this practice tends to be the norm and presents management practices at Levi Strauss and Company as an innovative exception. In the absence of an explicit system of rewards and recognition for value congruent behavior at the research site, it is suggested that the interpretation of this scale may have been confusing to respondents.

In conclusion, these results indicate full support for hypothesis 6a, partial support for hypotheses 6b, 6c, and 6d, and very limited support for hypothesis 6e as follows:

Hypothesis 6a: Propinquity with members of the dominant coalition through interaction and/or close physical proximity will be positively associated with awareness of the organization's required values.

Hypothesis 6b: Tenure in the organization will be positively associated with awareness of the organization's required values.

Hypothesis 6c: Being specifically instructed to pay attention to the organization's required values will be positively associated with awareness of the organization's required values.

Hypothesis 6d: Having a role which involves discussing the organization's required values with others inside and/or outside the organization will be positively associated with awareness of the organization's required values.

Hypothesis 6e: Being recognized and rewarded for adherence to the organization's required values will be positively associated with awareness of the organization's required values.

7.4.6 Personality Antecedents to Employee Awareness of Required Values

The previous section addressed the degree to which situational variables designed to increase the salience of the organization's required values were positively associated with employee awareness of such values. This section will consider personality dispositions hypothesized to influence the extent to which employees atte.. to salient stimuli in their workplace environment.

Social cognition theory suggests that some employees by the nature of their personalities will be more predisposed to attend to their external environments. The personality variables of particular interest in this research are: self-consciousness (public, private, and social anxiety), locus of control, and self-monitoring.

Table 23 presents correlation coefficients describing the statistical association between the three indices of awareness (Aware $_{rank}$ -awareness based on ranking data; Aware $_{rate}$ - awareness based on rating data; and P-Aware - employee's perceived level of awareness) and hypothesized personality variables.

TABLE 23

Personality Antecedents to Employee Awareness of the Required Values [a, b]

#	Variables:	1	2	3	4	5	6	7
1	Aware $_{rank}$							
2	Aware $_{rate}$							
3	P-Aware							
4	Public S-C	-.09	.03	-.09				
5	Private S-C	-.12*	-.02	.01	.48***			
6	Social Anx.	-.18**	-.10	-.25***	.35***	.14*		
7	Loc. of Cont	-.03	-.02	-.25***	.09	.04	.27***	
8	Self-Monitor	.06	.04	.04	.11*	.17**	-.33***	-.08

a. n = 282 (Executive management's responses have been excluded from the computation of these correlations as their data (n =42) were used to define the organization's required values set.)
b. all correlations are first-order partial correlations controlling for social desirability.
* p < .05, one-tailed
** p < .01, one-tailed
*** p < .001, one-tailed

Theoretical rationale has been advanced to suggest a positive association between public self-consciousness (awareness of the self as a social object) and awareness of the organization's required values. The statistical results in Table 23 provide no support for this hypothesis. None of the correlations with the three indices of awareness were significant. These results indicate no association between being aware of one's self as a social object and being aware of the organization's required values.

In contrast to public self-consciousness, it was hypothesized that private self-consciousness (attending to one's inner thoughts and feelings) would be negatively associated with awareness of the organization's required values. The results in Table 23 provide very limited support for this hypothesis. There is a weak negative association between private self-consciousness and Aware $_{rank}$ at $p < .05$ level. There is no evidence of significant association with respect to the other two awareness indices.

A negative association between social anxiety (defined as a discomfort in the presence of others) and awareness of the organization's required values was also hypothesized. A review of Table 23 indicates partial support for this hypothesis. Two of the correlations with the awareness indices are negative and significant at $p < .01$ level. The third correlation with the Aware rate index is in the right direction, but failed ($p = .055$) to achieve significance at the $p < .05$ level.

Theoretical rationale linking locus of control to an awareness of the organization's required values was presented in Chapter 5. Specifically, it was hypothesized that high internals would be more aware of the organization's required values relative to high externals. This suggests a negative correlation (high scores on Rotter's (1966) locus of control scale indicate a high external locus of control, low scores indicate a high internal locus of control) between locus of control and awareness of the organization's required values. The results in Table 23 provide very limited support for this hypothesis. Only P-Aware (perceived awareness of the organization's required values) was negatively correlated with locus of control at $p < .001$ level. It appears that high internals perceive an awareness of the organization's required values whereas the actual awareness indices exhibit no statistical evidence in support of an association.

The final personality construct considered in this analysis is self-monitoring (a predisposition to monitor and control one's expressive behaviors in order to "manage" an impression). It was hypothesized that high self-monitors would make themselves more aware of the organization's required values. The results in Table 23 provide no support for this hypothesis. Correlations coefficients with the three awareness indices manifest very small positive associations, none of which are significant at $p < .05$ level.

It was thought that this lack of an association between self-monitoring and awareness of the organization's required values may be indicative of arguments in the literature (Briggs, Cheek & Buss, 1980; Luechauer & Katerberg, 1989) suggesting that self-monitoring is a multi-dimensional construct comprising three factors: acting, extroversion, and other-directedness.

To address this issue, correlation coefficients were examined between the self-monitoring factors and the three awareness indices. Based on the description of these factors it was intuitively compelling to anticipate that other-directedness factor would exhibit the greatest degree of association. This investigation, however, did not produce any evidence of significant associations between the self-monitoring factors and the three indices of awareness.

As shown in Table 23, the correlation coefficients describing relations between the personality variables support earlier research. The relative order of magnitude with respect to the three self-consciousness sub-scales is similar to results found by Fenigstein, Scheier and Buss (1975), although the magnitude of the coefficients in this study was higher. While there was some evidence of a relationship between self-consciousness (public and private) and self-monitoring, similar to earlier studies (Briggs, Cheek & Buss, 1980; Turner et al., 1978) it was not a strong relationship.

The positive correlation (.27) between locus of control and social anxiety is interpreted to suggest that high externals tend to be more anxious in social situations. Perhaps this is a symptom of their perceived inability to control such situations. The negative correlation (-.33) between social anxiety and self-monitoring is interpreted to suggest that impression managers (high self-monitors) tend not to be socially anxious. This may be because they view social situations as positive opportunities (a social platform or stage) to make a good impression, whereas socially anxious people simply experience discomfort in such situations.

In conclusion, the results of this correlation analysis indicate partial support for hypothesis 7c, very limited support for hypotheses 7b and 7d, and no support for hypotheses 7a and 7e as follows:

Hypothesis 7a: Public self-consciousness will be positively associated with awareness of the organization's required values.

Hypothesis 7b: Private self-consciousness will be negatively associated with awareness of the organization's required values.

Hypothesis 7c: Social anxiety will be negatively associated with awareness of the organization's required values.

Hypothesis 7d: External locus of control will be negatively associated with awareness of organization's required values.

Hypothesis 7e: Self-monitoring will be positively associated with awareness of the organization's required values.

7.4.7 Antecedents to Employee Awareness of Required Values

The two preceding sections have examined empirical results relating indices of employee awareness of the organization's required values to situational factors which may enhance the salience of shared value requirements in the work context and to personality factors which may predispose certain employees to attend more to stimuli in their work environment. Ten hypothetical relationships were advanced in Chapter 5. Five hypotheses related to situational variables and five related to personality variables. Empirical support (in varying degrees) was found for all five situational (salience) variables with visual salience (interaction with executives) and instructed salience (training seminars and discussions on shared values) showing relatively strong statistical associations.

Relationships between the personality variables and awareness of the organization's required values, in comparison, were less clear. Public self-consciousness and self-monitoring which were expected to show strong positive associations, in fact, failed to achieve statistical significance with any of the three awareness indices. Similarly, the locus of control variable was limited to a significant association with perceived awareness. The only hypothesized relationship with moderate empirical support was the negative association between social anxiety and awareness of the organization's required values.

In retrospect, perhaps these personality variables which measured employees' predisposition to attend to external stimuli were too general for the research question under consideration. These measures provided a coarse distinction between inner and outer orientation. It is thought that more "fine-grained" instrumentation referring specifically to normative cues (as opposed to environmental cues in general) may have been more beneficial.

In summary, these data indicate that increased awareness of the organization's required values is empirically related to situational (salience) factors which are amenable to managerial intervention. The implications of these findings for organizational science and the practice of management will be discussed in the following chapter.

7.4.8 Subjective Versus Objective Perceptions of Organizational Values

The basic proposition that subjective reality (as opposed to objective reality) will be more meaningful to individual employees in terms of predicting their attitudes, intentions, and behavior is central to this study's research design. For the purposes of this study, subjective reality is defined as the individual employee's view of the organization's value priorities. Objective reality is defined as a collective view (an aggregate across all respondents) of the organization's value priorities providing that there is some evidence of "crystallization" or collective consensus (Patsfall & Feimer, 1985).

In keeping with consistency theory, the research design in this study relies on intra-person calculations of value congruence. As explained in Chapter 6, the two actual congruence indices (VC_{rank} and VC_{rate}) consider each individual's perception of his or her own personal values against that same individual's perception of the organization's values.

Previous research (e.g., Chatman, 1988, 1991) has relied on aggregate constructions of organizational value priorities in an attempt to define objective profiles representing organizational cultures. In her study, Chatman used independent samples to derive individual and organizational value profiles. Her organizational value profiles were based on data from key informants (16 individuals (on average) with at least two years tenure per firm including senior management representation).

As discussed in Chapter 3, Pervin (1968) examines the ongoing debate in the literature between those (e.g., Heider, 1939) who promote the behavioral environment (the environment as perceived and reacted to by the subject) and those (e.g., Sells, 1963) who emphasize the geographical environment (the objective physical and social environment). Pervin suggests that there is no resolution to the issue of behavioral (subjective) versus geographical (objective) reality and the right path involves an understanding of the nature of the research question. He recommends the collection of data from both perspectives whenever possible.

While this study's primary focus has been the behavioral environment, consistent with Heider's balance theory, it is possible given the instrumentation applied to create a geographical view of the organization's culture by aggregating perceptions across all respondents (n = 324). This aggregate profile using median organizational value ranking and mean organizational value ratings has already been presented in Table 12. In addition, the prerequisite of cultural consensus or "crystallization" has been addressed in Section 7.1.3.

In light of evidence in support of cultural homogeneity, it seems reasonable to represent the organizational culture as an aggregate profile. Calculations of value congruence based on this aggregate profile of organizational values priorities against employees' personal values profiles provides a means of addressing the ongoing behavioral-geographical debate.

In this particular analysis, respondents' personal value profiles were correlated with the aggregate organizational value profile (e.g., objective reality) to produce indices of congruence. In previous analyses, congruence indices were based on each individual's personal value profile in relation to his or her own perceived organizational value profile.

Table 24, on the following page, presents correlation coefficients between these individual-organizational value congruence indices based on objective reality and employee attitudinal, intentional and behavioral outcome variables. Similar to previous bivariate analyses, this analysis relies on partial correlations controlling for social desirability.

A review of Table 24 indicates that geographical reality appears to be less meaningful in terms of statistical associations with employee attitudes, intentions, and behavior. While the overall pattern remains the same (with the exception of normative commitment), correlation coefficients in general were reduced. In addition, convergent validity across ranking and rating methods was less pronounced. This analysis is interpreted to suggest that behavioral as opposed to geographical reality is the more appropriate conceptualization of an organization's values when attempting to understand individual employee attitudes.

TABLE 24

Correlations - Value Congruence (Objective) - Employee Work-Outcomes [a]

Variable:	VC_{rank} - object.[b]	VC_{rate} - object.[b]	PFit
VC_{rate} - objective	.28***		
PFit	.29***	.22***	
Affective Commitment	.15**	.18**	.61***
Continuance Commitment	-.09	-.18**	.03
Normative Commitment	-.17**	-.08	.20***
Overall Satisfaction w/ Org.	.21***	.08	.55***
Satisfaction w/ Work	.24***	.22***	.39***
Satisfaction w/ Supervision	.14**	.14**	.31***
Satisfaction w/ Co-Workers	.37***	.12*	.29***
Satisfaction w/ Promotion	.14**	.10*	.33***
Satisfaction w/ Pay	.22***	.11*	.12*
Turnover Intention	-.08	-.01	-.44***
Org. Citizenship Behavior	.09	.12*	.17***
OCB sub-scale - Altruism	.00	.11*	.13**
OCB sub-scale - Conscientious	.13*	.05	.10*
Absence - Total Days	-.08	.00	.08
Absence - Frequency	-.09	.00	.07

a. n = 324 - all correlations are first-order partial correlations controlling for social desirability.
b. Value congruence (VC_{rate} and VC_{rank}) is calculated on geographical reality (e.g., an aggregate profile of org. values).
* p < .05 ** p < .01, *** p < .001

This finding has implications for organizational science which will be addressed in Chapter 8. The next section will examine the focal construct of individual-organizational value congruence using multivariate procedures in order to address the issue of predictive validity.

7.5 MULTIVARIATE RELATIONSHIPS

Hierarchical regression procedures were employed in this study to address two issues:

First -- Does the construct of individual-organizational value congruence add to our understanding and prediction of employee work-outcome variables (e.g., commitment, satisfaction, and turnover intent) after demographic control variables (seniority in the hierarchy, organizational tenure, annual salary level, age, gender, and educational level) and a method control variable (social desirability) have been taken into account?

Second -- Does the construct of individual-organizational value congruence add to our understanding and prediction of employee work-outcome variables after individual employees' personal value data (using the six personal values factors) have been taken into account?

With respect to the first issue, previous research as discussed in Chapter 6 has found demographic variables to be of importance when examining employee outcome variables including commitment, satisfaction, and turnover intention. In addition, the methodological review in Chapter 3 revealed the need to consider social desirability effects.

With respect to the second issue, it was considered necessary to investigate whether value congruence (individual-organizational) or personal value data (e.g., personal value factors) best explain attitudinal constructs such as satisfaction and commitment? There is, for example, evidence in the literature (Staw & Ross, 1985) to suggest that some people have enduring predispositions toward being satisfied whereas others appear to be predisposed to remain dissatisfied regardless of their situation.

The methodological rationale for applying hierarchical regression in these analyses was as follows: Tabachnick and Fidell (1989) recommend the application of hierarchical regression procedures for this type of research question. With reference to hierarchical regression, they state (p. 150): "Explicit hypotheses are tested about the proportion of variance attributable to some IVs after variance due to IVs already in the equation is accounted for." In addition, Chatman (1991) used hierarchical regression in her analysis of value congruence effects on satisfaction and intent to leave. She controlled for the effects of organizational tenure, age, grade point average, gender, and person-job fit.

In the conduct of these analyses a number of considerations designed to ensure statistical rigor were taken into account. These considerations follow guidelines provided by Tabachnick and Fidell (1989). The ratio of cases to independent variables was 40:1 in the first hierarchical regression analysis (method and demographic control variables). In the second analysis (method and personal value factors) the ratio was also 40:1. These ratios are well in excess of the recommended (5:1) guideline.

As discussed in Chapter 6, univariate normality was assessed through examination of output produced by the SPSSx *Frequencies* routine. Out of the variables involved in this analysis, turnover intent was quite skewed (positive skewness = 1.052). While it is unlikely that this departure from normality will be problematic given the size of the sample (Tabachnick and Fidell, 1989), it was considered prudent to apply a logarithmic transformation to the dependent variable turnover intent.

Regression analysis is also sensitive to univariate and multivariate outliers. The data were screened and ten cases were removed due to univariate outliers leaving a total sample size of 324 respondents. In addition, the subroutine *Casewise Plot* was applied within the program SPSSx *Regression* to identify multivariate outliers. Cases with multivariate outliers were removed and the regression programs were rerun. The existence of multivariate outliers was very limited. In the majority of analyses, no cases were removed. In fact, the maximum number of cases removed in any one analysis was three.

Examination of graphical and chart output from SPSSx *Regression* (histograms of standardized residuals, plots of expected versus observed standardized residuals, and scatterplots of residuals against predicted dependent variable scores) provided support for the assumptions of homoscedasticity and independence of residuals.

Multicollinearity was evident across some of the demographic control variables. For example, as might be expected seniority within the organizational hierarchy was highly correlated with salary (.81), educational level (.58), and to a lesser extent organizational tenure (.31). However, multicollinearity was not viewed as a major issue because the emphasis in this analysis was on the additional variance explained by the value-congruence independent variable as opposed to the relative weighting of the independent demographic variables.

Multicollinearity was not an issue in the regression analysis involving the personal value factors as they were orthogonal.

7.5.1 Predicting Employee Outcomes Controlling for Demographics

This analysis focused on the employee work-outcome variables considered to be the most central to the construct of individual-organizational value congruence as follows: affective commitment, overall satisfaction with the organization, and turnover intention. Bivariate analyses reported earlier provide empirical support for an emphasis on these particular variables.

Theoretical rationale linking demographic variables such as age, gender, and educational level to employee performance variables (e.g., commitment, satisfaction and turnover intent) has been presented in Chapter 6. In addition, this study found empirical evidence in support of such relationships. Table 25 on the following page shows correlation coefficients representing associations between the employee outcome variables of interest and the demographic control variables. In addition, Chatman (1991) used organizational tenure, age, gender, and educational level as demographic control values in her study.

TABLE 25

Employee Outcome Variables Across Regression Independent Variables [a]

Variable:	Affective Commitment	Overall Satisfaction with Organization	Turnover Intention
Method Control			
Social Desirability	.19**	.08	.03
Demographic Control:			
Seniority in Hierarchy	.21***	.13*	.03
Organizational Tenure	.24***	.12*	-.12*
Annual Salary	.19**	.13*	-.01
Age	.08	-.01	-.07
Gender [b]	-.10	-.06	-.06
Educational Level	-.02	-.04	.19**
Value Congruence Indices:			
VC_{rank}	.29***	.26***	-.26***
VC_{rate}	.40***	.37***	-.23***
PFit	.61***	.55***	-.44***

a. n = 324
b. Gender was coded as a dichotomous dummy variable (male = 0, female = 1) for regression analyses.
* p < .05, ** p < .01, *** p < .001 (two-tailed)

Following recommended hierarchical regression procedures (Tabachnick and Fidell, 1989), the control variables were entered first followed by the value-congruence variable. It is important to note that separate regression analyses were run for each of the three value congruence indices (VC_{rank}, VC_{rate}, and PFit). Table 26 on the following page shows the results of these analyses focusing on affective commitment as the dependent variable.

A review of Table 26 indicates that the method control variable (social desirability) explains (on average across the three analyses) about 5% of the variance in the dependent

TABLE 26

Hierarchical Regression Predicting Affective Commitment [a]
(using social desirability and demographics as control variables)

VC_{rank} - Value Ranking	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.05	.05	11.49***
Seniority in Org. Hierarchy	.10	.05	12.35***
Organizational Tenure	.15	.05	12.42***
Annual Salary	.15	.00	0.36
Age	.15	.00	0.41
Gender [c]	.16	.01	2.74
Educational Level	.18	.02	6.24*
Value Congruence Variable:			
VC_{rank}	.24	.06	17.39***
VC_{rate} - Value Rating	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.06	.06	16.91***
Seniority in Org. Hierarchy	.10	.04	13.39***
Organizational Tenure	.15	.05	15.68***
Annual Salary	.15	.00	0.03
Age	.15	.00	1.03
Gender [c]	.16	.01	4.60*
Educational Level	.18	.02	6.20*
Value Congruence Variable:			
VC_{rate}	.28	.10	37.16***
PFit - Perceived Congruence	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.04	.04	12.71***
Seniority in Org. Hierarchy	.08	.04	11.67***
Organizational Tenure	.13	.05	17.06***
Annual Salary	.13	.00	0.00
Age	.14	.01	1.99
Gender [c]	.15	.01	4.43*
Educational Level	.16	.01	3.84
Value Congruence Variable:			
PFit	.46	.30	151.88***

a. Variable sets listed in order of entry. Separate analyses were run for each value congruence index.
b. F ratio refers to incremental change in R^2
c. Gender was coded as a dummy variable (male = 0, female = 1)
* $p < .05$, ** $p < .01$, *** $p < .001$

variable affective commitment, significant at a probability level of $p < .001$. The demographic control variables explain an additional 13% of the variance (R^2) on average. These controls brought the cumulative R^2 up to approximately 18% prior to consideration of the value congruence variable.

Taking into account the control variables, Table 26 indicates that all three value congruence indices still add explained variance to the dependent variable, affective commitment. The VC_{rank} index adds 6% significant at $p < .001$. The VC_{rate} index adds 10%, significant at $p < .001$. The PFit index variable adds 30%, significant at $p < .001$. It is suggested that the differential in explained variance between perceived fit (PFit) and the actual congruence indices (VC_{rank} and VC_{rate}) is a function of dissonance reduction though which employees have cognitively balanced their feelings of belonging (affective commitment) with their perception of fitting in with the organizational culture (PFit).

In terms of the six demographic control variables, it appears (notwithstanding multi-collinearity effects) that seniority in the organizational hierarchy and organizational tenure tend to influence the dependent variable affective commitment more so than the other demographic control variables. It must be recognized, however, that causal direction with respect to the above statement is very much open to debate. This point will be discussed in more detail in Chapter 8.

Table 27 on the following page presents the results of hierarchical regression focusing on the dependent variable of overall satisfaction with the organization. In contrast to the previous analyses, the control variables appear to exert little influence on the dependent variable. The only control variable to produce a significant change ($p < .05$) in variance explained (R^2) across all three analyses was educational level. Based on the negative slope of the beta coefficient, this result is interpreted to suggest that increased educational level has a negative influence on respondents' level of overall satisfaction with the organization.

TABLE 27

Hierarchical Regression Predicting Overall Satisfaction with Organization [a]

(using social desirability and demographics as control variables)

VC_{rank} - Value Ranking	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.01	.01	1.19
Seniority in Org. Hierarchy	.03	.02	3.64
Organizational Tenure	.04	.01	1.99
Annual Salary	.05	.01	1.94
Age	.06	.01	3.37
Gender [c]	.06	.00	0.49
Educational Level	.08	.02	5.55*
Value Congruence Variable:			
VC_{rank}	.14	.06	14.81***
VC_{rate} - Value Rating	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.01	.01	3.52
Seniority in Org. Hierarchy	.02	.01	2.69
Organizational Tenure	.03	.01	1.81
Annual Salary	.03	.00	0.71
Age	.05	.02	5.05*
Gender [c]	.05	.00	0.95
Educational Level	.08	.03	8.51**
Value Congruence Variable:			
VC_{rate}	.17	.09	30.62***
PFit - Perceived Congruence	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.01	.01	2.37
Seniority in Org. Hierarchy	.02	.01	3.23
Organizational Tenure	.03	.01	2.24
Annual Salary	.04	.01	1.86
Age	.06	.02	5.85*
Gender [c]	.06	.00	1.11
Educational Level	.08	.02	6.70*
Value Congruence Variable:			
PFit	.36	.28	118.68***

a. Variab... ...ts listed in order of entry. Separate analyses were run for each value congruence index.
b. F ratio ...ers to incremental change in R^2
c. Gender was coded as a dummy variable (male = 0, female = 1)
* $p < .05$, ** $p < .01$, *** $p < .001$

In terms of the three value congruence variables, all three produced significant changes (at $p < .001$) in variance explained (R^2) after taking into account method and demographic control variables. The VC $_{rank}$ variable accounted for an additional 6% explained variance to yield a cumulative R^2 of .14. The VC $_{rate}$ variable accounted for an additional 9% explained variance to yield a cumulative R^2 of .17. And, the PFit variable produced an additional 28% explained to yield a cumulative R^2 of .36. Similar to earlier comments, it is suggested that the relative differential for the perceived congruence variable indicates dissonance reduction effects.

Table 28 on the following page presents the results of hierarchical regression focusing on turnover intent as the dependent variable. With the exception of organizational tenure and educational level, the control variables appear to exert little influence on turnover intent. Organizational tenure was found to account for 3% of the variance in all three analyses. These incremental changes in R^2 were all significant at $p < .05$. Educational level was found to account for 2 to 3% of the variance in all three analyses. These incremental changes in R^2 were all significant at $p < .05$.

Based on the beta coefficients, it appears that increased tenure may influence (reduce) turnover intention, while increased educational level may increase turnover intention. It is suggested that these finding have face validity as follows: Long tenure employees are less likely to think about turnover for a variety of reasons -- e.g., they are settled, have long-term interests in pension benefits, etc. On the other hand, highly educated employees are likely to be more job mobile and may entertain ongoing consideration of turnover opportunities.

It is suggested that the results in Table 28 provide support for the predictive validity of individual-organizational value congruence. Each of the three congruence variables added significantly (at $p < .001$) to the variance explained in the dependent variable, turnover intent. The VC $_{rank}$ variable accounted for an additional 5% explained variance to yield a cumulative R^2 of .12. The VC $_{rate}$ variable accounted for an additional 5%

TABLE 28

Hierarchical Regression Predicting Turnover Intent [a]

(using social desirability and demographics as control variables)

VC_{rank} - Value Ranking	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.00	.00	0.02
Seniority in Org. Hierarchy	.00	.00	0.03
Organizational Tenure	.03	.03	6.41*
Annual Salary	.03	.00	0.03
Age	.03	.00	0.41
Gender [c]	.04	.01	2.18
Educational Level	.07	.03	6.49*
Value Congruence Variable:			
VC_{rank}	.12	.05	14.02***
VC_{rate} - Value Rating	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.00	.00	0.38
Seniority in Org. Hierarchy	.00	.00	0.10
Organizational Tenure	.03	.03	8.82**
Annual Salary	.03	.00	0.03
Age	.03	.00	0.53
Gender [c]	.04	.01	1.66
Educational Level	.06	.02	6.70*
Value Congruence Variable:			
VC_{rate}	.11	.05	15.18***
PFit - Perceived Congruence	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.00	.00	0.24
Seniority in Org. Hierarchy	.00	.00	0.35
Organizational Tenure	.03	.03	9.09**
Annual Salary	.03	.00	0.03
Age	.03	.00	0.12
Gender [c]	.04	.01	2.31
Educational Level	.06	.02	7.49**
Value Congruence Variable:			
PFit	.22	.16	56.66***

a. Variable sets listed in order of entry. Separate analyses were run for each value congruence index.
b. F ratio refers to incremental change in R^2
c. Gender was coded as a dummy variable (male = 0, female = 1)
* $p < .05$, ** $p < .01$, *** $p < .001$

explained variance to yield a cumulative R^2 of .11. And, the perceived value congruence variable (PFit) accounted for an additional 16% explained variance to yield a cumulative R^2 of .22. Again, it is suggested that dissonance reduction effects may be operative in producing the differential with respect to the perceived value congruence variable.

In summary, these hierarchical regression results provide evidence in support of the predictive validity of individual-organizational value congruence in relation to employee work-related attitudes and intentions. Additionally, there is also evidence of convergent validity across the three indices of congruence. It appears, however, that dissonance reduction effects may influence employees to perceive their level of fit with the organizational culture (PFit) to be higher than it is as operationalized by the two calculated value congruence indices (VC_{rank} and VC_{rate}).

7.5.2 Predicting Employee Outcomes Controlling for Personal Values

The suggestion that employee outcome variables such as commitment, satisfaction, and turnover intent may be largely a function of individual personal value orientations is plausible (Chatman, 1991) and one which needs to be addressed. This section discusses the degree to which the construct individual-organizational value congruence adds to the understanding and prediction of employee outcome variables after the social desirability method variable and the six personal values factors (Section 7.3) have been taken into account.

As per earlier discussion, the analyses in this section rely on hierarchical regression procedures. The six personal value factors were analyzed rather than the twenty-four personal value dimensions for two reasons: 1) to simplify the regression analyses, and 2) the personal value factors have the advantage of being orthogonal to each other.

A preliminary analysis of correlation coefficients, as shown in Table 29 on the following page, provides univariate empirical support for testing multivariate relationships between the employee work-related outcome variables of commitment, satisfaction, and turnover intent, and the six personal values factors (change, task, status quo, relations, moral integrity, and acceptance of others) as described in Section 7.3.

TABLE 29

Employee Outcome Variables Across Personal Value Factors [a]

Variable:	Affective Commitment	Overall Satisfaction with Organization	Turnover Intention
Personal Value Factors:			
Change Factor	.08	.12*	.13*
Task Factor	.23***	.17**	-.18**
Status Quo Factor	.01	.01	-.13*
Relations Factor	.07	.11*	-.04
Moral Integrity Factor	.16**	.04	-.02
Acceptance Factor	-.01	.09*	.00

a. n = 324 - all correlations are first-order partial correlations controlling for social desirability.
* $p < .05$ (two-tailed)
** $p < .01$
*** $p < .001$

Table 29 indicates a number of statistically significant relationships between the personal value factors and the employee outcome variables: Affective commitment is positively associated with the task factor (.23) and the moral integrity factor (.16) at a significance level of $p < .01$. Given that organizational values relating to moral integrity and working hard are prominent in the organizational culture at the research site (Table 12), it is intuitively appealing that affective commitment (sense of belonging) is positively associated with these two personal value factors.

With respect to the outcome variable overall satisfaction with the organization, four of the six personal value factors are positively associated (at $p < .05$). These personal value factors are task (.17), change (.12), relations (.11), and acceptance (.09).

With respect to turnover intent as the outcome variable, three of the six personal value factors are associated at a significance level of $p < .05$. There is a positive relation (.13) between the personal value factor relating to change and turnover intent. There is a negative relation between the personal value factor relating to status quo (-.13) and turnover intent. And, there is a negative relation between the personal value factor relating to task (-.18) and turnover intent. It is suggested that these empirical relationships have good face validity given the nature of the outcome variables under consideration.

Table 30, on the following page, presents the results of the hierarchical regression analyses for affective commitment as the dependent variable. For purposes of these analyses each of the three value congruence indices were addressed separately. In conducting the hierarchical regression, the social desirability method variable was entered first, followed by the six personal value factors, followed by the particular value congruence variable under consideration.

A review of incremental changes in R^2 as shown in Table 30 indicates that value congruence adds significantly to the variance explained in the dependent variable (affective commitment) across all three analyses (VC_{rank}, VC_{rate}, and PFit). The VC_{rank} congruence index accounted for an additional 6% explained variance to bring the cumulative total up to 20%. The VC_{rate} congruence index accounted for an additional 11% explained variance to bring the cumulative total up to 24%. And, the PFit variable accounted for an additional 29% explained variance to bring the total up to 42%. All incremental changes in R^2 with respect to the congruence variables were significant at $p < .001$. As discussed in the previous section, the differential for the perceived fit congruence variable is partially attributed to dissonance reduction.

Out of the six personal value factors in the analysis, only the task factor and the moral integrity factor produced significant increments (R^2) in the variance explained. As per earlier comments relating to the preliminary correlational analysis, it is suggested that this finding has face validity. The cultural roots at corporate research site tend to make the task and moral integrity dimensions quite salient. Therefore it is intuitively appealing that

TABLE 30

Hierarchical Regression with PV Factors Predicting Affective Commitment [a]
(using social desirability and personal value factor scores as control variables)

VC_{rank} - Value Ranking	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.03	.03	8.02**
PV Factor 1 (Change) [c]	.04	.01	1.74
PV Factor 2 (Task)	.10	.06	17.64***
PV Factor 3 (Status Quo)	.10	.00	0.43
PV Factor 4 (Relations)	.11	.01	1.54
PV Factor 5 (Moral Integrity)	.14	.03	8.27**
PV Factor 6 (Acceptance)	.14	.00	0.58
Value Congruence Variable:			
VC_{rank}	.20	.06	18.46***

VC_{rate} - Value Rating	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.04	.04	13.54***
PV Factor 1 (Change) [c]	.05	.01	3.35
PV Factor 2 (Task)	.10	.05	16.48***
PV Factor 3 (Status Quo)	.10	.00	0.51
PV Factor 4 (Relations)	.11	.01	1.91
PV Factor 5 (Moral Integrity)	.13	.02	8.30**
PV Factor 6 (Acceptance)	.13	.00	0.00
Value Congruence Variable:			
VC_{rate}	.24	.11	43.48***

PFit - Perceived Congruence	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.03	.03	10.13**
PV Factor 1 (Change) [c]	.04	.01	2.59
PV Factor 2 (Task)	.09	.05	18.62***
PV Factor 3 (Status Quo)	.09	.00	0.23
PV Factor 4 (Relations)	.10	.01	2.16
PV Factor 5 (Moral Integrity)	.13	.03	11.65***
PV Factor 6 (Acceptance)	.13	.00	0.11
Value Congruence Variable:			
PFit	.42	.29	156.73***

a. Variable sets listed in order of entry. Separate analyses were run for each value congruence index.
b. F ratio refers to incremental change in R^2
c. Underlying value dimensions of the personal value factors are described in Section 7.3.
* $p < .05$, ** $p < .01$, *** $p < .001$

respondents who experience a sense of belonging (affective commitment) with the organization also emphasize these value dimensions within their personal value profiles.

Table 31, on the following page, presents the results of hierarchical regression analyses for the dependent variable overall satisfaction with the organization. A review of Table 31 indicates that all three value congruence variables add significantly (at $p < .001$) to the variance explained in the dependent variable. The VC_{rank} congruence index accounted for an additional 6% explained variance to bring the total up to 15%. The VC rate congruence index accounted for an additional 10% explained variance to bring the total up to 21%. And the PFit variable accounted for an additional 28% to bring the total up to 37%. Again, it is suggested that the PFit analysis includes the effects of dissonance reduction.

In terms of the six personal value factors presented in Table 31, three factors consistently add to the explained variance (at $p < .05$) across all three regression analyses. The strongest influence comes from the personal value factor relating to the task dimension. This factor adds 4% explained variance to the dependent variable overall satisfaction. The personal value factor relating to the change dimension accounts for an additional 2% explained variance in the dependent variable. And, the personal value factor relating to the relationship dimension accounts for an additional 1% explained variance in the dependent variable.

Table 32, two pages following, focuses on turnover intent as the dependent variable. A review of Table 32 indicates that all three congruence indices contribute to the variance explained in the dependent variable at a significance level of $p < .001$. Specifically, VC_{rank} contributes 5% to a cumulative total of 14%. VC_{rate} contributes 4% to a cumulative total of 12%, and PFit contributes 16% to a cumulative total of 24%. Dissonance reduction effects are assumed to be operative with respect to PFit.

Two of the six personal value factors contribute significantly (across all three analyses) to explained variance in the dependent variable turnover intent. The personal

TABLE 31

Hierarchical Regression with PV Factors Predicting Overall Satisfaction [a]

(using social desirability and personal value factor scores as control variables)

VC_{rank} - Value Ranking	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.01	.01	2.13
PV Factor 1 (Change) [c]	.03	.02	4.80*
PV Factor 2 (Task)	.07	.04	12.15***
PV Factor 3 (Status Quo)	.07	.00	0.06
PV Factor 4 (Relations)	.08	.01	3.91*
PV Factor 5 (Moral Integrity)	.08	.00	0.39
PV Factor 6 (Acceptance)	.09	.01	3.57
Value Congruence Variable:			
VC_{rank}	.15	.06	16.08***
VC_{rate} - Value Rating	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.02	.02	4.87*
PV Factor 1 (Change) [c]	.04	.02	6.74**
PV Factor 2 (Task)	.08	.04	12.28***
PV Factor 3 (Status Quo)	.08	.00	0.34
PV Factor 4 (Relations)	.10	.02	5.27*
PV Factor 5 (Moral Integrity)	.10	.00	0.61
PV Factor 6 (Acceptance)	.11	.01	1.92
Value Congruence Variable:			
VC_{rate}	.21	.10	37.56***
PFit - Perceived Congruence	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.01	.01	2.53
PV Factor 1 (Change) [c]	.03	.02	5.07*
PV Factor 2 (Task)	.07	.04	12.17***
PV Factor 3 (Status Quo)	.07	.00	0.00
PV Factor 4 (Relations)	.08	.01	4.07*
PV Factor 5 (Moral Integrity)	.08	.00	0.66
PV Factor 6 (Acceptance)	.09	.01	3.78
Value Congruence Variable:			
PFit	.37	.28	134.68***

a. Variable sets listed in order of entry. Separate analyses were run for each value congruence index.

b. F ratio refers to incremental change in R^2

c. Underlying value dimensions of the personal value factors are described in Section 7.3.

* $p < .05$, ** $p < .01$, *** $p < .001$

TABLE 32

Hierarchical Regression with PV Factors Predicting Turnover Intent [a]
(using social desirability and personal value factor scores as control variables)

VC rank - Value Ranking	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.00	.00	0.16
PV Factor 1 (Change) [c]	.01	.01	2.40
PV Factor 2 (Task)	.04	.03	6.69*
PV Factor 3 (Status Quo)	.08	.04	11.22***
PV Factor 4 (Relations)	.09	.01	1.43
PV Factor 5 (Moral Integrity)	.09	.00	1.35
PV Factor 6 (Acceptance)	.09	.00	0.00
Value Congruence Variable:			
VC_{rank}	.14	.05	13.74***
VC rate - Value Rating	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.00	.00	1.03
PV Factor 1 (Change) [c]	.02	.02	5.06*
PV Factor 2 (Task)	.05	.03	8.44**
PV Factor 3 (Status Quo)	.08	.03	8.45**
PV Factor 4 (Relations)	.08	.00	1.59
PV Factor 5 (Moral Integrity)	.08	.00	1.05
PV Factor 6 (Acceptance)	.08	.00	0.59
Value Congruence Variable:			
VC_{rate}	.12	.04	15.35***
PFit - Perceived Congruence	Cumulative R^2	Change in R^2	F Ratio [b]
Control Variables:			
Social Desirability	.00	.00	0.92
PV Factor 1 (Change) [c]	.02	.02	6.72*
PV Factor 2 (Task)	.05	.03	9.22**
PV Factor 3 (Status Quo)	.08	.03	8.55**
PV Factor 4 (Relations)	.08	.00	1.54
PV Factor 5 (Moral Integrity)	.08	.00	1.17
PV Factor 6 (Acceptance)	.08	.00	0.32
Value Congruence Variable:			
PFit	.24	.16	63.14***

a. Variable sets listed in order of entry. Separate analyses were run for each value congruence index.
b. F ratio refers to incremental change in R^2
c. Underlying value dimensions of the personal value factors are described in Section 7.3.
* $p < .05$, ** $p < .01$, *** $p < .001$

value factor relating to the task dimension contributes approximately 3% to the dependent variable. And, the personal value factor relating to the status quo also contributes 3% on average to the dependent variable. Examination of the beta coefficients suggests that respondents high on the maintenance of the status quo as a personal value orientation tend to be lower on turnover intent. And, respondents high on the task factor as a personal value orientation also tend to be lower on turnover intent.

In summary, this section has addressed the predictive validity of individual-organizational value congruence as a construct in relation to employee work-related attitudinal and intentional outcomes while controlling for social desirability and respondent scores on the six personal value factors. The results of these analyses indicate that individual-organizational value congruence has validity as a unique construct. Individual-organizational value congruence provides additional explanation to employee attitudes and intentions beyond that explained by the social desirability method variable and the personal value factors.

The next section will examine value differences across identifiable groups in the organization through the application of analysis of variance techniques.

7.6 ANALYSIS OF VARIANCE

Univariate analysis of covariance (*Ancova*) and multivariate analysis of variance (*Manova - Discriminant*) procedures were applied to conduct post-hoc comparisons of personal and perceived organizational value differences across groups in the organization.

7.6.1 Personal Value Differences Across Position in the Hierarchy

Post-hoc comparisons of personal value differences across groups in the organizational hierarchy were conducted as a means of addressing the validity of the value taxonomy. Following from earlier work by Guth and Tagiuri (1965), it was anticipated that personal value differences should be evident across managers, professional / technical workers, and clerical / administrative workers.

One-way analysis of variance was deemed inappropriate for this analysis because variance resultant from position in the hierarchy may be exaggerated by underlying differences in demographics. Cross-tabulations of demographic data reveal, for example, that females represent the largest portion (75%) of the lowest hierarchical rank (clerical workers) whereas males represent the largest portion (93%) of the highest rank (managers).

There is also considerable evidence in the literature (e.g., Rokeach, 1973, Cherrington, Condie, & England, 1979) to suggest that personal value preferences are influenced by demographic variables such as age, gender, and education. In light of this evidence, personal value preferences across the hierarchy were analyzed while controlling for the effects of demographic covariates (age, gender, and education). In addition, respondent data from Marlowe and Crowne's social desirability scale (abbreviated version) were utilized to control for social desirability effects.

Tabachnick and Fidell (1989) recommend analysis of covariance (*Ancova*) for this type of research question. In order to ensure a rigorous application of *Ancova* procedures a variety of statistical issues were addressed. *Ancova*, which was originally designed for experimental research, is sensitive to unequal representation across cells. Harris (1975) cautions that the ratio of largest to smallest sample size for groups should be no greater than four to one.

Representative balance across cells was not possible in this field study which relied on naturally-formed groupings. However, to address this issue the four original groups across the hierarchy (executive management (n=46), middle management (n=110), professional / technical workers (n=131), and administrative / clerical workers (n=83)) were collapsed into three groups as follows: management (n=156), professional / technical (n=131), and clerical / administrative (n=83). Considerable similarity across executive and middle management group means provided additional empirical support to the rationale for amalgamating these two groups.

Ancova is also unduly influenced by outliers. Cases which exhibited extreme value ratings were identified using observed value, predicted value, raw residual, and standardized residual analysis available through a *Manova* sub-routine (*Residuals - Casewise*). Cases with a standardized residual greater than +/- 3.0 were dropped from the analysis. In actuality, the number of outliers in the data was very small. On average only two to three cases were dropped for each value dimension analysis out of the sample of 375 cases.

Tabachnick and Fidell (1989: 324) state: "With relatively equal sample sizes in groups, no outliers, and two-tailed tests, robustness is expected with 20 degrees of freedom for error." Given the above discussion and the fact that the sample size for this analysis provided in excess of three hundred degrees of freedom for error terms, it is concluded that the results of these procedures have statistical validity.

Tabachnick and Fidell (1989) suggest that covariates should be used sparingly as they limit available degrees of freedom. In addition, they suggest that covariates should be: reliable, correlated with the dependent variable (in this case the personal value dimension), and not highly intercorrelated.

