ANEXO I. ARTÍCULOS FUNDAMENTALES PARA LA ELABORACIÓN DE LA TESIS	108
Anexo 1a. People and Organizational Culture: A Profile Comparison Approach to Assessing	108
Anexo 1b. The Organizational Culture Profile Revisited and Revised: An Australian Perspective	127
Anexo 1c. Measuring organizational cultures: A qualitative and quantitative study across twenty case	es.

Anexo I. Artículos fundamentales para la elaboración de la Tesis

Anexo 1a. People and Organizational Culture: A Profile Comparison Approach to Assessing...

O'Reilly, Charles A., III; Chatman, Jennifer; Caldwell, David F. Academy of Management Journal; Ser 1991; 34, 3; ABI/INFORM Global pg.487

Academy of Management journal 1991. Vol. 34, No. 3, 487-516.

PEOPLE AND ORGANIZATIONAL CULTURE: A PROFILE COMPARISON APPROACH TO ASSESSING PERSON-ORGANIZATION FIT

CHARLES A. O'REILL y III University of California, Berkeley JENNIFER CHATMAN Northwestern University DAVID F. CALDWELL Santa Clara University

This article brings together three current themes in organizational behavior: (1) a renewed interest in assessing person-situation interactional constructs, (2) the quantitative assessment of organizational culture, and (3) the application of "Q-sort," or template-matching, approaches to assessing person-situation interactions. Using longitudinal data from accountants and M.B.A. students and cross-sectional data from employees of government agencies and public accounting firms, we developed and validated an instrument for assessing person-organization fit, the Organizational Culture Profile [OCP). Results suggest that the dimensionality of individual preferences far organizational cultures and the existence of these cultures are interpretable. Further, person-organization fit predicts job satisfaction and organizational commitment a year after fit was measured and actual turnover after two years. This evidence attests to the importance of understanding the fit between individuals' preferences and organizational cultures.

The notion of organizational culture has been important in the study of organizational behavior for the past decade (e.g., Barley, Meyer, & Gash, 1988; O'Reilly, 1989; Smircich, 1983). In spite of disagreements over some elements of definition and measurement, researchers seem to agree that culture may be an important factor in determining how well an individual fits an organizational context (e.g., Kilmann, Saxton, & Serpa, 1986; Schein, 1985). Implicit in writing on this theme is a logic of person-culture fit fundamentally drawn from an interactional psychology perspective in which aspects of both individual and situation combine to influence a local individual's response to a given situation (e.g., Chatman, 1989; Schneider, 1987; Terborg, 1981). In this regard, aspects of individuals, such as values and expectations, interact with facets of situations, such as incentive systems and norms, to affect the individuals' attitudinal and behavioral responses. As with similar fit theories of careers (Holland, 1985), job choice (Hackman & Oldham, 1980), work adjustment (Lofquist & Oawis, 1969), and organizational climate (Joyce & Slocum, 1984), the validation of the construct of personculture fit rests on the ability to assess relevant aspects of both person and culture. This measurement problem is a significant and sometimes controversial issue (Keon, Latack, & Wanous, 1982; Rousseau, 1990)-one that is at the center of the person-situation debate, that is, the controversy over the degree to which personality or context variables explain attitudes and behavior (Bem & Allen, 1974; Oavis-Blake & Pfeffer, 1989; Kenrick & Funder, 1988). The purpose of this research was to examine person-culture fit and its implications for work attitudes and behavior. We draw on recent developments in the applications of Q-sort, or template-matching, 1 approaches to resolve Borne of the measurement issues that have hindered previous research on fit (Bem & Funder, 1978; Block, Block, & Morrison, 1981; Caldwell & O'Reilly, 1990).

THEORETICAL BACKGROUND

Person-Situation Fit

The general notion of fit, or congruence, has long been important in psychology and organizational behavior (Nadler & Tushman, 1980). In studying person-situation fit, organizational behavior researchers have typically taken one of two broad paths. One has led to exploration of the interaction of individual characteristics and broad occupational attributes, the other to exploration of the fit between specific characteristics of an organization and the people in it. Examples of the second approach range from studying the match of individual skills to job requirements to studying the relationship between individual characteristics and organizational climate (e.g., Oowney, Hellriegel, & Slocum, 1975). For example, the two major theories of vocational choice (Holland, 1985; Super, 1957) both postulate that an individual will select a career or occupation that is similar to or that fits with that person's self-concept. Empirical results have typically supported the hypothesis that congruence between individuals' personalities and the demands of their occupations are associated with positive affect (Mount & Muchinsky, 1978; Spokane, 1985) and a high likelihood of their staying in their jobs (Meir & Hasson, 1982).