Given the explicit nature of the demographic covariates under consideration in this analysis (age, gender, and education), variable reliability was assumed to be satisfactory. With respect to evidence of statistical association, Table 33, on the following page, shows intercorrelations between the demographic covariates in addition to their correlation with the twenty-four personal value dimensions. The age and education correlations are distribution free (Spearman rank). Correlations between gender (recoded as a dichotomous variable) and the other variables are point-biserials (Nunnally, 1978).

The results shown in Table 33 suggest (at $p < .05$) that the demographic variables chosen as covariates for the *Ancova* are, as anticipated, empirically associated with the

TABLE 33

Correlations - Personal Values Across Demographic Characteristics [a]

Variable:		Age	Gender [b]	Education
Covariates:	Age			
	Gender	-.23***		
	Education	-.06	-.32***	
Values [c]:	adaptability	-.16**	.03	-.02
	aggressiveness	.02	-.21***	.15**
	autonomy	.03	-.04	.07
	broad-mindedness	-.03	-.01	-.01
	cautiousness	.01	.19**	-.07
	consideration	-.13	.39***	-.30***
	cooperation	-.06	.04	-.10*
	courtesy	-.12**	.18**	-.01
	creativity	.03	-.13*	.08
	development	-.17**	.01	.16**
	diligence	.12**	-.08	.10*
	economy	.02	.06	-.06
	experimentation	-.07	-.12*	-.01
	fairness	.13**	-.11*	.01
	forgiveness	.05	.01	-.04
	formality	.14**	.02	-.07
	humor	-.12*	.19**	-.24***
	initiative	.03	-.16**	.15**
	logic	.00	-.23***	.25***
	moral integrity	.10*	-.03	.08
	obedience	.01	.12**	-.16**
	openness	.07	-.08	.06
	orderliness	-.01	.15**	-.16**
	social equality	-.07	.21***	-.25***

a. n = 375 - Questionnaire One Data
b. Gender has been coded as a dichotomous dummy variable for this analysis (male = 0, female = 1)
c. Personal value rating data
* $p < .05$
** $p < .01$
*** $p < .001$

personal value dimensions. While Table 33 presents indications of multicollinearity between the covariates, it is suggested that the magnitude of the coefficients does not warrant dropping any of the covariates from the analysis. In summary, the covariates selected for inclusion in the analysis of covariance appear to meet with Tabachnick and Fidell's (1989) criteria.

Table 34, on the following page, presents the results of analyses of covariance performed on the twenty-four personal value dimensions. The independent variable in these analyses was position in organizational hierarchy (management, professional/technical, clerical/administrative). Covariates were age, gender, education, and social desirability. Analyses were performed using SPSSx *Anova* (with covariates), including weighting cells by sample size to adjust for unequal representation across cells.

The results in Table 34 indicate significant differences across group means (management, professional/technical, clerical/administrative) on three of the twenty-four personal value dimensions at $p < .001$. These personal value dimensions are: aggressiveness, initiative, and openness.

The analysis of covariance on the personal value of initiative produced the highest F ratio ($F_{4,341} = 13.75$). Examination of group mean deviations from the grand mean of 5.22 indicate that the management group is above (+.38) the grand mean on this personal value dimension while the clerical/administrative group is below (-.59) the grand mean.

Analysis of covariance on the personal value of aggressiveness produced the second highest F ratio ($F_{4,341} = 13.51$). Examination of group mean deviations from the grand mean of 4.43 indicate that the management group is above (+.44) the grand mean on this personal value dimension while the clerical/administrative group is below (-.75) the grand mean.

Analysis of covariance on the personal value of openness produced the third highest F ratio ($F_{4,341} = 10.74$). Similar to previous patterns, the group mean deviation for the management group was above (+.25) the grand mean, the professional/technical group was

TABLE 34

Personal Value Differences Across the Hierarchy

(adjusted for differences in age, gender, education, and social desirability)

Value Dimension	Adj. F.[a]	Sig. of F	R^2 % [b]	Grand Mean	Adj.Dev.[c] Mgnt.	Adj.Dev.[c] Pro/Tech	Adj.Dev.[c] Cler/Adm
adaptability	6.01	.003	7.1	5.14	.09	.14	-.36
aggressiveness	13.51	.000	11.7	4.43	.44	-.01	-.75
autonomy	4.07	.018	2.7	5.54	.09	.08	-.27
broad-mindedness	1.59	.204	5.8	5.30	.06	.04	-.17
cautiousness	7.45	.001	8.1	3.94	-.21	-.11	.52
consideration	3.11	.046	22.9	5.28	-.18	.03	.27
cooperation	0.39	.679	9.5	5.82	-.05	.04	.03
courtesy	0.75	.472	5.7	5.89	-.07	.01	.10
creativity	4.94	.008	4.4	4.71	.12	.15	-.44
development	6.85	.001	8.9	5.48	.07	.17	-.36
diligence	1.42	.243	4.2	5.51	.12	-.03	-.16
economy	0.04	.962	1.2	4.41	.02	.00	-.04
experimentation	1.00	.370	3.7	4.45	.01	.10	-.16
fairness	0.85	.427	3.8	5.61	.05	.01	-.11
forgiveness	0.32	.730	7.4	4.74	.04	-.07	.02
formality	3.32	.037	6.3	4.04	-.11	-.15	.41
humor	1.74	.178	13.7	4.99	-.13	.13	.04
initiative	13.75	.000	11.8	5.22	.38	-.05	-.59
logic	4.10	.017	11.2	5.58	.13	.06	-.32
moral integrity	3.19	.042	5.0	6.01	.13	.00	-.22
obedience	5.97	.003	7.6	4.39	-.12	-.17	.46
openness	10.74	.000	7.7	5.40	.25	.08	-.56
orderliness	0.42	.656	5.9	5.11	-.18	-.06	.14
social equality	1.22	.296	12.9	5.06	-.12	.15	.40

a. - F Score adjusted for influence of the covariates - age, gender, education, and social desirability.

b. - R^2 - variance explained in personal value by position and by covariates (expressed in percentage terms).

c. - Direction and magnitude of group's (management, tech./pro.,clerical/adm) deviation from the grand mean adjusted for demographic and method covariates.

near (+.08) the grand mean, and the clerical/administrative group was below (-.56) the grand mean of 5.40.

The group means data in Table 34 are interpreted to suggest that respondent ratings on the personal value dimensions of initiative, aggressiveness, and openness are relatively higher as one considers groups further up the organizational hierarchy. It is suggested that differences across these particular personal value dimensions have face validity. One might expect managerial respondents to be higher in their ratings of personal values such as initiative and aggressiveness relative to professional/technical and administrative/clerical staff.

In conclusion, this analysis suggests that the relative importance of the task dimension (from a personal values orientation) increases as one considers groups higher in the organizational hierarchy. As shown in Section 7.3 (Factor Analysis), the values of aggressiveness, initiative, and openness comprise the three highest loading items in the personal value factor relating to the task dimension (e.g., "getting the work done").

The next section relies on multivariate analysis of variance procedures to test differences across the six personal value factors in relation to respondent position in the organizational hierarchy. Given the results of this section, it is anticipated that the task factor will figure prominently in the multivariate analysis.

7.6.2 Personal Value Differences - Multivariate Analysis of Variance

Discriminant analysis (SPSSx - *Discriminant*) was applied as the multivariate technique to address personal value differences across groups in the organizational hierarchy. Tabachnick and Fidell (1989) note that discriminant analysis is mathematically the same as *Manova* (multivariate analysis of variance). From a theoretical perspective, however, the research orientation of these two procedures is different. *Manova* attempts to address whether group membership produces reliable differences across a combination of dependent variables (e.g., as in control / treatment groupings in an experiment).

Discriminant analysis attempts to predict group membership given a set of predictors. Personal values are defined in the literature (e.g., Rokeach, 1973) as enduring preferences which drive behavior. In light of this conceptualization, it is suggested that the discriminant analysis approach (e.g., personal values as predictors of position) is the most appropriate.

Similar to the earlier analysis, it was deemed necessary to take into account the effects of demographic and social desirability characteristics while conducting the discriminant analysis. In order to control for demographic and social desirability effects, hierarchical discriminant analysis was conducted. Under this procedure, the demographic variables of gender, age, and educational level and the method variable of social desirability were entered first as variables in the discriminant function. Once their effects were taken into account, then the six personal value factors (Change, Task, Status Quo, Relationships, Moral Integrity, and Acceptance of Others) were analyzed.

The statistic Rao's *V* was used to provide an indication of the degree to which variables entering the analysis contribute to the overall separation between groups. Tabachnick and Fidell (1989) recommend Rao's *V* for hierarchical discriminant analysis with SPSSx *Discriminant* because the program produces "change in Rao's *V*" statistics for each step in the analysis.

Various considerations were taken into account to facilitate statistical validity. Of the original 375 cases (Questionnaire One Data), 31 cases were dropped due to missing data (these cases appeared to be randomly distributed across the groups). In addition, four cases were dropped due to excessive univariate outliers in the personal value rating data. The remaining set of 340 cases consisted of: 142 management representatives, 117 professional-technical representatives, and 81 clerical-administrative representatives.

The results of the discriminant analysis are presented in Table 35, on the following page. The analysis produced two discriminant functions both statistically significant at $p < .05$. These two discriminant functions accounted for 95% and 5%, respectively, of the

TABLE 35
Discriminant Analysis - Personal Value Factors Across the Hierarchy [a]

Univariate Statistics

Variable:	Wilks' λ	F Ratio	Sig.
Gender [b]	0.69	77.34	0.000
Age	0.94	9.05	0.000
Educational Level	0.77	49.93	0.000
Social Desirability	0.99	0.01	0.994
PF 1-Change	0.96	6.69	0.002
PF 2-Task	0.93	12.64	0.000
PF 3-Status Quo	0.97	5.17	0.006
PF 4-Relations	0.88	22.73	0.000
PF 5-Moral Integ.	0.97	5.04	0.007
PF 6-Acceptance	0.99	1.90	0.152

Summary Table - Discriminant Analysis After Step Nine

Step:	Variable:	# in	Wilks' λ	Sig.	Rao's V	Sig.	Chg. V	Sig.
1.	Gender [b]	1	0.685	0.000	154.7	0.000	154.7	0.000
2.	Age	2	0.667	0.000	164.4	0.000	9.7	0.008
3.	Educational Level	3	0.562	0.000	256.6	0.000	92.1	0.000
4.	Social Desirability	4	0.562	0.000	256.9	0.000	0.3	0.853
5.	PF 2-Task	5	0.525	0.000	297.6	0.000	40.7	0.000
6.	PF 4-Relations	6	0.516	0.000	308.7	0.000	11.1	0.004
7.	PF 1-Change	7	0.502	0.000	320.5	0.000	11.8	0.003
8.	PF 3-Status Quo	8	0.493	0.000	329.9	0.000	9.4	0.009
9.	PF 5-Moral Integ.	9	0.486	0.000	338.5	0.000	8.7	0.013

Canonical Discriminant Functions

	Wilks' λ	Chi-Sq.	DF	Sig.	% variance
Function One:	0.48	239.9	18	0.000	95%
Function Two:	0.95	17.2	8	0.028	5%

Structure Matrix

Variable:	Function 1.	Function 2.
Gender [b]	-0.69*	0.04
Education Level	0.56*	0.05
PF 4-Relations	-0.38*	-0.14
PF 2-Task	0.28*	0.09
PF 5-Moral Integ.	0.18*	0.05
PF 6 - Acceptance	-0.08*	-0.03
Social Desirability	-0.01*	0.00
PF 1-Change	0.13	-0.65*
Age	0.18	0.64*
PF 3-Status Quo	-0.13	0.51*

a. n = 340, (142 managers, 117 professional/technicals, 81 administrative/clericals).
b. Gender recoded as a dichotomous variable (male = 0, female = 1).
* asterisk indicates the largest correlation for each variable when there is more than one function.

between-group variability. The first function appears to create maximum separation (e.g. group centroids) between managers and clerical-administrative staff on the personal demographics of gender (-.69) and education (.56), and on the personal value factors of relationships (-.38), task (.28), moral integrity (.18), and acceptance of others (-.08).

The second function appears to create maximum separation (e.g., group centroids) between professional-technical staff and the other two groups (managerial and clerical/administrative) on the personal demographics of age (.64), and the personal value factors of change (-.65) and status quo (.51).

The univariate statistics shown in Table 35 indicate group differences across the demographic covariates (gender, age, and education), but there is little evidence of differences between groups with respect to the method variable, social desirability. With reference to the six personal value factors, only the task and relations factors achieved significant F ratios at $p < .001$.

The primary aim of this analysis was to test whether the personal value factors enhance the prediction of group membership within the organizational hierarchy after taking into account demographic and social desirability characteristics. Examination of Wilks' lambda and change in Rao's *V* statistics shown in Table 35 suggests that five of the six personal value factors improve empirical discrimination between groups in the organizational hierarchy. Most pronounced in this regard was the personal value factor relating to the task dimension. The change in Rao's *V* upon entry of the task factor was 40.7, significant at $p < .001$. This finding is consistent with earlier results based on the analysis of covariance (Section 7.6.1).

From a classification standpoint, the demographic/method control variables and the personal value factors data enabled the correct classification of 65% of the cases. Classification by chance alone would have yielded only 35% of the cases correct. This finding is interpreted to suggest good validity for the predictor set.

There was, however, little incremental improvement (65.3% versus 64.4%) in classification accuracy upon inclusion of the personal value factor data after demographic and social desirability data had been taken into consideration. This finding is interpreted to suggest that classification across the organizational hierarchy is for the most part an effect of demographic differences as opposed to differences across the six personal value factors.

In conclusion, this analysis provides partial support for the predictive validity of the personal value factors as a means to explain group membership in the organizational hierarchy. Most pronounced in this regard was the task factor. This conclusion primarily reflects the statistical significance of the personal value factors entering the discriminant analysis (e.g., changes in Rao's *V*) as opposed to the personal value factors enhancing the correct classification of cases.

7.6.3 Organizational Value Differences Across Position in the Hierarchy

Having considered personal value differences, it was deemed necessary to investigate differences in respondent perceptions of the organizational value priorities across the hierarchy (managers, professional/technicals, and clerical/administratives). In light of evidence in support of cultural homogeneity or crystallization, discussed in Section 7.1.3, it was anticipated that hierarchical variability in perceptions of the organization's value priorities would be less pronounced relative to personal value differences.

Consistent with univariate analysis of covariance procedures discussed earlier, variance across respondent perceptions of the organizational value ratings was analysed taking into consideration demographic and social desirability effects. In addition, a variety of actions were taken to ensure statistical validity including the identification and removal of multivariate outliers.

The results of the analysis of covariance on respondent perceptions of organizational values are presented in Table 36, on the following page. Examination of Table 36 in light

TABLE 36

Differences in Perceptions of Organizational Values Across the Hierarchy

(adjusted for differences in age, gender, education, and social desirability)

Value Dimension	Adj. F.[a]	Sig. of F	R^2 % [b]	Grand Mean	Adj.Dev.[c] Mgnt.	Adj.Dev.[c] Pro/Tech	Adj.Dev.[c] Cler/Adm
adaptability	1.44	.239	3.6	5.33	.14	-.07	-.13
aggressiveness	0.02	.983	1.8	4.90	.01	-.02	.01
autonomy	2.12	.122	2.4	4.95	.10	.05	-.24
broad-mindedness	0.00	.997	3.5	4.83	.01	.00	-.01
cautiousness	0.03	.969	6.9	4.21	.02	.00	-.03
consideration	3.06	.048	4.2	4.29	.10	-.20	.13
cooperation	1.18	.309	3.7	5.11	.11	-.02	-.15
courtesy	2.09	.126	4.4	5.33	.13	.01	-.23
creativity	0.79	.455	3.2	5.03	.05	-.10	.06
development	0.55	.580	4.2	5.44	-.01	.07	-.08
diligence	7.21	.001	10.0	5.05	.17	.16	-.53
economy	3.64	.027	4.7	4.51	-.27	.11	.28
experimentation	0.64	.527	9.7	3.83	.03	-.08	.07
fairness	3.76	.024	4.0	4.54	.23	-.23	-.05
forgiveness	2.66	.071	10.7	4.15	-.14	-.06	.31
formality	0.89	.414	5.2	4.57	.13	-.06	-.13
humor	2.08	.127	2.1	4.06	-.08	-.09	.28
initiative	3.11	.046	3.2	5.51	.15	.00	-.25
logic	2.18	.115	10.1	4.59	.12	.02	-.23
moral integrity	2.95	.054	5.1	6.17	.16	-.02	-.23
obedience	0.78	.461	4.3	4.63	-.11	.03	.15
openness	0.21	.813	3.3	4.38	-.06	.03	.07
orderliness	0.51	.603	1.1	4.61	.03	-.08	.07
social equality	0.40	.673	3.2	3.17	.09	-.06	-.05

a. - F Score adjusted for influence of the covariates - age, gender, education, and social desirability.

b. - R^2 - variance explained in personal value by position and by covariates (expressed in percentage terms).

c. - Direction and magnitude of group's (management, tech./pro.,clerical/adm) deviation from the grand mean adjusted for demographic and method covariates.

of previous analysis focusing on personal value differences (see Table 34) suggests less variability across hierarchical groups (managers, professional/technicals, and clerical/administratives). Whereas the analysis of personal value differences yielded significant differences on three value dimensions (at $p < .001$), the results in Table 36 indicate no significant differences in respondent perceptions of the organizational value priorities at $p < .001$.

A similar pattern is also evident at lower levels of statistical significance. At $p < .05$, the personal values analysis produced significant differences across thirteen of the twenty-four value dimensions, whereas the organizational values analysis produces only five significant differences. These findings are viewed as additional evidence in support of cultural homogeneity.

The next section will investigate the issue of cultural homogeneity in more depth using multivariate analysis of variance procedures. Consideration will be given to existence of subcultural differences from three perspectives: hierarchical, functional, and organizational origin in terms of the recent merger.

7.6.4 Organizational Value Differences - Multivariate Analysis of Variance

Multivariate analysis of variance (SPSSx - *Discriminant*) procedures were utilized to produce the results found in this section. Similar to the multivariate analysis of variance across the personal value factors (Section 7.6.2), hierarchical discriminant analyses were conducted in order to control for demographic (gender, age, and education) and method (social desirability) effects. In addition, as per earlier discriminant analysis, a variety of steps were taken to maintain statistical validity including the identification and removal of univariate outliers.

This section reports on three discriminant analyses: 1) differences across the hierarchy: managers, professional/technicals, and clerical/administratives; 2) differences across functional areas: sales/marketing, production, finance/accounting, administration/legal, and human resources management; and 3) differences across respondents' organizational origin in terms of the recent merger.

To avoid the complexity of dealing with twenty-four value dimensions in addition to four control variables, the analyses presented in this section focus on the four organizational value factors (Change, Relations, Task, and Status Quo) as described in Section 7.3.

The first discriminant analysis examines differences across the hierarchy (managers (n = 122), professional/technicals (n = 104), and clerical/administratives (n = 72)). The results of this analysis are shown in Table 37, on the following page.

Examination of the univariate statistics in Table 37 indicates variability across group means with respect to the three demographic control variables (gender, age, and education), significant at $p < .001$. There appears, however, to be little variability across group means with respect to the social desirability control variable. With reference to the four organizational value factors, variability across the change factor is the most pronounced (significant at $p < .001$). Between-group variability across the status quo factor, which does not achieve statistical significance at $p < .05$, is the least pronounced.

The analysis produced two discriminant functions. Only the first function, however, achieved statistical significance. The structure matrix shown in Table 37 indicates that the first function relies primarily on demographic data (gender and education) and to a lesser extent on the relations factor. Examination of group centroids (managers 0.99, professional technicals -0.09, and clerical/administratives -1.54) suggests that the function discriminates in a manner consistent with the groups' natural order within the hierarchy.

Examination of group means on the relevant demographic variables suggests that managers are most likely to be male and the most highly educated. In terms of the relationships factor, managers perceived this factor as higher (0.27) in its emphasis within the organizational culture than did professional/technicals (-0.06) and clerical/administratives (-0.29).

TABLE 37

Discriminant Analysis - Organizational Value Factors Across the Hierarchy [a]

Univariate Statistics

Variable:	Wilks' λ	F Ratio	Sig.
Gender [b]	0.66	77.47	0.000
Age	0.95	7.92	0.000
Educational Level	0.75	48.37	0.000
Social Desirability	0.99	0.00	0.995
PF 1-Change	0.86	24.47	0.000
PF 2-Relations	0.95	7.91	0.001
PF 3-Task	0.97	5.07	0.007
PF 4-Status Quo	0.99	0.39	0.672

Summary Table - Discriminant Analysis After Step Seven

Step:	Variable:	# in	Wilks' λ	Sig.	Rao's V	Sig.	Chg. V	Sig.
1.	Gender [b]	1	0.656	0.000	154.9	0.000	154.9	0.000
2.	Age	2	0.638	0.000	163.9	0.000	8.9	0.012
3.	Educational Level	3	0.533	0.000	252.6	0.000	88.8	0.000
4.	Social Desirability	4	0.533	0.000	252.7	0.000	0.1	0.952
5.	PF 1-Change	5	0.508	0.000	276.1	0.000	23.4	0.000
6.	PF 2-Relations	6	0.495	0.000	291.2	0.000	15.0	0.001
7.	PF 3-Task	7	0.481	0.000	305.6	0.000	14.5	0.001

Canonical Discriminant Functions

	Wilks' λ	Chi-Sq.	DF	Sig.	% variance
Function One:	0.48	213.6	14	0.000	96%
Function Two:	0.96	12.1	6	0.059	4%

Structure Matrix

Variable:	Function 1.	Function 2.
Gender [b]	-0.73*	0.09
Education	0.57*	0.17
PF 2 - Relations	0.23*	0.22
Age	0.19	0.68*
PF 1-Change	-0.40	0.45*
PF 3 - Task	0.17	-0.37*
PF 4 - Status Quo	0.01	-0.08*
Social Desirability	0.00	0.02*

a. n = 328, (122 managers, 104 professional/technicals, 72 administrative/clericals, 30 cases missing data).

b. Gender recoded as a dichotomous variable (male = 0, female = 1).

* asterisk indicates the largest correlation for each variable when there is more than one function.

The summary table indicates that the organizational value data are less instrumental in terms of predictive validity relative to the previous discriminant analysis of personal value data. After consideration of demographic and method effects, only the change factor yields a statistically significant improvement in Rao's *V* at $p < .001$. The status quo factor does not enter into the analysis. It is suggested that these results have face validity as follows: more variability should be expected across personal value ratings relative to respondents' perceptions of the organizational value priorities.

Consideration of group means on the change factor suggests that clerical/administratives perceive a greater emphasis on change in the organizational culture (0.66) than do professional/technicals (-0.06) and managers (-0.29). Perhaps managers perceive too little emphasis on change given their competitive intelligence with respect to the marketplace, whereas clerical/administratives perceive a higher emphasis on change with respect to their traditional job duties. In other words, frame of reference is an important consideration in understanding respondent perceptions of the organization's cultural priorities.

In summary, this analysis indicates the importance of demographic characteristics in discriminating across groups within the organizational hierarchy. Hierarchical differences with respect to respondent perceptions of the organization's value priorities (as operationalized by the four value factors) are in comparison less evident.

The next analysis will focus on differences across five functional groupings (sales and marketing (n = 59), production (n = 65), finance and accounting (n = 41), administration and legal (n = 66), and human resources management (n = 31)). Data were originally collected on six classifications, however, the research and development group was excluded on the bases of its relatively small sample size (n = 15). Tabachnick and Fidell (1989: 511) caution that the number of cases in the smallest group should "notably" exceed the number of predictors.

The results of discriminant analysis across the functional groupings are shown in Table 38, on the following page. These results suggest, in general, less variability across functional groupings relative to the previous analysis of differences across hierarchical groupings.

In terms of univariate statistics, the F ratios of only two predictors achieve statistical significance at $p < .05$. These variables are the demographic gender variable and the task factor.

The summary statistics shown in Table 38 also indicate lower predictive validity relative to the analysis of hierarchical groupings. The total Rao's *V* upon consideration of all predictors is only 80.7 relative to 305.6 in the previous analysis. In terms of incremental contribution to group separation, none of the predictors, neither demographic, nor method effect, nor organizational value factor, produced a significant change in Rao's *V* at $p < .001$. The gender variable and the organizational task factor did, however, achieve significant contributions to group separation (Rao's *V*) at the $p < .01$ significance level.

This analysis resulted in four discriminant functions; however, only the first two functions were significant at $p < .05$. The structure matrix indicates that the first function emphasizes the task and change factors. This discriminant equation separates functional groups (e.g., group centroids) in order as follows: sales and marketing, production, finance and accounting, administration and legal, and human resource management.

Examination of group means with reference to the task factor suggests that sales and marketing perceive a relatively low emphasis (-0.36) on the task factor compared (in ascending order) with: finance and accounting (-0.15), production (0.08), administration and legal (0.11), and human resources management (0.49).

Examination of group means with reference to the change factor suggests that human resources management perceive a relatively low emphasis (-0.24) on the change factor compared (in ascending order) with: production (-0.11), administration and legal (-0.07), finance and accounting (0.05), and sales and marketing (0.30).

TABLE 38

Discriminant Analysis - Organizational Value Factors Across the Functions [a]

Univariate Statistics

Variable:	Wilks' λ	F Ratio	Sig.
Gender [b]	0.93	4.83	0.001
Age	0.99	0.33	0.856
Educational Level	0.97	2.01	0.093
Social Desirability	0.99	0.92	0.455
PF 1-Change	0.97	2.09	0.083
PF 2-Relations	0.98	1.51	0.199
PF 3-Task	0.94	4.29	0.002
PF 4-Status Quo	0.97	2.28	0.061

Summary Table - Discriminant Analysis After Step Eight

Step:	Variable:	# in	Wilks' λ	Sig.	Rao's *V*	Sig.	Chg. *V*	Sig.
1.	Gender [b]	1	0.930	0.001	19.3	0.001	19.3	0.001
2.	Age	2	0.925	0.011	20.6	0.008	1.3	0.864
3.	Educational Level	3	0.889	0.003	31.3	0.002	10.7	0.030
4.	Social Desirability	4	0.877	0.006	35.0	0.004	3.6	0.458
5.	PF 3 - Task	5	0.822	0.000	52.9	0.000	17.8	0.001
6.	PF 1- Change	6	0.788	0.000	65.0	0.000	12.1	0.017
7.	PF 4- Status Quo	7	0.759	0.000	74.8	0.000	9.8	0.043
8.	PF 2 - Relations	8	0.743	0.000	80.7	0.000	5.8	0.211

Canonical Discriminant Functions

	Wilks' λ	Chi-Sq.	DF	Sig.	% variance
Function One:	0.74	75.4	32	0.000	53.8%
Function Two:	0.87	35.7	21	0.023	23.9%
Function Three:	0.93	17.3	12	0.137	20.7%
Function Four:	0.99	1.3	5	0.934	1.6%

Structure Matrix

Variable:	Function 1.	Function 2.	Function 3	Function 4
PF 3 - Task	0.57*	-0.28	0.25	-0.38
PF 1 - Change	-0.37*	0.35	-0.08	-0.07
Gender [b]	0.32	0.65*	-0.64	0.01
PF 4 - Status Quo	0.05	0.55*	0.42	0.37
PF 2 - Relations	0.09	0.08	0.58*	-0.17
Education	0.31	-0.17	0.44*	0.35
Age	0.09	-0.09	0.23*	0.04
Social Desirability	0.03	-0.39	-0.08	0.65*

a. n = 328, (59 sales and marketing, 65 production, 41 finance and accounting, 66 administration and legal, 31 human resources management, and 66 cases with missing or out of range data).

b. Gender recoded as a dichotomous variable (male = 0, female = 1).

* asterisk indicates the largest correlation for each variable when there is more than one function.

The results of this first discriminant function are interpreted to suggest some evidence of subcultural variation along what in broad terms might be called a line-staff distinction. Sales and marketing perceive a relatively low emphasis on the task dimension within the organizational culture, most distinct with respect to the perceptions of the human resources management group. And, the human resources management group perceive relatively low emphasis on the change dimension within the organizational culture, most distinct with respect to the perception of the sales and marketing group.

The second discriminant function as indicated by the structure matrix appears to emphasize gender differences and to a lesser extent the status quo factor. Examination of group means suggests that the finance/accounting, human resource management, and administrative/legal functions tend to be more populated (in descending order of presentation) by females relative to the sales/marketing, and production functions. Given the nature of the corporate research site and its industry norms, this finding has face validity.

With reference to the status quo factor, sales/marketing perceive the highest emphasis (0.21) on this dimension within the organizational culture while finance/accounting perceive the lowest emphasis (-0.22) on this dimension. It is suggested that this finding has intuitive appeal in terms of the distinct nature of these functions.

Notwithstanding empirical indications of possible subcultural differences as discussed above, these results must be viewed with caution. The discriminant analysis of differences across the five functional groupings was equivocal at high levels of significance ($p < .001$), and changes in Rao's *V* were considerably less pronounced relative to the previous analyses of differences across hierarchical groupings for both the demographic control variables and the organizational value factors.

The final analysis in this section examines differences across groups known to vary in terms of respondents' organizational origin. As mentioned in Chapter 6, the organization used as the research site in this study was involved a merger approximately one and one-half years prior to data collection. The original corporation acquired a competitor within its industry group. The relative size (in terms of sales) of the competitor was approximately 50%. Of the sample in this study, 232 respondents were former employees of the original corporation and 56 respondents were former employees of the acquired corporation. Table 39, on the following page, shows the results of discriminant analysis across these two groups.

Examination of the univariate statistics shown in Table 39 indicate no significant differences across the two groups at $p < .05$. The Wilks' lambda scores are all uniformly high (e.g., .99). And, the F ratios indicating between group variation are small relative to previous analyses for both the control variables and the organizational value factors. From a preliminary univariate perspective, these findings suggest little discrimination between the two groups.

Similarly, the results of multivariate analyses do not provide evidence of significant differences between the two groups. Only one organizational value factor (task) enters into the discriminant analysis and its incremental effect on Rao's *V* is not significant at $p < .05$. In fact, Rao's *V* upon consideration of all predictors (demographic, method effect, and organizational value factor) remains small (6.1) relative to the functional analysis (80.7) and the analysis of positions within the hierarchy (305.6).

The analysis of differences across respondent's organizational origin yielded one discriminant function which was not significant at $p < .05$. In total, these results indicate little or no discrimination between the two groups (original members of the organization and former members of the acquired organization) given the predictor set. This finding is interpreted to suggest that respondents in both groups currently see the merged organization in a similar light with respect to its organizational value factors.[4]

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4 T-tests on group means across the twenty-four organizational value dimensions produced six differences at $p < .01$: adaptability, autonomy, cautiousness, cooperation, economy, and initiative. In each case the original group mean was higher than that of the acquired group with the exception of cautiousness.

TABLE 39

Discriminant Analysis - Organizational Value Factors Across Org. Origin [a]

Univariate Statistics

Variable:	Wilks' λ	F Ratio	Sig.
Gender [b]	0.99	0.64	0.424
Age	0.99	0.18	0.668
Educational Level	0.99	3.25	0.073
Social Desirability	0.99	0.10	0.745
PF 1-Change	0.99	0.89	0.346
PF 2-Relations	0.99	0.72	0.396
PF 3-Task	0.99	2.91	0.089
PF 4-Status Quo	0.99	0.35	0.556

Summary Table - Discriminant Analysis After Step Five

Step:	Variable:	# in	Wilks' λ	Sig.	Rao's *V*	Sig.	Chg. *V*	Sig.
1.	Gender [b]	1	0.998	0.424	0.6	0.424	0.6	0.424
2.	Age	2	0.997	0.698	0.7	0.697	0.1	0.778
3.	Educational Level	3	0.988	0.327	3.5	0.322	2.8	0.096
4.	Social Desirability	4	0.988	0.479	3.5	0.472	0.0	0.827
5.	PF 3 - Task	5	0.979	0.307	6.1	0.296	2.6	0.109

Canonical Discriminant Functions

	Wilks' λ	Chi-Sq.	DF	Sig.	% variance
Function One:	0.98	6.0	5	0.307	100%

Structure Matrix

Variable:	Function 1.
Education	0.73
PF 3 - Task	0.69
Gender [b]	-0.32
PF 1-Change	-0.22
Age	0.17
Social Desirability	-0.13
PF 2 - Relations	0.04
PF 4 - Status Quo	0.04

a. n = 328, 232 former members of the original corporate entity, 56 former members of the acquired corporate entity, and 40 cases of missing or out of range data).

b. Gender recoded as a dichotomous variable (male = 0, female = 1).

On a cautionary note, it is suggested that this finding should not be interpreted to imply that the two organizations were culturally similar at the time of the merger. The focus of the research instrumentation applied in this study did not address this issue. Nor should the above discussion be interpreted to suggest that the members of the acquired group experience the same sense of fit in terms of individual-organizational value congruence.[5]

This multivariate analyses of variance reported in this section have examined differences in perceptions of the organization's value priorities in terms of the four cultural factors, as discussed in Section 7.3 (task, relationships, change, and status quo). Hierarchical discriminant analysis procedures were applied in order to control for demographic (gender, age, and education) and method (social desirability) effects. Differences along three dimensions at the research site were addressed: hierarchical, functional, and respondents' organizational origin with respect to the recent merger.

In summary, differences in perception of the organizational culture (using the organizational value factor data) across identifiable groups within the organization were not pronounced, particularly with respect to group differences across functional and organizational origin.

None of the organizational value factors in the functional analysis added significantly (at $p < .001$) to the distance between groups (Rao's *V*). It should be noted, however, that there were some statistical indications (at $p < .05$) to suggest subcultural differences in the perceived importance of the change and task factors. Most distinct in this respect were differences between the sales/marketing and the human resource management functions.

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5 T-tests on group means across the three value congruence indices produced the following results: VC rank - no significant difference, VC rate - original group mean was significantly higher than that of the acquired group at $p < .05$, and Perceived Fit - original group mean was significantly higher at $p < .01$.

With reference to differences across respondent's organizational origin, the results (univariate F ratios, changes in Rao's V, and discriminant function statistics) consistently indicated little or no discrimination between the two groups.

Out of the three analyses, the discriminant analysis focusing on positions across the organizational hierarchy produced the greatest group separation. The change factor added significantly to the distance (Rao's *V*) separating the groups at $p < .001$ after consideration of demographic and method effects. This finding is interpreted to indicate subcultural variation on the change factor across the hierarchy, particularly between managers and clerical/administrative staff.

It is concluded that earlier comments (Section 7.1.3) regarding cultural homogeneity (crystallization) at the research site are still valid. While this section provides evidence of subcultural variation, its extent is not viewed as extreme. Clearly, cultural homogeneity is not a dichotomous concept. Rather, it is question of degree.

A final point with respect to these discriminant analyses across groups within the organization relates to the importance of demographic control variables. In each analysis the relative effect of the demographic control variables (gender, age, and education) was considerable. Following from these analyses, it is concluded that the effect of demographic-based perceptual biases be recognized as an important design consideration when conducting values-based research.

The next section will address the discriminant validity of the individual-organizational value congruence construct.

7.7 DISCRIMINANT VALIDITY

This section addresses the discriminant validity of the focal construct, individual-organizational value congruence. The review of methodological issues in Chapter 3 highlighted the issue of social desirability response set bias as a particular threat in this type of research. This section focuses on the question: To what extent is the focal construct of individual-organizational value congruence distinct from the method construct of social-desirability?

This question was investigated by examination of correlation coefficients between the method variable (Marlowe-Crowne's SDS - social desirability scale) and the other variables in the research model with particular emphasis on the three indices of individual-organizational value congruence.

7.7.1 Correlations with the Social Desirability Method Variable

Table 40, on the following page, presents correlations between the SDS method variable and the three indices of individual-organizational value congruence. The correlations in this table provide evidence of some social desirability response set bias, although these effects are judged to be relatively minor.

Two of the three value congruence indices are correlated with the method variable as follows: VC_{rank} (.13) and PFit (.12), both statistically significant at $p < .05$ level. It is interesting to note that the rating index (VC_{rate}) appears to be the least susceptible to social desirability biases. This finding is interesting in that it contradicts earlier speculation that value rating and its associated value congruence index would be quite susceptible to method effects.

Three explanations are advanced in light of this finding: One, the VC_{rate} index tends to counteract social desirability biases because value ratings are relative to each individual's own mean rating using the profile analysis (Q) correlation calculation (see Section 6.2.2). Two, the value rating scales are less abstract in their presentation of the concepts relative to the value ranking instrument, and thereby, are less likely to elicit ideal responses. And three, error variance is better addressed (e.g., more random) using the multiple-item rating scales rather than the value ranking instrument which presents the concepts in abstract terms by means of a single-item ipsative framework.

Table 40 also displays correlations between the SDS method variable and the three indices of awareness of the organization's required values (Aware $_{rank}$, Aware $_{rate}$, and P-Aware). There are no significant associations between these indices and the method variable at $p < .05$.

TABLE 40

Congruence and Awareness Indices in relation to the SDS Method Variable [a]

	VC $_{rank}$	VC $_{rate}$	PFit
Social Desirability	.13*	.08	.12*
	Aware $_{rank}$	Aware $_{rate}$	P-Aware
Social Desirability	-.05	-.04	-.01

a. n = 324
* p < .05 (two-tailed)
** p < .01
*** p < .001

Correlations between the SDS method variable and the value ratings (personal and organizational) were also considered. These coefficients are shown in Table 41, on the following page. As might be expected, personal value ratings showed a greater degree of association with the social desirability variable relative to organizational value ratings.

Twelve out of the twenty-four personal value rating dimensions were significantly correlated with the SDS method variable at $p < .05$. Most pronounced in this respect were the personal values of: broad-mindedness (.21), cooperation (.29), and forgiveness (.26), which were all significant at $p < .001$. In contrast, only four out of the twenty-four organizational value rating dimensions were significantly correlated with the SDS method variable as follows: consideration (.14), fairness (.13), openness (.14), and social equality (.14).

TABLE 41
Value Ratings in relation to the SDS Method Variable [a]

Value Dimension	Personal Value Ratings	Organizational Value Ratings
adaptability	.17**	-.08
aggressiveness	.05	-.08
autonomy	.01	.01
broad-mindedness	.21***	.07
cautiousness	-.07	-.09
consideration	.08	.14*
cooperation	.29***	.11
courtesy	.07	-.02
creativity	-.02	.08
development	.12*	.02
diligence	.07	-.06
economy	.13*	-.07
experimentation	.08	.10
fairness	.14*	.13*
forgiveness	.26***	.08
formality	-.13*	-.08
humor	.15**	.02
initiative	.14*	.08
logic	.01	-.08
moral integrity	.04	.05
obedience	.06	-.10
openness	.09	.14*
orderliness	.15**	.01
social equality	.16**	.14*

a. n = 324
* p < .05, ** p < .01, *** p < .001 (two-tailed)

The consequents of value congruence (e.g., affective commitment) and the antecedents to awareness of the organization's required values (e.g., visual salience) were also examined in terms of social desirability effects. As shown in Table 42, on the following page, the statistical evidence provides indications of response set biases.[6]

With reference to the consequents of individual-organizational value congruence, Table 42 indicates that the attitudinal (commitment and satisfaction) variables and to a lesser extent the behavioral (e.g., organizational citizenship) variables are associated with the SDS method variable. Affective and normative commitment are positively associated whereas continuance commitment is negatively associated.

In terms of the satisfaction variables, overall satisfaction with the organization is not significantly associated, but four out of the five JDI satisfaction scales are significantly associated (satisfaction with pay being the only exception). The correlation between the SDS method variable and satisfaction with promotion opportunities is the most pronounced with a coefficient of .21, significant at $p < .001$. It is suggested that this effect may be a result of this scale's emphasis on promotion *opportunities* (e.g., the individual's forecast of his or her promotability) as opposed to promotion *history*.

With reference to the antecedents to awareness of the organization's required values, the situational (value salience) antecedents show very little association with the SDS method variable. Goal relevant salience is the only variable to exhibit a significant relationship.

There appears, however, to be a number of significant associations with respect to the personality (attentiveness) antecedents. Table 42 indicates (at $p < .01$) that high externals (locus of control) appear to be more likely to respond in a socially-desirable manner.

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6 Steps have been taken in earlier bivariate and multivariate analyses to control for these effects including the examination of partial correlation coefficients controlling for the SDS variable, and the application of hierarchical regression and discriminant analysis procedures.

TABLE 42

Antecedent / Consequent Variables in relation to the SDS Method Variable [a]

Consequents of Ind.-Org.Value Congruence:	Correlation with SDS	Antecedents to Employee Awareness of Org.'s Required Values:	Correlation with SDS
affective commitment	.19**	contact - executives	.01
continuance commitment	-.18**	contact - peers	.03
normative commitment	.19**	contact - customers	.06
overall satis. with org.	.08	org. tenure	-.01
satis. with work	.17**	exposure - training	.09
satis. with supervision	.15**	exposure - speaking	.08
satis. with co-workers	.18**	goal relevant salience	-.19***
satis. with promotion	.21***	public self-consciousness	-.14*
satis. with pay	.03	priv. self-consciousness	-.17**
org. citizenship behavior	.15**	social anxiety	-.24***
altruism sub-scale	.14*	locus of control	.18**
conscien. - sub-scale	.06	self-monitoring	-.12*
turnover intent	.03	other-directed-sub.	-.23***
absence - days	-.05	acting -sub-scale	-.06
absence- episodes	-.06	extroversion-sub.	.09

a. n = 324
* p < .05 (two-tailed)
** p < .01
*** p < .001

This finding (both in correlation coefficient size and direction) confirms earlier findings by Rotter (1966). In addition, the results in Table 42 suggest that individuals low on social anxiety (a sub-scale of self-consciousness), who tend to be comfortable in social situations, appear to be more likely to provide socially desirable responses.

It is interesting to note the negative correlation (-.23), statistically significant at $p < .001$, between other-directedness (a sub-scale of the self-monitoring instrument) and the SDS method variable. The items comprising the other-directedness sub-scale emphasize: pleasing others, conforming to the social situation, and masking one's true feelings (Briggs, Cheek & Buss, 1980).

The negative association with respect to this relationship is interpreted to suggest that individuals who provided socially desirable responses on the SDS scale are those least likely to admit (on the self-monitoring scale) that they engage in socially desirable behaviors. Perhaps these individuals are not consciously aware of their social-desirability tendencies, or else, they are cognizant of their biases but find it undesirable to admit to behaving in a socially-desirable manner.