The authors gratefully acknowledge the research support of the Institute of Industrial Relations and the Institute for Personality Assessment and Research at the University of California, Berkeley. We also thank John Sheridan and Blair Sheppard for providing data access.

¹Q-methodology (Stephenson, 1953) is a well-established assessment technique. In a typical Q-sort procedure, the individual is presented with a large number of statements or characteristics and asked lo sort the items into categories (normally nine) according lo some criterion (usually the extent to which the item is characteristic of the individual). Constraints are typically imposed lo force respondents lo place fewer items in the extreme categories and more items in the middle categories.

A similar logic characterizes a series of studies of work adjustment conducted by Lofquist and Davis (1969). For instance, they proposed that satisfaction results from "a harmonious relationship between the individual and his environment, suitability of the individual to the environment and vice versa" (1969: 45). Tom (1971) recast this notion of person-situation complementarity to focus on person organization fit. He studied the role of personality and organizational images in the recruiting process and found that the greater the similarity between an individual's self-concept and his or her image of an organization, the more that individual preferred that organization. In a similar vein, Keon and colleagues (1982) found that individuals with a positive self-image sought to enter graduate schools with positive organizational images. Other studies have reported generally consistent findings (e.g., Graham, 1976).

More recent studies of early career adjustment and person-job fit have also invoked notions of congruence. For example, in a programmatic effort, Wanous and his colleagues showed how an accurate understanding of job requirements can enhance a person's adjustment to a job (Wimous, 1977). Similarly, the congruence between a person and a job has embodied notions of fit (e.g., O'Reilly, 1977): the degree to which individuals are suited to a job depends on their motives and needs and the job's requirements (Hackman & Oldham, 1980).

The cited studies and more general studies of person-situation interactions (e.g., manar, Larsen, & Emmons. 1984; Pervin, 1968) rest on the premise that positive responses will occur when individuals fit or match the requirements of a situation. Although broadly used and intuitively compelling, the person-situation framework has spawned a number of disagreements. For example, a recent issue of the Academy of Management Review (1989, vol. 14, no. 3) contained articles dealing with those controversies. One important question raised is how tit should be defined (Chatman. 1989).

The definition of fit remains a critical and largely unanswered question (Rynes & Gerhart, 1990). For instance, most studies of personsituation fit in organizations have used normative measures of personality to assess individual characteristics and relatively broad classifications of tasks, occupations, or jobs to characterize situations. Thus, people are described with one language, or set of characteristics, and situations with a totally different language. 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). Further, the use of a very limited set of descriptions of person and situation may make the detection of any true interaction effect difficult. Davis-Blake and Pfeffer, for example, observed that similar jobs in different firms mar vary greatly and concluded that the "measurement of job characteristics requires moving beyond crude occupational surrogates to measures which actually reflect the characteristics of a particular job as it is structured in a particular organizational setting" (1989: 394). A similar criticism can be made of the extant treatments of personality, in which most researchers have relied on a few normative measures that may not only fail to describe individuals adequately but may also assess personality characteristics not relevant to the people or situations under study (O'Reilly, Caldwell, & Mirabile, 1990; Weiss & Adler, 1984). Thus, although suggestive, previous research has generally failed to describe people and situations in a comprehensive manner along commensurate and relevant dimensions. This failure has hindered the development and empirical assessment of coherent theories of person-situation interaction.

Recent work in interactional psychology has begun to identify the characteristics of effective techniques for addressing person-situation effects. Bem and Funder (1978) argued that, in addition to providing comprehensive measurements, effective techniques for assessing persons and situations should allow for holistic comparisons across multiple dimensions. Such an approach can be thought of as "semi-idiographic" in that it is idiographic (i.e., compares the relative strength of attributes within a single individual) with respect to individual attributes but permits comparisons of person-situations (Luthans & Davis, 1982; Springfield, 1988). Since any given trait dimension will not be applicable to all individuals, we want to be able to select only those personological variables that are pertinent to a focal individual. Doing so requires an idiographic approach rather than a nomothetic one in which all individuals are rated in terms of a given attribute (Lamiell, 1981). The difficulty, however, with an idiographic approach is that it isn't clear what to do once a rating has been made. What is then needed is to be able to compare individuals even though descriptors may be differentially relevant to them.

Using "Q-methodology" (Stephenson, 1953), Bem and Allen (1974) developed a template-matching technique to accommodate this dual concern with relevance and comparability. This approach focuses on the salience and configuration of variables within a person rather than on the relative standing of persons across each variable. Since not all characteristics apply *to* all people and since what differentiates people from each other is the set of traits salient *to* each individual, an assessment of person-situation fit must permit such idiographic measurement of each person while also allowing comparisons across situations. Such an approach requires a large number of items or descriptors that comprehensively describe individuals and are relevant *to* particular situations. For instance, Bem and Funder (1978) created a 100-item profile of the ideal person for successful performance in an array of specific situations. How well individuals might do in a situation was predicted by how well they matched the ideal person-in-situation profile. Thus, rather than comparing a person and situation on a few dimensions, an appropriate person-situation investigation would attempt *to* determine the overall fit of the person *to* the set of relevant situational attributes.

Drawing on the Q-sort technique used for template matching, Caldwell and O'Reilly (1990) and O'Reilly and colleagues (1990) developed a profile-matching process to assess person-job fit. Using a structured interview job analysis with job incumbents and experts, they first developed a comprehensive set of competencies required for successful job performance. This set (typical1y 60-90 items) was then used to construct a consensus profile of the job. Individual profiles were then obtained by using peers and superiors as assessors. Person-job fit was measured by correlating the two profiles. Results of a series of studies have shown that person-job fit predicts performance, satisfaction, and turnover across a variety of jobs. Like template matching (Bem & Funder, 1978), the profile comparison process comprehensively assesses individuals and situations using a common language allows for the ipsative measurement of individual characteristics by arraying attributes in terms of their salience to the individual, and provides a direct measure of person-situation fit. The profile comparison process goes beyond template matching by using items that are highly specific to a target situation and equally relevant to a person and a situation. Thus, the application of a Q-sort technique appears to be a useful way to obtain semi-idiographic assessments of fit and offers a way to resolve a number of the measurement problems that have characterized earlier studies of person-situation interaction.

Person-Culture Fit

Although a number of earlier studies have explored the general notion of person-organization fit (e.g., Graham, 1976; Joyce & Slocum, 1984; Tom, 1971), more recent interest has centered on the idea that organizations have cultures that are more or less attractive to certain types of individuals (e.g., Wilkins & Ouchi, 1983). As Barley and colleagues (1988) noted, the concept of organizational culture has a long history, dating to early sociological studies (e.g." Gouldner, 1954; Selznick, 1949). Only recently, however, has the term "organizational culture" become prominent.