In summary, the analysis in this section provides evidence of some social desirability biases with reference to the variables examined in the study. These biases are judged to be limited with respect to the value congruence indices and more pronounced with respect to the attitudinal (commitment and satisfaction) outcome variables. There was little or no evidence of bias in the awareness indices, nor in the social salience antecedents to awareness of the organization's required values.

Earlier multivariate regression analyses (Section 7.5) demonstrated that the construct of individual-organizational value congruence consistently improves predicative validity (at $p < .001$) across three outcome variables (affective commitment, overall satisfaction, and turnover intent) after taking into account both demographic and social desirability effects. The correlation analysis in this section (Table 40) indicates relatively weak statistical relations (significant at $p < .05$) between the SDS method variable and two of the three value congruence indices. These empirical findings are interpreted to provide partial support for the conclusion that the focal construct of individual-organizational value congruence exhibits discriminant validity relative to the method construct, social desirability.

7.8 SUMMARY OF RESEARCH RESULTS

This chapter has presented a wide array of results under a variety of headings as stipulated by the data analysis plan (Section 6.5). Appendix D attempts to summarize these results in a concise fashion by means of a comprehensive table detailing: the research issue, the methodology applied, and the resultant findings.

To conclude in general: This chapter has addressed the construct validity of individual-organizational value congruence from a variety of perspectives as recommended by Schwab (1980). Evidence of reliability and convergent validity across value ranking and rating methods has been found. Higher-order cultural dimensions (task, relationships, change and status quo) have been derived from principal components analysis. In addition, the construct of individual-organizational value congruence has exhibited good predictive validity across a number of bivariate and multivariate analyses even after controls for demographic and response set biases were instituted. While the construct of individual-organizational value congruence manifested some statistical association with social desirability response set bias, the magnitude of this association in light of strong hierarchical regression results has been judged to be insufficient to disqualify the conclusion of discriminant validity.

The purpose of the next chapter will be to draw conclusions from these results. A number of implications for organizational science and the practice of management will be advanced. In addition, the limitations of this study will be discussed and avenues for future research on shared values in organizations will be envisioned.

CHAPTER 8 - CONCLUSIONS AND FUTURE DIRECTIONS

The focus of this study has been the fit between individual employees and their organization on the basis of shared values. Discussion in the first chapter proposed that person-organization fit was a meaningful and distinct construct relative to its higher profile counterpart person-job fit. Rationale was also presented to suggest that person-organization fit on the basis of shared values is becoming more critical as industry and commerce move into the information age. Despite its potential implications and considerable conceptual discussion in both the academic and business press, very little has been done in terms of assessing the construct validity of individual-organizational value congruence.

In her study Chatman (1991: 459) concluded: "Conceptualizing the situation as the organization's values and considering person-organization fit is thus a meaningful, yet less-researched level of analysis." The paucity of empirical study on this significant topic raises the question -- "Why?" Why, given the recognition that individual-organizational value congruence has received, has this issue not been addressed empirically? With the exception of very recent work by Chatman and her colleagues (e.g., Chatman, 1988, 1991; Chatman & John, 1991; O'Reilly, Chatman, & Caldwell, 1991), there are no studies which directly and substantively address this construct within the corporate context.

The stumbling block, according to O'Reilly, Chatman, and Caldwell (1991: 489) has been measurement:

> This failure to describe people and situations along commensurate dimensions limits scholars' ability to develop a coherent theory of person-situation interactions (Graham, 1976; Pervin, 1968; Springfield, 1988) and makes it difficult to determine the real impact of person-situation effects (Terborg, 1981).

The premier contribution of this study is the empirical derivation of a twenty-four dimension typology of shared values and subsequent testing of this framework as a means of operationalizing individual-organizational value congruence. The purpose of this chapter is to draw conclusions as to the construct validity of individual-organizational value congruence and to propose implications for the advancement of organizational science and the practice of management.

This chapter begins with a summary of the research execution. It discusses the results of the analyses and concludes as to the construct validity of individual-organizational value congruence. A number of implications for organizational science are suggested as are a variety of lessons for business. The strengths and weaknesses of this study are also discussed. The chapter concludes by outlining several avenues for future research on shared values in organizations.

8.1 SUMMARY OF RESEARCH EXECUTION

Against the backdrop of declining competitive position in North America apparently fuelled by legions of uncommitted employees, a situation which futurists John Naisbitt and Patricia Aburdene (1985: 87) have described as America's trend to a "job-hopping society," this study started with a simple question: "When the personality of an employee meshes with the culture of his or her organization, is that individual more committed, more satisfied, and more likely to remain with the organization?"

A review of the literature revealed little empirical evidence to address this question. The initial solution appeared to be deceptively simple: take an existing values typology, measure values from personal and organizational perspectives, calculate value congruence, and assess congruence against commitment, satisfaction, and turnover. The search for a values typology with relevance to the modern business corporation and commensurability across personal and organizational levels of analysis ended in disappointment. As a result, a typology of twenty-four shared values dimensions was empirically derived (McDonald &

Gandz, 1992a) from content analysis of over two hundred pages of interview notes based on discussions with forty-five practitioners in thirty-eight organizations across North America.

Using the twenty-four dimension shared value typology, the second stage of this research focused on the operationalization of individual-organizational value congruence and assessment of its construct validity in a corporate setting. In light of controversy evident in the literature (Chapter 3) concerning the measurement of values, it was decided to approach the question of value congruence using a variety of methods: value ranking, value rating, and perceived congruence. This action was taken in anticipation of multi-method convergence which would provide a more compelling argument for accurate measurement.

The criteria for selecting the corporate research site were: evidence of strongly shared values (cultural crystallization), full support from the chief executive officer, and adequate staff size to permit random stratified sampling across functions and levels in the hierarchy. Five major corporations were approached (four in Canada and one in the United States) with the hope that one would make itself available. One corporation with a long tradition in its industry (over 100 years) and a CEO who believed in shared values came forward almost immediately.[1]

A set of two questionnaires (one addressing personal values and one addressing organizational values in addition to other variables) was distributed to a random stratified sample of 500 employees for anonymous return to the University. The 334 matched responses which were received yielded a 67.5% response rate.

The primary focus of the data analysis was to assess the construct validity of individual-organizational value congruence using a variety of bivariate and multivariate statistical procedures while attempting to control for demographic and response set

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1 Three more of the five corporations which were approached subsequently expressed an interest in this research and have recently supplied data (n = 276, n = 213, and n =104) for replication studies.

influences. A secondary focus was to investigate personal and organization factors capable of influencing employee awareness of the organization's required values.

Findings from the initial interviews and subsequent analyses of the survey data have important implications for shared values research and for corporations interested in values-based management. The next two sections examine these implications.

8.2 IMPLICATIONS FOR SHARED VALUES RESEARCH

This study has a number of implications for shared values research. The introductory chapter to this dissertation identified five issues as significant gaps in the literature. Findings with respect to these issues are presented in this section. In addition, other issues which surfaced during the course of the research, for example: the debate over the quantitative versus qualitative assessment of organizational culture, will be addressed. First on the agenda for this section are conclusions with respect to the construct validity of individual-organizational value congruence.

8.2.1 Construct Validity of Individual-Organizational Value Congruence

Schwab (1980) is critical of organizational behavior research for its emphasis on substantive validity without adequate concern for construct validity. He suggests (p. 4) that: "our knowledge of substantive relationships is not as great as often believed, and (more speculatively) not as great as would be true if the idea of construct validity received greater attention."

Given that the operationalization of individual-organizational value congruence has been recognized in the literature as a critical issue (O'Reilly, Chatman & Caldwell, 1991), this study places particular emphasis on construct validity. Construct validity is defined (Schwab, 1980: 6) as: "representing the correspondence between a construct (conceptual definition of a variable) and the operational procedure to measure or manipulate that construct."

The research results presented in Chapter 7 provide strong support for the construct validity of individual-organization value congruence. The word "strong" is used because a variety of tests using three different methods of measurement point almost without exception toward this conclusion.

There is evidence of convergence across ranking, rating and perceived congruence methods. In addition, a number of signs point to high respondent acceptance and perceived relevance with respect to the twenty-four dimension typology used to assess congruence including: high response rates, very little missing data, good reliabilities for three item scales, significant correlations as expected with related variables, and relatively unambiguous factor patterns from principal components analyses.

In the preliminary stages of this research it was expected that empirical results would provide an opportunity to pare down the framework of twenty-four dimensions making the ranking instrument less cognitively complex and time consuming. During the statistical analysis, however, no single dimension stood out as irrelevant. All of the dimensions occupied a statistically significant role in one or more of the analyses.

The questionnaire cover letters to respondents solicited margin comments on the instrumentation. Out of all of the returns, only one margin comment questioned the comprehensiveness of the twenty-four value typology. (One individual suggested a value dimension relating to physical health and fitness). This apparent level of acceptance and the fact that over ninety percent of respondents completed the demanding task of rank ordering the twenty-four dimensions twice without error (e.g., correct rankings had to sum to 300) are interpreted to indicate high content validity for the shared values typology. A meaningful and relevant typology of shared values is essential to this study because it underlies the operationalization of individual-organizational value congruence.

The two congruence indices produced good variation across the sample and the mean congruence scores (VC_{rank} = .24 and VC_{rate} = .15) are in line with earlier findings by Chatman (1988). The calculation of actual congruence was also supported by respondents' perception of their level of congruence. Although, the perceived congruence measure appeared to be open to some inflation possibly as a result of dissonance effects.

When the multi-method design was initially contemplated, it was thought that ranking procedures would outperform rating procedures from an operational standpoint. The review of the literature (Chapter 3) also suggested this. However, it is fair to acknowledge considerable controversy in the literature.

In retrospect, value rating appears to have operational advantages over value ranking. Several benefits from value rating have been identified as follows: 1) rating procedures are less demanding (cognitively complex) for respondents, 2) the data produced from rating are independent whereas the ranking data are ipsative, 3) rating procedures in general produce larger correlation coefficients than ranking procedures, 4) value ranking profiles derived by ordering mean rating scores parallel profiles produced by actual ranking, and 5) the VC_{rate} congruence index appears to be the least susceptible to social desirability biases.

As mentioned earlier, the VC_{rate} index appears to be the least susceptible to social desirability biases because: The rating instrumentation presents the shared value concepts in less abstract terms over multiple occasions (multi-item scales). And, the calculation (*Q* correlation coefficient) of VC_{rate} takes into account each respondent's mean value rating score.

The construct of individual-organizational value congruence manifested good predictive validity in this study. Out of the seventeen hypotheses relating to consequents of individual-organizational value congruence: eight received full support (convergence across all three methods at $p < .05$), three received partial support (statistically significant associations at $p < .05$ across two of the congruence measures), three received very limited support (statistically significant associations at $p < .05$ across one of the congruence measures), and three of the hypotheses were not supported at all.

In addition, subsequent multivariate regression and multivariate analysis of variance, after taking into account demographic influences and social desirability biases, yielded statistically significant results (at $p < .001$) across all three value congruence measures.

In summary, this overall pattern of results leads to the conclusion that individual-organizational value congruence exhibits construct validity. The concept of values fit appears to be meaningful in the minds' of employees and it can be operationalized using paper and pencil instrumentation.

8.2.2 Reconciling Theoretical Foundations

During the review of the literature it became apparent that organizational scientists conducting values research have tended to adopt concepts and theories from the basic social science disciplines without due recognition for epistemological differences. This practice has resulted in a variety of conceptualizations underlying the word "values," as found in the organizational science literature, including: values as life ideals (philosophy), values as personal preferences (psychology), values as conceptions of the desirable (anthropology), values as societal standards (sociology), and values as utilities (economics).

The aim of this study is not to prescribe or promote one conceptualization over another. Rather, it is to alert scholars to need to be more discriminating when conceptualizing values. To this end, Quinn and Hall's competing values model has been recognized in Chapter 2 and is promoted as a useful theoretical framework within which epistemological differences can be understood and reconciled.

8.2.3 Deriving a Relevant Typology of Values

The first chapter of this dissertation noted the absence of a relevant typology of value dimensions commensurate at individual and organizational levels of analysis. O'Reilly, Chatman and Caldwell (1991) consider this issue to be a major impediment to the development of a coherent theory of person-situation fit in organizations. This study has addressed this gap in the literature with an empirically-based typology of twenty-four shared value dimensions.

It is anticipated that this typology will contribute to organizational science in a number of ways including: 1) as a conceptual framework for scholars to think about individual-organizational values fit, 2) as a means for scholars to operationalize individual-organizational fit, and 3) as a basis for classifying higher level cultural orientations.

The principal components analyses in this study must be recognized as exploratory and in need of further validation including evidence of consistent factor patterns across different organizations. Nevertheless, these results are interpreted to contribute to organizational science by providing preliminary support for and a possible extension (e.g., the addition of shared value dimensions) to Quinn and Hall's (1985) cultural typology.

In summary, this study finds that the shared values typology aggregates into four cultural types: values emphasizing task completion (getting the work done); values emphasizing maintenance of the status quo (observing precedent, policies, rules, and regulations); values emphasizing social relationships (being a team, high cohesion and cooperation); and values emphasizing change and development (creating new insights, inventions, and innovations).

8.2.4 Developing Operational Enhancements

Research involving personality constructs is often characterized by relatively small amounts of variance explained. Competing rationale for small correlation coefficients provides the basis for ongoing debate (e.g., Adler & Weiss, 1988) in the literature. Opponents to personality research note that correlation coefficients describing personality traits in relation to objective behaviors seldom break the .30 barrier. Mischel (1968: 146), for example, states: "With the possible exception of intelligence, highly generalized behavioral consistencies have not been demonstrated, and the concept of personality traits as broad predispositions is thus untenable."

Proponents (e.g., Epstein, 1979) of research involving personality constructs defend characteristic small correlation coefficients with the suggestion that if different (more controlled and rigorous) operational procedures had been followed, then higher coefficients would have been obtained. Other proponents (Weiss & Adler, 1984) note that researchers often fail to consider theoretical frameworks within which the personality variables were originally embedded.

One of the aims of this study was to improve variance explained relating to individual-organizational value congruence through the incorporation of three design enhancements: 1) the application of an empirically-derived values typology judged to be relevant in the corporate context and commensurate across levels of analysis; 2) the calculation of value congruence from an intrapersonal perspective in accordance with consistency theory; and 3) the inclusion of specific actions designed to reduce social desirability response set biases.

Given the paucity of empirical work in this area, bench marks against which to evaluate this study's results were limited. As discussed in Chapter 3, an extensive review of the literature uncovered only two studies in which value congruence was actually calculated (as opposed to perceived measures of congruence, e.g., Posner, Kouzes and Schmidt, 1985). One of these studies was by Feather (1975, 1979) and the other was by Chatman (1988).

Feather's study (1975, 1979) involving 3000 high school students found correlation coefficients (in relation to satisfaction and happiness measures) just below the .20 level. Feather's study used Rokeach's value typology. He rationalizes the size of his correlation coefficients with the suggestion that many other factors influence the outcome variables.

Chatman's study (1988) yielded correlation coefficients around the .30 level. Similar to this study, she instituted steps to reduce social desirability effects. Her study is distinct, however, in that she relied on a typology of fifty-four dimensions (OCP - Organizational Culture Profile) derived primarily from the organizational culture literature. In addition, she did not conceptualize values fit as an intrapersonal construct. Rather, she measured personal and organizational value profiles using separate independent samples.

Chatman's work, therefore, relies on the concept of geographical (interpersonal) reality whereas this study is based on the premise of behavioral (intrapersonal) reality. As discussed earlier in Section 3.3.2, the question of which conceptualization is most appropriate remains the subject of ongoing debate. The intrapersonal emphasis characteristic of this study, however, is consistent with Heider's (1958) theory. In addition, empirical results described in Section 7.4.8 suggest that behavioral (intrapersonal) reality yields higher correlation coefficients than geographical (interpersonal) reality.

Relative to these two research bench marks (Chatman, 1988; Feather, 1975, 1979), the variance explained (bivariate and multivariate) in this study shows some improvement with respect to the predictive validity of individual-organizational value congruence. In conclusion, it is suggested that the improved empirical results evident in this study reflect: the operational efficiency of the twenty-four dimension shared values typology, the theoretical appropriateness of the intrapersonal design, and an ability to control for social desirability biases.

8.2.5 Testing the Consequents of Value Congruence

Five consequents to individual-organizational value congruence were hypothesized in this study as follows: organizational commitment, job satisfaction, turnover intent, organizational citizenship behavior, and absence behavior. Nearly all of these outcome constructs had more than one facet which was theoretically expected to show a greater degree of association (correlation) relative to the other facets.

Affective commitment (commitment based on a sense of belonging) was expected to be more closely associated with individual-organizational value congruence than were continuance commitment (commitment based on financial considerations) and normative commitment (commitment based on a sense of moral obligation). Overall satisfaction with the organization was expected to show a higher association with value congruence than were the more job-specific facets of the Job Descriptive Index: satisfaction with work, supervision, co-workers, promotion opportunities, and pay. Altruistic behavior (a sub-scale of organizational citizenship behavior) was expected to show a greater degree of association than was conscientiousness (another facet of organizational citizenship behavior).

Conclusions with respect to the consequents of value congruence, as hypothesized in Chapter 5, are as follows:

Organizational Commitment. The results of this study provide good support for the hypothesized link between value congruence and affective commitment. In addition, affective commitment exhibits a higher correlation coefficient in comparison to continuance and normative commitment. It is, therefore, concluded that employees whose personal values align with the normative (values) framework of the organization experience a sense of belonging. This study also concludes that value congruence is associated (to a lesser degree) with a sense of moral obligation to the organization. And, as one might expect, there was no evidence of value congruence being associated with continuance commitment (commitment based on financial considerations).

Hierarchical regression analyses with affective commitment as the dependent variable indicated that, after consideration of both demographic and method controls, value congruence was able to account for 6% (VC_{rank}), 10% (VC_{rate}), and 30% (PFit) of the explained variance in the dependent variable. These bivariate and multivariate results in conjunction highlight the importance (validity) of individual-organizational value congruence as a construct of interest to scholars studying affective commitment.

The results of this study also confirm Allen & Meyer's (1990) findings as to the importance of distinguishing between bases of commitment. Clearly, affective commitment is a distinctive aspect of the employee-employer relationship. It is suggested that scholars need to move beyond Porter and Smith's (1970) original unidimensional conceptualization of commitment and consider Allen and Meyer's (1990) triadic model.

Job Satisfaction. This study concludes that individual-organizational value congruence manifests a positive relationship with employees' level of overall satisfaction with the organization. Also as hypothesized this association tends to be more pronounced compared to the JDI facets indicating that the *organization as a whole* is an important and unique (relative to traditional emphases on specific job facets) psychological object in employees' minds.

Hierarchical regression analysis indicated that, after consideration of both demographic and method controls, value congruence was able to account for 6% (VC_{rank}), 9% (VC_{rate}), and 28% (PFit) of the explained variance in overall satisfaction with the organization. It is, therefore, concluded that individual-organizational value congruence is related to employee satisfaction, and this relationship is most distinct when the referenced psychological object is the overall organization.

The results of this study support Locke's (1976) proposition that: an employee's perception that his or her job fulfils or allows the fulfilment of important job values results in satisfaction. In his research, Locke emphasized perceived discrepancies as opposed to actual discrepancies. The relatively higher bivariate correlation coefficients and squared multiple correlations (R^2) for PFit, perceived congruence, evident in this study support Locke's emphasis on perceived versus actual discrepancies.

In addition to the empirical association with value congruence, the construct of job satisfaction manifested a variety of statistical relationships including significant associations with employee demographic variables and personal value factors. This finding is interpreted as support for current thinking (e.g., Glisson & Durick, 1988) which posits that a variety of variables, divided roughly into three groups (job characteristics, organizational characteristics, and worker characteristics), predict job satisfaction.

Turnover Intent. The bivariate results from this study provide good support for concluding a negative relationship between value congruence and intent to leave the employ of the organization. The hypothesized association was statistically significant across all three congruence measures and most pronounced with respect to perceived congruence (PFit).

Similarly, hierarchical regression analyses controlling for demographic and method effects indicated that value congruence produces significant changes in the variance explained (R^2) in turnover intent as the dependent variable across all three indices as follows: VC_{rank} (5%), VC_{rate} (5%), and PFit (16%).

The research design for this study did not attempt to address the causal ordering of the employee outcome variables, a weakness which will be discussed and a rationale provided for in Section 8.5. One reason for this decision was considerable controversy in the literature as to the causal ordering for some of the employee outcome variables.

With respect to turnover intent, however, there appears to be general consensus that it is a consequent of satisfaction and commitment. One must, therefore, question the degree to which value congruence acts independently on turnover intent versus the degree to which its influence is reflected through employee affective commitment and overall satisfaction with the organization.

A multiple regression analysis (similar to Section 7.5.1) was conducted with turnover intent as the dependent variable and independent variables in order of entry as follows: demographics, social desirability, affective commitment, overall satisfaction with the organization, and value congruence. The results of this analysis suggest that value congruence does not directly affect turnover intent. Rather, its influence appears to be indirect through affective commitment which accounted for 20% (R^2) explained variance in turnover intent.

Clearly, there is a need to address the causal ordering of the outcome variables in the research model. In fact, specific future actions to address this issue will be described in the latter part of this chapter. For purposes of this particular study, however, the establishment of construct validity for the focal construct, individual-organization value congruence, was the primary research priority.

Behavioral Outcomes - Organizational Citizenship and Absence. While the results of this study have provided relatively clear conclusions for the testing of attitudinal (commitment and satisfaction) and intentional (turnover) hypotheses, they are ambiguous with respect to the behavioral hypotheses focusing on organizational citizenship and absence behavior. In general, firm empirical support for associations between individual-organizational value congruence and the behavioral constructs was not found. Explanations for this outcome include theoretical and operational considerations.

From a theoretical perspective, behavior is generally recognized in the literature as the complex consequent of a variety of personal and situational antecedents along with interaction effects. Epstein (1979: 1097) explains the difficulties of dealing with behavioral constructs and cautions: "it is normally not possible to predict single instances of behavior, but that it is possible to predict behavior averaged over a sample of situations and / or occasions."

For an operational viewpoint, the behavioral measures used in this study were self-report measures. Most respondents reported that they were good organizational citizens. Similarly, most reported that they were never or seldom ever absent. It is suggested that this reduction in variation including "end-piling" at the socially desirable end of the self-report scales indicates evidence of response set biases.

It is also possible that reduced variation may be a sampling artifact. Given the sophisticated nature of the employees surveyed in this study (28 % of sample earned in excess of $100,000 per year, 55% had university degrees, and no hourly paid workers were surveyed), it is plausible that most respondents were indeed good organizational citizens with very good attendance records.

In conclusion, the operationalization of behavior (organizational citizenship and absence) using self-report measures appears to have been problematic in this study. As Epstein (1979) points out linking psychological and behavioral constructs is quite a complex and difficult task. Perhaps, it is one which requires a degree of design sophistication beyond that which was applied in this cross-sectional mail survey.

8.2.6 Antecedents to Awareness of the Organization's Required Values

A secondary focus in this study was the investigation of personal and organizational constructs hypothesized to influence employee awareness of the organization's required values. As discussed in Section 5.4, the organization's required values were defined as those values perceived as important by members of the dominant coalition (executive managers, n = 42). Potential antecedents to employee awareness were identified on the basis of social cognition theory (Fiske & Taylor, 1984). This theory proposes that an individual will be aware of social stimuli within his or her environment to the degree that the stimuli are salient and the individual is predisposed to attend to such stimuli.

This study identified four organization constructs hypothesized to create salience for the organization's required values: 1) visual salience - the degree to which other employees interact with / are in physical contact with members of the dominant coalition; 2) temporal salience - the length of time spent in the organization, 3) instructed salience - the degree to which employees have been exposed to corporate documentation and / or seminars emphasizing the organization's required values, and 4) goal-relevant salience - the degree to which adherence to the organization's required values is explicitly rewarded.

It is concluded from the results of this study that organizations can take actions to increase the salience of their normative (shared value) requirements as follows: 1) Encouraging a high level of interaction between executives and staff -- contact with members of the dominant coalition (visual salience) was significantly associated with employee awareness of the organization's shared values across all three awareness indices

(Aware $_{rank}$, Aware $_{rate}$, and P-Aware). 2) Exposing employees to reading materials and seminars -- the empirical evidence indicates that instructed salience was positively associated with employee awareness across all three indices.

Positive associations between employee awareness and temporal salience (organizational tenure) and goal-relevant salience (explicit rewards) were also indicated, but these relationships failed to achieve statistical significance across all three awareness indices. Several possible explanations for this finding are advanced as follows:

Organizational tenure (time in the organization) may not be directly aimed at operationalizing the salience of required values in the same sense as constructs such as visual and instructed salience. In other words, some employees may have spent considerable time in the organization without ever having been directly exposed to the required values, whereas employees who have attended a seminar on shared values, for example, have definitely been directly exposed.

The ambiguous results with respect to goal-relevant salience and employee awareness may reflect the fact that the organization studied does not operate an explicit appraisal system for shared value recognition and reward. Such systems are still rare. There are few corporate examples in North America, a notable exception being Levi Strauss and Company (Howard, 1990) which rewards one-third of each manager's raise, bonus, and other financial rewards on the basis that individual's ability to manage in accordance with the company's shared values statement.

In addition to situational antecedents, social cognition theory was the theoretical basis for identifying personality antecedents which may predispose certain employees to pay more attention to social stimuli within their workplace environment. These personality variables were as follows: self-consciousness (public, private, and social anxiety), locus of control, and self-monitoring.

There was very little empirical support in this study for hypothesized relationships between the personal (attentiveness) antecedents and awareness of the organization's required values. The only personality variable to consistently manifest statistical significance ($p < .05$) across all three awareness measures was social anxiety. The negative correlation coefficients characteristic of this relationship indicate that socially anxious employees (e.g., those who experience discomfort in the presence of others) are less likely to be aware of normative (e.g., required values) stimuli salient in the workplace environment.

The failure of the remaining personality antecedents to manifest significant relationships with employee awareness of the organization's required values can be addressed from both theoretical and operational perspectives as follows.

From a theoretical perspective, the construct definitions (locus of control, self-consciousness, and self-monitoring) emphasize the degree (e.g., extent) to which an individual is predisposed to attend to external stimuli as opposed to the focus (e.g., content) of that individual's attendance. The research model for this study implicitly assumes that individual attentiveness includes a focus on (sensitivity to) the organization's cultural elements (e.g., its required values). In retrospect, this need not be the case. For example, an individual may be highly attentive to his or her external environment, but focus on political (power-dynamics), rational (task-goal), or any number of other possible cues.

From this discussion it is suggested that there may be personality variables not considered in this study which influence individual attentional focus. One might, for example, hypothesize that employees with a high need for power (nPOW - McClelland, 1961) will tend to focus on stimuli in the political environment. Similarly, employees with a high need for achievement (nACH) will tend to focus on rational/task-related stimuli, and employees with a high need for affiliation (nAFF) will tend to focus on cultural stimuli. These propositions could offer an interesting avenue for future research; an idea which will be discussed in more detail in Section 8.5.

Operational explanations can also be advanced with respect to the absence of empirical support. A case in point is Snyder's self-monitoring scale. Out of the personal attentiveness constructs, it was expected that self-monitoring by virtue of its definition -- the extent to which people attend to social situations as guides for their behavior -- would yield the largest correlation coefficients in relation to the awareness indices.

The self-monitoring scale, in fact, failed to achieve statistical significance ($p < .05$) with any of the awareness indices. It is possible that this result may be a reflection of the psychometric qualities of Snyder's (1974) self-monitoring scale, which have been open to question in the recent literature (Luechauer & Katerberg, 1989). This results of this study, in addition to those of Chatman (1988) who also failed to achieve statistical significance with Snyder's self-monitoring scale, may be indicative of support for Luechauer and Katerberg's criticisms. It is, however, beyond the scope of this single study to make definitive statements as to the psychometric validity of Snyder's self-monitoring scale.

To conclude: social cognition theory, in particular the dynamics of social information processing, appears to be applicable to the understanding the promulgation of shared values in organizational settings. While there exists considerable literature on managing shared values, there is very little evidence of substantive empirical investigations using social cognition as a theoretical platform.

The results of this study suggest that social cognition theory is relevant and applicable to such research questions, particularly with respect to the social salience constructs. The personal attentiveness constructs (e.g., self-consciousness, self-monitoring) in contrast appear to be less instrumental in terms of understanding and predicting employee awareness of the organization's required values.

8.2.7 Qualitative Versus Quantitative Approaches to Organizational Culture

The topic of individual-organizational value congruence cannot be addressed without becoming involved in the debate between the qualitative and quantitative assessment of organizational culture. Rousseau (1990) describes the nature of this ongoing debate in considerable detail. She provides concise summaries (pages 8 and 18) of the opposing viewpoints as follows:

Qualitative Assessment.

Advocates of qualitative methods have taken several positions supporting qualitative research and countering the use of quantitative culture measures. Louis (1983) and Smircich (1983a) have argued that culture reflects a social construction of reality unique to members of a social unit, and as such, this uniqueness makes it impossible for standardized measures to tap cultural processes. Schein (1984b, 1986) argues that quantitative assessment conducted through surveys is unethical in that it reflects conceptual categories not the respondent's own, presuming unwarranted generalizability. Deal (1986) suggests that traditional academic methods applied to studying culture "sterilize" the construct and reflect a re-labeling of old approaches to studying organizations.

Quantitative Assessment.

Quantitative approaches to collecting data on organizational culture consist of public, replicable, standardized procedures for obtaining and scoring information on the elements within the culture's conceptual domain. Such methods include high structured procedures, techniques, and instrumentation, such as interview schedules, questionnaires, and Q-sorts. The essence of this approach is *a priori* structuring of stimuli to which organization members are exposed during data collection. The common content participants are exposed to facilitates the application of uniform categorization and scoring systems useful for data summary, comparison, analysis, and reduction, as well as replication and cross validation.

Rousseau concludes (p. 30):

> Methodological debates, prejudices and preferences seem to have stifled much of the constructive work that might have been expected in the decade or so since culture first entered the OB mainstream. The potential remains.
>
> Quantitative assessment offers opportunity for inter-organizational comparisons to assess often-assumed relations between culture and organizational success, strategy and goals. Qualitative research can explore meanings behind the patterns.

The long-term aims of the research stream introduced by this study include: replication studies, cross-organizational comparisons, and establishing links with organizational strategy. To these ends, this study has relied on the quantitative assessment of organizational culture. In an ideal sense, the assessment of organizational culture in this study would have benefited from a combined qualitative / quantitative approach. Unfortunately, a number of factors including time and resources precluded attempting to achieve the confirmation of ethnographic techniques.[2] This is an obvious weakness which will be discussed in Section 8.4.

The results of this study, nevertheless, provide empirical support for the assessment of organizational culture via quantitative means. Chapter 7 contains considerable evidence in support of acceptable psychometric performance for the survey instrumentation including: scale reliability, convergence across multiple methods (ranking and rating), and predictive validity across a number of outcome variables.

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2 While there was no ethnographic confirmation in a systematic sense, the results of this study were presented at a senior management meeting with what appeared to be high acceptance and good face validity.

8.3 IMPLICATIONS FOR MANAGEMENT

This research has important implications for the management of human resources. It is proposed that the twenty-four dimension shared values typology will facilitate the integration of strategic business and human resource (HR) functions. In addition, it has potential for application within traditional HR practices including: staffing, training and development, appraisal and compensation, organization design, and communication.

8.3.1 Integrating Strategic Business and Human Resource Functions

A major challenge currently facing organizations is the achievement of greater synergy between the management of strategy and the management of human resources (Tichy et al., 1982). It is proposed that shared values represent a conceptual bridge across which the integration of business strategy and human resource management can be articulated. As Robert Haas, chairman and CEO of value-driven Levi Strauss & Co., stated in a recent interview: "What we've learned is that the soft stuff and the hard stuff are becoming increasingly intertwined. A company's values -- what it stands for, what its people believe in -- are crucial to its competitive success." (Howard, 1990: 134)

Existing typologies of values, developed in the realm of social psychology and lacking contextual relevance, have been found unsuitable to facilitate discussions integrating an organization's strategy with the shared values manifest by its human resources. It is proposed that this study provides a framework, a relevant lexicon of shared value dimensions, within which meaningful discussions of a strategic nature can proceed.

During the forty-five interviews (Chapter 4) conducted with business practitioners, the message that vision and values are inextricably linked and mutually supportive came across loud and clear. Based on these interviews and subsequent survey data showing an empirical link between value congruence and employee outcome variables, it is proposed that a healthy organization is one which has achieved a high level of integration across its hard systems (the tangible, goal-oriented, planning and control systems characteristic of traditional organizational life) and its soft systems (the less tangible, normative framework of shared values and organizational culture characteristic of the emergent social reality metaphor).

There exists considerable literature to suggest that both goals (e.g., Locke & Latham, 1984) and values (Chapter 1) influence work behavior. It is proposed that these two systems (goal-setting and values-management) should work in concert to produce the behaviors necessary to make the corporate vision a reality. Figure 12 displays a conceptual model integrating vision, goals, values, control, and commitment to create a corporate reality that satisfies stakeholder (constituent) needs. The model's basic premise that vision comprises both hard and soft elements is supported in recent management literature (e.g., Fry & Killing, 1989).

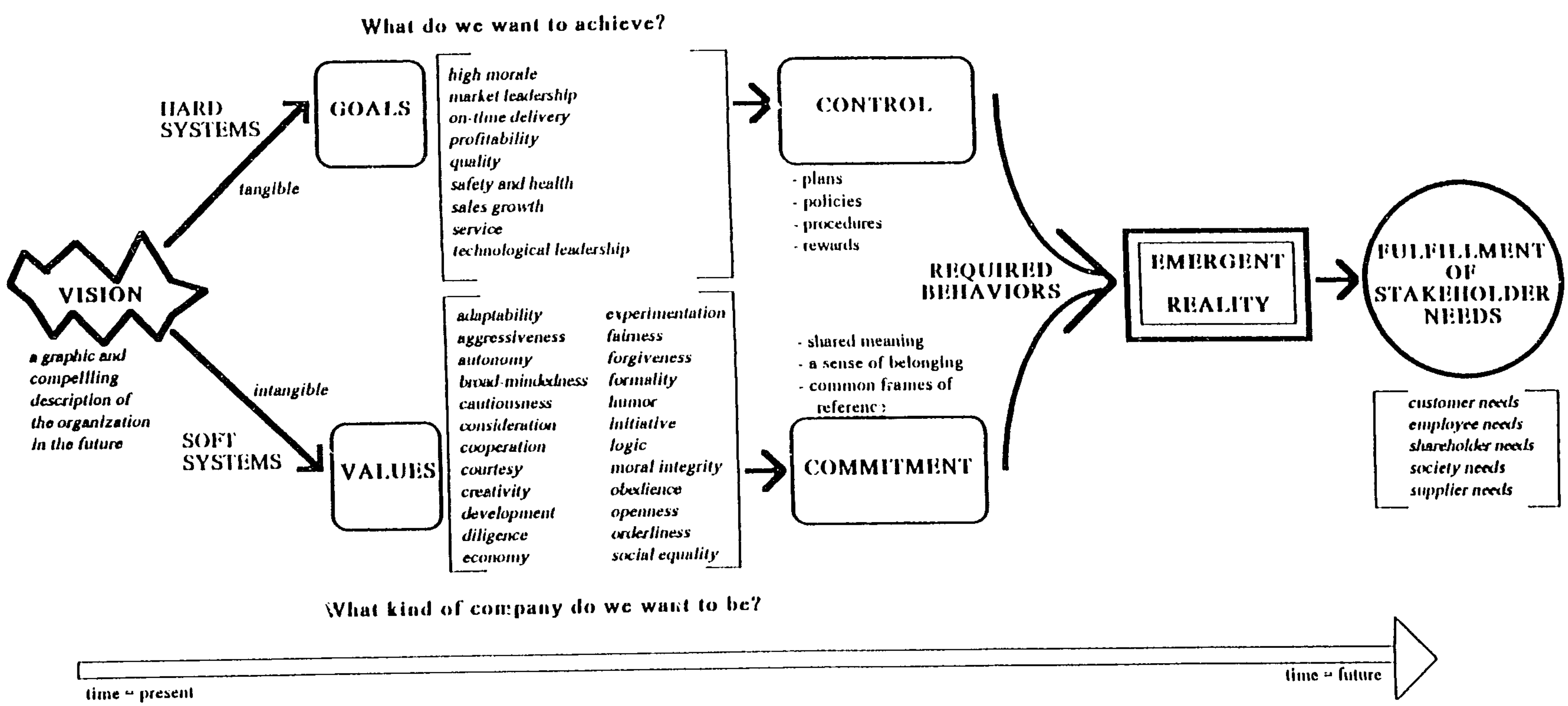
The model shown in Figure 12 presents, in an integrated format, distinctive concepts and dimensions which arose during the interviews. In addition, the relation between shared values and commitment (defined in the model as affective commitment or a sense of belonging) has been empirically established from the survey data.

It is important to recognize that the set of organizational goals reflects only items which were explicitly mentioned by interview respondents, as does the set of stakeholder needs. Inasmuch as it was not the purpose of this study to derive exhaustive lists of organizational goals and potential stakeholders, these sets may be incomplete. In the case of the twenty-four shared values dimensions, however, the empirical evidence contained in this study supports content validity.

It is anticipated that this model will provide the basis for meaningful discussions within corporations seeking to achieve a link between their corporate vision and their shared values. Implicit in the model are a number of critical questions of a strategic nature: Who are our stakeholders and what are their needs? What goals will facilitate the satisfaction of these needs? And, what shared values need to be emphasized in order to make our vision emerge as reality?

FIGURE 12

Integrating Vision and Values within a Strategic Framework



It is postulated that different goal sets will call for different value emphases. For example, one corporation may focus on the goal of sales growth (selling more of the existing product or service) as a critical success factor in the satisfaction of stakeholder needs. In concert with this goal, the corporation may decide that its culture should emphasize shared values such as aggressiveness, autonomy, diligence, and initiative. Another corporation may decide that technological leadership (creating new products or services) is the key to success within its industry. In contrast to the first corporate example, this corporation may decide to emphasize shared values such as creativity, experimentation, humor, and forgiveness.

It is not the purpose of this study to prescribe certain shared values to complement corporate strategies. This is an issue for executive management decision-making, and perhaps future empirical study. The above examples are hypothetical and designed simply to illustrate the utility of model in terms of strategically integrating "hard" goal-oriented and "soft" normative considerations.

While there are numerous strategic models in the literature, most present the concepts of values and vision in a broad, abstract manner. The contribution that this model makes is a more detailed conceptual framework within which strategic discussions on the integration of vision and values can proceed.

8.3.2 Human Resource Management Practices

In order to generate, reinforce and sustain human competencies which support their strategies, organizations employ a variety of practices from six HR domains: staffing, development, appraisal, rewards, organization design, and organizational communication (Ulrich, Brockbank, & Yeung, 1989). Distinctive competencies are generated as a function of staffing and development practices. These competencies are then reinforced through appraisal and reward systems, and sustained over time by effective organization design and communications. It is proposed that the typology of shared value concepts has potential application within each of these practices as follows:

Staffing. Organizations apply staffing procedures to increase the likelihood of attracting and selecting the *right* candidate. In HR management the concept of *right* has traditionally been assessed in terms of a match between skills and task requirements. The logic of continued emphasis on this criterion in the face of dramatic increases in job and career turnover across North America (Naisbitt & Aburdene, 1985) is open to question. More recently additional staffing criteria, including shared values (Posner et al., 1985: Chatman, 1991) and the need to hire for the organization, not the job (Bowen, Ledford & Nathan, 1991) have been recognized in the HR literature.

Nearly all of the managers and executive recruiters sampled in this study recognized the need to consider individual-organizational value congruence as part of their staffing processes. Some expressed frustration in terms of being unable to assess this aspect of fit. Others purported to be able to accurately determine the work-related values of job candidates through unstructured observation and intuitive insight.

This study offers a tangible first step toward a more systematic approach for practitioners wishing to address individual-organizational values fit. Employers and prospective employees interested in establishing mutually congruent work situations now have a framework of concepts within which value similarities and differences can be discussed. This typology has been provided to MBA students involved in job-search activities on several occasions. Feedback to date indicates that it is perceived to be a useful and thought-provoking framework.

Development. The typology of shared values and operationalization of individual-organizational value congruence also have implications within the domain of training and development. It seems reasonable to suggest that many organizations have employees who are currently experiencing the strain of value incongruence without being explicitly aware of the source of their distress.

Rokeach (1973) provides evidence that negative stresses of this sort can be alleviated by simply having individuals identify and confront value inconsistencies within their lives. In other words, the key to dealing with a value inconsistency is to make the individual consciously aware of its existence. Once explicitly cognizant of an inconsistency individuals can usually reconcile it and regain their cognitive balance. To this end the shared values instrumentation developed in this study could be applied in training sessions providing individuals with the opportunity to reflect on their personal work-related values in relation to their perception of the organization's value priorities.

Appraisal and Reward Systems. HR appraisal and reward practices have traditionally focused on tangible indications of performance. More recently attention has started to shift to a variety of non-traditional compensation practices. The Levi Strauss company is a case in point -- chairman and CEO Robert Haas emphasizes the need to appraise and reward not only the "what" of management, but also the "how" (Howard, 1990: 141). In Haas' organization, one-third of each manager's reward package depends on his or her ability to manage in accordance with corporate shared values.

It is suggested that the shared values typology generated in this study provides a detailed framework within which value-related appraisal and reward bench marks can be negotiated in meaningful and specific terms.

Organization Design. In order to sustain competencies organizations pay careful attention to their structural design parameters. Groupings and reporting lines are established to promote synergistic relationships. While too much similarity may reduce creativity (Amabile, 1988), value congruence is instrumental in the achievement of shared frames of reference (Chatman, 1988).

The shared value dimensions in this study could form the basis for discussion between team members in their search for shared meaning and common ground. In addition, the shared values typology could serve to extend the scope of organization design beyond its traditional emphasis on task, function, market, and product considerations to broader design criteria including the need for normative values to support work unit goals.

Communications. It is in the domain of organizational communications that the shared value typology probably has its most significant implications. A common vocabulary is essential in any field of group endeavor. The more complex the undertaking the greater the requirement for a "fine-grained," perhaps even esoteric, vocabulary. This study has presented evidence suggesting that existing values typologies are ill-suited to facilitate meaningful dialogues within the context of modern corporate life. Managers and HR professionals have not had exposure to the vocabulary necessary to expand their thinking and discussions beyond vague indistinct generalities. It is suggested that this study contributes to business practitioners' vocabulary through the provision of a fine-grained lexicon of shared value concepts.

8.3.3 Assessing Corporate Culture

In response to the recent emphasis on managing corporate culture, many organizations are grappling with the question: What is our corporate culture? Organizational science has focused on this issue and, amidst considerable controversy (as discussed), there exist numerous methodologies and instruments.

Within the quantitative stream, the operationalization of organizational values as representative of organizational culture is recognized in the literature. In his review of methodological approaches to organizational culture, Ott (1989) finds utility in Harrison's (1975) instrument for diagnosing organizational values. He does, however, criticize the instrument for its limited range (p. 119): "The instrument's second problem is simply a limitation: it only taps four ideologies."

This study contributes to the assessment of organizational culture with a relatively broad-range (twenty-four dimensions) instrument which aggregates organizational values into four cultural factors: task, relationships, change, and status-quo. In fact, Harrison's instrument appears to operate more at the level of these higher-order cultural factors. His four ideologies are: achievement (similar to task), support (similar to relationships), power, and role (both similar to status quo). The only higher order cultural dimension in this study with no overlap to Harrison's work is the factor emphasizing organizational change and innovation.

It is also suggested that this study contributes to the assessment of organizational culture through the increased rigor of multiple-method (value ranking and value rating) operationalization. From a practitioner perspective, the instrumentation developed for this study can be utilized to prepare a cultural profile or map of the organization. A cultural map (based on information shown in Table 12 - Chapter 7) for the corporate research site surveyed in this study is shown in Figure 13.

While there was no systematic attempt to achieve ethnographic confirmation for this cultural representation (a weakness of this study), a number of salient organizational artifacts, interpreted to provide tentative support, were noted during the course of the research.

For example, moral integrity as the highest organizational value did not come as a surprise. Given the Chief Executive Officer's high profile and very public stand on ethical practices in business it was expected.[3] Nor did the low priority accorded to social equality come as a surprise. The relative arrangement of office space in the corporation's head office tower and the relative size and arrangement of company cars parked behind the building support this finding. It is also suggested that the low priority placed on the value of humor may be a manifestation of the organization's scientific and engineering roots.

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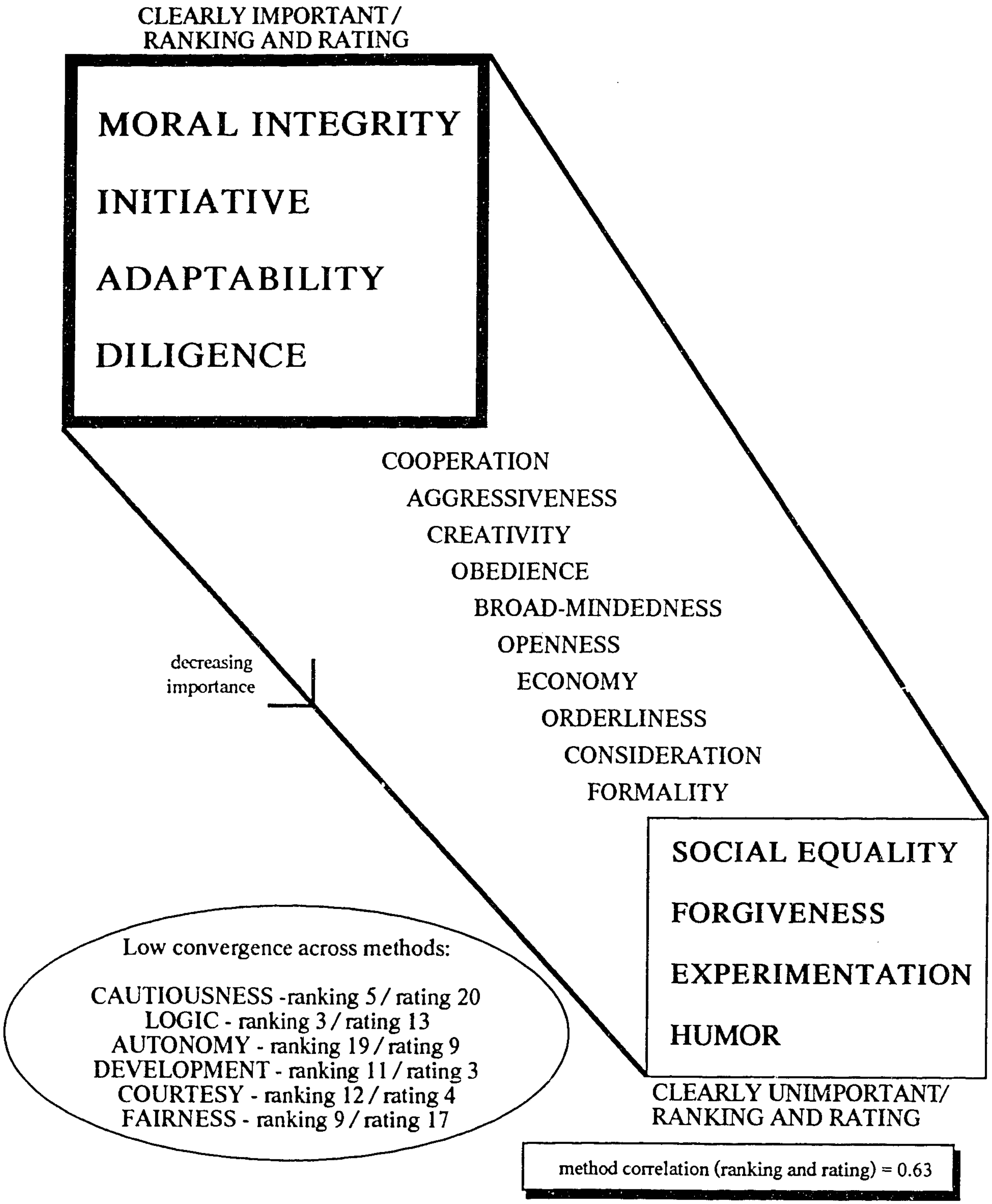
3 The high ranking accorded to the value of moral integrity may be an artifact of social desirability influences. However, preliminary analysis of organizational value ranking / rating data from four other organizations suggests that this is not the case.

FIGURE 13

Organizational Culture at the Corporate Research Site



Additional face validity for this representation of the organization's value priorities was provided during a research results debrief with corporate senior management. There appeared to be general consensus that the cultural profile shown in Figure 13 was a fair and accurate representation of relative organizational value priorities.

Of particular interest to senior management were the top and bottom ranked values, as highlighted by the boxes in Figure 13. With respect to these values, there was good evidence of convergence across methods. Moral Integrity was the top ranked value across both value ranking and value rating. Humor was ranked twenty-fourth using value ranking and twenty-second using value rating. The rank correlation coefficients across methods were .83 and .78, respectively, for the top and bottom ranked values. The selection of four highlighted values at the top and four at the bottom was not arbitrary. There appeared to be distinct steps between these sets and adjacent values in the magnitudes of average rankings.

There was less evidence of method convergence across value ranking in the middle of the distribution. In fact, it was considered prudent to not represent six value dimensions in the cultural profile because of less than expected multiple-method convergence.

The criterion for selecting out these six values was a difference of eight or more places across the two methods. The number "eight" was used for two reasons: First, the original conceptualization and discussion of the profile was based on distinguishing between top, middle, and bottom ranked values. This conceptualization defines three classifications each with a range of eight values. Therefore a range difference of greater than eight would necessitate a different classification set within the profile. And second, standard deviations across organizational value ranking data ranged from 5.0 to 7.6. A difference of eight units would therefore be greater than any standard deviation within the organizational ranking data.

The overall method correlation across all twenty-four dimensions was .63 and the difference in ranking across methods was on average 4.5 places. These results are interpreted to lend general support to convergent validity across methods. For the eighteen values represented in the culture profile, however, the method correlation was .96. This strong convergence across methods increases the level of confidence with which the organizational value profile shown in Figure 13 can be viewed.

A variety of analyses were conducted to investigate why six of the twenty-four value dimensions did not converge. In conclusion, there appear to be several possible confounds: With respect to the value ranking exercise, it is likely that there is more error variance in the middle rankings. Comments received during pilot testing suggest that respondents pay less attention to the relative ordering of values in the middle of the ranking than they do to those values at the top and bottom ends.

An analysis of social desirability effects suggests that two of the six values, courtesy and fairness, would exhibit greater convergence if response set biases were controlled. In the value ranking exercise, the relative order of courtesy would move up and the relative order of fairness would move down, thereby bringing the ranking profile more in line with the rating profile.

With respect to the dimensions of cautiousness and logic, there may be a need to reconcile conceptualizations across the two methods. It appears, particularly with respect to cautiousness, that respondents may be interpreting different meanings across methods.[4]

In addition to providing management with a profile of organizational value priorities, the organizational value rating data combined with factor score results from the principal components analysis can be utilized to provide an indication of higher level cultural emphases within the organization. The principal components analysis (Section 7.3) indicates four cultural factors: task, relationship, status quo, and change. It is proposed that factor scores can be calculated using mean organizational value ratings to provide an indication of overall cultural emphases characteristic of the organization.

4 Preliminary analysis of data from the three replication studies indicates good convergence across ranking and rating methods (overall method correlations = .86, .78, & .82). In the first of the replication studies only cautiousness and orderliness did not converge. In the second, only cautiousness did not converge, and in the third only logic did not converge.

Figures 14 and 15 on the following two pages present graphic representations of cultural emphases at the corporate research site derived using the factor score regression weights.

A cultural bias index was calculated as follows: The organizational value ranking profile which would maximize each of the four factor scores was determined by examination of relative regression weights in the factor-score coefficients matrix. Similarly, the organizational value profile which would minimize each of the four factor scores was also determined. These two scores defined maximum and minimum end-points for the possible range of factor scores. For example, the factor equation for the relationships dimension was:

$Factor_{rel}$ = .118 (adaptability) - .123 (aggressiveness) - .021 (autonomy) +
.108 (broad-mindedness) + .086 (cautiousness) +
.135 (consideration) + .221 (cooperation) + .265 (courtesy) +
.001 (creativity) + .122 (development) + .058 (diligence) -
.051 (economy) - .078 (experimentation) + .146 (fairness) -
.059 (forgiveness) + .032 (formality) - .045 (humor) -
.013 (initiative) + .149 (logic) + .310 (moral integrity) -
.025 (obedience) + .057 (openness) + .007 (orderliness) +
.081 (social equality) [5]

The maximum factor score for relationships was +6.93. The minimum factor score for relationships was +1.30. The mean score (based on the mean profile using organizational value rating data) was +4.85. Therefore, the organization value profile on average exhibits a 26% bias toward the maximum end of the range. Cultural bias scores were calculated for the other factor dimensions in a similar fashion.

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5 Initially the top ranked value had a score of "24" points in the factor equations and the bottom ranked value had a score of "1" point. Using the full ranking range from one to twenty-four was found to reduce the influence of value dimensions near the bottom of range to negligible proportions. To reduce these range effects (and allow bottom ranked values some influence) a logarithmic decline was applied to the ranking scores. This changed the ranking distribution from a 24 unit range to 5.75 unit range.

FIGURE 14
Cultural Biases at the Corporate Research Site

RELATIONSHIPS — CHANGE

THE CLAN	THE ADHOCRACY
Quadrant I : The Consensual Culture	Quadrant II : The Developmental Culture
Purpose: Group Cohesion	Purpose: Broad Purposes
Salient Values: *Courtesy (+)*, *Moral Integrity (+)*, *Fairness (+)*, *Cooperation (+)*, *Consideration (+)*, *Development (+)*, *Broad-Mindedness (+)*, *Openness (+)*	**Salient Values:** *Forgiveness (+)*, *Experimentation (+)*, *Humor (+)*, *Creativity(+)*; *Logic (-)*, *Cautiousness (-)*, *Diligence (-)*
Information Processing Styles: Discussion, Participation, Consensus	**Information Processing Styles:** Insight, Invention, Innovation
26 % Positive Bias	**52 % Negative Bias**
THE HIERARCHY	**THE MARKET**
Quadrant IV : The Hierarchical Culture	Quadrant III : The Rational Culture
Purpose: Execution of Regulations	Purpose: Pursuit of Objectives
Salient Values: *Formality (+)*, *Orderliness (+)*, *Obedience (+)*; *Social Equality (-)*	**Salient Values:** *Initiative (+)*, *Aggressiveness (+)*, *Autonomy (+)*
Information Processing Styles: Measurement, Documentation, Computation	**Information Processing Styles:** Goal Clarification, Individual Judgement, Decisiveness
13 % Negative Bias	**43 % Positive Bias**

(note - the values of adaptability and economy do not load significantly on any of these factors)

STATUS QUO — TASK

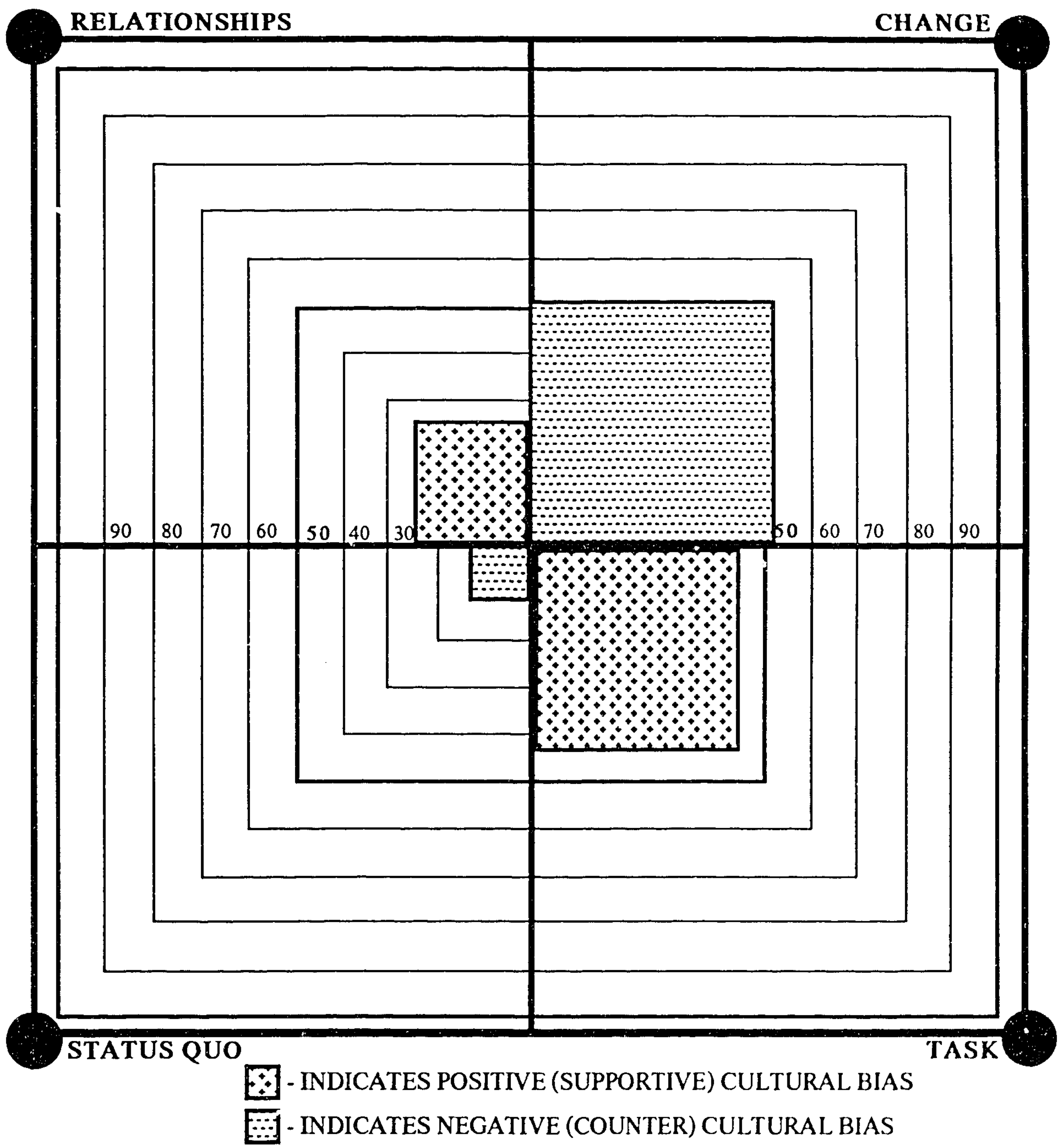
Cultural Bias Scale

(negative - bias) ← counter culture | supportive culture → + (positive bias)

100 % — 0% (no bias) — 100 %

FIGURE 15

Cultural Biases at the Corporate Research Site on a Pictorial Grid



The data portrayed in these figures suggest that the corporation has a relatively strong positive bias on the task dimension and a relatively strong negative bias on the change dimension. Given what is known about the nature of the corporation these bias indices are intuitively appealing and exhibit good face validity.

It is anticipated that this type of presentation will have practical significance for senior managers. These figures provide a general overview of emphases manifested in the organizational value data along four basic dimensions: task - getting the work done; relationships - keeping the group together; status quo - following rules and regulations; and change - creating new ideas and producing innovations. From a strategic perspective, this sort of analysis could provide a meaningful framework from which discussions on future directions (cultural emphases) could proceed.

Organizational value profiles which maximize emphases (e.g., factor scores) in the four cultural dimensions are shown in Table 43, on the following page. This table was prepared using relative regression weights from the factor-score coefficient matrix. It suggests that an organization could emphasize the change dimension by putting high priority on the values of forgiveness and experimentation and low priority on the value of logic. An organization wanting to emphasize its relationships dimension would put a high priority on the values of moral integrity and courtesy and a low priority on the value of aggressiveness. An organization seeking to be task-oriented would put a high priority on aggressiveness and initiative and low priority on cooperation. (Task interdependence would of course be an issue here.) And, an organization wishing to maintain its status quo would put a high priority on orderliness and formality and a low priority on social equality.

It is suggested that the profiles shown in Table 43 have intuitive appeal while recognizing some anomalies. The most significant anomaly appears to be the value of adaptability which is ranked fourth from the bottom in the optimal change profile. In the early stages of this research it was anticipated that the value of adaptability would figure prominently in the change dimension. Empirically, this has not been the case. In fact,

TABLE 43

Best Case Organizational Value Profiles [a]

(value profiles which will maximize factor scores for each of the four factors)

Profile to maximize Change Factor:	Profile to maximize Relationships Factor:	Profile to maximize Task Factor:	Profile to maximize Status Quo Factor:
Forgiveness	Moral Integrity	Aggressiveness	Orderliness
Experimentation	Courtesy	Initiative	Formality
Humor	Cooperation	Autonomy	Obedience
Orderliness	Logic	Diligence	Consideration
Consideration	Fairness	Creativity	Forgiveness
Creativity	Consideration	Openness	Humor
Openness	Development	Humor	Economy
Fairness	Adaptability	Development	Courtesy
Autonomy	Broad-Mindedness	Formality	Fairness
Formality	Cautiousness	Logic	Diligence
Economy	Social Equality	Moral Integrity	Aggressiveness
Initiative	Diligence	Orderliness	Autonomy
Broad-Mindedness	Openness	Experimentation	Creativity
Obedience	Formality	Broad-Mindedness	Development
Social Equality	Orderliness	Courtesy	Cautiousness
Development	Creativity	Fairness	Broad-Mindedness
Aggressiveness	Initiative	Social Equality	Initiative
Cooperation	Autonomy	Adaptability	Experimentation
Courtesy	Obedience	Cautiousness	Openness
Cautiousness	Humor	Obedience	Cooperation
Adaptability	Economy	Forgiveness	Logic
Diligence	Forgiveness	Economy	Moral Integrity
Moral Integrity	Experimentation	Consideration	Adaptability
Logic	Aggressiveness	Cooperation	Social Equality

a. Derived from ordering regression weights (Factor-score coefficients matrix) used to generate factor scores from the variables.

the organizational value of adaptability loads most highly on the relationships dimension.

A possible explanation for this result may be in how the value concept was interpreted by respondents. The definition of adaptability advanced in questionnaire instrumentation was: "being flexible and changing easily to meet new circumstances." This definition may have been interpreted by respondents as being "flexible," "easy-going," and "passive" to change. It is suggested that such an interpretation characterizes a reactive stance toward change, whereas many of the high loading value elements on the change factor characterize a proactive stance to change based on innovation and the creation of new ideas.

To conclude on a cautionary note, the factor analysis central to this discussion is based on data from only one organizational site. Clearly, additional studies across different sites will be necessary in order to provide evidence as to the stability and validity of these principal components. It may, for example, be interesting to survey distinctive organizations (e.g., ballet companies, film production companies, research and development companies) to test the validity of the instrumentation to reveal cultural biases across the task, relationships, change and status quo factors.

8.3.4 A Case for Employee Empowerment

By measuring personal and organizational values along commensurate dimensions within an intrapersonal framework, the design of this study permits the identification of gaps between what the individual employee judges to be personally important and what that same individual perceives as important in the organizational context. It is suggested that these gaps represent potential need (congruence) deficiencies. For example, an employee may rank autonomy as his or her number one (most important) value. Whereas the same individual may see the value of autonomy as number "20" within the context of the organization's culture. This gap has the potential to cause the individual strife leading to lower commitment, lower satisfaction, and higher turnover intent.

Value gaps (organizational value ranking - personal value ranking) were calculated for each respondent across the twenty-four value dimensions based on the following formula:

$$\text{Value Gap}_i = (\text{Oval}_i - \text{Pval}_i) \;/\; (1 + \log_{10}(\text{Pval}_i))$$

where i = 1 to 24

This formula is based on the assumption that a unit of difference with respect to an individual's highest ranked personal value is more important than a unit of difference with respect to his or her lowest ranked personal value. In other words, if autonomy were an employee's top personal value and he or she, for example, viewed the organization as ranking this value at number "10." The gap of nine units is assumed to be more significant to that individual than a equivalent sized gap of nine units on a value dimension he or she views as personally unimportant. The calculation of value gaps using this formula, therefore, takes into account the relative priority of personal values.[6]

It is suggested that the mean gap within each value dimension can be viewed as relevant managerial information. Figure 16, on the following page, shows what employees (on average) want *more of* in terms of cultural emphases and what they want *less of* in terms of cultural emphasis.

It should be noted that this discussion assumes managerial interest in the maintenance of high person-situation congruence in the workplace. The possibility, however, of other competitive factors which cause the organization to emphasize a certain value (e.g., obedience) to the detriment of person-organization congruence must also be recognized.

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6 Similar to earlier rationale, a weighting range of twenty-four units was found to completely ignore value differences at the lower end of each person's value ranking. A logarithmic decline was applied to the personal value ranking data to reduce the spread of weightings. This changed the weighting spread (highest to lowest personal value) from 1 to 0.04 to 1 to 0.42.

FIGURE 16

Individual-Organizational Value Differences at the Corporate Research Site

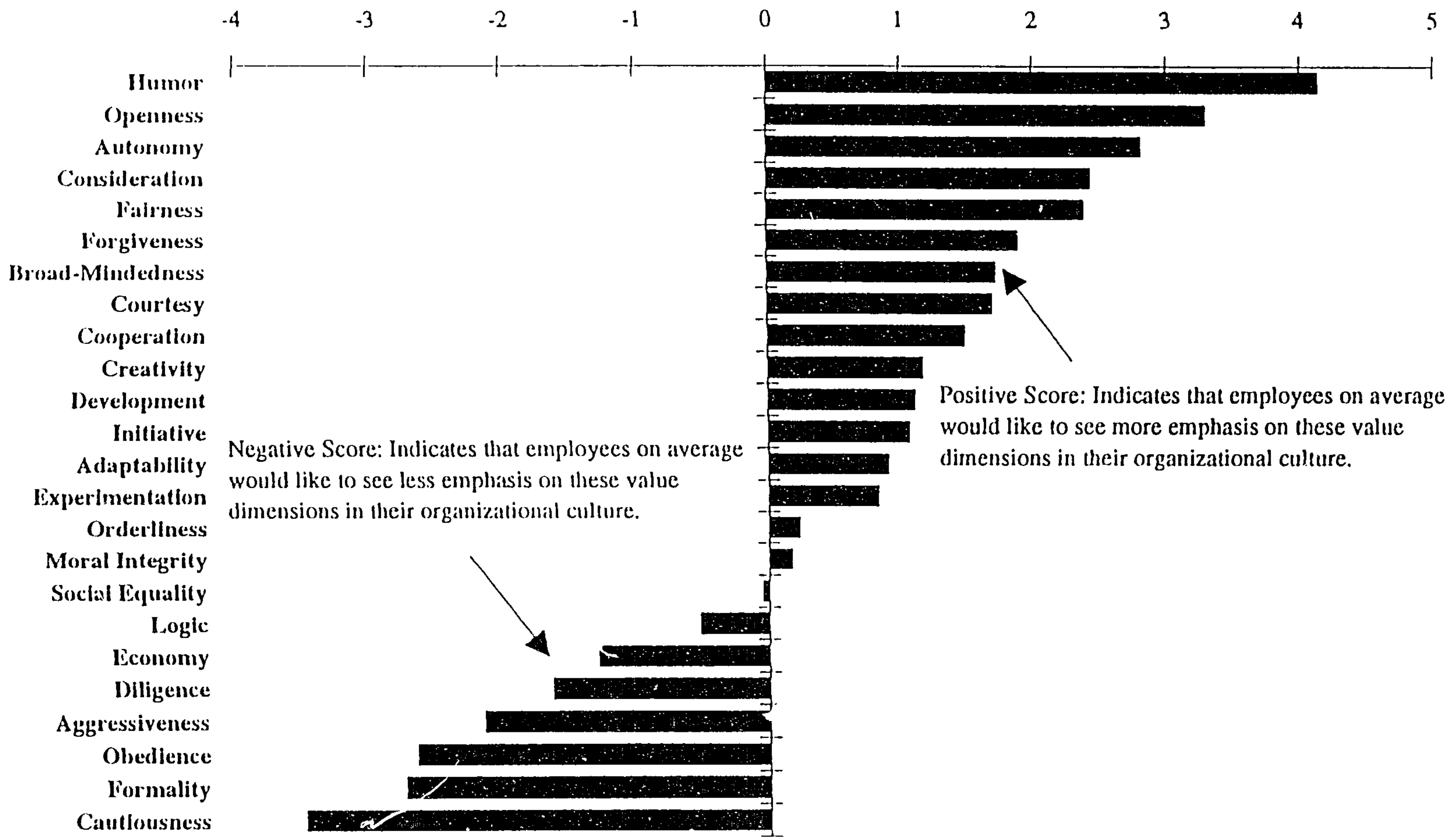

Figure 16 is interpreted to suggest that employees (on average) in the organization studied want more "empowerment." Gandz (1990: 74) defines the process of empowerment as: "liberating the creative and innovative energies of employees to compete effectively in a global environment." Conger and Kanungo (1988) define empowerment as enhancing employee feelings of self-efficacy and suggest that empowerment is positively associated with organizational effectiveness.

The employees at the corporate research site appear to want greater cultural emphasis on humor, openness, autonomy, consideration, fairness and forgiveness, and less cultural emphasis on cautiousness, formality, obedience, and aggressiveness. In other words -- "free me up, provide me with due rewards and recognition, and give me the opportunity to make well-intentioned mistakes."

From the perspective of cultural biases discussed in the previous section, Figure 16 indicates that this organization should consider changing its emphasis away from task-oriented values towards relationship and change-oriented values. This observation was raised during the senior management debriefing session. The relative unimportance of values like humor within the corporate culture was recognized and agreed to by senior management. However, the general consensus appeared to be that cultural change in this direction would be a very difficult and challenging task.

This section has identified a number of implications for business practitioners: A strategic framework based on the interview data has been presented in Figure 12. Implications for human resource practices have been suggested. In addition, the instrumentation appears to be able to offer diagnostic insights into the organizational culture including areas of potential incongruence between cultural and personal value priorities.

The managerial response to this initial study has been positive. It is hoped that future studies will increase the level of confidence which can be placed in these analyses and findings, and ultimately allow for the advancement of management prescriptions of a general nature.

8.4 STUDY STRENGTHS AND WEAKNESSES

Discussion throughout this dissertation has highlighted several areas of perceived strength and recognized a number of areas of potential weakness. This section summarizes the strengths and weaknesses of the study and discusses ways in which future investigations of this sort might be improved.

8.4.1 Strengths of the Study

It is suggested that the overall strength of the study is its comprehensive approach to the operationalization of individual-organizational value congruence within an ecologically valid setting. In this respect, the study addressed two major issues in the literature: concerns over the operationalization of value congruence, and concerns over the generalizability of person-situation fit studies conducted within the realm of social psychology laboratories. It is submitted that the specific strengths of this study are as follows:

Structured Approach to Construct Validity. The construct of individual-organizational value congruence does not have a long empirical history in the literature. The only other research to operationalize actual congruence in a corporate setting is the work of Chatman (1988; 1991). Following Schwab's (1980) recommendations, the thrust of this study was a carefully engineered to address the establishment of construct validity for individual-organizational value congruence. Schwab (1980) has been critical of organizational behavior studies in general for their emphasis on substantive validity prior to the establishment of construct validity. This study has provided good support for the construct validity of individual-organizational value congruence, and thereby, prepared the way for future research on shared values in corporate settings.

Multiple Method Triangulation. In order to achieve a higher level of confidence in the operationalization of individual-organizational value congruence a variety of quantitative methods were applied. The criterion of method convergence, which was generally achieved, is seen as a more rigorous and demanding approach to this topic. Jick (1983) recommends the application of multiple methods in organizational science and notes of number of benefits including increased confidence that the results are not methodological artifacts.

Ecological Validity of the Corporate Context. There are a number of studies in the social psychology literature which focus on person-situation fit. Diener, Larsen and Emmons (1984: 586), for example, found: "when there is congruence between personality and the situation, the person will experience greater positive affect and less negative affect." Their study relied on a sample of 42 students enroled in a university psychology course. The ecological validity of such studies relative to shared values within a modern business corporation is open to question. The context used to operationalize and test individual-organizational value congruence for this study (a mainstream Canadian business corporation) is viewed as a strength.

Empirically-Derived Typology of Shared Values. The empirically-derived typology of twenty-four shared value dimensions is seen as a major strength in this study. It appears to have meaning and relevance in a corporate context. It is comprehensive and shows indications of good content validity. It aggregates into four principal components which, in addition to having face validity, support existing theory. Its performance as the operational framework for measuring individual-organizational value congruence appears to be sound. In summary, the shared values typology shows good potential as a means to address a recognized gap in the literature (O'Reilly, Chatman, & Caldwell, 1991), the failure to describe people and organizations along commensurate dimensions.

Intrapersonal Research Design. A major distinction of this study relative to Chatman's (1988, 1991) is its emphasis on behavioral reality. The intrapersonal design characteristic of this study is viewed as a strength. Theoretically, it supports Heider's (1958) conceptualization of balance. Empirically, it appears to yield higher amounts of explained variance.

Exploratory Research. The exploratory research described in Chapter 4 is viewed as a strength. This phase of the research allowed a number of broad qualitative issues to be addressed prior to the design and application of quantitative techniques. A number of important lessons were learned during the exploratory stage which had implications for the survey design. In parallel with this phase, pilot-testing of prototype instrumentation with support from a number of MBA students proved to be a very valuable and beneficial exercise.

Random Stratified Sampling. The sampling frame for this study contained the names and addresses of 3,500 employees. Employees (n = 500) were chosen across hierarchical levels in the organization using mathematical decision rules (e.g., every third name). This approach is viewed as a strength because it reduced potential bias from researcher discretion and respondent self-selection. In addition, it increased the level of confidence which can be placed on the representativeness of the sample.

Addressing Other Sources of Variation. This study incorporated a number of actions designed to reduce threats to validity (e.g., Table 10, Chapter 6) and take into account possible external sources of variation. The measurement and analysis of demographic control variables, for example, proved to be an important consideration in the multivariate analysis. In addition, steps were taken to reduce the threat of social desirability response set bias. While social desirability bias was not completely removed, it is suggested that its influences were identified and addressed in a systematic manner.

8.4.2 Weaknesses of the Study

The conduct of this research involved a number of trade-offs. For example, greater emphasis was placed on the operationalization of individual-organizational value congruence (construct validation) as opposed to testing causal linkages (internal validation) within a nomological network. This emphasis on construct validation reflects the rudimentary state of empirical research in this area. In contrast to more established areas of organizational science (e.g., motivation theory), shared values research currently lacks established causal frameworks from which research studies can be launched. It is suggested that this study has several limitations as follows:

Causality. The recognized aim of organizational behavior is to understand, predict, and control human behavior in organizations (Cummings, 19[illegible]). Implicit in this statement is the notion of causality -- the premise that certain events occur as a consequent of specific states or actions. In this study, for example, affective commitment as a consequence of individual-organizational value congruence entails an implicit causal relationship.

Considerable differences exist in the literature as to the necessary criteria for rendering causal inferences. At one extreme, there are those scholars who advocate an experimental approach to causality. Criteria for inferring causality include: random assignment of subjects to remove the threat of external influences, deliberate manipulation of the independent variable, attention to temporal sequencing, and evidence of concomitant variation (e.g., Cook & Campbell, 1979). At the other extreme, there are scholars (e.g., Kerlinger, 1986) who suggest that scientific research can be done without invoking cause and causal explanations. Blalock (1961: 6), another example, concludes that causal laws cannot be demonstrated empirically, but that it is helpful to think causally.

This study takes a "middle-ground" position on the issue of causality. It recognizes causality as an important consideration; however, the establishment of causal inferences is viewed as a longitudinal process involving both theoretical and empirical considerations. From a theoretical standpoint, this study has introduced substantial evidence from the literature to suggest that employee attitudes (e.g., affective commitment) stem in part from person-situation congruence. From an empirical standpoint, the evidence in this study is more open to question. In terms of establishing causal inferences, the cross-sectional nature of the survey research design can be viewed as a weakness.

With reference to the rigorous standards characteristic of an experimental approach to causation: the independent variable (individual-organizational value congruence) in this study was not deliberately manipulated, nor was temporal sequencing established. There were, however, specific actions taken to control for the possibility of external (demographic and social desirability) confounds.

The rationale for not emphasizing these criteria in this research is as follows: The focal construct, individual-organizational value congruence, is a phenomenon which lends itself to passive observation in the field rather than explicit manipulation in the laboratory. And as mentioned, the relative state of empirical research in this area warrants a primary emphasis on construct validity.

The empirical evidence in support of the construct validity of individual-organization value congruence found in this study should permit future research to place increasing emphasis on testing causal inferences. In fact, it is suggested that longitudinal research with cross-lagged correlations may be one interesting possibility for future study. Another possibility for future research is the creation of congruent and incongruent states within an experimental business-type setting complete with the measurement of attitudinal and behavioral variables.

Causal Ordering of Outcome Variables. Five employee outcome variables were investigated in this research: commitment, satisfaction, turnover intent, organizational citizenship, and absence behavior. The literature on these particular outcome variables is voluminous including numerous empirical studies on causal structure. The causal sequencing of commitment and satisfaction continues to be an area of controversy in the literature (Glisson & Durick, 1988). Absence (Brooke & Price, 1989) and turnover (Cotton & Tuttle, 1986), on the other hand, are generally viewed as consequents to commitment and satisfaction.

Causal ordering of the outcome variables was not addressed in this study for reasons as follows: continuing controversy in the literature as to the causal sequencing despite extensive empirical work; and this study's emphasis on the construct validity of value congruence as its primary research aim. It is anticipated, however, that future research will permit this issue to be addressed through the application of structural equation modelling.[7]

Personal Awareness of Value Preferences. The methodological review in Chapter 3 raised the possibility that individuals (or certain types of individuals) may be unaware of their real value priorities (Freeman et al., 1988), and therefore, unable to accurately complete self-report ranking and rating exercises. It is suggested that a study linking self-reported value priorities to behavioral patterns across situations would be a meaningful way to empirically address this issue. Such an investigation was beyond the scope of this study.

England (1967) proposed a theoretical model in which personal values influence behavior channeling (the generation and choice of alternative behaviors) and perceptual screening (the selection and filtration of incoming sensory data). He subsequently developed (England, 1975) five vignettes representing four types of typical organizational decision situations: budgeting, morally questionable procedures, employee selection, and delegation of authority. He found (p. 57): "Across all five incidents, eighteen out of twenty-five expectations are supported by the data."

Notwithstanding England's work, the link between personal values and behavior is clearly a complex issue (Epstein, 1979, 1980) and one which would benefit from additional empirical investigation.[8]

Cognitive Complexity of the Instrumentation. The value ranking instrumentation developed for this study required participants to rank order twenty-four value concepts on two occasions (personal values and perceptions of the organization's

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7 The combined data from this study and more recent replication studies will provide sufficient sample size (n = 927) to conduct analyses on a number of fronts including addressing the causal sequencing of employee outcome variables using goodness of fit statistics and structural equation modelling.

8 A research study linking the personal value ranking and rating instrumentation to a set of ten behavioral choice vignettes (derived from actual organizational situations described in the literature and accounts provided by experienced students enroled in an Masters of Business Administration program) is currently underway.

values). As discussed, respondent reaction to these ranking exercises was quite positive. In addition, Rokeach's ranking instrumentation which uses eighteen concepts is noted (Brown, 1976) for its operational efficiency. Nevertheless, the cognitive demands of the ranking instrumentation applied in this study are considerable. Feedback received during the pilot-testing phase supports this statement.

To date, this instrumentation has only been applied in white-collar and university settings. There remains some question as to the ranking instrumentation's applicability in other work settings (e.g., blue collar). The relatively lower response rate from clerical / administrative employees evident in this study (51% versus 67% average) may be manifestation of this issue. (In addition, there could be alternate or additive influences such as less interest in the topic of value congruence as one moves down the organizational hierarchy).

It is suggested that future research is necessary to test the instrumentation developed for this study including empirical reliability and validity assessments across a variety of organizational and work group settings.

Absence of Ethnographic Confirmation. The debate between the qualitative and quantitative assessment of organizational culture has been recognized in this study. For a variety of reasons, as discussed in Section 8.2.7, this study has relied on structured paper and pencil instrumentation. The lack of ethnographic confirmation in this study is a weakness. Despite considerable anecdotal evidence in support and managerial acceptance (face validity) of this study's results, the rigorous confirmation of systematic participant-observation (Van Mannen, 1982) was not achieved.

One avenue for future research in this regard may be a study which approaches the phenomenon of organizational culture from both qualitative and quantitative perspectives. The assessment of convergence in such a study would have important implications for the validity of the instrumentation used in this study.

External Validity. While the results of this study are judged to be more generalizable to the context of modern business relative to earlier studies involving high school students (Feather, 1975, 1979) and social psychology majors (e.g., Diener, Larsen & Emmons, 1984), external validity is viewed as weakness in this "first-time" study. Generalizability of these results can be questioned from three perspectives: Although the corporate research site represented a "mainstream" entity in Canadian business, the empirical results represent only one corporate entity. There is no evidence that the relationships found in this study exist in other corporations and or industry sectors.[9]

One of the criteria for site selection in this study and subsequent replication studies was the expectation of cultural homogeneity. While individual-organizational value congruence may exhibit high construct validity in these (strong culture) situations, its significance may be diminished in organizations where there is little or no consensus as to normative priorities. Therefore, generalizations across organizations without consideration of cultural homogeneity effects may be open to question.

The third issue with respect to generalizability concerns the nature of the sample in this study. The lack of representation by hourly-paid and blue collar workers is viewed as a weakness. The extent to which these findings apply to the full spectrum of occupational classes in the workforce, therefore, remains open to question.

Defining the Organization's Required Values. While the majority of analyses in this study rely on intrapersonal comparisons of personal and perceived organizational value profiles, some analyses (e.g., antecedents to awareness of required values) rely on aggregate value profiles formed by averaging individual responses from within an identifiable group (e.g., executive management). The degree to which aggregate

9 A preliminary review of simple bivariate correlation coefficients manifested in data recently received from three replication studies suggests that the findings of this study will be generalizable to other corporate entities and industry groups.

profiles are valid and meaningful representations of organizational constructs must be recognized as controversial and open to debate.

The practice of aggregating individual scores to represent higher order profiles is common in the literature. Chatman (1988; 1991) averaged individual responses to her OCP instrument to create a single aggregate profile which she defined as the organizational culture. Aggregate profiles have also been used to operationalize the construct of organizational climate (Patsfall & Feimer, 1985).

Guion (1973) questions the practice of aggregating individual scores to represent organizational level constructs when there is no assessment of consensus among individuals. In the case of this study, there was evidence of cultural consensus (e.g., inter-rater reliability). In fact, the level of cultural consensus was highest for the executive management group relative to other groups in the hierarchy. Therefore, Guion's (1973) criterion has been addressed with respect to the aggregation of individual scores in this study.

Individual scores of the dominant coalition (executive management, n = 42) were aggregated in order to define the organization's required values set. In concluding from this analysis it is important to recognize a number of assumptions. One assumption is that this particular group (executive management) defines the organization's required values. While this proposition has been advanced in the literature (Sathe, 1985, Schein, 1985), there are probably instances of other dominant influences within some organizations.

A second assumption is that perceptions of individual executives have equal weighting. It seems reasonable, however, to postulate that some executives for a variety of reasons are likely to have more influence on cultural norms and values. This possibility was not addressed in the study.

There appears to be a need for more research into the issue of how cultural profiles are determined when quantitative instrumentation is applied across individual respondents.

Value Congruence at Which Level ? There is discussion in the literature as to which level of value congruence is the most meaningful to individual employees. This study, similar to Chatman (1988; 1991) and Wiener (1988), emphasizes the person-organization level. Other researchers (e.g., Enz, 1988; Hofstede et al., 1990, Meglino, Ravlin & Adkins, 1989) have emphasized individual fit with work unit values. Meglino and his colleagues, for example, measured five indices of value congruence representing different levels including: individual to plant management, individual to supervisor, individual to supervisor's perception of plant management, and two individual to overall management aggregates. They found that congruence effects were most pronounced when the fit between individuals and immediate supervisors values was considered.

This study's focus on person-organization fit should not be interpreted to suggest that other levels of value congruence are unimportant. There is, however, theoretical and empirical justification for this study's emphasis on person-organization congruence. As a strategic variable of significance to senior management, person-organization values fit was judged to be more relevant than conceptualizations of values fit at sub-organizational levels. The relevance of the organizational level construct is predicated on its ability to have normative influence across the entire organization including sub-unit and supervisory behavior. In addition, Chatman (1988, 1991) presents empirical evidence to support the relevance of person-organization fit.

An interesting avenue for future research may be the investigation of cultural strength as a moderator of congruence effects across different levels of fit.

Alternative Formulations of Person-Situation Interaction. The formulation of value congruence in this study is based on the general congruency model (Joyce, Slocum & Von Glinow, 1982). This formulation, which originated with Lewin (1936), defines congruence in terms of fit between conceptually similar dimensions of persons and situations. It is important to also recognize competing models of congruence, in particular effect congruency and functional congruency.

The effect congruency model (Joyce, Slocum & Von Glinow, 1982: 266): "suggests a 'more is better' perspective in which it is assumed that variance explained will continue to improve as additional independent variables, reflecting attributes of both the individual and the situation, are considered."

The functional congruency model (Joyce, Slocum & Von Glinow, 1982: 267): "suggests that either an achievement-oriented person or a motivating task may be sufficient to produce high performance, but the *joint* occurrence of both may do little to improve satisfaction or performance."

In their empirical study, Joyce, Slocum and Von Glinow (1982) found partial support for each of the three congruence models. With respect to work satisfaction, however, the general congruency model was not supported. In contrast, this study found a significant relationship between value congruence based on the general congruency model and overall satisfaction with the organization even after taking into account demographics, social desirability effects, and personal values rating data in terms of six values factors.

In summary, there appears to be a need for further empirical work on the validity of competing models of person-situation interaction.

Personality Moderators of Situational Congruence. Rationale was presented in the first chapter to suggest that individual-organizational value congruence has been overlooked as a facet of the employee/employer relationship relative to traditional emphases on person-job fit and effort-reward equity. This study has found empirical support for individual-organizational value congruence as a construct capable of influencing employee attitudes and intentions.

To assume, however, that all individuals are uniform with respect to their need satisfaction along these dimensions of fit would be overly simplistic. It seems reasonable to suggest that some employees stay on and remain productive within organizations that they dislike (from a shared values perspective) because they love their jobs. An example that comes to mind is a military pilot friend who confides a distaste for the values of the military, but confesses a love for flying high performance aircraft. Similarly, the case of individuals who stay on and remain productive in organizations solely for financial reasons is well known.

In addition to these three bases of congruence (job, cultural, and compensation), the possibility of a fourth dimension was uncovered during the interview process (Chapter 4). One respondent, an executive in the steel industry, expounded on how much he loved working in the steel business and how he would be loath to work in a situation like the beverage industry. In his words: "I could never work selling sugared water to kids." This respondent's comments raise the possibility of a dimension of fit which captures individual employees' perception of the organizational role or mission in society.

Investigation of these broader bases of fit was beyond the scope of this particular study. An interesting avenue for future research may be the investigation of personality variables (e.g., dominant needs -- NAFF, NPOW, NACH) and the extent to which they moderate the relative importance of different bases of fit. Indeed, it may be that some individuals (rugged individualists ??) have personality traits which predispose them to eschew congruence along any of these dimensions.

How Much Value Congruence is Good ? A central premise throughout this research study is the proposition that high individual-organizational value congruence is a positive and productive organizational end-state. While consistency and needs-satisfaction theories provide considerable support for this proposition, there are those (e.g., Lewicki, 1981: 5) who view managerial interventions designed to elicit high personal commitment and loyalty from employees as "organizational seduction." On a similar note, Amabile (1988) cautions that too much homogeneity impedes creative processes.

Schein (1985) recommends that organizations select and socialize people who will become "creative individualists." Creative individualists agree with the basic values of the organization, but do not necessary conform in terms of behavioral norms.

These comments raise an number of important issues including: the existence of an optimal level of value congruence, factors which define that optimal level, and the link between value congruence and organizational effectiveness. While theoretical arguments have been advanced from the literature (Chapter 1) as to improved organizational effectiveness based on individual-organizational value congruence, clearly, much more empirical research is necessary to address this strategic issue.

The question of an optimal level of value congruence was beyond the scope of this study. Nevertheless, it is an interesting question and one which has potential for future research. One might intuitively hypothesize a bell shaped curve along which increasing value congruence produces greater commitment and satisfaction, thereby facilitating improved organizational communication and productivity, until some apex point characteristic of "groupthink" (Janis, 1982). Beyond this point, the organization may be in risk of becoming a stagnant, inward-looking monolith.

8.5 FUTURE DIRECTIONS

The previous section has highlighted a variety of potential extensions to this study. The purpose of this section is to describe actual shared values research projects currently underway and / or being contemplated for initiation in the near future.

As mentioned in the footnotes, three replication studies are currently in progress. These studies rely on identical research designs and instrumentation to that which was applied in this study. These studies involve: 1) a major Canadian corporation in the business products sector (random stratified sample = 521, matched returns received = 276); 2) a major Canadian corporation in the financial services sector (random stratified sample = 508, matched returns received = 213); and a mid-size American corporation in the financial services sector (random stratified sample = 250, matched returns = 104). These data are currently at a preliminary stage of analysis (e.g., data screening, data reliability, data structure, method convergence).

It is anticipated that the results of these replication studies will address concerns raised in the previous section as to generalizability and external validity. In addition, these data will allow the stability of the factor structure advanced in this study to be validated. There will be a number of other avenues of interest. The American financial institution is a recent acquisition by the Canadian financial institution. This relationship has implications for shared value congruence in a merger situation. These data will also provide a pool of American personal value data and Canadian personal value data. In this current era of free trade, these data may contain interesting insights into personal value differences at a national level.

The combined data base from all four individual-organization value congruence studies will comprise 927 matched (Questionnaire One and Two) responses. This data base will be of sufficient size to permit structural equation modelling (e.g., LISREL). Analyses to test alternative causal models and address some of the concerns raised in the previous section are anticipated.

In addition to the above studies, more restricted cultural audits (using the instrumentation in Questionnaire Two) are currently in progress. These audits include a New Zealand government department, a New Zealand high technology company, and a New Zealand automotive dealer. Early indications from the cultural audit of the New Zealand government department support the instrumentation's ability to discriminate from a cultural perspective. The two top cultural values manifested in this public sector entity (obedience and economy) contrast sharply with results to date from the private sector entities.

A study linking personal values to decision-making behavior is also underway. Eighty commerce students have completed the personal values ranking and rating exercises in addition to rating twenty-four proverbs designed to operationalize personal value preferences (e.g., "A merry heart goes a long way" = value of humor). These students have also supplied decision data on ten forced-choice vignettes involving typical business situations. The situations were developed from MBA students' accounts of previous business experiences and actual situational descriptions from the literature. It is hoped that the results of this study will address the relationship between personal values and decision-making behavior.

A final study, currently being contemplated, will focus on strategic vision, shared values and organizational performance across several corporations within a single industry group (e.g., the banking industry). Primary research issues in this proposed study include: the importance of a synergistic relationship between vision and values, the effect of differing levels of individual-organization value congruence on organizational performance, and the degree to which certain pivotal values converge across an industry group (e.g., the value of formality in banking). The major operational challenge anticipated in this study will be to partial out other sources of variation with respect to organizational (e.g., financial) performance.

A number of other studies are simple thoughts at this stage. Ideas include a study combining the quantitative assessment of culture (using instrumentation developed in this study) with an independent ethnographic qualitative assessment, and a study investigating a needs typology (e.g., McClelland's typology) in relation to the perceived importance of achieving high individual-organizational value congruence.

8.6 CLOSING COMMENT

People have survived by working together in groups for thousands of years. The critical importance of shared values and understandings and their influence on group membership and behavior have been recognized by cultural anthropologists for some time. More recently, business practitioners and organizational scientists have started to emphasize the cultural side of organizational life. The quotation by Thomas Watson, Jr., (1963: 5) at the start of this dissertation foreshadows this development.

This study plays a small part in exploring the emergent metaphor of organizations as social realities. From the perspective of construct validity, individual-organizational value congruence appears to be a real phenomenon capable of being measured and influential in terms of employee attitudes and intentions. It is hoped that the typology of shared value dimensions and accompanying survey instrumentation developed in this study will prompt other scholars to initiate investigations of this important facet of organizational life.

Employers and employees in North America face increasing pressure in the global marketplace. There is a need to create work environments which foster high employee commitment and encourage long-term organizational tenure. It is hoped that this study will provide insights with which these challenges can be addressed to gain greater organizational capability.

On a personal note, this topic has been fascinating. As a first-time expedition into the realm of organizational research it has provided many gratifications, and more importantly, it has generated excitement and created opportunities for future research along a number of new avenues.

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BIBLIOGRAPHY

Abbasi, S. M., & Hollman, K. W. 1987. An exploratory study of the personal value systems of city managers. **Journal of Business Ethics**, 6(1): 45-53.

Abelson, R. P. 1959. Modes of resolution of belief dilemmas. **Journal of Conflict Resolution**, 3(4): 343-352.

Abelson, R. P. 1972. Are attitudes necessary? In B. T. King & E. McGinnies (Eds.), **Attitudes, conflict, and social change**: 19-32. New York: Academic Press.

Abelson, R. P. 1983. Whatever became of consistency theory? **Personality and Social Psychology Bulletin**, 9(1): 37-54.

Adams, J. S. 1963. Wage inequities, productivity and work quality. **Industrial Relations**, 3: 9-16.

Adler, S., & Golan, J. 1981. Lateness as a withdrawal behavior. **Journal of Applied Psychology**, 66: 544-554.

Adler, S., & Weiss, H. M. 1988. Recent developments in the study of personality and organizational behavior. In C. Cooper & I. Robertson (Eds.), **International review of industrial and organizational psychology**: 307-330. New York: John Wiley & Sons.

Agar, M. H. 1982. Whatever happened to cognitive anthropology: A partial review. **Human Organization**, 41(Spring): 82-86.

Ajzen, I. 1989. Attitude structure and behaviour. In A. R. Pratkanis, S. J. Becker, & A. G. Greenwald (Eds.), **Attutudes, structure [illegible]nd function**: 241-274. Englewood Cliffs, NJ: Erlbaum.

Ajzen, I., & Fishbein, B. 1980. **Understanding attitudes and predicting social behavior**. Hillsdale, NJ: Prentice-Hall.

Alexander, C. S., & Becker, H. J. 1978. The use of vignettes in survey research. **Public Opinion Quarterly**, 42: 93-104.

Alexander, M. 1978. Organizational norms. In J. E. Jones & J. Pfeffer (Eds.), **The [illegible]7 annual handbook for group facilitators**: 123-125. LaJolla, CA: University Associates.

Allen, N. J., & Meyer, J. P. 1990. The measurement and antecedents of affective, continuance and normative commitment to the organization. **Journal of Occupational Psychology**, 63: 1-18.

Allen, R. F., & Kraft, C. 1982. **The organizational unconscious: How to create the corporate culture you want and need**. Englewood Cliffs, NJ: Prentice-Hall.

Allport, G. 1968. The historical b[illegible]ground of modern social psychology. In G. Lindzey & E. Aronson (Eds.), **Handbook of Social Psychology (2nd ed.)**: 1-80. Reading, MA: Addison-Wesley.

Allport, G. W. (Ed.). 1935. **Attitudes**. Worchester, MA: Clark University Press.

Allport, G. W. 1966. Traits revisited. **American Psychologist**, 21: 1-10.

Allport, G. W., & Odbert, H. S. 1936. Trait names: A psycho-lexical study. **Psychological Monographs**, 47(1).

Allport, G. W., Vernon, P. E., & Lindzey, G. 1960. **A study of values**. Boston: Houghton Mifflin.

Amabile, T. M. 1988. A model of creativity and innovation in organizations. In B. Staw & L. Cummings (Eds.), **Research in organizational behaviour:** 123-167. Greenwich, CT: JAI Press.

Anderson, N. H. 1968. Likableness ratings of 555 personality-trait words. **Journal of Personality and Social Psychology**, 9: 272-279.

Andrews, K. 1980. **The concept of corporate strategy**. Homewood, IL: R D Irwin.

Angle, H., & Perry, J. 1981. An empirical assessment of organizational commitment and organizational effectiveness. **Administrative Science Quarterly**, 26: 1-14.

Argyris, C. 1957. **Personality and organization**. New York: Harper.

Argyris, C., & Schon, D. A. 1978. **Organizational learning: A theory of action perspective**. Reading, MA: Addison-Wesley.

Attenborough, R. 1982. **Gandhi (film)**. Hollywood, USA: Columbia Pictures.

Bagozzi, R. P. 1984. A prospectus for theory construction in marketing. **Journal of Marketing**, 48: 11-29.

Baker, H. G. 1985. The unwritten contract: Job perceptions. **Personnel Journal**, 40(July): 17-23.

Bales, R. F., & Cohen, S. P. 1979. **SYMLOG: A system for the multiple level observation of groups**. New York: Free Press.

Balzer, W. K., & Smith, P. C. 1990. **User's manual: Job Descriptive Index**. Bowling Green: OH: Bowling Green State University.

Bandura, A. 1977. **Social learning theory**. Englewood Cliffs, NJ: Prentice-Hall.

Barnard, C. I. 1938. **The functions of the executive**. Cambridge, MA: Harvard University press.

Barnett, J. H., & Karson, M. J. 1987. Personal values and business decisions: An exploratory investigation. **Journal of Business Ethics**, 6: 371-382.

Barney, J. B. 1986. Organizational culture: Can it be a source of sustained competitive advantage? **Academy of Management Review**, 3(11): 656-665.

Barnouw, V. 1987. **An introduction to Anthropology (5th ed.)**. Chicago, IL: Dorsey Press.

Bateman, T. S., & Organ, D. W. 1983. Job satisfaction and the good soldier: The relationship between affect and employee citizenship. **Academy of Management Journal**, 26: 587-595.

Becker, H. S. 1960. Notes on the concept of commitment. **American Journal of Sociology**, 66: 32-42.

Behling, O. 1980. The case for the natural science model for research in organizational behavior and organizational theory. **Academy of Management Review**, 5: 483-490.

Bem, D. J. 1967. Self-perception: An alternative interpretation of cognitive dissonance phenomena. **Psychological Review**(74): 183-200.

Bem, D. J. 1970. **Beliefs, attitudes and human affairs**. Belmont, CA: Brooks, Cole.

Bem, D. J., & Allen, A. 1974. On predicting some of the people some of the time: The search for cross-situational consistencies in behavior. **Psychological Review**, 81(6): 506-520.

Berkowitz, L. 1986. **A survey of social psychology (3rd ed.)**. New York: Holt, Rinehart & Winston.

Bettman, J. R. 1974. Toward a statistic for consumer decision net models. **Journal of Consumer Research**, 1: 71-80.

Bettman, J. R., & Jacoby, J. 1976. Patterns of processing in consumer information acquisition. In B. B. Anderson (Eds.), **Advances in consumer research**: 315-320. Chicago: University of Illinois.

Beyer, J. M. 1981. Ideologies, values and decision making in organizations. In P. C. Nystrom & W. H. Starbuck (Eds.), **Handbook of organizational design**: 166-202. Oxford, UK: Oxford University Press.

Blalock, H. 1961. **Causal inferences in nonexperimental research**. Chapel Hill, NC: University of North Carolina Press.

Block, J. 1961. **The Q-sort method in personality assessment and psychiatric research**. Springfield, IL: Charles C Thomas.

Block, J. 1978. **The Q-sort method in personality assessment and psychiatric research (2nd ed.)**. Palo Alto, CA: Consulting Psychologist Press.

Blood, M. R. 1969. Work values and job satisfaction. **Journal of Applied Psychology**, 53(6): 456-459.

Boland, J. R., & Hoffman, R. 1983. Humour in a machine shop: An interpretation of symbolic action. In L. R. Pondy, P. J. Frost, G. Morgan, & T. C. Dandridge (Eds.), **Organizational symbolism**: 187-198. Greenwich, CT: JAI Press.

Bowen, D., Ledford, G., & Nathan, B. 1991. Hiring for the organization, not the job. **Academy of Management Executive**, 5(4): 35-51.

Braithwaite, V. A., & Law, H. G. 1985. Structure of human values: Testing the adequacy of the Rokeach Value Survey. **Journal of Personality and Social Psychology**, 49(1): 250-263.

Braunstein, M. L., & Coleman, O. F. 1967. An information processing model of the aircraft accident investigator. **Human Factors**, 9: 61-70.

Brayfield, A. H., & Crockett, W. H. 1955. Employee attitudes and employee performance. **Psychological Bulletin**, 52: 396-424.

Breckler, S. J., & Wiggins, E. C. 1989. On defining attitude and attitude theory: Once more with feeling. In A. R. Pratkanis, S. J. Becker, & A. G. Greenwald (Eds.), **Attitudes structure and function**: 407-427. Hillsdale, NJ: Erlbaum.

Brenner, S. N., & Molander, E. A. 1977. Is the ethics of business changing? **Harvard Business Review**, 55: 57-71.

Brief, A., & Roberson, L. 1989. Job attitude organization: An exploratory study. **Journal of Applied Social Psychology**, 75: 648-657.

Briggs, S. R., Check, J. M., & Buss, A. H. 1980. An analysis of the self-monitoring scale. **Journal of Personality and Social Psychology**, 38(4): 679-686.

Broms, H., & Gahmberg, H. 1987. **Semiotics of management**. Helsinki: Helsinki School of Economics.

Bronfrenbrenner, U. 1979. **The ecology of human development**. Cambridge, MA: Harvard University Press.

Brooke, P. P., & Price, J. L. 1989. The determinants of employee absenteeism: An empirical test of a causal model. **Journal of Occupational Psychology**, 62: 1-19.

Brown, M. A. 1976. Values - A necessary but neglected ingredient of motivation on the job. **Academy of Management Review**, 4(4): 15-23.

Buchanan, W., & Cantril, H. 1953. **How nations see each other**. Urbana, IL: University of Illinois Press.

Buss, A. H., & Plomin, R. A. 1975. **Temperament theory of personality development**. New York: Wiley - Interscience.

Byrne, D. 1971. **The attraction paradigm**. New York: Academic Press.

Cacioppo, J. T., Petty, R. E., & Green, T. R. 1989. Attitude structure and function: From the tripartite to homeostasis model of attitudes. In A. R. Pratkanis, S. J. Becker, & A. G. Greenwald (Eds.), **Attitudes structure and function**: 275-309. Hillsdale, NJ: Erlbaum.

Calder, B. J., & Schurr, P. H. 1981. Attitudinal processes in organizations. In L. L. Cummings & B. M. Staw (Eds.), **Research in organizational behavior**: 283-302. Greenwich, CT: JAI Press.

Caldwell, D. F., & O'Reilly, C. A. 1990. Measuring person-job fit with a profile-comparison process. **Journal of Applied Psychology**, 75(6): 648-657.

Cameron, K. S. (1985). **Cultural congruence, strength, and type: Relationships to effectiveness** (Working paper), University of Michigan, Ann Arbor.

Campbell, D. T. 1950. The indirect assessment of social attitudes. **Psychological Bulletin**, 47: 15-38.

Campbell, D. T. 1963. Social attitudes and other acquired behaviour dispositions. In S. Koch (Eds.), **Psychology: A study of a science**: New York: McGraw-Hill.

Campbell, D. T., & Fiske, D. W. 1959. Convergent and discriminant validation by the multitrait-multimethod matrix. **Psychological Bulletin**, 56: 81-105.

Carroll, J. S., & Payne, J. W. 1977. Judgments about crime and the criminal: A model and method for investigating parole decisions. In B. D. Scales (Eds.), **Perspectives in law and psychology: The criminal justice system**: 191-238. New York: Plenum.

Carver, C. S. 1979. A cybernetic model of self-attention processes. **Journal of personality and social psychology**, 37: 1251-1281.

Carver, C. S., & Glass, D. C. 1976. The self-consciousness scale: A discriminant validity study. **Journal of Personality Assessment**, 40(2): 169-172.

Carver, C. S., & Scheier, M. F. 1981a. The self-attention-induced feedback loop and social facilitation. **Journal of Experimental Social Psychology**, 17: 545-568.

Carver, C. S., & Scheier, M. F. 1981b. Self-consciousness and reactance. **Journal of Research in Personality**, 15: 16-29.

Cattell, R. B. 1944. Psychological measurement: Ipsative, normative and interactive. **Psychological Review**, 51: 292-303.

Cattell, R. B. 1949. r_p and other coefficients of pattern similarity. **Psychometrika**, 14: 279-298.

Cavanagh, G. 1976. **American business values**. Englewood Cliffs, NJ: Prentice-Hall.

Chatman, J. 1988. **Matching people and organizations: Selection and socialization in public accounting firms**. Unpublished doctoral dissertation, University of California, Berkeley.

Chatman, J. 1989. Improving interactional organizational research: A model of person-organization fit. **Academy of Management Review**, 14(3): 133-138.

Chatman, J. 1991. Matching people and organizations: Selection and socialization in public accounting firms. **Administrative Science Quarterly**, 36(3): 459-484.

Chatman, J., & John, K. A. 1991. **Organizational culture in the service sector: A between-industry comparison.** Paper presented at the annual meeting of the Academy of Management, Miami, FL.

Cherrington, D. J., Condie, S. J., & England, J. L. 1979. Age and work values. Academy of Management Journal, 22(3): 617-623.

Chrisman, J. J., Hofer, C. W., & Boulton, W. R. 1988. Toward a system for classifying business strategies. Academy of Management Review, 13(3): 413-427.

Churchill, G. A. 1979. A paradigm for developing better measures of marketing constructs. Journal of Marketing Research, 16: 64-73.

Clark, B. R. 1970. The distinctive college: Antioch, Reed and Swarthmore. Chicago: Aldine.

Clark, B. R. 1972. The organizational saga in higher education. Administrative Science Quarterly, 17: 178-184.

Clarke, D. D., & Hoyle, R. 1988. A theoretical solution to the problem of personality situation interaction. Personality and Individual Differences, 9(1): 133-138.

Clarkson, G. P. E. 1963. A model of trust investment behavior. In R. M. Cyert & J. G. March (Eds.), A behavioral theory of the firm: 253-267. Englewood Cliffs, NJ: Prentice Hall.

Conger, J. A. 1991. Inspiring others: The language of leadership. Academy of Management Executive, 5(1): 31-45.

Conger, J. A., & Kanungo, R. N. 1988. The empowerment process: Integrating theory and practice. Academy of Management Review, 13(3): 471-482.

Conner, P. E., & Becker, B. W. 1975. Values and the organization: Suggestions for research. Academy of Management Journal, 18(3): 550-561.

Cook, T. D., & Campbell, D. T. 1979. Quasi-experimentation: Design & analysis issues for field settings. Boston: Houghton Mifflin.

Cooke, R. A., & Lafferty, J. C. 1983. Level V: Organizational culture inventory-form I. Plymouth, MI: Human Synergistics.

Cooke, R. A., & Lafferty, J. C. 1986. Level C: Organizational culture inventory-form III. Plymouth, MI: Human Synergistics.

Cooke, R. A., & Rousseau, D. M. 1988. A quantitative approach to the assessment of organizational culture. Group & Organization Studies, 13(3): 245-273.

Cornelius, E. T. 1983. The use of projective techniques in personnel selection. In K. Rowland & G. Ferris (Eds.), Research in personnel and human resources management: 127-168. Greenwich, CT: JAI Press.

Cornelius, E. T., Ullman, J. P., Meglino, B. M., Czajka, J., & McNeely, B. 1985. A new approach to the study of worker values and some preliminary results. Paper presented at the annual meeting of the Southern Management Association, Orlando, Florida.

Costa, P. T., McCrae, R. R., & Holland, J. L. 1984. Personality and vocational interests in an adult sample. Journal of Applied Psychology, 69(3): 390-400.

Cotton, J. L., & Tuttle, J. M. 1986. Employee turnover: A meta-analysis and review with implications for research. **Academy of Management Review**, 11(1): 55-70.

Crandall, J. E. 1975. A scale for social interest. **Journal of Individual Psychology**, 31: 187-195.

Cronbach, L. J. 1950. Further evidence on response sets and test design. **Educational and Psychological Measurement**, 10: 3-31.

Cronbach, L. J. 1957. The two disciplines of scientific psychology. **American Psychologist**(12): 671-684.

Cronbach, L. J., & Gleser, G. C. 1953. Assessing similarity between profiles. **Psychological Bulletin**, 50(6): 456-473.

Crowne, D. P., & Marlowe, D. 1960. A new scale of social desirability independent of psychopathology. **Journal of Consulting Psychology**, 24(4): 349-354.

Crowne, D. P., & Marlowe, D. 1964. **The approval motive: Studies in evaluative dependence**. New York: Wiley.

Cummings, L. L. 1978. Toward organizational behavior. **Academy of Management Review**, 3: 90-98.

Daft, R. L. 1980. The evolution of organization analysis in ASQ: 1959-1979. **Administrative Science Quarterly**, 25: 623-636.

Dalton, D. R., & Enz, C. A. 1987. Absenteeism in remission: Planning, policy, culture. **Human Resource Planning**, 10(2): 81-91.

Darwin, C. 1859 (1968). **The origin of species: By means of natural selection (recent printing)**. London: Pelican.

Davis, S. M. 1984. **Managing Corporate Culture**. Cambridge, MA: Ballinger.

Deal, T. E. 1986. Deeper culture: Mucking, muddling and metaphors. **Training and Development Journal**(January): 32-33.

Deal, T. E., & Kennedy, A. A. 1982. **Corporate cultures: The rites and rituals of corporate life**. Reading, MA: Addison-Wesley.

Deal, T. E., & Kennedy, A. A. 1983. Culture: A new look through old lenses. **Journal of Applied Behavioral Science**, 6: 15-20.

DeMeuse, K. P. 1985. A compendium of frequently used measures in industrial/organizational psychology. **The Industrial-Organizational Psychologist**, 23: 53-59.

Denison, D. R. 1984. Bringing corporate culture to the bottom line. **Organizational Dynamics**, 13(2): 5-22.

Dewey, J. 1896. The reflex arc concept in psychology. **Psychological Review**(3): 357-370.

Diener, E., Larsen, R., & Emmons, R. 1984. Person x situation interactions: Choice of situations and congruence response models. **Journal of Personality and Social Psychology**, 47: 580-592.

Dillman, D. A. 1978. **Mail and telephone surveys: The total design method**. New York: Wiley.

Doeser, M. C. 1986. Can the dichotomy of fact and value be maintained? In M. C. Doeser & J. N. Kraay (Eds.), **Facts and Values**: 1-19. The Hague: Martinus Nimjoff.

du Mas, F. M. 1946. A quick method for analyzing the similarity of profiles. **Journal of Clinical Psychology**, 2: 80-83.

Duncan, W. J. 1989. Organizational culture: "Getting a fix" on an elusive concept. **Academy of Management Executive**, 3(3): 229-236.

Dunham, R. B., & Herman, J. B. 1975. Development of a female Faces scale for measuring job satisfaction. **Journal of Applied Psychology**, 60: 629-631.

Dunham, R. B., Smith, F. J., & Blackburn, R. S. 1977. Validation of the index of organizational reactions with the HDI, the MSQ and Faces scales. **Academy of Management Journal**, 20: 420-432.

Dyer, W. G. 1985. The cycle of cultural evolution in organizations. In R. H. Kilmann, M. J. Saxton, & R. Serpa (Eds.), **Gaining control of the corporate culture**: 200-229. Jossey-Bass: San Francisco.

Edwards, A. L. 1954. **Edwards Personal Preference Schedule**. New York: Psychological Corporation.

Edwards, A. L. 1955. Social Desirability and Q-sorts. **Journal of Consulting Psychology**, 19: 462-470.

Edwards, A. L. 1957. **Manual for the Edwards Personal Preference Schedule (Rev.)**. New York: Psychological Corp.

Edye, L. D. 1962. **Work values and background factors as predictors of women's desire to work**. Columbus, OH: Bureau of Business Research.

England, G. 1967. Personal value systems of American managers. **Academy of Management Journal**, 10(1): 53-68.

England, G. 1975. **The manager and his values**. Cambridge, MA: Ballinger.

Enz, C. A. 1986. **Power and shared values in the corporate culture**. Ann Arbor, Michigan: UMI Research Press.

Enz, C. A. 1988. Value congruity and interorganizational power: A supplement to a critical contingencies explanation. **Administrative Science Quarterly**, 33: 284-304.

Epstein, S. 1979. The stability of behaviour: I. On predicting most of the people much of the time. **Journal of Personality and Social Psychology**, 37(7): 1097-1126.

Epstein, S. 1980. The stability of behaviour· II. Implications for psychological research. **American Psychologist**, 35(9): 790-806.

Ericsson, K. A., & Simon, H. A. 1980. Verbal reps as data. **Psychological Review**, 87: 215-251.

Ericsson, K. A., & Simon, H. A. 1984. **Protocol analysis: Verbal reports as data**. Cambridge, MA: MIT Press.

Etzioni, A. 1961. **A comparative analysis of complex organizations**. New York: Free Press.

Etzioni, A. 1975. **A comparative analysis of complex organizations (2nd ed.)**. New York: Free Press.

Evans-Pritchard, E. E. 1951. **Social anthropology**. London: Cohen & West.

Evered, R. 1983. The language of organizations: The case of the Navy. In L. R. Pondy, P. J. Frost, G. Morgan, & T. C. Dandridge (Eds.), **Organizational symbolism:** Greenwich, CT: JAI Press.

Evered, R., & Louis, M. R. 1981. Alternative perspectives in the organizational sciences: "Inquiry from the inside" and "Inquiry from the outside". **Academy of Management Review**, 6: 385-395.

Fallding, H. 1965. A proposal for the empirical study of value. **American Sociological Review**, 30: 223-233.

Farrell, D., & Stamm, C. L. 1988. Meta-analysis of the correlates of employee absence. **Human Relations**, 41(3): 211-227.

Feather, N. T. 1975. **Values in education and society**. New York: Free Press

Feather, N. T. 1979. Human values and the work situation: Two studies. **Australian Psychologist**, 14(2): 131-141.

Feather, N. T. 1985a. **Values in education and society (2nd ed)**. New York: Free Press.

Feather, N. T. 1985b. Attitudes, values and attributions: Explanations of unemployment. **Journal of Personality and Social Psychology**, 48(4): 876-889.

Feldman, D. C. 1976. A contingency theory of socialization. **Administrative Science Quarterly**, 21: 433-452.

Feldman, D. C. 1981. The multiple socialization of organizational members. **Academy of Management Review**, 9(2).

Feldman, D. C. 1984. The development and enforcement of group norms. **Academy of Management Review**, 9(1): 47-53.

Feldman, D. C. 1988. **Managing careers in organizations**. Glenview, IL: Scott Foresman.

Feldman, S. (Ed.). 1966. **Cognitive consistency: Motivational antecedents and behavioral consequents**. New York: Academic Press.

Fenigstein, A. 1974. **Self-consciousness, self-awareness and rejection**. Unpublished doctoral dissertation, University of Texas, Austin.

Fenigstein, A., Scheier, M. F., & Buss, A. H. 1975. Public and private self-consciousness: Assessment and theory. **Journal of Consulting and Clinical Psychology**, 43: 522-527.

Festinger, L., Riecken, H. W., & Schachter, S. 1956. **When prophecy fails: A social and psychological study of a modern group that predicted the destruction of the world**. Minneapolis, MN: The University of Minnesota Press.

Festinger, L. A. 1957. **A theory of cognitive dissonance**. Evanston, IL: Row, Peterson.

Festinger, L. A. 1964. Behavioral support for opinion change. **Public Opinion Quarterly**(40): 427-448.

Fishbein, M. A. 1967. A consideration of beliefs and their role in attitude measurement. In M. A. Fishbein (Eds.), **Readings in attitude theory and measurement**: 257-266. New York: John Wiley & Sons.

Fishbein, M. A., & Ajzen, I. 1975. **Belief, attitude, intention and behaviour: An introduction to theory and research**. Reading, MA: Addison-Wesley.

Fisher, C. D. 1986. Organizational socialization: An integrative review. In K. M. Rowland & G. R. Ferris (Eds.), **Research in Personnel and Human Resources Management**: 101-145. Greenwich, CT: JAI Press.

Fisher, R. A. 1921. On the probable error of coefficient of correlation deduced from a small sample. **Metron**: 1-32.

Fiske, S. T., & Taylor, S. E. 1984. **Social cognition**. New York: Random House.

Flowers, V., Hughes, C. L., Myers, M. S., & Myers, S. S. 1975. **Managerial values for working**. New York: AMACOM.

Fombrun, C. J. 1983. Corporate culture, environment and strategy. **Human Resource Management Journal**, 22(2): 139-152.

Freeman, R. E., Gilbert, D. R., & Hartman, E. 1988. Values and the foundations of strategic management. **Journal of Business Ethics**, 11(7): 805-820.

Fritzsche, D. J., & Becker, H. J. 1984. Linking management behaviour to ethical philosophy: An empirical investigation. **Academy of Management Journal**, 27(1): 166-175.

Frost, F. J., Moore, L. F., Louis, M. R., Lundberg, C. C., & Martin, J. (Ed.). 1985. **Organizational culture**. Beverly Hills: SAGE Publications.

Frost, P. J., Moore, L. F., Louis, M. R., Lundberg, C. C., & Martin, J. (Ed.). 1991. **Reframing organizational culture**. Newbury Park, CA: SAGE Publications.

Fry, J. N., & Killing, P. J. 1989. Vision-Check. **Business Quarterly**, 54(2): 64-69.

Gandz, J. 1990. The employee empowerment era. **Business Quarterly**, 55(2): 74-79.

Gardner, J. W. 1978. **Morale**. New York: Norton.

Geertz, C. 1973. **The interpretation of cultures**. New York: Basic Books.

Gillespie, J. N., & Allport, G. W. 1955. **Youth's outlook on the future**. New York: Doubleday.

Glaser, B. G., & Strauss, A. L. 1967. **The discovery of grounded theory: Strategies for qualitative research**. Chicago: Aldine.

Glicksman, M., & Wahl, J. 1965. Expressed values of Burmese and American university students. **Journal of Social Psychology**, 65: 17-26.

Glisson, C., & Durick, M. 1988. Predictors of job satisfaction and organizational commitment in human service organizations. **Administrative Science Quarterly**, 33: 61-81.

Goffman, E. 1961. **Asylums: Essays on the social situation of mental patients and other inmates**. Garden City, New York: Anchor Books.

Goldsmith, R. E., Stith, M. T., & White, J. D. 1987. The Rokeach value survey and social desirability. **Journal of Social Psychology**, 127(5): 553-554.

Goodman, R. S., & Kruger, E. J. 1988. Data dredging or legitimate research method? Historiography and its potential for management research. **Academy of Management Review**, 13(2): 315-325.

Gordon, L. V. 1960. **Survey of interpersonal values**. Chicago: Science Research Associates.

Gordon, L. V. 1976. **Survey of interpersonal values (rev)**. Chicago: Science Research Associates.

Gorlow, L., & Barocus, R. 1965. Value preferences and interpersonal behavior. **Journal of Social Psychology**, 66: 271-280.

Gorsuch, R. L. 1970. Rokeach's approach to value systems and social compassion. **Review of Religious Research**, 11: 139-143.

Gough, H. G., & Heilbrun, A. B. 1965. **Adjective check list: Manual**. Palo Alto, CA: Consulting Psychologists Press.

Gough, H. G., & Heilbrun, A. B. 1980. **Adjective check list: Manual (2nd ed.)**. Palo Alto, CA: Consulting Psychologists Press.

Graham, W. 1976. Commensurate characterization of persons, groups, and organizations: Development of the trait-ascription questionnaire (TAQ). **Human Relations**, 29: 607-622.

Graves, C. W. 1970. Levels of existence: An open system theory of values. **Journal of Humanistic Psychology**, 10(2): 131-151.

Griffitt, W. 1974. Attitude similarity and attraction. In T. L. Huston (Eds.), **Foundations of interpersonal attraction**: 285-308. New York: Academic Press.

Griffitt, W., & Veitch, R. 1974. Preacquaintance attitude similarity and attraction revisited: Ten days in a fall-out shelter. **Sociometry**, 37: 163-173.

Guildford, J. P. 1959. **Personality**. New York: McGraw-Hill.

Guion, R. 1973. A note on organizational climate. **Organizational Behavior and Human Performance**, 9: 120-125.

Guion, R. M. 1977. Content validity: Three years of talk - what's the action? **Public Personnel Management**: 410.

Guth, W. D., & Tagiuri, R. 1965. Personal values and corporate strategies. **Harvard Business Review**, 43(5): 123-132.

Haberstroh, C. J., & Gerwin, D. 1972. Climate factors and the decision process. **General Systems**, 17: 129-141.

Hackett, R. D., & Guion, R. M. 1985. A reevaluation of the absenteeism-job satisfaction relationship. **Organizational Behavior and Human Decision Processes**, 35: 340-381.

Hall, C. S., & Lindzey, G. 1978. **Theories of Personality (3rd ed.)**. New York: John Wiley & Sons.

Hambrick, D. C., & Brandon, G. L. 1988. Executive values. In D. C. Hambrick (Eds.), **The executive effect: Concepts and methods for studying top managers**: 3-34. Greenwich, CT: JAI Press.

Hambrick, D. C., & Mason, P. A. 1984. Upper echelons: The organization as a reflection of its top managers. **Academy of Management Review**, 9(2): 193-206.

Handy, C. 1978. **Gods of management**. London: Souvenir Press.

Handy, R. 1970. **The measurement of values**. St. Louis, MO: Green.

Haralambos, M. 1985. **Sociology: Themes and perspectives (2nd ed.)**. London: Bell & Hyman.

Harrison, R. 1975. Diagnosing organizational ideology. In J. E. Jones & J. W. Pfeffer (Eds.), **The 1975 annual handbook for group facilitators**: 101-107. LaJolla, CA: University Associates.

Haviland, W. A. 1985. **Anthropology (4th ed.)**. New York: Holt, Rinehart & Winston.

Heider, F. 1939. Environmental determinants in psychological theories. **Psychological Review**, 46: 383-410.

Heider, F. 1944. Social perception and phenomenal causality. **Psychological Review**, 51: 358-374.

Heider, F. 1946. Attitudes and cognitive organizations. **Journal of Psychology**, 21: 107-112.

Heider, F. 1958. **The psychology of interpersonal relations**. New York: John Wiley & Sons.

Hicks, L. E. 1970. Some properties of ipsative, normative and forced-choice normative measures. **Psychological Bulletin**, 74: 167-184.

Hodgetts, R. M. 1987. **Modern human relations at work (3rd ed)**. Chicago: Dryden Press.

Hofstede, G., Neuijen, B., Ohayv, D. D., & Sanders, G. 1990. Measuring organizational cultures: A qualitative and quantitative study across twenty cases. **Administrative Science Quarterly**, 35(2): 286-316.

Hollenbeck, J. R. 1989. Control theory and the perception of work environments: The effects of focus of attention on affective and behavioral reactions to work. **Organizational Behavior and Human Decision Processes**, 43: 406-430.

Homans, G. C. 1950. **The human group**. New York: Harcourt.

Howard, R. 1990. Values make the company: An interview with Robert Haas. **Harvard Business Review**, 68(5): 132-144.

Hunter, J. E., Schmidt, F. L., & Jackson, G. 1982. **Advanced meta-analysis: Quantitative methods for cumulating research findings across studies**. Beverly Hills, CA: SAGE Publications.

Iaffaldano, M. T., & Muchinsky, P. M. 1985. Job satisfaction and job performance: A meta-analysis. **Psychological Bulletin**, 97: 251-273.

Isenberg, D. J. 1986. Thinking and managing: A verbal protocol analysis of managerial problem solving. **Academy of Management Journal**, 29(4): 775-788.

Ivancevich, J. M., Schweiger, D. M., & Power, F. R. 1987. Strategies for managing human resources during mergers and acquisitions. **Human Resource Planning**, 10: 19-36.

Izraeli, D. 1988. Ethical beliefs and behaviour among managers: A cross-cultural perspective. **Journal of Business Ethics**, 7: 726-271.

Jahoda, M. A. 1961. A social-psychological approach to the study of culture. **Human Relations**, 14: 23-30.

Jahoda, M. A. 1982. **Psychology and Anthropology: A psychological perspective**. London: Academic Press.

James, W. 1950. **The principles of psychology**. New York: Dover.

Janis, I. L. 1972. **Groupthink**. Boston: Houghton Mifflin.

Janis, I. L. 1982. **Groupthink (2nd ed.)**. Boston: Houghton Mifflin.

Janis, I. L., & Mann, L. 1977. **Decision making: A psychological analysis of conflict, choice and commitment**. New York: Free Press.

Jick, T. D. 1983. Mixing qualitative and quantitative methods: Triangulation in action. In J. Van Maanen (Eds.), **Qualitative Methodology**: 135-148. Beverly Hills, CA: SAGE Publications.

Joad, C. E. M. 1952. **The recovery of belief: A restatement of Christian philosophy**. London: Faber & Faber.

Jones, E. E., & Gerard, H. B. 1967. **Foundations of social psychology**. New York: John Wiley & Sons.

Jones, G. R. 1983. Psychological orientation and the process of organizational socialization: An interactionist perspective. **Academy of Management Review**, 8(3): 464-474.

Jones, G. R. 1986. Socialization tactics, self-efficacy, and newcomer's adjustments to organizations. **Academy of Management Journal**, 29(2): 270-288.

Jones, R. A., Sensenig, J., & Ashmore, R. D. 1978. Systems of values and their multidimensional representation. **Multivariate Behavioral Research**, 13: 255-270.

Jones, W. T. 1961. **The romantic syndrome: Toward a new method in cultural anthropology and the history of ideas**. The Hague: Martinus Nimjoff.

Joreskog, K. G., & Sorbom, D. 1984. **LISREL VI User's Guide**. Sweden: University of Uppsala.

Joyce, W., Slocum, J. W., & Von Glinow, M. A. 1982. Person-situation interaction: Competing models of fit. **Journal of Occupational Behavior**, 3: 265-280.

Kanter, R. M. 1968. Commitment and social organization: A study of commitment mechanisms in utopian communities. **American Sociological Review**, 33: 499-517.

Kaplan, M. F. 1972. Interpersonal attraction as a function of relatedness of similar and dissimilar attitudes. **Journal of Experimental Research in Personality**, 6: 17-21.

Kast, E. C. 1976. **The value theory of Karl Marx**. New York: Exposition Press.

Katz, D. 1964. The motivational basis of organizational behavior. **Behavioral Science**, 9: 131-133.

Katz, D., & Kahn, R. L. 1966. **The social psychology of organizations**. New York: John Wiley & Sons.

Katz, D., & Kahn, R. L. 1978. **The social psychology of organizations (2nd ed.)**. New York: John Wiley & Sons.

Keesing, R. M. 1974. Theories of culture. **Annual Review of Anthropology**, 3: 73-79.

Keisler, S. 1978. **Interpersonal processes in groups and organizations**. Arlington Heights, IL: AHM Publishing.

Kelly, K., Silverman, B. I., & Cochrane, R. 1972. Social desirability and the Rokeach value survey. **Journal of Experimental Research in Personality**, 48: 111-117.

Kendall, M. G. 1948. **Rank correlation methods**. London: Griffin.

Kerlinger, F. N. 1986. **Foundations of behavioral research**. New York: Holt, Rinehart & Winston.

Kerr, B. A. 1985. Review of the Job Descriptive Index. In D. Keyer & R. Sweetland (Eds.), **Test Critiques**: 754-756. Kansas City: Test Corporation of America.

Kilmann, R. H. 1982. Getting control of the corporate culture. **Managing**, 2: 11-17.

Kilmann, R. H. 1984. **Beyond the quick fix**. San Francisco: Jossey-Bass.

Kilmann, R. H. 1985. Five steps for closing culture-gaps. In R. H. Kilmann, M. J. Saxton, & R. Serpa (Eds.), **Gaining control of the corporate culture**: San Francisco: Jossey-Bass.

Kilmann, R. H., Covin, T. J., & Associates (Ed.). 1988. **Corporate transformation: Revitalizing organizations for a competitive world**. San Francisco: Jossey-Bass.

Kilmann, R. H., & Saxton, M. J. 1983. **The Kilmann-Saxton Culture-Gap Survey**. Pittsburgh, PN: Organizational Design Consultants.

Kilmann, R. H., Saxton, M. J., Serpa, R., & Associates (Ed.). 1985. **Gaining control of the corporate culture**. San Francisco: Jossey-Bass.

Kirschenbaum, H., & Simon, S. B. 1973. **Readings in values clarification**. Minneapolis, MN: Winston Press.

Kluckhohn, C. 1949. **Mirror for man**. New York: McGraw-Hill.

Kluckhohn, C. 1951. Values and value orientations in the theory of action. In T. Parsons & E. A. Shils (Eds.), **Toward a general theory of action**: 388-433. Cambridge: Harvard University Press.

Kluckhohn, C. 1956. Toward a comparison of value-emphases in different cultures. In L. White (Eds.), **The State of the Social Sciences**: 116-132. Chicago: University of Chicago Press.

Kluckhohn, F. R., & Strodbeck, F. L. 1961. **Variations in value orientations**. Evanston, IL: Row, Peterson.

Koffka, K. 1935. **Principles of Gestalt psychology**. New York: Harcourt Brace.

Konovsky, M. A. 1986. **Antecedents and consequents of informal leader helping behavior: A structural equation modeling approach**. Unpublished doctoral dissertation, Indiana University, Bloomington.

Kram, K. E., Yeager, P. C., & Reed, G. E. 1989. Decisions and dilemmas: The ethical dimension in the corporate context. In J. E. Post (Eds.), **Research in corporate social performance and policy**: 21-54. Greenwich, CT: JAI Press.

Kreitner, R., & Kinicki, A. 1989. **Organizational Behavior**. Homewood, IL: BPI-Irwin.

Kroeber, A. L., & Kluckhohn, C. 1952. **Culture: A critical review of concepts and definitions**. Cambridge, MA: Peabody Museum.

Kunin, T. 1955. The construction of a new type of attitude measure. **Personnel Psychology**, 8: 65-78.

LaPiere, R. T. 1934. Attitudes vs actions. **Social Forces**, 13: 230-237.

Latham, G. P., & Frayne, C. A. 1989. Self-management training for increasing job attendance: A follow-up and replication. **Journal of Applied Psychology**, 74(3): 411-416.

Lawler, E. E. 1981. **Pay and organization development**. Reading, MA: Addison-Wesley.

Lennox, R., & Wolfe, R. 1984. Revision of the self-monitoring scale. **Journal of Personality and Social Psychology**, 46: 1346-1364.

Levinger, G. 1972. Little sand box and big quarry: Comment on Byrne's paradigmatic spade for research on interpersonal attraction. **Representative Research in Social Psychology**, 3: 3-19.

Lewicki, R. J. 1981. Organizational seduction: Building commitment to organizations. **Organizational Dynamics**, 10: 5-21.

Lewin, K. 1936. **Principles of topological psychology**. New York: McGraw-Hill.

Lewin, K. 1951a. **Field theory in social science**. New York: Harper.

Lewin, K. (Ed.). 1951b. **Formalization and progress in psychology**. New York: Harper.

Liedtka, J. 1989. Managerial values and corporate decision-making: An empirical analysis of value congruence in two organizations. In J. E. Post (Eds.), **Research in corporate social performance and policy**: 55-91. Greenwich, CT: JAI Press.

Lipset, S. M. 1963. The value patterns of democracy: A case study in comparative analysis. **American Sociological Review**, 28(4): 515-531.

Litwin, G. H., & Stringer, R. A. (1968). **Motivation and organizational climate** (Working paper), Division of Research, Harvard Business School.

Locke, E. A. 1976. The nature and cause of job satisfaction. In M. D. Dunnette (Eds.), **Handbook of industrial and organizational psychology**: Chicago: Rand McNally.

Locke, E. A., & Henne, D. 1986. Work motivation theories. In C. L. Cooper & I. Robertson (Eds.), **International review of industrial and organizational psychology**: 1-35. New York: John Wiley & Sons.

Locke, E. A., & Latham, G. P. 1984. **Goal setting: A motivational technique that works**. Englewood Cliffs, NJ: Prentice Hall.

Lofquist, L., & Dawis, R. 1969. **Adjustment to work**. New York: Appleton-Century-Crofts.

Lord, R. G., & Maher, K. J. 1989. Cognitive processes in industrial and organizational psychology. In C. L. Cooper & I. Robertson (Eds.), **International review of industrial and organizational psychology**: Greenwich, CT: JAI Press.

Louis, M. R. 1980. Surprise and sense making: What newcomers experience in entering unfamiliar organizational settings. **Administrative Science Quarterly**, 25(2): 226-251.

Louis, M. R. 1981. Culture in organizations: The need for and consequences of viewing organizations as culture-bearing milieu. **Human Systems Management**, 2: 246-258.

Louis, M. R. 1983. Organizations as culture-bearing milieu. In L. R. Pondy, P. Frost, G. Morgan, & T. C. Dandridge (Eds.), **Organizational symbolism**: Greenwich, CT: JAI Press.

Louis, M. R. 1985. Sourcing workplace cultures: Why, when, and how. In R. H. Kilmann, M. J. Saxton, & R. Serpa (Eds.), **Gaining control of the corporate culture**: 126-136. San Francisco: Jossey-Bass.

Lovejoy, A. O. 1950. Terminal and adjectival values. **Journal of Philosophy**, 47: 593-608.

Luechauer, D. L., & Katerberg, R. 1989. **The self-monitoring scale: A psychometric analysis and proposed revision.** Paper presented at the Midwest Academy of Management,

Lundberg, G. A. 1947. **Can science save us**? New York: Longmans, Green & Co.

Luthans, F. 1989. **Organizational Behavior (5th ed.)**. New York: McGraw Hill.

Luthans, F., & Kreitner, R. 1985. **Organizational behaviour modification and beyond: An operant and social learning approach**. Glenview, IL: Scott Foresman.

Lyons, T. F. 1972. Turnover and absenteeism: A review of relationships and shared correlates. **Personnel Psychology**, 25: 271-281.

Maccoby, M., & Endler, N. S. 1968. **Polling emotional attitudes in relation to political choice**. Belmont, CA: Brookes Cole.

Magnusson, E., & Endler, N. S. (Ed.). 1977. **Interactional psychology: Present status and future prospects**. Hillsdale, NJ: Lawrence Erlbaum.

Malinowski, B. 1953. **Argonauts of the Western Pacific**. New York: Dutton.

Mandler, G., & Sarason, S. B. 1952. A study of anxiety and learning. **Journal of Abnormal and Social Psychology**, 47: 166-173.

Martin, J. 1982. Stories and scripts in organizational settings. In A. H. Hastorf & A. M. Isen (Eds.), **Cognitive social psychology**: 255-305. New York: Elsevier/North Holland.

Martin, J., & Powers, M. E. 1983. Truth or corporate propaganda: The value of a good war story. In L. R. Pondy, P. Frost, G. Morgan, & T. C. Dandridge (Eds.), **Organizational symbolism**: 93-107. Greenwich, CT: JAI Press.

Martin, J., & Siehl, C. 1983. Organizational culture and counterculture: An uneasy symbiosis. **Organizational Dynamics**, 12(2): 52-64.

Mayr, E. 1982. **The growth of biological thought: Diversity, evolution and inheritance**. Cambridge, MA: Harvard University Press.

McCarthy, R. 1970. **Patton (Film)**. Hollywood: Twentieth Century Fox.

McClelland, D. C. 1961. **The achieving society**. New York: Free Press.

McDonald, P., & Gandz, J. 1992a. Identification of values relevant to business research. **Human Resource Management**, 30(2): 217-236.

McDonald, P., & Gandz, J. 1992b. Getting value from shared values. **Organizational Dynamics**, 20(3): 64-77.

McGregor, D. 1960. **The human side of enterprise**. New York: McGraw-Hill.

McGuire, W. J. 1966. The current status of cognitive consistency theories. In S. Feldman (Eds.), **Motivational antecedents and behavioral consequents**: 1-20. New York: Academic Press.

McKelvey, B. 1982. **Organizational systematics: Taxonomic evolution classification**. Berkeley, CA: University of California Press.

McLaughlin, B. 1965. Values in behavioral science. **Journal of Religion and Health**, 4: 258-279.

McMurry, R. N. 1963. Conflicts in human values. **Harvard Business Review**, 41: 130-145.

Meglino, B. M., Ravlin, E. C., & Adkins, C. L. 1989. A work values approach to corporate culture: A field test of the value congruence process and its relationship to individual outcomes. **Journal of Applied Psychology**, 74(3): 424-432.

Merton, R. K. 1957. **Social theory and social structure**. Glencoe, IL: Free Press.

Meyer, J. P., & Allen, N. J. 1988. Links between work experiences and organizational commitment during the first year of employment: A longitudinal analysis. **Journal of Occupational Psychology**, 61: 195-209.

Meyer, J. P., Paunonen, S. V., Gellatly, I. R., Goffin, R. D., & Jackson, D. N. 1989. Organizational commitment and job performance: It's the nature of commitment that counts. **Journal of Applied Psychology**, 74(1): 152-156.

Miles, R. E., & Snow, C. C. 1978. **Organizational strategy, structure, and process**. New York: McGraw-Hill.

Mintzberg, H. 1979. **The structuring of organizations**. Englewood Cliffs, NJ: Prentice-Hall.

Mirels, H. L., & Garrett, J. B. 1971. Protestant Ethic as a personality variable. **Journal of Consulting and Clinical Psychology**, 36: 40-44.

Mischel, W. 1968. **Personality and assessment**. New York: John Wiley & Sons.

Mischel, W. 1977. The interaction of person and situation. In D. Magnusson & N. S. Endler (Eds.), **Personality at the crossroads: Current issues in interactional psychology**: Hillsdale, NJ: Erlbaum.

Mitchell, T. R., Smyser, C. M., & Weed, S. E. 1975. Locus of control: Supervision and work satisfaction. **Academy of Management Journal**, 18(3): 623-631.

Mitroff, I. I. 1987. **Business not as usual**. San Francisco: Jossey-Bass.

Mitroff, I. I., & Kilmann, R. H. 1985. Corporate taboos as the key to unlocking culture. In R. H. Kilmann, M. J. Saxton, & R. Serpa (Eds.), **Gaining control of the corporate culture**: 184-199. San Francisco: Jossey-Bass.

Mitroff, I. I., & Mason, R. O. 1982. Business policy and metaphysics: Some philosophical considerations. **Academy of Management Review**, 7: 361-371

Morgan, G. 1986. **Images of organization**. Newbury Park, CA: SAGE Publications.

Morris, C. W. 1956. **Varieties of human value**. Chicago: University of Chicago Press.

Morse, S., & Gergen, K. J. 1970. Social comparison, self-consistency, and the concept of self. **Journal of Personality and Social Psychology**, 16: 264-273.

Mowday, R. T., Porter, L. W., & Steers, R. M. 1982. **Employee-organization linkages: The psychology of commitment, absenteeism and turnover**. New York: Academic Press.

Mowday, R. T., Steers, R. M., & Porter, L. W. 1979. The measurement of organizational commitment. **Journal of Vocational Behavior**, 14: 224-247.

Mueller, D. J. 1985. Survey of Personal Values. In D. Keyer & R. Sweetland (Eds.), **Test critiques**: 773-779. Kansas City: Test Corporation of America.

Mueller, D. J. 1986. **Measuring social attitudes**. New York: Teachers College Press.

Munson, J. M., & McIntyre, S. H. 1979. Developing practical procedures for measurement of personal values in cross-cultural marketing. Journal of Marketing Research, 16: 48-52.

Munson, J. M., & Posner, B. Z. 1980. Concurrent validation of two values inventories in predicting job classification and success for organizational personnel. Journal of Applied Psychology, 65(5): 536-542.

Murray, H. A. 1938. Explorations in personality. London: Oxford University Press.

Murray, H. A. 1943. Thematic apperception test manual. Cambridge, MA: Harvard University Press.

Myers, M. S., & Myers, S. S. 1974. Toward understanding the changing work ethic. California Management Review, 16(3): 7-19.

Naisbitt, J., & Aburdene, P. 1985. Re-inventing the corporation. New York: Warner Books.

Newcomb, T. M. 1952. Attitude development as a function of reference groups: The Bennington study. In G. E. Swanson, T. M. Newcomb, & E. L. Hartley (Eds.), Readings in social psychology (2nd ed.): New York: Holt, Rinehart & Winston.

Newcomb, T. M. 1953. An approach to the study of communicative acts. Psychological Review, 60: 393-404.

Newcomb, T. M. 1961. The acquaintance process. New York: Holt, Rinehart & Winston.

Newcomb, T. M. 1968. Interpersonal balance. In R. P. Abelson, E. Aronson, W. J. McGuire, T. M. Newcomb, M. J. Rosenberg, & P. H. Tannenbaum (Eds.), Theories of cognitive consistency: A sourcebook: Chicago: Rand McNally.

Ng, S. H. 1982. Choosing between the ranking and rating procedure for the comparison of values across culture. European Journal of Social Psychology, 12(2): 169-172.

Nisbett, R. E., & Ross, L. 1980. Human interference: Strategies and shortcomings of social judgment. Englewood Cliffs, NJ: Prentice-Hall.

Nisbett, R. E., & Wilson, T. D. 1977. Telling more than we can know: Verbal reports on mental processes. Psychological Review, 84(3): 231-259.

Norman, W. T. (1967). 2800 personality trait descriptors: Normative operating characteristics for a university population (Working paper (Dept. of Psychology)) No.8, University of Michigan.

Nunnally, J. C. 1967. Psychometric theory. New York: McGraw-Hill.

Nunnally, J. C. 1978. Psychometric theory (2nd ed.). New York: McGraw-Hill.

O'Brien, G., & Dowling, P. 1978. **Work values: Cultural, organizational and individual parameters.** Paper presented at the 19th International Congress of Applied Psychology, Munich, West Germany.

O'Reilly, C. 1983. **Corporations, cults and organizational culture: Lessons from Silicon Valley firms.** Paper presented at the 42nd Meeting of the Academy of Management, Dallas, Texas.

O'Reilly, C., & Chatman, J. 1986. Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. **Journal of Applied Psychology**, 71(3): 492-499.

O'Reilly, C. A., Chatman, J., & Caldwell, D. F. 1991. People and organizational culture: A profile comparison approach to assessing person-organization fit. **Academy of Management Journal**, 34(3): 487-516.

Organ, D. W. 1988. **Organizational citizenship behavior: The good soldier syndrome**. Lexington, MA: Lexington Books.

Orne, M. T. 1962. On the social psychology of the psychological experiment with particular reference to demand characteristics and their implications. **American Psychologist**, 17: 776-783.

Osgood, C. E., & Suci, G. 1952. A measure of relation determined by both mean difference and profile information. **Psychological Bulletin**, 49: 251-262.

Osgood, C. E., Suci, G. J., & Tannenbaum, R. H. 1957. **The measurement of meaning**. Urbana, IL: University of Illinois Press.

Osgood, C. E., & Tannenbaum, P. H. 1955. The principle of congruity in the prediction of attitude change. **Psychological Review**, 62: 42-55.

Otis, A. S. 1954 **Manual of directions for Gamma test**. New York: Harcourt, Brace, and Would.

Ott, J. S. 1989. **The organizational culture perspective**. Chicago: Dorsey Press.

Ouchi, W., & Price, R. 1978. Hierarchies, clans, and theory Z: A new perspective on organizational development. **Organizational Dynamics**, 7(2): 25-44.

Ouchi, W. G. 1980. Markets, bureaucracies and clans. **Administrative Science Quarterly**, 25: 129-141.

Ouchi, W. G. 1981. **Theory Z: How American business can meet the Japanese challenge**. Reading, MA: Addison-Wesley.

Ouchi, W. G. 1984. **The M-form society**. Reading, MA: Addison-Wesley.

Oviatt, B. M. 1988. Agency and transaction cost perspectives on the manager-shareholder relationship: Incentives for congruent interests. **Journal of Educational Psychology**, 49: 269-277.

Pace, C. R., & Stern, G. C. 1958. An approach to the measurement of psychological characteristics of college environments. **Journal of Educational Psychology**, 49: 269-277.

Parsons, T. 1949. **Essays in sociological theory: Pure and applied**. Glencoe, IL: Free Press.

Parsons, T. 1951. **The social system**. Glencoe, IL: The Free Press.

Parsons, T., & Shils, E. A. 1952. **Toward a general theory of action**. Cambridge, MA: Harvard University Press.

Pascale, R. T., & Athos, A. G. 1981. **The art at Japanese management: Applications for American executives**. New York: Simon & Schuster.

Patsfall, M. R., & Feimer, N. R. 1985. The role of person-environment fit in job performance and satisfaction. In H. J. Bernardin & D. A. Bownas (Eds.), **Personality assessment in organizations**: 53-81. New York: Praeger.

Payne, J. W. 1976. Task complexity and contingent processing in decision making: An information search and protocol analysis. **Organizational Behavior and Human Performance**, 16: 366-387.

Payne, S. L. 1988. Values and ethics-related measures for management education. **Journal of Business Ethics**, 7: 273-277.

Pearson, K. 1928. On the coefficient of racial likeness. **Biometrika**, 18: 105-117.

Pedhazur, E. J. 1982. **Multiple regression in behavioral research**. New York: Holt, Rinehart & Winston.

Pervin, L. A. 1968. Performance and satisfaction as a function of individual-environment fit. **Psychological Bulletin**, 69: 56-68.

Peters, T. J., & Waterman, R. H. 1982. **In search of excellence: Lessons from America's best-run companies**. New York: Warner Books.

Pettigrew, A. M. 1979. On studying organizational cultures. **Administrative Science Quarterly**, 24: 579-581.

Petty, M. M., McGee, G. W., & Cavender, J. W. 1984. A meta-analysis of the relationships between individual job satisfaction and individual performance. **Academy of Management Review**, 9: 712-721.

Petty, R. E., & Cacioppo, J. T. 1981. **Attitudes and persuasion: Classic and contemporary approaches**. Dubuque, IO: WC Brown.

Pfeffer, J. 1981. Management as symbolic action: The creation and maintenance of organizational paradigms. In L. L. Cummings & B. M. Staw (Eds.), **Research in organizational behavior**: 1-52. Greenwich, CT: JAI Press.

Phillips, J. R., & Kennedy, A. A. (1980). **Shaping and managing shared values** Staff Paper, (December) No.1, McKinsey Consulting.

Pierce, J. L., Gardner, D. G., Cummings, L. L., & Dunham, R. B. 1989. Organization-based self-esteem: Construct definition, measurement and validation. Academy of Management Journal, 32(3): 622- 648.

Polley, R. B., Hare, A. P., & Stone, P. J. 1988. The SYMLOG practitioner: Applications of small group research. New York: Praeger.

Pondy, L. R. 1978. Leadership is a language game. In M. W. McCall & M. M. Lombardo (Eds.), Leadership: Where else can we go?: 87-99. Durham, NC: Duke University press.

Pondy, L. R. 1983. The role of metaphors and myths in organization and the facilitation of change. In L. R. Pondy, P. J. Frost, G. Morgan, & T. C. Dandridge (Eds.), Organizational symbolism: 157-166. Greenwich, CT: JAI Press.

Popper, K. R. 1964. The poverty of historicism. New York: Harper Torchbooks.

Porter, L. W., & Lawler, E. E. 1965. Properties of organizational structure in relation to job attitudes and job behavior. Psychological Bulletin, 64: 23-51.

Porter, L. W., & Lawler, E. E. 1968. Managerial attitudes and performance. Homewood, IL: Dorsey Press.

Porter, L. W., & Smith, F. J. (1970). The etiology of organizational commitment: A longitudinal study of initial stages of employee-organization relationships (Unpublished Manuscript), University of California.

Porter, L. W., Steers, R., Mowday, R., & Boulian, P. 1974. Organizational commitment, job satisfaction, and turnover among psychiatric technicians. Journal of Applied Psychology, 59: 603-609.

Posner, B. Z., Kouzes, J. M., & Schmidt, W. H. 1985. Shared values make a difference: An empirical test of corporate culture. Human Resource Management Journal, 24(3): 293-309.

Post, J. E., & Andrews, P. N. 1982. Case research in corporation and society studies. In L. Preston (Eds.), Research in corporate social performance and policy: Greenwich, CT: JAI Press.

Postman, L., Bruner, J. A., & McGinnies, E. 1948. Personal values as selective factors in perception. Journal of Abnormal and Social Psychology, 43: 142-154.

Pratkanis, A. R., & Greenwald, A. G. 1989. A sociocognitive model of attitude structure and function. In L. Berkowitz (Eds.), Advances in Experimental Social Psychology: 245-285. San Diego, CA: Academic Press.

Precker, J. A. 1952. Similarity of valuings as a factor in selection of peers and near-authority figures. Journal of Abnormal and Social Psychology, 47: 406-414.

Price, J. L. 1973. Handbook of organizational measurement. Lexington, MA: D.C. Heath and Company.

Pugh, D. S., Hickson, D. J., Hinnings, C. R., & Turner, C. 1969. The context of organization structures. Administrative Science Quarterly, 14: 91-114.

Quinn, R. E. 1984. Applying the competing values approach to leadership: Toward an integrative framework. In J. G. Hunt, D. Hosking, C. Schriesheim, & R. Stewart (Eds.), **Leaders and managers: International perspectives on managerial behavior and leadership**: Elmsford, NY: Pergamon Press.

Quinn, R. E., & Anderson, D. 1984. Formalization as crises: A transition planning program for young organizations. In J. R. Kimberly & R. E. Quinn (Eds.), **New futures: The challenge of transformation management**: New York: Dow Jones - Irwin.

Quinn, R. E., & Cameron, K. 1983. Organizational life cycles and shifting criteria of effectiveness: Some preliminary evidence. **Management Science**, 29: 33-51.

Quinn, R. E., & Hall, R. H. 1983. Environments, organizations, and policy-makers: Toward an integrative framework. In R. H. Hall & R. E. Quinn (Eds.), **Organization Theory and Public Policy**: 281-298. Beverly Hills, CA: SAGE Publications.

Quinn, R. E., & Kimberly, J. R. 1984. The management of transitions. In J. R. Kimberly & R. E. Quinn (Eds.), **New futures: The challenge of transformation management**: New York: Dow Jones - Irwin.

Quinn, R. E., & McGrath, M. R. 1984. **The transformation of organizational cultures: A competing values perspective.** Conference of Organizational Culture and Meaning of Life in the Workplace, Vancouver, BC.

Quinn, R. E., & McGrath, M. R. 1985. The transformation of organizational cultures: A competing values perspective. In P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lundberg, & J. Martin (Eds.), **Organizational culture**: 315-334. Beverly Hills, CA: SAGE Publications.

Quinn, R. E., & Rohrbaugh, J. 1983. A spatial model of effectiveness criteria: Toward a competing values approach to organizational analysis. **Management Science**, 29: 363-377.

Raths, L. E., Harmin, M., & Simon, S. B. 1978. **Values and teaching (2nd ed.)**. Columbus: Merrill.

Ravlin, E. C., & Meglino, B. M. 1987a. Issues in work values measurement. In W. C. Frederick (Eds.), **Research in corporate social performance and policy**: 153-183. Greenwicn, CT: JAI Press.

Ravlin, E. C., & Meglino, B. M. 1987b. Effect of values on perception and decision making: A study of alternative work values measure. **Journal of Applied Psychology**, 72(4): 666-673.

Ravlin, E. C., & Meglino, B. M. 1989. The transitivity of work values: Hierarchical preference ordering of socially desirable stimuli. **Organizational Behavior and Human Decision Processes**, 44: 494-508.

Ray, J. J. 1982. The Protestant Ethic in Australia. **Journal of Social Psychology**, 116: 127-138.

Reece, B. L., & Brandt, R. 1987. **Effective human relations in organizations (3rd ed.)**. Boston: Houghton Mifflin.

Regan, D. T., & Fazio, R. H. 1977. On the consistency between attitudes and behavior: Look to the method of attitude formation. **Journal of Experimental Social Psychology**, 13: 38-45.

Reidenbach, R. W., & Robin, D. P. 1988. Some initial steps toward improving the measurement of ethical evaluations of marketing activities. **Journal of Business Ethics**, 7: 871-879.

Rest, J. 1980. Developmental psychology and values education. In B. Munsey (Eds.), **Moral development, moral education and Kohlberg**: 111. Birmingham, UK: Religious Education Press.

Reynolds, P. D. 1986. Organizational culture as related to industry position and performance: A preliminary report. **Journal of Management Studies**, 23(3): 333-345.

Robinson, P. 1981. **Fundamentals of experimental psychology**. Englewood Cliffs, NJ: Prentice-Hall.

Roethlisberger, F. J., & Dickson, W. J. 1939. **Management and the worker**. New York: John Wiley and Sons.

Rokeach, M. 1960. **The Open and closed mind**. New York: Basic Books.

Rokeach, M. 1968. **Beliefs, attitudes, and values**. San Francisco: Jossey-Bass.

Rokeach, M. 1973. **The nature of human values**. New York: The Free Press.

Rosenberg, M. J. 1956. Cognitive structure and attitudinal affect. **Journal of Abnormal and Social Psychology**, 53: 367-372.

Rosenberg, M. J. 1960. An analysis of affective-cognitive consistency. In M. J. Rosenberg, C. I. Hovland, W. J. McGuire, R. P. Abelson, & J. W. Brehm (Eds.), **Attitude organization and change**: 15-64. New Haven: Yale University Press.

Rosenzweig, S. 1945. The picture association method and its application in a study of reactions to frustrations. **Journal of Personality**, 14: 3-23.

Rossi, I., & O'Higgins, E. 1980. The development of theories of culture. In I. Rossi (Eds.), **People in Culture**: 31-78. New York: Praeger.

Rotter, J. B. 1966. Generalized expectancies for internal versus external control of reinforcement. **Psychological Monographs**, 80(1).

Rousseau, D. M. 1990. Quantitative assessment of organizational culture: The case for multiple measures. In B. Schneider (Eds.), **Frontiers in industrial and organizational psychology**: San Francisco: Jossey-Bass.

Runyon, K. E. 1973. Some interactions between personality variables and management styles. **Journal of Applied Psychology**, 57(3): 288-294.

Saffold, G. S. 1988. Culture traits, strength and organizational performance: Moving beyond "strong" culture. Academy of Management Review, 13(4): 546-558.

Salancik, G. R., & Pfeffer, J. 1977. An examination of need satisfaction models of job attitudes. Administrative Science Quarterly, 22: 427-456.

Salancik, G. R., & Pfeffer, J. 1978. A social information processing approach to job attitudes and task design. Administrative Science Quarterly, 23: 224-253.

Samuelson, P. A., & Nordhaus, W. D. 1989. Economics (13th ed.). New York: McGraw-Hill.

Sanday, P. R. 1979. The ethnographic paradigm(s). Administrative Science Quarterly, 24: 527-538.

Sanday, P. R. 1983. The ethnographic paradigm(s). In J. Van Maanen (Eds.), Qualitative methodology: 19-36. Beverly Hills, CA: SAGE Publications.

Sapienza, A. M. 1985. Believing is seeing: How culture influences the decisions that top managers make. In R. H. Kilmann, M. J. Saxton, & R. Serpa (Eds.), Gaining control of the corporate culture: 66-83. San Francisco: Jossey-Bass.

Sathe, V. 1983. Some action implications of corporate culture: A manager's guide to action. Organizational Dynamics, 12(2): 5-23.

Sathe, V. 1985. Culture and related corporate realities. Homewood, IL: RD Irwin.

Sawa, S. L., & Sawa, G. H. 1988. The value confrontation approach to enduring behavior modification. Journal of Social Psychology, 128(2): 207-215.

Scheier, M. F. 1980. The effects of public and private self-consciousness on the public expression of personal beliefs. Journal of Personality and Social Psychology, 39: 514-521.

Schein, E. 1984a. Coming to a new awareness of organizational culture. Sloan Management Review, 25: 3-16.

Schein, E. (1986). A rejoinder to Sashkin and further clarification (Academy of Management OD newsletter), Academy of Management.

Schein, E. H. 1968. Organizational socialization and the profession of management. Industrial Management Review, 9: 1-15.

Schein, E. H. 1978. Career dynamics: Matching individual and organizational needs. Reading, MA: Addison-Wesley.

Schein, E. H. 1981. Does Japanese management style have a message for American managers? Sloan Management Review, 23: 55-68.

Schein, E. H. 1983. The role of the founder in creating organizational culture. Organizational Dynamics, 12(1): 13-28.

Schein, E. H. (1984b). Suppose we took culture seriously (Academy of Management OD Newsletter), Academy of Management.

Schein, E. H. 1985. **Organizational culture and leadership**. San Francisco: Jossey-Bass.

Schmidt, W. H., & Posner, B. Z. 1982. **Managerial values and expectations: The silent power in personal and organizational life**. New York: AMACOM.

Schneider, B. 1983. Interactional psychology and organizational behaviour. In B. M. Staw & L. L. Cummings (Eds.), **Research in organizational behaviour**: 1-31. Greenwich, CT: JAI Press.

Schneider, B., & Bartlett, C. J. 1968. Individual differences and organizational climate, I: The research plan and questionnaire development. **Personnel Psychology**, 21: 323-333.

Schoneman, P. H. 1966. A generalized solution of the orthogonal procrustes problem. **Psychometrika**, 31: 1-10.

Schwab, D. P. 1980. Construct validity in organizational behavior. In L. L. Cummings & B. M. Staw (Eds.), **Research in Organizational Behavior**: 3-43. Greenwich, CT: JAI Press.

Schweiger, D. M. 1980. **The impact of cognitive styles on strategy-formulation effectiveness in uncertain environments: An exploratory study**. Unpublished doctoral dissertation, University of Maryland.

Schweiger, D. M. 1983. Is the simultaneous verbal protocol a viable method for studying managerial problem solving and decision making? **Academy of Management Journal**, 26(1): 185-192.

Scott, W. A. 1959. Empirical assessment of values and ideologies. **American Sociological Review**, 24(3): 299-310.

Scott, W. A. 1965. **Values and organizations**. Chicago: Rand McNally.

Sells, S. B. 1963. Dimensions of stimulus situations which account for behavior variances. In S. B. Sills (Eds.), **Stimulus determinants of behavior**: 3-15. New York: Ronald Press.

Selznick, P. 1957. **Leadership in administration**. New York: Harper & Row.

Senger, J. 1970. The religious manager. **Academy of Management Journal**, 13(2): 179-186.

Senger, J. 1971. Manager's perceptions of subordinates' competence as a function of personal value orientations. **Academy of Management Journal**, 14(4): 415-423.

Siehl, C., & Martin, J. 1984. The role of symbolic management: How can managers effectively transmit organizational culture? In J. G. Hunt, D. M. Hosking, C. A. Schreisheim, & R. Stewart (Eds.), **Leaders and managers: International perspectives on managerial behavior and leadership**: New York: Pergamon Press.

Siehl, C., & Martin, J. 1988. Measuring organizational culture: Mixing qualitative and quantitative methods. In M. O. Jones, M. D. Moore, & R. C. Snyder (Eds.), Inside organizations: Understanding the human dimension: 79-103. Newbury Park, CA: SAGE Publications.

Siehl, C., & Martin, J. 1990. Organizational culture: A key to financial performance? In B. Schneider (Eds.), Organizational culture and climate (Frontiers of Industrial and Organizational Psychology): San Francisco, CA: Jossey-Bass.

Siehl, C., & Murray, A. (1987). Using quantitative analysis to measure cultural values (Working paper No. University of California (Los Angeles).

Silver, N. C., & Dunlap, W. P. 1987. Averaging correlation coefficients: Should Fisher's z transformation be used? Journal of Applied Psychology, 72: 146-148.

Simon, S. B., & Clark, J. 1975. More values clarification. San Diego: Pennant Press.

Simon, S. B., Howe, L. W., & Kirschenbaum, H. 1972. Values clarification: A handbook for teachers and students. New York: Hart Publishing.

Singer, M. G. 1989. Value judgments. In A. P. Griffiths (Eds.), Key Themes in Philosophy: 145-172. Cambridge, UK: Cambridge University Press.

Skinner, B. F. 1953. Science and human behavior. New York: Macmillan.

Skinner, B. F. 1971. Beyond freedom and dignity. New York: Knopf.

Smircich, L. 1983a. Concepts of culture and organizational analysis. Administrative Sciences Quarterly, 28: 339-358.

Smircich, L. 1983b. Organizations as shared meanings. In L. R. Pondy, P. J. Frost, G. H. Morgan, & T. C. Dandridge (Eds.), Organizational Symbolism: 55-65. Greenwich, CT: JAI Press.

Smith, C. A., Organ, D. W., & Near, J. P. 1983. Organizational citizenship behavior: Its nature and antecedents. Journal of Applied Psychology, 68: 653-663.

Smith, M. B. 1969. Social psychology and human values. Chicago: Aldine.

Smith, P. C., Balzer, W., Brannick, M., Chia, W., Eggleston, S., Gibson, W., Johnson, B., Josephson, H., Paul, K., Reilly, C., & Whalen, M. 1987. The revised JDI: A facelift for an old friend. The Industrial-Organizational Psychologist, 24: 31-33.

Smith, P. C., Kendall, L. M., & Hulin, C. L. 1969. The measurement of satisfaction in work and retirement. Chicago: Rand McNally.

Snyder, M. 1974. Self-monitoring of expressive behavior. Journal of Personality and Social Psychology, 30: 526-537.

Snyder, M. 1979. Self-monitoring processes. In L. Berkowitz (Eds.), Advances in experimental social psychology: New York: Academic Press.

Snyder, M. 1987. **Public appearances private realities: The psychology of self-monitoring**. New York: W.H. Freeman & Co.

Snyder, M., & Campbell, B. H. 1982. Self-monitoring: The self in action. In J. Suls (Eds.), **Psychological perspectives on the self**: Hillsdale, NJ: Erlbaum.

Snyder, M., & Gangestad, S. 1986. On the nature of self-monitoring: Matters of assessment, matters of validity. **Journal of Personality and Social Psychology**, 51: 125-139.

Soelberg, P. A. 1965. **A study of decision making: Job choice**. Unpublished doctoral dissertation, Carnegie Institute of Technology.

Spearman, C. 1904. The proof and measurement of association between two things. **American Journal of Psychology**, 15: 72-101.

Spranger, E. 1928. **Types of men**. Halle, Germany: Max Neimeyer Verlag.

Springfield, A. 1988. An Aristotelian resolution of the ideographic versus nomothetic tension. **American Psychologist**, 43: 425-430.

Staw, B. M. 1984. Organizational behavior: A review and reformulation of the field's outcome variables. **Annual Review of Psychology**, 35: 627-666.

Staw, B. M., & Ross, J. 1985. Stability in the midst of change: A dispositional approach to job attitudes. **Journal of Applied Psychology**, 70: 469-480.

Steel, R. P., & Ovalle, N. K. 1984. A review and meta-analysis of research on the relationship between behavioral intentions and employee turnover. **Journal of Applied Psychology**, 69(4): 673-686.

Steele, F. I. 1973. **Physical settings and organizational development**. Reading, MA: Addison-Wesley.

Steers, R. M., & Mowday, R. T. 1981. Employee turnover and post-decision accommodation processes. In L. L. Cummings & B. M. Staw (Eds.), **Research in organizational behavior**: 235-281. Greenwich, CT: JAI Press.

Steers, R. M., & Rhodes, S. R. 1978. Major influences on employee attendance: A process model. **Journal of Applied Psychology**, 63: 391-407.

Stephenson, W. 1950. A statistical approach to typology; the study of trait-universes. **Journal of Clinical Psychology**, 6: 26-38.

Stephenson, W. 1952. Some observations on Q technique. **Psychological Bulletin**, 49: 483-498.

Stephenson, W. 1953. **The study of behavior**. Chicago: University of Chicago Press.

Strahan, R., & Gerbasi, K. C. 1975. Short, homogeneous versions of the Marlowe-Crowne Social Desirability Scale. **Journal of Personality and Social Psychology**, 31: 191-193.

Super, D. E. 1953. A theory of vocational development. American Psychologist, 8: 185-190.

Svenson, O. (1974). A note on think aloud protocols obtained during the choice of a home (Reports from the Psychological Laboratories, No. 421), University of Stockholm.

Tabachnick, B. G., & Fidell, L. S. 1989. Using multivariate statistics (2nd ed.). New York: Harper & Row.

Taylor, S. E., & Thompson, S. C. 1982. Stalking the elusive "vividness" effect. Psychological Review, 89: 155-181.

Terborg, J. R. 1981. Interactional psychology and research on human behavior in organizations. Academy of Management Review, 6: 569-176.

Thomas, K. W., & Tymon, W. G. 1982. Necessary properties of relevant research: Lessons from recent criticisms of the organizational sciences. Academy of Management Review, 7(3): 345-352.

Thompson, B., Levitov, J. E., & Miederhoff, P. A. 1982. Validity of the Rokeach Value Survey. Educational and Psychological Measurement, 42: 899.

Thurstone, L. L. 1946. Comment. American Journal of Sociology, 52: 39-50.

Tichy, N. M., Fombrun, C. J., & Devanna, M. A. 1982. Strategic human resources management. Sloan Management Review, 23(2): 47-61.

Titus, H. H., Smith, M. S., & Nolan, R. T. 1986. Living issues in philosophy (8th ed.). Belmont, CA: Wadsworth.

Tom, V. R. 1971. The role of personality and organizational images in the recruiting process. Organizational Behavior and Human Performance, 6: 574-592.

Triandis, H. C., Vassiliou, V., Vassiliou, G., Tanaka, Y., & Shanmugam, A. V. (Ed.). 1972. The analysis of subjective culture. New York: Wiley.

Trice, H. M., & Beyer, J. M. 1985. Using six organizational rites to change culture. In R. H. Kilmann, M. J. Saxton, & R. Serpa (Eds.), Gaining control of the corporate culture: 370-399. San Francisco: Jossey-Bass.

Tucker, R. W., & McCoy, W. J. 1989. Objective assessment of organizational culture: Generalizations from 10 validation studies. Paper presented at the annual meeting of the Academy of Management, Washington, DC.

Tunstall, W. B. 1986. The breakup of the Bell system: A case study in cultural transformation. California Management Review, 28(2): 110-125.

Turner, R. G., Scheier, M. F., Carver, C. S., & Ickes, W. 1978. Correlates of self-consciousness. Journal of Personality Assessment, 42: 285-289.

Ulrich, D., Brockbank, W., & Yeung, A. 1989. Beyond belief: A benchmark for human resources. Human Resource Management, 28(3): 311-335.

Ulrich, D., & Lake, D. 1991. Organizational capability: Creating competitive advantage. **Academy of Management Executive**, 5(1): 77-91.

Vaillant, G. 1977. **Adaptation to life**. Boston: Little Brown.

Van Maanen, J. 1978. People processing: Strategies of organizational socialization. **Organizational Dynamics**, 7(4): 1-20.

Van Maanen, J. 1982. Introduction. In J. Van Maanen, J. M. Dabbs, & R. R. Faulkner (Eds.), **Varieties of qualitative research**: 7-10. Beverly Hills, CA: SAGE Publications.

Vitalari, N. P. 1980. **A study of business systems analysis problem solving behavior in the requirements determination task for computer-based information systems**. Unpublished doctoral dissertation, University of Minnesota.

Volkart, E. H. 1968. W.I. Thomas. In D. J. Sills (Eds.), **International Encyclopedia of the Social Sciences**: 1-7. New York: Macmillan & Free Press.

Vroom, V. H. 1964. **Work and motivation**. New York: Wiley.

Wallach, E. J. 1983. Individuals and organizations: The cultural match. **Training and Development Journal**, 37: 29-36.

Walton, R. E. 1985. From control to commitment in the workplace. **Harvard Business Review**, 63(2): 77-84.

Wanous, J. P., & Lawler, E. E. 1972. Measurement and meaning of job satisfaction. **Journal of Applied Psychology**, 56: 95-105.

Watson, J. B., & Rayner, R. 1920. Conditioning emotional reactions. **Journal of Experimental Psychology**, 3: 1-14.

Watson, T., Jr. 1963. **A business and its beliefs**. New York: McGraw-Hill.

Weber, M. 1958. **The Protestant ethic and the spirit of capitalism**. New York: Scribner.

Webster, J., & Starbuck, W. H. 1988. Theory building in industrial and organizational psychology. In C. L. Cooper & I. Robertson (Eds.), **International review of industrial and organizational psychology**: 93-138. New York: John Wiley & Sons.

Weick, K. E. 1977. Enactment processes in organizations. In B. M. Staw & G. Salancik (Eds.), **New directions in organizational behavior**: 267-300. Chicago: St Clair Press.

Weiss, H. M., & Adler, S. 1984. Personality and organizational behavior. In L. L. Cummings & B. M. Staw (Eds.), **Research in organizational behavior**: 1-50. Greenwich, CT: JAI Press.

White, R. K. 1951. **Value analysis: The nature and use of the method**. New York: Society for the Study of Social Issues.

Whyte, W. F. 1943. **Street corner society**. Chicago: Chicago University Press.

Whyte, W. F. 1948. **Human relations in the restaurant industry**. New York: Putnam.

Wicker, A. W. 1969. Attitudes vs. actions: The relationship of verbal and overt behavioral responses to attitude objects. **Journal of Social Issues**, 25: 41-78.

Wiener, Y. 1988. Forms of value systems: A focus on organizational effectiveness and cultural change and maintenance. **Academy of Management Review**, 14(4): 534-545.

Wilkins, A. L. 1983. Organizational stories as symbols which control the organization. In L. R. Pondy, P. J. Frost, G. Morgan, & T. C. Dandridge (Eds.), **Organizational Symbolism**: 81-92. Greenwich, CT: JAI Press.

Wilkins, A. L. 1984. The creation of company cultures: The role of stories in human resource systems. **Human Resource Management Journal**, 23: 41-60.

Wilkins, A. L., & Dyer, W. G. 1988. Toward culturally sensitive theories of culture change. **Academy of Management Review**, 13(4): 522-533.

Wilkins, A. L., & Patterson, K. J. 1985. You can't get there from here: What will make culture-change projects fail. In R. H. Kilmann, M. J. Saxton, & R. Serpa (Eds.), **Gaining control of the corporate culture**: 262-291. Sam Francisco: Jossey-Bass.

Williams, L. J., Podsakoff, P. M., & Huber, V. (1986). **Determinants of organizational citizenship behaviors: A structural equation analysis with cross-validation** (Unpublished manuscript), Indiana University.

Williams, R. 1970. **American society: A sociological interpretation (2nd ed.)**. New York: Alfred A. Knopf.

Williams, R. M. 1968. The concept of values. In E. Sills (Eds.), **International encyclopedia of the social sciences**: New York: Macmillan.

Wilson, T. D., Dunn, D. S., Kraft, D., & Lisle, D. J. 1989. Introspection, attitude change, and attitude-behavior consistency: The disruptive effects of explaining why we feel the way we do. In L. Berkowitz (Eds.), **Advances in experimental social psychology**: 287-343. San Diego, CA: Academic Press.

Wolcott, H. 1975. Criteria for an ethnographic approach to research in schools. **Human Organization**, 34: 111-128.

Wollack, S., Goodale, J. G., Wijting, J. P., & Smith, P. C. 1971. Development of the survey of work values. **Journal of Applied Psychology**, 55(4): 331-338.

Wright, G., & Ayton, P. 1988. Immediate and short-term judgmental forecasting: Personologism, situationism or interactionism. **Personality and Individual Differences**, 9(1): 109-120.

Wright, P. H., & Crawford, A. C. 1971. Agreement and friendship: A close look and some second thoughts. **Representative Research in Social Psychology**, 2: 52-69.

Wuthnow, R. 1987. **Meaning and moral order: Explorations in cultural analysis**. Berkeley: University of California Press.

Yeung, A., Brockbank, W., & Ulrich, D. 1989. **Organizational culture and human resource practices: An empirical assessment.** Annual meeting of the Academy of Management, Washington, DC.

Zajonc, R. B. 1968. Cognitive theories in social psychology. In G. Lindzey & E. Aronson (Eds.), **Handbook of social psychology**: Reading, MA: Addison-Wesley.

Zajonc, R. B. 1983. Discussion of Abelson's talk on Cartwright's founders' day. **Personality and Social Psychology Bulletin**, 9(1): 55-59.

Zammuto, R. F., & Krakower, J. Y. (1988). **Assessing organizational culture: A competing values approach** (Unpublished manuscript).

Zanna, M. P., & Remple, J. K. 1988. Attitudes: A new look at an old concept. In D. Bartal & A. W. Kruglanski (Eds.), **The social psychology of knowledge**: 315-334. Cambridge, UK: Cambridge University Press.

Zavalloni, M. 1978. L'approche neo-idiographic en psychologie: Convergences interdisciplinaires. **Sciences de l'Homme**, 9: 57.

Zavalloni, M. 1980. Values. In H. C. Triandis & R. W. Brislin (Eds.), **Handbook of cross-cultural psychology**: 73-120. Boston: Allyn & Bacon.

Znaniecki, F. 1918. Methodological note. In W. I. Thomas & F. Znaniecki (Eds.), **The Polish peasant in Europe and America**: Boston: Bodger.

APPENDIX A

SEMI-STRUCTURED INTERVIEW PROTOCOL

APPENDIX A - SEMI-STRUCTURED INTERVIEW PROTOCOL

Objectives:

1. To generate an item pool of potential workplace shared value dimensions commensurate at both individual and organizational levels of analysis.

2. To gain insights into the extent to which these shared values are contingent on industry, level in the hierarchy, professional, functional, and role moderators.

3. To generate a list of behavioral descriptors representative of the shared value concepts.

4. To determine the origins of the organization's required values in terms of senior management's personal preferences, past traditions and learning, professional precedents, legal precedents, etc.

5. To gain insights into the degree to which individual-organizational value congruence is a consideration in the employee selection process.

6. To determine the means, if any, by which personal values are currently assessed in employee selection.

7. To gain insights into the degree to which selection based on value congruence is perceived as an ethical issue.

8. To determine the extent to which organizations have explicit sets of required values and means through which these required values have been communicated.

9. To determine the extent to which the organization's required values have been consciously linked to the corporate strategy.

10. To gain insights as to the potential advantages and disadvantages of value congruence within organizations.

Questions: (Manager Version - this basic protocol was adjusted in its wording in order to apply to the various types of respondent -- for example: executive recruiters.)

A. Expected Output = item pool of potential workplace shared value dimensions.

1. What do you consider are the most important personal beliefs and values necessary for someone to fit into this organization ?

(The strategy in this question is to allow the respondent the opportunity to "think out loud," at first, and then to probe as to the applicability of the value concepts mentioned in terms of hierarchical position and role expectations.)

Follow Up Probes: (Based on the value concepts mentioned.)

a. Why are these particular values important to your company ?

b. Which ot these values apply to all employees regardless of position and responsibilities within the organization?

c. To what degree are values shared within this organization?

d. Which of these values tend to be more applicable to:
1) senior management ? 2) middle management ? 3) first-line supervisors ?

e. Which of these values tend to be more a function of one's role and/or profession within the organization? (i.e.: sales, production, research, finance and accounting, and administration)?

f. Are there other factors (for example - unionization, multi-national company) which might determine when a certain value would be required of one group of employees but not another ?

B. Expected Output = behavioral descriptors of the value concepts mentioned.

2. You mentioned _______ as a required value. How would you go about determining if an employee actually had that value?

Follow Up Probes:

a. What behaviors or actions would you look for?

b. Are any of these behaviors directly rewarded by the organization?

C. Expected output = origins of the value concepts mentioned ?

3. What do you think are some of the origins of these values we have been discussing?

Follow Up Probes:

a. Did you originate them?, in the company tradition?, from a take-over or parent organization?, from the current dominant coalition or chief executive?, relate back to the beliefs of the founder?, found across the industry?, due to the nature of your controlling legislation?

D. Expected Output = views on value congruence in employee selection.

4. To what extent is value congruence a factor when you choose a new employee for this company?

Follow Up Probes:

a. Does this depend on level and importance of the position ?
b. How important is value congruence relative to the more traditional selection criteria such as experience, skills, and professional and academic qualifications?

5. If value congruence is an issue: How do you go about determining the degree to which a potential candidate has that particular value? Let's consider your list of values. How do you assess ________ ?

Follow up Probes:

a. How explicit are these measures?
b. What degree of confidence do you place in these measures?

6. Do you think that the practice of employee selection based on value congruence is or may become an ethical issue?

Follow Up Probes:

a. Were your values assessed in taking this position?
b. If so, any feelings on the subject?

E. Expected Output = understanding of the degree to which value requirements are formalized and communicated to employees.

7. Does you company have a formal document outlining its value requirements?

Follow Up Probes:

a. Description / nature of the document?

b. Degree of availability to employees?

8. What other ways, formal (if any others) and/or informal, are employees made aware of this organization's required values?

Follow Up Probes:

a. Socialization, leadership, training, discussions, ceremonies, rituals?

b. Degree to which managers attempt to discuss shared values?

F. Expected Output = perception of the degree to which required values within the organization are linked to the organization's strategy.

9. Does the topic of values and values-management come up when the long-term direction and strategy of this organization is discussed?

Follow Up Probe:

a. Explicit linkages between required values and strategies?

G. Expected Output = advantages and disadvantages of value congruence.

10. If you were to achieve (or have) a high degree of value congruence within the organization what would be / are the advantages?

11. If you were to achieve (or have) a high degree of value congruence within the organization what would be / are the disadvantages?

H. Expected Output = opportunity for the respondent to make final remarks.

12. Any concluding comments on shared values in the workplace?

APPENDIX B

SURVEY INSTRUMENTATION
QUESTIONNAIRES ONE & TWO

Western Business School

Research Project

Questionnaire One

The University of Western Ontario
London, Ontario, Canada
N6A 3K7

The UNIVERSITY *of* WESTERN ONTARIO

School of Business Administration

Dear Participant:

Thank you for taking the time to participate in this research study. Your participation is very much appreciated.

This study consists of two separate questionnaires. The first questionnaire is contained in this booklet. We request that you now complete and return this questionnaire using the pre-addressed envelope provided. You will receive the second questionnaire in two weeks. The time period separating our two questionnaires is an important aspect of our research design. Therefore, please do not wait for the arrival of the second questionnaire in order to complete and return this first questionnaire.

Please be open and candid in your responses. All information you provide will be strictly confidential. Furthermore, your responses are anonymous. There is no need to identify yourself. The information you provide is for academic research sponsored by the University of Western Ontario.

This questionnaire has been designed for your convenience. Very little writing is required. In most cases you are asked to circle a number or write a single letter (e.g. T = *true*, F = *false*) in order to indicate your response. If you do not wish to respond to any particular question, then please draw a line through that question. If you feel that you do not understand a question, then please put a question mark in the space provided for your response. If you wish to make any comments while you are completing this questionnaire, please feel free to write a note in the margin.

For your interest, all participating organizations in this study will receive a summary of our results. These results will be available to you should you wish to follow up on this research. Again, thank you for your participation and if you have any questions or concerns please do not hesitate to contact me at (519) 661-3206.

Sincerely,

Paul McDonald

Paul McDonald
Project Director

London, Ontario • Canada • N6A 3K7 • Telephone: (519) 661-3206
Fax: (519) 661-3485 • Telex 064-7134 UWO TEL LDN

General Instructions

- Please attempt all questions.
- Be perfectly open and candid.
- This data is for academic research.
- Do not identify yourself anywhere in the booklet.
- Do not linger too long on any one question, your first response is probably your best.
- Each section has a set of instructions. Please read these instructions prior to starting to answer.
- On the back inside cover of this booklet, we request that you make up a confidential five digit code number. This code can be any five digit number of your own choice. We need this code number in order to match your first questionnaire with your second questionnaire. Therefore, it is important that you put a number on the back inside cover of this questionnaire and that you remove the stub provided in order to have the same number available to attach to your second questionnaire. Thank you.

Part 1. **Your Personal Values**

- This is a survey of personal value systems. There are no right or wrong answers in this survey. The best answer is your own personal opinion.

- On the next page is a list of 24 values presented in alphabetical order. We are interested in finding out *the relative importance of these values to you.*

- We recommend that you use a pencil to complete this exercise. This will allow you to easily make changes in your ranking.

- First, study the entire list of 24 values carefully. Then, place a "1" next to the value which is *most* important to you, place a "2" next to the value which is *second most* important, and so on. The value which is *least important* to you should be ranked "24." Please do not give the same ranking number to two or more different values.

- When you have completed ranking all the values, go back and check over your list. Feel free to make changes. Please take all the time you need to think about this, so that the end result truly represents the ranking of *your personal values.*

- It is important to keep in mind that the purpose of this value ranking is to reflect your *real operating values* (personal preferences which drive your day-to-day behavior). The purpose of this exercise is <u>not</u> to measure your ideal values (desirable standards toward which you aspire or think of as worthy ideals).

Rank from "1" (most important to you) to "24" (least important to you):

_____ **Adaptability** (being flexible and changing easily to meet new circumstances)

_____ **Aggressiveness** (being aggressive and pursuing goals vigorously)

_____ **Autonomy** (being independent and free to act)

_____ **Broad-Mindedness** (accepting different viewpoints and opinions)

_____ **Cautiousness** (being cautious and minimizing exposure to risk)

_____ **Consideration** (being caring, kind and considerate)

_____ **Cooperation** (being cooperative and working well with others)

_____ **Courtesy** (being polite and having respect for individual dignity)

_____ **Creativity** (developing new ideas and applying innovative approaches)

_____ **Development** (achieving personal growth, learning and development)

_____ **Diligence** (working long and hard to achieve results)

_____ **Economy** (being thrifty and careful in spending)

_____ **Experimentation** (taking a trial-and-error approach to problem solving)

_____ **Fairness** (being fair and providing just recognition on the basis of merit)

_____ **Forgiveness** (being forgiving and understanding when errors occur)

_____ **Formality** (upholding proper ceremony and maintaining traditions)

_____ **Humor** (creating fun and being lighthearted)

_____ **Initiative** (seizing opportunity and taking on responsibility without hesitation)

_____ **Logic** (being rational and thinking in terms of facts and figures)

_____ **Moral Integrity** (being honorable and following ethical principles)

_____ **Obedience** (complying with directions and conforming to rules)

_____ **Openness** (being straightforward, sincere and candid in discussions)

_____ **Orderliness** (being neat, tidy and well-organized)

_____ **Social Equality** (being equal to others and avoiding status differences)

N.B. - Assign each ranking number (1 to 24) only once. Please do not repeat the same ranking number for different values.

Part 2. **Your Typical Characteristics**

- The following page contains a number of descriptive word phrases (a single word or set of related words) which have been arranged in random order.

- Please think about each word phrase and indicate *the degree to which that word phrase characterizes the real you.*

- Be as objective, open and accurate about yourself as possible.

- Score each word phrase on a scale of 1 - 2 - 3 - 4 - 5 - 6 - 7 as follows:

1<---------2---------3---------4---------5---------6--------->7

This word phrase does not describe me at all.	**This word phrase describes me perfectly.**

For example:

__7__ optimistic	(the respondent has indicated that the word optimistic is a *perfectly accurate* description of himself or herself)
__4__ spontaneous	(the respondent has indicated that the word spontaneous is a *moderately accurate* description of himself or herself)
__1__ modest	(the respondent has indicated that the word modest is *not at all an accurate* description of himself or herself)

You - Typical Characteristics

This word phrase describes me: (not at all) 1<---2---3---4---5---6--->7 (perfectly)

____ playful	____ demanding	____ polite	____ quick-to-take-responsibility
____ risk-taker	____ unforgiving	____ eager-to-grow	____ not-one-to-hold-a-grudge
____ well-mannered	____ well-organized	____ inventive	____ observant-of-formalities
____ loving	____ thrifty	____ strong-morals	____ straight-forward & direct
____ conventional	____ jovial	____ analytical	____ broad-minded
____ untidy	____ conforming	____ industrious	____ dislike-status-differences
____ take-charge	____ tender-hearted	____ safety-minded	____ well-kept-workspace
____ educated	____ self-reliant	____ traditional	____ strive-for-justice
____ forceful	____ ingenious	____ careful-spender	____ cooperative-with-others
____ fair-minded	____ adventurous	____ team-player	____ an-original-thinker
____ hard-working	____ candid & open	____ assertive	____ ethical
____ speak-directly	____ liberal-outlook	____ logical	____ try-out-different-ways
____ honorable	____ adaptable	____ courteous	____ enjoy changes
____ imaginative	____ not-resentful	____ obey-the-rules	____ old-fashioned
____ equality-for-all	____ high-principles	____ high-initiative	____ let-bygones-be-bygones
____ economical	____ enjoy-learning	____ cheerful	____ tolerant-of-differences
____ independent	____ mathematical	____ set-in-my-ways	____ willing-to-accept-direction
____ easy-going	____ willing-to-share	____ neat	____ stay-with-what-works
____ civil-to-others	____ work-together	____ considerate	____ self-determining
____ experimental	____ objective & fair	____ frugal	____ believe-in-social-equality
____ cautious	____ lighthearted	____ frank	____ lots-of-get-up-and-go
____ even-handed	____ tireless-worker	____ complying	____ receptive-to-others'-views
____ rational-thinker	____ individualistic	____ aggressive	____ thirsty-for-knowledge
____ caring	____ seek-out-variety	____ use-trial &error	____ like-to-work-by-myself

Please try to be as realistic about yourself as possible and avoid the temptation to give high scores (e.g. 5-6-7) to all of the socially desirable characteristics. Your scores should balance out across the 1 - 7 range.

Part 3. **Your Relationship To The Organization**

- Listed below is a series of statements that represent possible feelings that individuals might have about the company or organization in which they work.

- With respect to your own feelings about the particular organization in which you are now working, please indicate the degree of your agreement or disagreement with each statement by putting a circle around one of the seven alternatives to the right of each statement:

1 = strongly disagree
2 = moderately disagree
3 = slightly disagree
4 = neither disagree nor agree
5 = slightly agree
6 = moderately agree
7 = strongly agree

For Example:

I really care about the fate of this organization. 1 2 3 4 5 6 7

Respondent has indicated that he or she *moderately disagrees* with the statement with respect to his or her own feelings about the organization.

	strongly disagree						strongly agree
I would be very happy to spend the rest of my career with this organization..	1	2	3	4	5	6	7
I am not afraid of what might happen if I quit my job without having another one lined up.	1	2	3	4	5	6	7
I do not have the right type of personality to fit in this organization............	1	2	3	4	5	6	7
I think that people these days move from company to company too often.....	1	2	3	4	5	6	7

Your Relationship To The Organization

7

	strongly disagree						strongly agree
Within the next few years, I intend to be working for another organization	1	2	3	4	5	6	7
I enjoy discussing my organization with people outside it	1	2	3	4	5	6	7
It would be very hard for me to leave my organization right now, even if I wanted to.	1	2	3	4	5	6	7
I do not believe that a person must always be loyal to his or her organization.	1	2	3	4	5	6	7
I really feel as if this organization's problems are my own	1	2	3	4	5	6	7
Too much in my life would be disrupted if I decided I wanted to leave my organization right now.	1	2	3	4	5	6	7
Working at this organization has caused me to experience internal conflict with respect to my personal values and beliefs.	1	2	3	4	5	6	7
Jumping from organization to organization does not seem at all unethical to me.	1	2	3	4	5	6	7
I think that I could easily become as attached to another organization as I am to this one.	1	2	3	4	5	6	7
It wouldn't be too costly for me to leave my organization now	1	2	3	4	5	6	7
My personal values are very similar to this organization's expectations	1	2	3	4	5	6	7
One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.	1	2	3	4	5	6	7
I do not feel like 'part of the family' at my organization	1	2	3	4	5	6	7

Your Relationship To The Organization

	strongly disagree						strongly agree
Right now, staying with my organization is a matter of necessity as much as desire.	1	2	3	4	5	6	7
If I got another offer for a better job elsewhere I would not feel it was right to leave my organization.	1	2	3	4	5	6	7
I do not feel 'emotionally attached' to this organization	1	2	3	4	5	6	7
I feel that I have too few options to consider leaving this organization	1	2	3	4	5	6	7
I was taught to believe in the value of remaining loyal to one organization	1	2	3	4	5	6	7
This organization has a great deal of personal meaning for me	1	2	3	4	5	6	7
One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.	1	2	3	4	5	6	7
Things were better in the days when people stayed with one organization for most of their careers.	1	2	3	4	5	6	7
I do not feel a strong sense of belonging to my organization	1	2	3	4	5	6	7
One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice - another organization may not match the overall benefits I have here.	1	2	3	4	5	6	7
I do not think that wanting to be a 'company man' or 'company woman' is sensible anymore.	1	2	3	4	5	6	7
I fully intend to spend the rest of my career at this organization	1	2	3	4	5	6	7
In terms of its culture and values, I really feel 'at home' in this organization	1	2	3	4	5	6	7

Part 4. **Your Level Of Job Satisfaction ***

- We are interested in the degree to which you are satisfied with five aspects of your present job: work, supervision, co-workers, promotions, and pay.

- Consider each descriptive item shown below in relation to the specific aspect of your job as indicated. If the item *describes* that aspect of your job, put a "Y" in the blank space. If the item *does not describe* that aspect of your job, put a "N" in the blank space. If you are *undecided*, put a "?" in the blank space.

"Y" = YES	"N" = NO	"?" = UNDECIDED

WORK ON PRESENT JOB:	SUPERVISION:	CO-WORKERS:
_____ Fascinating	_____ Asks my advice	_____ Stimulating
_____ Routine	_____ Hard to please	_____ Boring
_____ Satisfying	_____ Impolite	_____ Slow
_____ Boring	_____ Praises good work	_____ Helpful
_____ Good	_____ Tactful	_____ Stupid
_____ Creative	_____ Influential	_____ Responsible
_____ Respected	_____ Up-to-date	_____ Fast
_____ Uncomfortable	_____ Doesn't supervise enough	_____ Intelligent
_____ Pleasant	_____ Has favorites	_____ Easy to make enemies
_____ Useful	_____ Tells me where I stand	_____ Talk too much
_____ Tiring	_____ Annoying	_____ Smart
_____ Healthful	_____ Stubborn	_____ Lazy
_____ Challenging	_____ Knows job well	_____ Unpleasant
_____ Too much to do	_____ Bad	_____ Gossipy
_____ Frustrating	_____ Intelligent	_____ Active
_____ Simple	_____ Poor planner	_____ Narrow Interests
_____ Repetitive	_____ Around when needed	_____ Loyal
_____ Gives sense of accomplishment	_____ Lazy	_____ Stubborn

Your Level of Job Satisfaction

"Y" = YES	"N" = NO	"?" = UNDECIDED

OPPORTUNITIES FOR PROMOTION:

_____ Good opportunities for promotion

_____ Opportunities somewhat limited

_____ Promotion on ability

_____ Dead-end job

_____ Good chance for promotion

_____ Unfair promotion policy

_____ Infrequent promotions

_____ Regular promotions

_____ Fairly good chance for promotion

PRESENT PAY:

_____ Income adequate for normal expenses

_____ Fair

_____ Barely live on income

_____ Bad

_____ Income provides luxuries

_____ Insecure

_____ Less than I deserve

_____ Well paid

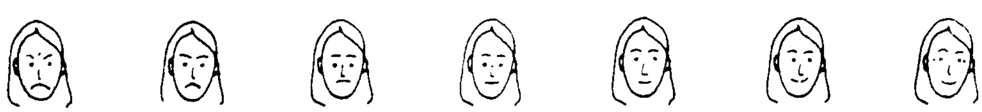
_____ Underpaid

YOUR OVERALL LEVEL OF SATISFACTION WITH THE ORGANIZATION:

- Consider the organization that you work for and the things that you do for this organization.

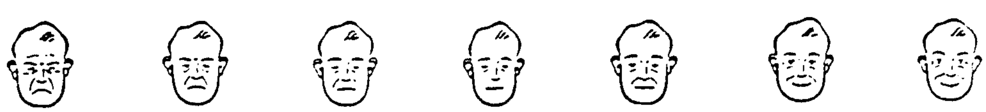
- Circle the face on the appropriate scale which best expresses how you feel about your association with this organization.

Female Respondents:



1 2 3 4 5 6 7

Male Respondents:



1 2 3 4 5 6 7

Part 5. Your Typical Behavior In The Organization

- Listed below are a series of behaviors representing possible actions that employees could typically take while in their work settings.
- Consider each behavior and circle the number (7, 6, 5, 4, 3, 2, 1) that best describes how *characteristic this behavior is of you* in your current work environment.

1 = not at all characteristic
7 = very characteristic

	not at all characteristic						very characteristic
I help other employees with their work when they have been absent	1	2	3	4	5	6	7
I am punctual in arriving at work on time in the morning and after lunch	1	2	3	4	5	6	7
I volunteer to do things not formally required by my job	1	2	3	4	5	6	7
I take undeserved work breaks.	1	2	3	4	5	6	7
I take the initiative to orient new employees to the department even though it is not part of my job description.	1	2	3	4	5	6	7
My attendance at work is better than average	1	2	3	4	5	6	7
I help others when their work load increases	1	2	3	4	5	6	7
I give advance notice if I am unable to come to work	1	2	3	4	5	6	7
I spend a great deal of time in personal telephone conversations	1	2	3	4	5	6	7
I do not take unnecessary time off work	1	2	3	4	5	6	7
I assist my supervisor / manager with his or her duties	1	2	3	4	5	6	7
I make innovative suggestions to improve the overall quality of the department.	1	2	3	4	5	6	7
I do not take extra breaks.	1	2	3	4	5	6	7
I do not spend a great deal of time in non-work related conversations	1	2	3	4	5	6	7

Part 6. **True-False Questions**

- Listed below are a number of statements concerning personal attitudes and traits.
- Read each item and decide whether the statement is *true* or *false* as it pertains to you personally.

"T" = True
"F" = False

_____ I never hesitate to go out of my way to help someone in trouble.

_____ I have never intensely disliked anyone.

_____ I sometimes feel resentful when I don't get my own way.

_____ There have been times when I felt like rebelling against people in authority even though I knew they were right.

_____ I can remember "playing sick" to get out of something.

_____ When I don't know something I don't at all mind admitting it.

_____ I am always courteous, even to people who are disagreeable.

_____ I would never think of letting someone else be punished for my wrong doings.

_____ There have been times when I was quite jealous of the good fortune of others.

_____ I am sometimes irritated by people who ask favors of me.

Part 7. **Your Attendance Behavior**

Please indicate the *number of work days* that you were absent from work last year:

Not absent at all _____ (please check one category)
1 to 5 days _____
5 to 10 days _____
11 to 15 days _____
16 to 20 days _____
21 to 25 days _____
26 to 30 days _____
Over 30 days _____

❐.... please check this box if most or all of this absence was due to serious illness (e.g. illness requiring a period of hospitalization).

Please check the box indicating the *number of episodes* of absence from work you had last year: (An episode of absence is one continuous, unbroken period away from your workplace.)

❐-no episodes ❐-1 to 5 episodes ❐-6 to 10 episodes ❐-11 to 15 episodes ❐-15 + episodes

Part 8. **Demographic Information**

- In this section we need some brief demographic information about you.

Position: (Check one)
- Executive Management .... ____
- Management ([redacted]).............. ____
- Professional (Individual Contributor).. ____
- Other (specify)______________________

Organization: (Check one)
Just prior to the [redacted]/[redacted] merger in [redacted], I was employed by:
- [redacted] .... ____
- [redacted] .... ____
- I was not employed by either organization at that time ...... ____

Function: (Check one)
- Sales / Marketing ..... ____
- Production .... ____
- Finance / Accounting . ____
- Administration / Legal ____
- Human Resources .... ____
- Research / Development ____
- Other (specify)______________________

Work Location: (Check one)
- Canada ____
- USA ____
- Other ____

Operations: (Check one) - [redacted] ____ [redacted] ____
Other (please specify) ______________________

Work Area: (Check one)
- Business Services .... ____
- Research or Technology .. ____
- [redacted] .... ____
- Retail/Commercial or Supply & Direct Sales ____
- Other (please specify) ______________________

Personal Data:

Your Age: (Check one)
- Under 20 ____
- 20-25 ____
- 26-30 ____
- 31-35 ____
- 36-40 ____
- 41-45 ____
- 46-50 ____
- 51-55 ____
- 56-60 ____
- 60+ ____

Work Experience:
- Number of years in your current position ____ (Insert number e.g. 4.5 years)
- Number of years with the organization ____
- Total years of full-time work experience ____

Your Gender: (Check one)
- Male ____
- Female ____

Education (Highest Level): (Check one)
- Less than High School Grad. ____
- High School Grad............. ____
- Some Community College .. ____
- Community College Diploma ____
- Some University .... ____
- Bachelor's Degree .... ____
- Master's Degree .... ____
- Ph.D. Degree .... ____
- Professional Designation ______________________ (please indicate designation - e.g. C.A., P.Eng.)

Approximate Annual Salary Level: (Check one)
- Under $40,000......... ____
- $40,000. to $60,000... ____
- $60,001. to $80,000... ____
- $80,001. to $100,000 . ____
- Over $100,000.......... ____

Thank you for your time and participation !

P.S. Please do not forget to enter a code number on the back cover.

Without identifying yourself, we would like to be able to match your completed questionnaires.

Please insert a code number in the five boxes shown below. You may use any combination of five numbers.
However, we request that you avoid typical combinations such as: 1-2-3-4-5 or 9-9-9-9-9.

Also, please copy your code number in the boxes on the tear off stubs. Then tear off the two stubs and put them in a safe place.

You will need stub #1 to attach to your second questionnaire.

Stub #2 is for your own records.

Thank you !

Your confidential five digit code number:

Tear off along here prior to returning this questionnaire.

Stub #1: Please staple to Questionnaire Two.

Stub #2: For your own records.

Western Business School

Research Project

Questionnaire Two

The University of Western Ontario
London, Ontario, Canada
N6A 3K7

The UNIVERSITY of WESTERN ONTARIO
School of Business Administration

Dear Participant:

This is the second questionnaire in our study. Hopefully, you have had time to complete and return our first questionnaire. Thank you for your time and effort. Your involvement in this research is very much appreciated.

We request that you now complete and return this second questionnaire using the pre-addressed envelope provided.

Please be open and candid in your responses. All information you provide will be strictly confidential. Furthermore, your responses are anonymous. There is no need to identify yourself. However, it is important that you staple your confidential five digit code to the back inside cover of this booklet. This is the only means we have to match your two questionnaires.

This questionnaire has been designed for your convenience. Very little writing is required. In most cases you are asked to circle a number or write a single letter (e.g. T = *true*, F = *false*) in order to indicate your response. If you do not wish to respond to any particular question, then please draw a line through that question. If you feel that you do not understand a question, then please put a question mark in the space provided for your response. If you wish to make any comments while you are completing this questionnaire, please feel free to write a note in the margin.

As we mentioned in questionnaire one, all organizations participating in this study will receive a summary of our results. These results will be available to you should you wish to follow up on this research. Again, thank you for your participation and if you have any questions or concerns, please do not hesitate to contact me at (519) 661-3206.

Sincerely,

Paul McDonald

Paul McDonald
Project Director

London, Ontario • Canada • N6A 3K7 • Telephone: (519) 661-3206
Fax: (519) 661-3485 • Telex 064-7134 UWO TEL LDN

General Instructions

- Please attempt all questions.
- Be perfectly open and candid.
- This data is for academic research.
- Do not identify yourself anywhere in the booklet.
- Do not linger too long on any one question, your first response is probably your best.
- Each section has a set of instructions. Please read these instructions prior to starting to answer.
- Please staple stub #1 containing your confidential five digit code number to the back inside cover of this booklet. Thank you.

Part 1. **This Organization's Values**

- This survey of organizational values is based on the assumption that every organization has its own culture and values. The purpose of this questionnaire is to find out your perception of which values are considered important in your organization. There is no right or wrong answer to this survey. The best answer is based on your experiences and observations while working in the organization.

- On the next page is a list of 24 values presented in alphabetical order. We are interested in finding out *the relative importance of these values to the organization.*

- We recommend that you use a pencil to complete this exercise. This will allow you to easily make changes in the ranking.

- First, study the entire list of 24 values carefully. Then, place a "1" next to the value which is *most* important in this organization's culture, place a "2" next to the value which is *second most* important, and so on. The value which is the *least important* in this organization's culture should be ranked "24." Please do not give the same ranking number to two different values.

- When you have completed ranking all the values, go back and check over the list. Feel free to make changes. Please take all the time you need to think about this organization and its values, so that the end result truly represents *the real organizational culture.*

- It is important to keep in mind that the purpose of this ranking is to reflect the *true operating values* ("the way things are done around here") in the organization. The purpose of this exercise is <u>not</u> to measure the organization's officially espoused values, published or otherwise.

This Organization's Values 3

Rank from "1" (most important to this organization) to "24" (least important to this organization):

_____ **Adaptability** (being flexible and changing easily to meet new circumstances)

_____ **Aggressiveness** (being aggressive and pursuing goals vigorously)

_____ **Autonomy** (being independent and free to act)

_____ **Broad-Mindedness** (accepting different viewpoints and opinions)

_____ **Cautiousness** (being cautious and minimizing exposure to risk)

_____ **Consideration** (being caring, kind and considerate)

_____ **Cooperation** (being cooperative and working well with others)

_____ **Courtesy** (being polite and having respect for individual dignity)

_____ **Creativity** (developing new ideas and applying innovative approaches)

_____ **Development** (achieving personal growth, learning and development)

_____ **Diligence** (working long and hard to achieve results)

_____ **Economy** (being thrifty and careful in spending)

_____ **Experimentation** (taking a trial-and-error approach to problem solving)

_____ **Fairness** (being fair and providing just recognition on the basis of merit)

_____ **Forgiveness** (being forgiving and understanding when errors occur)

_____ **Formality** (upholding proper ceremony and maintaining traditions)

_____ **Humor** (creating fun and being lighthearted)

_____ **Initiative** (seizing opportunity and taking on responsibility without hesitation)

_____ **Logic** (being rational and thinking in terms of facts and figures)

_____ **Moral Integrity** (being honorable and following ethical principles)

_____ **Obedience** (complying with directions and conforming to rules)

_____ **Openness** (being straightforward, sincere and candid in discussions)

_____ **Orderliness** (being neat, tidy and well-organized)

_____ **Social Equality** (being equal to others and avoiding status differences)

Part 2. **To Fit Well Into This Organization . . .**

- Listed below is a series of statements. With respect to your current organization, please indicate the degree of your agreement or disagreement with each statement by putting a circle around one of the seven alternatives to the right of each statement.

To fit well into this organization, you have to:

	strongly disagree						strongly agree
Do what you are told	1	2	3	4	5	6	7
Act in a forceful, assertive manner	1	2	3	4	5	6	7
Be caring	1	2	3	4	5	6	7
Be personally competitive	1	2	3	4	5	6	7
Not wait to be told what to do	1	2	3	4	5	6	7
Start work early and stay late	1	2	3	4	5	6	7
Be adaptable to changing conditions	1	2	3	4	5	6	7
Maintain high personal integrity	1	2	3	4	5	6	7
Be willing to "stick your neck out."	1	2	3	4	5	6	7
Tolerate error as part of the learning process	1	2	3	4	5	6	7
Be reserved and serious	1	2	3	4	5	6	7
Be self-directed	1	2	3	4	5	6	7
Be a gentleman / gentlewoman	1	2	3	4	5	6	7
Be an original thinker	1	2	3	4	5	6	7
Be objective and logical	1	2	3	4	5	6	7
Be neat and tidy	1	2	3	4	5	6	7
Be traditional	1	2	3	4	5	6	7
Accept a variety of viewpoints	1	2	3	4	5	6	7
Be willing to grow as a person	1	2	3	4	5	6	7
Be careful about what you say	1	2	3	4	5	6	7
Stick to the "tried and true" methods	1	2	3	4	5	6	7
Know and keep to your place in the hierarchy	1	2	3	4	5	6	7
Be willing to share rewards and recognition	1	2	3	4	5	6	7
Like to be extravagant	1	2	3	4	5	6	7

Part 3. What Gets Rewarded In This Organization . . .

- Listed below is a series of statements. With respect to your current organization, please indicate the degree of your agreement or disagreement with each statement by putting a circle around one of the seven alternatives to the right of each statement.

This organization rewards employees who:

	strongly disagree						strongly agree
Take chances	1	2	3	4	5	6	7
Work hard	1	2	3	4	5	6	7
Play fair	1	2	3	4	5	6	7
Are kind to others	1	2	3	4	5	6	7
Act independently	1	2	3	4	5	6	7
Speak their minds	1	2	3	4	5	6	7
Question authority	1	2	3	4	5	6	7
Develop new skills	1	2	3	4	5	6	7
Take on additional responsibilities	1	2	3	4	5	6	7
Save the organization from expenses	1	2	3	4	5	6	7
Are willing to experiment	1	2	3	4	5	6	7
Work well with others	1	2	3	4	5	6	7
Behave with tact and diplomacy	1	2	3	4	5	6	7
Enjoy and embrace change	1	2	3	4	5	6	7
Have a sense of humor	1	2	3	4	5	6	7
Use their intuition	1	2	3	4	5	6	7
Comply with the chain of command	1	2	3	4	5	6	7
Behave aggressively	1	2	3	4	5	6	7
Are honest	1	2	3	4	5	6	7
Think up new improvements	1	2	3	4	5	6	7
Are methodical and well-organized	1	2	3	4	5	6	7
Maintain a professional appearance	1	2	3	4	5	6	7
Are open-minded	1	2	3	4	5	6	7
Don't make mistakes	1	2	3	4	5	6	7

Part 4. **This Organization Is Characterized by . . .**

- Listed below is a series of statements. With respect to your current organization, please indicate the degree of your agreement or disagreement with each statement by putting a circle around one of the seven alternatives to the right of each statement.

This organization is characterized by:

	strongly disagree						strongly agree
High regard for individual dignity	1	2	3	4	5	6	7
Skimping and penny-pinching	1	2	3	4	5	6	7
Frank and open meetings and discussions	1	2	3	4	5	6	7
Freedom from bureaucracy	1	2	3	4	5	6	7
Internal rivalry between employees	1	2	3	4	5	6	7
Fun and laughter	1	2	3	4	5	6	7
Fair sharing of rewards and benefits	1	2	3	4	5	6	7
Drive and a sense of urgency	1	2	3	4	5	6	7
Differences in status depending on position	1	2	3	4	5	6	7
An emphasis on systems and procedures	1	2	3	4	5	6	7
Strong and clear ethics	1	2	3	4	5	6	7
Intense work demands	1	2	3	4	5	6	7
Rigid thinking	1	2	3	4	5	6	7
Constant change	1	2	3	4	5	6	7
Daring and a sense of adventure	1	2	3	4	5	6	7
Shirt-sleeves and first names	1	2	3	4	5	6	7
Opportunities to learn	1	2	3	4	5	6	7
Forgiveness and understanding	1	2	3	4	5	6	7
An emphasis on facts and numbers	1	2	3	4	5	6	7
Disorder and chaos	1	2	3	4	5	6	7
Support and consideration	1	2	3	4	5	6	7
People who are self-starters	1	2	3	4	5	6	7
Creative ideas	1	2	3	4	5	6	7
People who follow the book	1	2	3	4	5	6	7

Part 5. **In This Organization, Employees Are . . .**

- Listed below is a series of statements. With respect to your current organization, please indicate the degree of your agreement or disagreement with each statement by putting a circle around one of the seven alternatives to the right of each statement.

In this organization, Employees are:	strongly disagree						strongly agree
Encouraged to go with their hunches	1	2	3	4	5	6	7
Expected to be cost conscious	1	2	3	4	5	6	7
Treated with respect	1	2	3	4	5	6	7
Encouraged to speak candidly	1	2	3	4	5	6	7
Given a high degree of personal autonomy	1	2	3	4	5	6	7
Expected to put their careers ahead of all other interests.	1	2	3	4	5	6	7
Encouraged to tolerate different opinions	1	2	3	4	5	6	7
Expected to be strong team players	1	2	3	4	5	6	7
Provided due recognition based on personal merit	1	2	3	4	5	6	7
Treated as equals	1	2	3	4	5	6	7
Encouraged to take courses and attend seminars	1	2	3	4	5	6	7
Expected to be conventional	1	2	3	4	5	6	7
Forgiven in the event of well-intentioned mistakes	1	2	3	4	5	6	7
Expected to be careful and prudent	1	2	3	4	5	6	7
Encouraged to be unselfish	1	2	3	4	5	6	7
Expected not to "rock the boat."	1	2	3	4	5	6	7
Encouraged to innovate	1	2	3	4	5	6	7
Expected to be quiet and sedate	1	2	3	4	5	6	7
Expected to obey all company rules and regulations	1	2	3	4	5	6	7
Expected to take initiative	1	2	3	4	5	6	7
Expected to be honorable and morally principled	1	2	3	4	5	6	7
Expected to maintain an orderly / tidy workspace	1	2	3	4	5	6	7
Encouraged to use trial and error to solve problems	1	2	3	4	5	6	7
Expected to be highly ambitious	1	2	3	4	5	6	7

Part 6. **Some Questions About Yourself . . .**

- Shown below are 20 pairs of statements lettered "a" or "b." Please select the one statement from each pair *(and only one)* which you *more strongly believe to be true in the real world.* Indicate your selection by drawing a circle around either the "a" or the "b."
- Please answer these items carefully but do not spend too much time on any one item. This is a measure of your personal beliefs. There are no right or wrong answers. Although you may believe in both statements in the pair, choose the one in which you *more strongly believe*.

For Example:

a. People are often punished for things which are beyond their control.
b. There is a direct relation between how hard I work and the rewards I receive.

In this example, the respondent has indicated that he or she *more strongly* believes statement a to be true.

Choose one statement from each pair:

1. a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

3. a. In the long run people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

4. a. Without the right breaks one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

5. a. No matter how hard you try some people just don't like you.
   b. People who can't get others to like them don't understand how to get along with others.

6. a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what they're like.

7. a. I have often found that what is going to happen will happen.
   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

Choose one statement from each pair:

8. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
   b. Getting a good job depends mainly on being in the right place at the right time.

9. a. When I make plans, I am almost certain that I can make them work.
   b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

10. a. There are certain people who are just no good.
    b. There is some good in everybody.

11. a. In my case getting what I want has little or nothing to do with luck.
    b. Many times we might just as well decide what to do by flipping a coin.

12. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
    b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

13. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
    b. There is really no such thing as "luck."

14. a. One should always be willing to admit mistakes.
    b. It is usually best to cover up one's mistakes.

15. a. It is hard to know whether or not a person really likes you.
    b. How many friends you have depends upon how nice a person you are.

16. a. In the long run the bad things that happen to us are balanced by the good ones.
    b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

17. a. A good leader expects people to decide for themselves what they should do.
    b. A good leader makes it clear to everybody what their jobs are.

18. a. Many times I feel that I have little influence over the things that happen to me.
    b. It is impossible for me to believe that chance or luck plays an important role in my life.

19. a. People are lonely because they don't try to be friendly.
    b. There's not much use in trying too hard to please people, if they like you, they like you.

20. a. What happens to me is my own doing.
    b. Sometimes I feel that I don't have enough control over the direction my life is taking.

Part 7. **True-False Questions About Yourself . . .**

- The statements on this page concern your personal reactions to a number of different situations. No two statements are exactly alike, so consider each statement carefully before answering. If a statement is *true or mostly true as applied to you*, insert a "T" in the space provided to the left of the statement. If a statement is *false or not usually true as applied to you*, insert an "F" in the space provided to the left of the statement.

"T" = True
"F" = False

_____ I find it hard to imitate the behavior of other people.

_____ At parties and social gatherings, I do not attempt to do or say things that others will like.

_____ I can only argue for ideas which I already believe.

_____ I can make impromptu speeches even on topics about which I have almost no information.

_____ I guess I put on a show to impress or entertain people.

_____ I would probably make a good actor.

_____ In a group of people I am rarely the center of attention.

_____ In different situations and with different people, I often act like very different persons.

_____ I am not particularly good at making other people like me.

_____ I am not always the person I appear to be.

_____ I would not change my opinions (or the way I do things) in order to please someone else or win their favor.

_____ I have considered being an entertainer.

_____ I have never been good at games like charades or improvisational acting.

_____ I have trouble changing my behavior to suit different people and different situations.

_____ At a party I let others keep the jokes and stories going.

_____ I feel a bit awkward in company and do not show up quite so well as I should.

_____ I can look anyone in the eye and tell a lie with a straight face (if for a right end).

_____ I may deceive people by being friendly when I really dislike them.

Part 8. Your Typical Characteristics

- This page contains a number of descriptive statements. Please think about each statement and indicate the *degree to which that statement characterizes the real you.*
- Score each statement on a scale of 1 - 2 - 3 - 4 - 5 - 6 - 7 as follows:

1<---------2---------3---------4---------5---------6--------->7

Extremely Uncharacteristic of Me ... **Extremely Characteristic of Me**

	extremely uncharacteristic of me						extremely characteristic of me
I'm always trying to figure myself out	1	2	3	4	5	6	7
I'm concerned about my style of doing things	1	2	3	4	5	6	7
Generally, I'm not very aware of myself	1	2	3	4	5	6	7
It takes me time to overcome my shyness in new situations	1	2	3	4	5	6	7
I reflect about myself a lot	1	2	3	4	5	6	7
I'm concerned about the way I present myself	1	2	3	4	5	6	7
I'm often the subject of my own fantasies	1	2	3	4	5	6	7
I have trouble working when someone is watching me	1	2	3	4	5	6	7
I never scrutinize myself	1	2	3	4	5	6	7
I get embarrassed very easily	1	2	3	4	5	6	7
I'm self-conscious about the way I look	1	2	3	4	5	6	7
I don't find it hard to talk to strangers	1	2	3	4	5	6	7
I'm generally attentive to my inner feelings	1	2	3	4	5	6	7
I usually worry about making a good impression	1	2	3	4	5	6	7
I'm constantly examining my motives	1	2	3	4	5	6	7
I feel anxious when I speak in front of a group	1	2	3	4	5	6	7
One of the last things I do before I leave my house is to look in the mirror	1	2	3	4	5	6	7
I sometimes have the feeling that I'm off somewhere watching myself	1	2	3	4	5	6	7
I'm concerned about what other people think of me	1	2	3	4	5	6	7
I'm alert to changes in my mood	1	2	3	4	5	6	7
I'm usually aware of my appearance	1	2	3	4	5	6	7
I'm aware of the way my mind works when I work through a problem	1	2	3	4	5	6	7
Large groups make me nervous	1	2	3	4	5	6	7

Part 9. Your Level Of Interaction With Others In This Organization

- This section consists of a series of questions about your level of interaction with other groups in the organization. Please indicate your level of interaction (seeing / meeting with other people) by putting a circle around the number which *best describes you in your current work environment.*

- Score each statement on a scale of 1 - 2 - 3 - 4 - 5 - 6 - 7 as follows:

1<---------2---------3---------4---------5---------6--------->7
Never Very Frequently

In The Normal Course Of My Job, I Interact (see / talk) With:

	never						very frequently
1. Corporate Executive Managers	1	2	3	4	5	6	7
2. Divisional Senior Managers	1	2	3	4	5	6	7
3. My Immediate Manager(s) / Supervisor(s)	1	2	3	4	5	6	7
4. Peers and Colleagues In My Department	1	2	3	4	5	6	7
5. Employees Outside Of My Department	1	2	3	4	5	6	7
6. Our Customers and Clients	1	2	3	4	5	6	7

The name of my department / immediate work unit / branch is:

____

(e.g. internal audit dept., e.g. corporate head office, e.g. Portage & Main Branch - Winnipeg)

	never						very frequently
I attend training programs focusing on our corporate values and beliefs	1	2	3	4	5	6	7
I read internal corporate newsletters and newspapers	1	2	3	4	5	6	7
I read and refer to the corporate annual report	1	2	3	4	5	6	7
I attend meetings in which our corporate values and beliefs are discussed	1	2	3	4	5	6	7
My boss discusses our corporate values and beliefs	1	2	3	4	5	6	7
I am exposed to documents and pamphlets describing our corporate values	1	2	3	4	5	6	7
I speak to others in and outside of the organization about our corporate values	1	2	3	4	5	6	7
My work peers and colleagues discuss our corporate values	1	2	3	4	5	6	7
I attend speeches and events in which our corporate values are discussed	1	2	3	4	5	6	7

Part 10. Your Physical Proximity To Others In The Organization

- This section consists of a series of questions about your physical proximity (closeness in terms of workspace location) to other groups in the organization. Please indicate your level of proximity (physical closeness to other groups) by putting a circle around the number which *best describes you in your current work environment.*

- Score each statement on a scale of 1 - 2 - 3 - 4 - 5 - 6 - 7 as follows:

1<---------2---------3---------4---------5---------6--------->7

Very Close (office within the same area in the same building) — **Very Far Away** (offices in different cities)

The Physical Location Of My Workspace (office / desk) Relative To Each Group Listed Below Is:

	very close						very far away
1. Corporate Executive Managers........................	1	2	3	4	5	6	7
2. Divisional Senior Managers............................	1	2	3	4	5	6	7
3. My Immediate Manager(s) / Supervisor(s)..........	1	2	3	4	5	6	7
4. Peers and Colleagues In My Department............	1	2	3	4	5	6	7
5. Employees Outside Of My Department..............	1	2	3	4	5	6	7
6. Our Customers and Clients............................	1	2	3	4	5	6	7

Part 11. Your Understanding Of Corporate Values

- This section consists of a ~~serious~~ series of questions about your level of comfort in terms of understanding the values and culture of this organization. Please indicate *the extent to which each of the following statements are true for you* by putting a circle around the appropriate number from 1 to 7.

1<---------2---------3---------4---------5---------6--------->7

Not At All — **To A Great Extent**

	not at all						to a great extent
I understand the values and culture of this organization..........................	1	2	3	4	5	6	7
It pays to be like everyone else in this organization..............................	1	2	3	4	5	6	7
This organization expects employees to share its values and beliefs............	1	2	3	4	5	6	7
This organization's norms of behavior and expectations are not clear to me...	1	2	3	4	5	6	7
Fitting in with the corporate culture here gets noticed and rewarded............	1	2	3	4	5	6	7

Thank You For Your Time And Participation !

P.S. Please do not forget to staple your code number stub to the inside back cover !

Please staple stub #1 containing your confidential code number about here.

Thank you.

Follow - Up Letter #2

The UNIVERSITY *of* WESTERN ONTARIO

School of Business Administration

April 22, 1991

Dear Participant,

Earlier this year we were delighted to gain [redacted] commitment to participate in our research on shared values in organizations. We were subsequently provided with a random sample of [redacted] employees carefully selected from groups representing different levels and functional areas across the organization. In all likelihood you are already aware of this having been exposed to our two questionnaires and one follow-up letter. If by some chance this is the first piece of correspondence you have received with respect to our study, please contact us (call collect: 519-661-2111 extension 5175) and we will immediately forward copies of our questionnaires to you.

To date, [redacted] employees have been very supportive of this research, particularly with respect to Questionnaire One. The response rate (percentage of questionnaires returned out of the total number sent out) on the first questionnaire currently stands at 71% ! However, a significant proportion of the second questionnaire remains outstanding. The response rate on Questionnaire Two is 32%. For those who have already responded to both questionnaires we are most grateful. If you are one of the many people who completed the first questionnaire but have not yet completed the second questionnaire, we urge you to do so. In order to address the critical issues in this research we need to match your Questionnaire One responses with your Questionnaire Two responses. Without both questionnaires, the data you have so kindly supplied in Questionnaire One is much less useful to us. Also, if you have received both questionnaires but have not yet responded to either, there is still time to respond and we would appreciate hearing from you.

This is our final follow-up letter. To those of you who have expressed an interest in receiving a summary of our results (by calling [redacted] - [redacted] - [redacted]), we will have a document in your hands by August 31. Also, please let us restate the point that all questionnaire data you supply will remain the confidential property of University of Western Ontario. The only summary data (aggregate statistics on different groups, etc.) will be released in written documents. Your individual response does not leave our control nor are any results reported on an individual basis.

In closing, we believe that this research will have important implications for improving relationships between individual employees and their organizations in terms of shared values. Your contribution is an important one. Thank you [redacted] for your support.

Sincerely,

Paul McDonald

Paul McDonald
Project Director

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APPENDIX C

MASTER CORRELATION MATRICES

Master Correlation Matrix - All Variables [a]

	Variable	Code	# of items	Mean	S.D.	Reliability	1	2	3	4
1	VC $_{rank}$ (ranking index)	VC $_{rank}$	n/a	0.24	0.39	n/a				
2	VC $_{rate}$ (rating index)	VC $_{rate}$	n/a	0.15	0.29	n/a	.38***			
3	PFit (perceived values fit)	PFit	4	5.4	1.2	.70	.30***	.46***		
4	Affective Commitment	ACS	8	4.7	1.2	.83	.29***	.40***	.61***	
5	Continuance Commitment	CCS	8	4.4	1.3	.84	.05	-.08	.03	.04
6	Normative Commitment	NCS	8	3.7	1.0	.71	.16**	.02	.20***	.36***
7	Satisfaction-work (JDI)	Satwk	18	39.7	10.4	.82	.15**	.30***	.39***	.43***
8	Satisfaction-supervisor (JDI)	Satsp	18	42.1	11.2	.86	.14*	.29***	.31***	.29***
9	Satisfaction-co-worker (JDI)	Satco	18	44.8	9.6	.85	.15**	.30***	.29***	.20***
10	Satisfaction-promotion (JDI)	Satpr[b]	9	24.4	16.4	.87	.19**	.25***	.34***	.32***
11	Satisfaction-pay (JDI)	Satpy[b]	9	44.7	11.0	.80	.08	.18**	.11*	.17**
12	Overall Satisfaction w/ Org.	OSat	1	5.4	1.1	n/a	.26***	.37***	.56***	.57***
13	Turnover Intention	Toin	2	2.7	1.8	.65[c]	-.26***	-.23***	-.44***	-.49***
14	Organizational Citizenship	OCB[d]	14	5.7	0.6	.67	.04	.10*	.17**	.14*
15	Altruism	Alt	6	5.4	0.9	.72	.02	.08	.13*	.19**
16	Conscientiousness	Con	7	6.0	0.8	.56	.04	.06	.10*	-.01
17	Days Absent / Year	Ab-day	1	1.5	0.6	n/a	.05	-.02	.07	-.01
18	Episodes Absent / Year	Ab-eps	1	1.5	0.5	n/a	.08	-.01	.06	.00
19	Aware $_{rank}$ (Awareness-ranking)	Aw$_{rank}$	n/a	0.40	0.21	n/a	-.13*	.19**	.25***	.12*
20	Aware $_{rate}$ (Awareness-rating)	Aw $_{rate}$	n/a	0.50	0.18	n/a	-.12	.17**	.13*	.13*
21	Perceived Awareness Org. Values	P-Aware	2	5.5	1.1	.32[c]	.19**	.35***	.35***	.38***
22	Locus of Control	Loc	20	5.2	2.8	.68[e]	-.27***	-.29***	-.25***	-.24***
23	Self-Monitoring	SM	18	6.9	3.6	.75[e]	-.04	.16**	.09	.11
24	Private Self-Consciousness	PriSC	10	4.1	0.9	.76	-.16**	-.16**	-.08	-.06
25	Public Self-Consciousness	PubSC	7	4.4	1.0	.76	-.07	-.06	.08	.05
26	Social Anxiety	SocAX	6	4.0	1.2	.76	-.05	-.18**	-.17**	-.17**
27	Visual Salience	Exec	4	3.2	1.5	.32	.00	.24***	.17**	.23***
28	Temporal Salience	Time	1	15.6	8.7	n/a	.10	.20***	.09	.25***
29	Instructed Salience-Passive	Inst-P	6	4.3	1.1	.81	.14*	.29***	.24***	.34***
30	Instructed Salience-Active	Inst-A	3	3.9	1.3	.80	.10	.23***	.19***	.39***
31	Goal Relevant Salience	GoalRel	2	4.5	1.2	.28[c]	-.24***	-.25***	-.26***	-.14*

a- all correlations are first-order partial correlations controlling for social desirability. c. -indicates inter-item correlation (used in the case of two-item scales).
b.- scores for satisfaction with pay and promotion doubled to be commensurate with other JDI sub-scales. d. -includes items from Alt. and Con. sub-scales.
e - indicates Kudar-Richardson's (KR-20) coefficient (used in the case of dichotomous data). All other reliability scores are Cronbach's coefficient alpha.
* $p < .05$, ** $p < .01$, *** $p < .001$

Master Correlation Matrix - All Variables [a] - Continued

	Variable	Code	5	6	7	8	9	10	11	12	13
1	VC_{rank} (ranking index)	VC_{rank}									
2	VC_{rate} (rating index)	VC_{rate}									
3	PFit (perceived values fit)	PFit									
4	Affective Commitment	ACS									
5	Continuance Commitment	CCS									
6	Normative Commitment	NCS	.24***								
7	Satisfaction-work (JDI)	Satwk	-.18**	.00							
8	Satisfaction-supervisor (JDI)	Satsp	-.17**	-.01	.41***						
9	Satisfaction-co-worker (JDI)	Satco	-.17	-.11	.42***	.42***					
10	Satisfaction-promotion (JDI)	Satpr	-.10	.00	.30***	.47***	.25***				
11	Satisfaction-pay (JDI)	Satpy	-.12*	-.10	.26***	.25***	.18**	.25***			
12	Overall Satisfaction w/ Org.	OSat	-.11	.12*	.50***	.44***	.36***	.46***	.24***		
13	Turnover Intention	Toin	-.42***	-.24***	-.18**	-.16**	-.10	-.24***	-.10	-.40***	
14	Organizational Citizenship	OCB	.00	-.12*	.18**	.01	.07	.04	.19**	.13*	-.10
15	Altruism	Alt	-.04	-.06	.23***	.01	.05	.07	.17**	.15**	-.09
16	Conscientiousness	Con	.03	-.14*	.05	-.01	.03	-.01	.12*	.06	-.04
17	Days Absent / Year	Ab-day	.07	.04	.00	.01	-.02	-.02	-.16**	.02	-.12*
18	Episodes Absent / Year	Ab-eps	.10	.08	-.04	-.05	-.07	-.03	-.19**	.02	-.14*
19	$Aware_{rank}$ (Awareness-ranking)	Aw_{rank}	-.09	-.20**	.24***	.13*	.32***	.11	.22***	.16**	-.05
20	$Aware_{rate}$ (Awareness-rating)	Aw_{rate}	-.04	-.06	.16**	.11	.15**	.08	.13*	.04	-.04
21	Perceived Awareness Org. Values	P-Aware	-.07	-.02	.29***	.27***	.28***	.13*	.22***	.33***	-.14*
22	Locus of Control	Loc	.12*	-.02	-.32***	-.18**	-.31***	-.16**	-.17**	-.30***	.08
23	Self-Monitoring	SM	-.09	.06	.19**	.07	-.01	.12*	.00	.14*	.04
24	Private Self-Consciousness	PriSC	.03	-.07	-.02	-.06	-.11	-.01	.01	-.04	.14*
25	Public Self-Consciousness	PubSC	.10	.11	-.06	.01	-.12*	.06	.01	.05	-.06
26	Social Anxiety	SocAX	.18**	.03	-.32***	-.16**	-.17**	-.12*	-.09	-.24***	.06
27	Visual Salience	Exec	-.19**	-.19**	.19**	.14*	.22***	.14*	.24***	.17**	-.03
28	Temporal Salience	Time	.00	.19**	.12*	.09	.18**	.05	.11*	.12*	-.11
29	Instructed Salience-Passive	Inst-P	-.13*	.02	.29***	.25***	.12*	.18**	.23***	.24***	-.04
30	Instructed Salience-Active	Inst-A	-.06	.04	.28***	.28***	.21***	.23***	.21***	.23***	-.11
31	Goal Relevant Salience	GoalRel	.09	-.04	-.10	-.17**	-.12*	-.26***	.02	-.29***	.17**

a.- all correlations are first-order partial correlations controlling for social desirability.

* $p < .05$, ** $p < .01$, *** $p < .001$

Master Correlation Matrix - All Variables [a] - Continued

	Variable	Code	14	15	16	17	18	19	20	21	22
1	VC_{rank} (ranking index)	VC_{rank}									
2	VC_{rate} (rating index)	VC_{rate}									
3	PFit (perceived values fit)	PFit									
4	Affective Commitment	ACS									
5	Continuance Commitment	CCS									
6	Normative Commitment	NCS									
7	Satisfaction-work (JDI)	Satwk									
8	Satisfaction-supervisor (JDI)	Satsp									
9	Satisfaction-co-worker (JDI)	Satco									
10	Satisfaction-promotion (JDI)	Satpr									
11	Satisfaction-pay (JDI)	Satpy									
12	Overall Satisfaction w/ Org.	OSat									
13	Turnover Intention	Toin									
14	Organizational Citizenship	OCB									
15	Altruism	Alt	.74***								
16	Conscientiousness	Con	.76***	.13*							
17	Days Absent / Year	Ab-day	-.15*	-.03	-.22***						
18	Episodes Absent / Year	Ab-eps	-.13*	.00	-.21***	.91					
19	Aware $_{rank}$ (Awareness-ranking)	Aw_{rank}	.12*	.02	.15*	-.05	-.07				
20	Aware $_{rate}$ (Awareness-rating)	Aw_{rate}	.21***	.12*	.17*	-.12*	-.10	.41***			
21	Perceived Awareness Org. Values	P-Aware	.09	.03	.08	07	.05	.28***	.19***		
22	Locus of Control	Loc	-.12*	-.11	-.05	.04	.05	-.03	-.02	.25***	
23	Self-Monitoring	SM	.04	.11*	-.02	-.02	-.03	.06	.04	.04	-.08
24	Private Self-Consciousness	PriSC	.04	.06	.01	-.03	-.04	-.12*	-.02	.01	.04
25	Public Self-Consciousness	PubSC	.08	.03	.08	.02	.02	-.09	.03	-.09	.09
26	Social Anxiety	SocAX	-.16**	-.19**	-.05	-.02	-.01	-.18**	-.10	-.25***	.27***
27	Visual Salience	Exec	.17**	.14*	.12*	-.09	-.08	.26***	.16**	.22***	-.02
28	Temporal Salience	Time	.02	-.02	.05	-.05	-.04	.05	.11*	.14*	-.20**
29	Instructed Salience-Passive	Inst-P	.19**	.16**	.12*	.02	.02	.22***	.10	.36***	-.24***
30	Instructed Salience-Active	Inst-A	.15**	.17**	.06	-.08	-.08	.11*	.10	.33***	-.25***
31	Goal Relevant Salience	GoalRel	.06	.02	.06	-.06	-.05	-.01	.18**	.01	.12*

a.- all correlations are first-order partial correlations controlling for social desirability.

* $p < .05$, ** $p < .01$, *** $p < .001$

Master Correlation Matrix - All Variables [a] - Continued

	Variable	Code	23	24	25	26	27	28	29	30
1	VC_{rank} (ranking index)	VC_{rank}								
2	VC_{rate} (rating index)	VC_{rate}								
3	PFit (perceived values fit)	PFit								
4	Affective Commitment	ACS								
5	Continuance Commitment	CCS								
6	Normative Commitment	NCS								
7	Satisfaction-work (JDI)	Satwk								
8	Satisfaction-supervisor (JDI)	Satsp								
9	Satisfaction-co-worker (JDI)	Satco								
10	Satisfaction-promotion (JDI)	Satpr								
11	Satisfaction-pay (JDI)	Satpy								
12	Overall Satisfaction w/ Org.	OSat								
13	Turnover Intention	Toin								
14	Organizational Citizenship	OCB								
15	Altruism	Alt								
16	Conscientiousness	Con								
17	Days Absent / Year	Ab-day								
18	Episodes Absent / Year	Ab-eps								
19	$Aware_{rank}$ (Awareness-ranking)	Aw_{rank}								
20	$Aware_{rate}$ (Awareness-rating)	Aw_{rate}								
21	Perceived Awareness Org. Values	P-Aware								
22	Locus of Control	Loc								
23	Self-Monitoring	SM								
24	Private Self-Consciousness	PriSC	.17**							
25	Public Self-Consciousness	PubSC	.11*	.48***						
26	Social Anxiety	SocAX	-.33***	.14*	.35***					
27	Visual Salience	Exec	.07	-.08	.04	-.17**				
28	Temporal Salience	Time	-.16**	-.24***	-.19**	-.08	.09			
29	Instructed Salience-Passive	Inst-P	.15*	-.03	-.02	-.25***	.27***	.17**		
30	Instructed Salience-Active	Inst-A	.13*	.03	-.04	-.23***	.22***	.12*	.61***	
31	Goal Relevant Salience	GoalRel	.02	.10	.02	-.05	.04	-.08	.08	.07

a.- all correlations are first-order partial correlations controlling for social desirability.
* p < .05, ** p < .01, *** p < .001

Master Correlation Matrix - Personal Values [a, b]

	Variable	Code	$\overline{X}$	S.D.	1	2	3	4	5	6	7	8	9	10	11
1	Adaptability	adpp	5.14	0.93											
2	Aggressiveness	aggp	4.42	1.30	.26***										
3	Autonomy	autp	5.52	0.79	.38***	.33***									
4	Broad-Mindedness	bmdp	5.29	0.80	.38***	.04	.23***								
5	Cautiousness	caup	3.93	1.14	-.39***	-.48***	-.24***	-.19**							
6	Consideration	conp	5.28	1.14	.12*	-.22***	-.04	.28***	.12*						
7	Cooperation	copp	5.75	0.90	.20***	.01	.00	.39***	.01	.39***					
8	Courtesy	crtp	5.83	0.85	.07	-.24***	-.01	.29***	.26***	.45***	.36***				
9	Creativity	crep	4.76	1.21	.41***	.33***	.38***	.28***	-.46***	-.06	.03	-.09			
10	Development	devp	5.46	0.94	.51***	.19**	.38***	.42***	-.25***	.08	.15**	.22***	.45***		
11	Diligence	dilp	5.50	0.93	.24***	.32***	.26***	.22***	-.12*	.02	.20***	.21***	.26***	.36***	
12	Economy	ecop	4.42	1.32	.08	-.04	.12*	.03	.23***	.07	.11	.18**	-.02	.10	.18**
13	Experimentation	expp	4.50	1.02	.50***	.37***	.37***	.34***	-.47***	.00	.08	-.08	.53***	.32***	.18**
14	Fairness	farp	5.62	0.73	.17**	.08	.23***	.42***	-.05	.23***	.39***	.30***	.19**	.25***	.26***
15	Forgiveness	fgvp	4.70	1.16	.14*	-.08	.09	.39***	.02	.20***	.29***	.14*	-.02	.08	.06
16	Formality	forp	4.02	1.41	-.20***	-.14*	-.13*	-.07	.42***	.18**	.11*	.32***	-.25***	-.10	.16**
17	Humor	hump	4.96	1.10	.28***	.00	.07	.27***	-.16**	.47***	.32***	.20***	.08	.10	.08
18	Initiative	inip	5.20	1.10	.37***	.67***	.45***	.20***	-.48***	-.08	.11	-.09	.47***	.34***	.40***
19	Logic	logp	5.55	1.03	.17**	.12*	.36***	.25***	-.07	-.09	.10	.08	.39***	.38***	.29***
20	Moral Integrity	minp	5.97	0.80	.11*	.11*	.17**	.22***	-.07	.19**	.24***	.32***	.12*	.25***	.27***
21	Obedience	obdp	4.40	1.16	-.06	-.17**	-.13*	.08	.43***	.28***	.27***	.37***	-.23***	-.05	.23***
22	Openness	opnp	5.43	1.02	.28***	.53***	.43***	.24***	-.29***	-.01	.08	-.11	.27***	.26***	.29***
23	Orderliness	ordp	5.12	1.44	-.04	-.05	.07	-.01	.26***	.16**	.16**	.32***	-.16**	.02	.14*
24	Social Equality	seqp	5.04	1.30	.04	-.20***	.04	.35***	.04	.38***	.33***	.22***	-.01	.11	.01

a.- based on value rating data, n = 324.

b.- all correlations are first-order partial correlations controlling for social desirability.

* $p < .05$, ** $p < .01$, *** $p < .001$

Master Correlation Matrix - Personal Values [a, b] - Continued

	Variable	Code	12	13	14	15	16	17	18	19	20	21	22	23
1	Adaptability	adpp												
2	Aggressiveness	aggp												
3	Autonomy	autp												
4	Broad-Mindedness	bmdp												
5	Cautiousness	caup												
6	Consideration	conp												
7	Cooperation	copp												
8	Courtesy	crtp												
9	Creativity	crep												
10	Development	devp												
11	Diligence	dilp												
12	Economy	ecop												
13	Experimentation	expp	.01											
14	Fairness	farp	.19***	.19**										
15	Forgiveness	fgvp	.24***	.13*	.20***									
16	Formality	forp	.25***	-.17**	.20***	.08								
17	Humor	hump	.01	.16**	.15**	.18**	.01							
18	Initiative	inip	-.01	.48***	.13*	.01	-.20***	.11						
19	Logic	logp	.19**	.19**	.41***	.13*	.09	-.10	.22***					
20	Moral Integrity	minp	.17**	.05	.41***	.07	.21***	.03	.19**	.21***				
21	Obedience	obdp	.27***	-.14*	.19***	.20***	.60***	.08	-.18**	.03	.11*			
22	Openness	opnp	.08	.26***	.22***	.12*	-.04	.01	.45***	.24***	.29***	-.10		
23	Orderliness	ordp	.27***	-.16**	.13*	.08	.22***	-.01	-.01	.03	.18**	.30***	.04	
24	Social Equality	seqp	.20***	.03	.22***	.27***	.06	.29***	-.08	.01	.11*	.25***	-.05	.14*

a.- based on value rating data, n = 324.
b.- all correlations are first-order partial correlations controlling for social desirability.
* p < .05, ** p < .01, *** p < .001

Master Correlation Matrix - Organizational Values [a, b]

	Variable	Code	$\bar{x}$	S.D.	1	2	3	4	5	6	7	8	9	10	11
1	Adaptability	adpo	5.26	0.99											
2	Aggressiveness	aggo	4.89	1.06	.10										
3	Autonomy	auto	4.93	0.93	.32***	.24***									
4	Broad-Mindedness	bmdo	4.82	0.95	.51***	.05	.42***								
5	Cautiousness	cauo	4.24	1.06	-.54***	-.11*	-.56***	-.51***							
6	Consideration	cono	4.28	1.06	.22**	-.24***	.27***	.51***	-.29***						
7	Cooperation	copo	5.08	0.91	.31***	-.12*	.26***	.43***	-.25***	.48***					
8	Courtesy	crto	5.29	0.96	.29***	-.08	.37***	.44***	-.22***	.58***	.54***				
9	Creativity	creo	5.00	1.00	.49***	.13*	.56***	.55***	-.62***	.37***	.35***	.37***			
10	Development	devo	5.37	1.01	.47***	.12*	.50***	.60***	-.45***	.45***	.44***	.49***	.58***		
11	Diligence	dilo	5.06	1.16	-.03	.35***	-.02	-.12*	.18**	-.22***	-.17**	-.06	-.20***	-.12*	
12	Economy	ecoo	4.54	1.14	.20***	.11*	.08	.16**	-.23***	-.02	.01	-.04	.19**	.05	.06
13	Experimentation	expo	3.82	1.02	.43***	.02	.38***	.49***	-.65***	.35***	.32***	.21***	.60***	.46***	-.33***
14	Fairness	faro	4.54	1.12	.38***	-.05	.43***	.49***	-.43***	.66***	.51***	.62***	.54***	.54***	-.22***
15	Forgiveness	fgvo	4.13	1.12	.30***	-.05	.33***	.49***	-.53***	.47***	.38***	.30***	.45***	.45***	-.35***
16	Formality	foro	4.56	1.14	-.18**	.11	-.12*	-.15**	.31***	.02	-.14*	.10	-.23***	-.07	.40***
17	Humor	humo	4.07	1.07	.34***	.06	.48***	.47***	-.48***	.51***	.36***	.33***	.52***	.48***	-.29***
18	Initiative	inio	5.47	0.88	.33***	.29***	.69***	.40***	-.48***	.26***	.27***	.34***	.63***	.45***	-.01
19	Logic	logo	4.61	0.91	-.27***	.02	-.35***	-.40***	.57***	-.34***	-.23***	-.17**	-.46***	-.32***	.33***
20	Moral Integrity	mino	6.13	0.86	.36***	-.01	.33***	.40***	-.20***	.39***	.36***	.59***	.36***	.44***	.06
21	Obedience	obdo	4.62	1.09	-.27***	.05	-.45***	-.40***	.45***	-.31***	-.32***	-.24***	-.45***	-.42***	.32***
22	Openness	opno	4.39	1.11	.36***	.06	.56***	.59***	-.51***	.51***	.37***	.48***	.61***	.57***	-.20***
23	Orderliness	ordo	4.59	1.08	.06	-.02	.07	.09	.03	.28***	.07	.27***	.10	.14*	.15**
24	Social Equality	seqo	3.18	1.17	.13*	-.21***	.20***	.22***	-.24***	.27***	.33***	.18**	.29***	.28***	-.40***

a.- based on value rating data, n = 324.

b.- all correlations are first-order partial correlations controlling for social desirability.

* p < .05, ** p < .01, *** p < .001

Master Correlation Matrix - Organizational Values [a, b] - Continued

	Variable	Code	12	13	14	15	16	17	18	19	20	21	22	23
1	Adaptability	adpo												
2	Aggressiveness	aggo												
3	Autonomy	auto												
4	Broad-Mindedness	bmdo												
5	Cautiousness	cauo												
6	Consideration	cono												
7	Cooperation	copo												
8	Courtesy	crto												
9	Creativity	creo												
10	Development	devo												
11	Diligence	dilo												
12	Economy	ecoo												
13	Experimentation	expo	.13*											
14	Fairness	faro	.06	.46***										
15	Forgiveness	fgvo	.16**	.58***	.46***									
16	Formality	foro	.04	-.41***	-.09	-.24***								
17	Humor	humo	.12*	.46***	.52***	.54***	-.27***							
18	Initiative	inio	.05	.36***	.38***	.25***	-.15**	.47***						
19	Logic	logo	-.10	-.59***	-.36***	-.48***	.32***	-.50***	-.30***					
20	Moral Integrity	mino	.03	.14*	.45***	.13*	.04	.22***	.33***	-.07				
21	Obedience	obdo	.04	-.51***	-.41***	-.36***	.50***	-.46***	-.41***	.39***	-.19**			
22	Openness	opno	.09	.50***	.62***	.50***	-.25***	.58***	.53***	-.45***	.40***	-.61***		
23	Orderliness	ordo	.08	.00	.17**	.04	.53***	.04	.03	.03	.13*	.20***	.02	
24	Social Equality	seqo	-.10	.41***	.39***	.29***	-.55***	.36***	.23***	-.28***	.14*	-.65***	.44***	-.28***

a.- based on value rating data, n = 324.
b.- all correlations are first-order partial correlations controlling for social desirability.
* $p < .05$, ** $p < .01$, *** $p < .001$

APPENDIX D

SUMMARY OF RESEARCH RESULTS

Summary of Research Results

Analytical Focus:	Statistical Procedure:	Findings:
Reliability:		
Internal Consistency	Cronbach's coefficient α	Personal value rating scales (3-items): avg. α of .77 (range: .62-.86) Organizational value rating scales (3-items): avg. α of .68 (range: .47-.79)
Test-Retest	Correlation coefficient (sample of 30 undergrads.)	Pers. value ranking profile: avg. correlation (rho) of .76 (range: .23-.95) Pers. value rating profile: avg. correlation (P-M) of .81 (range: .38-.96)
Inter-Rater	Cronbach's coefficient α on rater's org. values profile	Average inter-rater reliability coefficient α: .77 which was interpreted as evidence in support of cultural crystallization (homogeneity)
Convergent Validity:		
value ranking and value rating scores	Correlation coefficient (rho)	Personal value measures: ranking and rating scores significantly correlated across all twenty-four dimensions at $p < .05$ Organizational value measures: ranking and rating significantly correlated across all twenty-four dimensions at $p < .001$
aggregate value profiles	Correlation coefficient (rho)	Pers. value rank profile correlates with pers. value rate profile: .81 Org. value rank profile correlates with org. value rate profile: .63
value congruence indices	Correlation coefficient (P-M)	All three indices (VC_{rank}, VC_{rate}, and PFit) significantly correlated at $p < .001$
Factor Structure:		
personal values	principal components with varimax rotation	Six factors emerged accounting for 61.4% of the variance: change, task, status quo, relationships, moral integrity, and acceptance of others
organizational values	principal components with varimax rotation	Five factors emerged accounting for 66.5% of the variance: change, relationships, task, status quo, and one ambiguous un-named factor
		10 of the 19 value dimensions loading (> .40) on the first four personal value factors also load (> .40) on the equivalent organizational factors

Summary of Research Results (Continued)

Analytical Focus:	Statistical Procedure:	Findings:		
Hypothesis Testing: (Bivariate Relationships)	Partial correlation coefficients controlling for social desirability response set bias		full support means statistical significance ($p < .05$) across all three value congruence indices: (VC_{rank}, VC_{rate}, PFit)	
			partial support means statistical significance ($p < .05$) across at least two of the three value congruence indices	
Consequents of Value Congruence:			very limited support means statistical significance ($p < .05$) across only one of the three value congruence indices	
Organizational Commitment		H1a:	value congruence pos. related to affective commit.:	full support
		H1b:	value congruence pos. related to normative commit.:	part. support
		H1c:	greater correlation with affective versus normative:	full support
Job Satisfaction		H2a:	value congruence pos. related to overall satisfaction:	full support
		H2b:	value congruence pos. related to satis. w/ work:	full support
		H2c:	value congruence pos. related to satis. w/ supervis.:	full support
		H2d:	value congruence pos. related to satis. w/ co-worker:	full support
		H2e:	value congruence pos. related to satis. w/ promotion:	full support
		H2f:	value congruence pos. related to satis. w/ pay:	part. support
		H2g:	greatest correlation with overall satisfaction:	very limited
Turnover Intention		H3:	value congruence neg. related to turnover intention:	full support
Organizational Citizenship Behavior		H4a:	value congruence pos. related to org. citizenship:	part. support
		H4b:	value congruence pos. related to altruistic behavior:	very limited
		H4c:	value congruence pos. related to conscientiousness:	very limited
		H4d:	greater correlation with altruistic vs. conscientious.:	no support
Absence Behavior		H5a:	value congruence neg. related to total time lost:	no support
		H5b:	value congruence neg. related to absence frequency:	no support

Summary of Research Results (Continued)

Analytical Focus:	Statistical Procedure:	Findings:	
Hypothesis Testing, cont'd.: (Bivariate Relationships)	Partial correlation coefficients controlling for social desirability response set bias	full support means statistical significance ($p < .05$) across all three value congruence indices: (VC_{rank}, VC_{rate}, PFit)	
		partial support means statistical significance ($p < .05$) across at least two of the three value congruence indices	
Antecedents to Employee Awareness of Org. Required Values:		very limited support means statistical significance ($p < .05$) across only one of the three value congruence indices	
Situational Antecedents			
Visual Salience		H6a: interaction w/ executives pos. related w/ awareness:	full support
Temporal Salience		H6b: organizational tenure pos. related w/ awareness:	part. support
Instructed Salience		H6c: value instruction (training) pos. related w/ awareness:	part. support
		H6d: value instruction (speak) pos. related w/ awareness:	part. support
Goal Rel. Salience		H6e: recognition/rewards pos. related w/ awareness:	very limited
Personality Antecedents:			
Pub. Self-Conscious.		H7a: Public self-consciousness pos. related w/ awareness:	no support
Pri. Self-Conscious.		H7b: Private self-consciousness neg. related w/ awareness:	very limited
Social Anxiety		H7c: Social anxiety neg. related w/ awareness:	part. support
Locus of Control		H7d: External locus neg. related w/ awareness:	very limited
Self-Monitoring		H7e: Self-monitoring pos. related w/ awareness:	no support

Summary of Research Results (Continued)

Analytical Focus:	Statistical Procedure:	Findings:
Behavioral (Subjective) versus Geographical (Objective) Reality	Bivariate correlation analyses as per hypothesis testing using an aggregate organizational profile	Correlations with respect to dep. variables were generally diminished: this finding is interpreted to provide support for behavioral (subjective) reality consistent with an intraperson research design as opposed to geographic (objective) reality based on an independent sample to profile the organizational values
Predictive Validity:	Regression:	
Value Congruence on:		
Affective Commitment	Multivariate hierarchical regressions controlling for demographic and method effects	all three congruence indices increased the variance explained (change in R^2) at $p < .001$ after demographic and method controls
Overall Satisfaction		all three congruence indices increased the variance explained (change in R^2) at $p < .001$ after demographic and method controls
Turnover Intention		all three congruence indices increased the variance explained (change in R^2) at $p < .001$ after demographic and method controls
Value Congruence on:		
Affective Commitment	Multivariate hierarchical regressions controlling for personal value factors and method effects	all three congruence indices increased the variance explained (change in R^2) at $p < .001$ after personal value factor and method controls
Overall Satisfaction		all three congruence indices increased the variance explained (change in R^2) at $p < .001$ after personal value factor and method controls
Turnover Intention		all three congruence indices increased the variance explained (change in R^2) at $p < .001$ after personal value factor and method controls

Summary of Research Results (Continued)

Analytical Focus:	Statistical Procedure:	Findings:
Predictive Validity:	Analysis of Variance:	
Personal Value Differences across the Hierarchy - (managers, prof/tech and clerical/adm)	ANCOVA - controlling for demographic and method (social desirability) effects	Differences across group means on three of the twenty-four personal value dimensions (initiative, aggressiveness, and openness), significant at $p < .001$, after consideration of demographic and method controls
Personal Value Differences across the Hierarchy using Value Factors - (managers, prof/tech and clerical/adm)	Hierarchical discriminant analysis on the six personal value factors while controlling for demographic and method (social desirability) effects	Task factor enhanced empirical discrimination (Rao's *V*) between groups in the hierarchy, significant at $p < .001$, after consideration of demographic and method controls
Differences in Perceptions of Organizational Values across the Hierarchy - (managers, prof/tech and clerical/adm)	ANCOVA - controlling for demographic and method (social desirability) effects	There were no significant differences across group means on the twenty-four organizational value dimensions at $p < .001$, after consideration of demographic and method controls
Differences in Perceptions of Organizational Value Factors across the Hierarchy - (managers, prof/tech and clerical/adm)	Hierarchical discriminant analysis on the four org. value factors while controlling for demographic and method (social desirability) effects	Change factor enhanced empirical discrimination (Rao's *V*) between groups in the hierarchy, significant at $p < .001$, after consideration of demographic and method controls
Differences in Perceptions of Organizational Value Factors across the Functions - (sales/mktg, production, fin/acctg, adm /legal, and hrm)	Hierarchical discriminant analysis on the four org. value factors while controlling for demographic and method (social desirability) effects	None of the factors added to the empirical discrimination (Rao's *V*) between functional groups, at a significance level of $p < .001$, after consideration of demographic and method controls

Summary of Research Results (Continued)

Analytical Focus:	Statistical Procedure:	Findings:
Predictive Validity: cont'd.	Analysis of Variance: cont'd.	
Differences in Perceptions of Organizational Value Factors across Organizational Origin - (original company staff and acquired company staff)	Hierarchical discriminant analysis on the four org. value factors while controlling for demographic and method (social desirability) effects	None of the factors added to the empirical discrimination (Rao's *V*) between the two pre-merger groups, at a significance level of $p < .001$, after consideration of demographic and method controls
Discriminant Validity:		
Value Congruence as distinct from the social desirability method variable	Bivariate correlation coefficients with the method variable (social desirability) Previous hierarchical regression analyses	Results of previous hierarchical regression analyses provide considerable evidence in support of individual-organizational value congruence as distinct from the social desirability method variable. However, the social desirability method variable was found to be correlated (at $p < .05$) with two of the value congruence indices: VC rank (.13) and PFit (.12). These results are interpreted to provide partial support for the discriminant validity of individual-organizational value congruence