Drawing on theories from anthropology, sociology, and social psychology, researchers have made a number of efforts to understand the behavior of individuals and groups in organizations using cultural concepts such as semiotics, ritual s, ceremonies, glories, and language (e.g., Ouchi & Wilkins, 1985; Smircich, 1983; Swidler, 1986; Trice & Beyer, 1984). This process has generated a series of debates over issues such as the definition of "culture," the appropriate methodology for investigating it, and the proper level of analysis for its study. Barley (1983) pointed out that all studies of culture, whatever their theoretical origin, use reasonably similar terms and constructs. Differences exist among researchers in how objective or subjective, conscious or unconscious their use of these terms and constructs is and in what they sea as appropriate elements to study. Typically, researchers have agreed that culture can be thought of as a set of cognitions shared by members of a social unit (e.g., Geertz, 1973; Smircich, 1983). Rousseau (1990) provided an excellent description of the common elements in such sets and suggested a framework including fundamental assumptions, values, behavioral norms and expectations, and larger patterns of behavior. Research on culture usually begins with a set of values and assumptions (Enz, 1988; Martin & Siehl, 1983; Schein, 1985; Weiner, 1988). These values, whether conscious or unconscious, typically act as the defining elements around which norms, symbols, rituals, and other cultural activities revolve. Thus, Parsons argued that a cultural tradition emerges around values, defined as elements "of a shared symbolic system which serves as a criterion or standard for selection among the alternatives of orientation which are intrinsically apen in a situation" (1951: 11-12). Rokeach offered a very similar definition, proposing that "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" (1973: 5). In ibis vein, basic values mar be thought of as internalized normative beliefs that can guide behavior. When a social unit's members share values, they mar form the basis for social expectations or norms. Should these be even more widely shared throughout a larger social grouping, an organizational culture or value system may exist .Thus, researchers who investigate culture by focusing on norms (e.g., Cooke & Rousseau, 1988; Harrison & Carroll, 1991; O 'Reilly, 1989) are studying social expectations that are based on underlying values. Others who study culture through rituals, glories, or myths (e.g., Louis, 1983; Martin & Siehl, 1983; Trice & Beyer, 1984) are examining phenotypic outcroppings that reflect underlying beliefs and values.

The pervasiveness and importance of values in organizational culture are fundamentally linked to the psychological process of identity formation in which individuals appear to seek a social identity that provides meaning and connectedness (Ashforth & Mael, 1989). A substantial body of research has shown that individuals tend to classify themselves into social categories, such as gender, race, ethnicity, and organizational affiliation, and to use those categories to define themselves. For instance, people appear particularly able to discriminate between in-groups and out-groups and to be attracted to those seen as similar to themselves (Brewer, 1979; Moreland, 1985). Drawing on underlying values, individual s may manage their lives in ways that help them choose congruent roles, occupations, and even organizations (Albert & Whetten, 1985; Sampson, 1978; Stryker & Serpe, 1982). Schneider (1987) proposed that individuals may be attracted to organizations attempt to select recruits who are likely to share their values. New entrants are then further socialized and assimilated, and those who don't fit leave. Thus, basic individual values *or* preferences for certain modes of conduct are expressed in organizational choices and then reinforced within organizational contexts. *Just* as research has shown that similar backgrounds, attitudes and experience can increase liking between individuals (Tsui & O'Reilly, 1989), it may be that organizations that manifest and reward characteristic *outcomes* and behaviors will be more or less attractive to different types *of* people. Values provide the starting point, with the joint processes of selection and socialization acting as complementary means to insure person-organization fit (Chatman, 1988). Thus, congruency between an individual's values and those *of* an organization may be at the crux *of* person-culture fit.

The Assessment of Person-Culture Fit

There are some fundamental areas of agreement in the definition of culture, but less agreement exists about its measurement. As Rousseau noted at the very outset of her review, "Quantitative assessment of culture is controversial" (1990: 1). She discussed how advocates of qualitative methods for studying culture have argued that much of what constitutes a culture may be unique social construction of reality, perhaps unconscious on the part of the culture's members (e.g., Schein, 1985; Smircich, 1983). Acknowledging that some aspects of organizational culture may not be easily accessible, Rousseau also asserted that certain dimensions of culture may be appropriately studied using quantitative methods, indeed suggesting that quantitative assessments offer an opportunity to understand the systematic effects of culture on individual behavior.

Qne way to assess culture quantitatively is to focus on the central values that may be important to an individual's self-concept or identity as well as relevant to an organization's central value system. Weiner suggested this perspective, noting that "when a number of key or pivotal values concerning organization-related behaviors and state-of-affairs are shared across units and levels-by members of an organization, a central value system is said to exist" (1988: 535). To characterize an organization's culture in terms of its central values requires first that the range of relevant values be identified and then that an assessment be made of how much intensity and consensus there is among organizational members about those values (Enz, 1988; Saffold, 1988). O'ReilIy (1989), drawing on earlier research on measuring norms, noted two important characteristics of strong cultures. Qne is intensity on the part of organization, or widespread agreement on values, among members. If there is no substantial agreement that a limited set of values is important in a social unit, a strong culture cannot be said to exist. If there is strong and widespread agreement about the salience and importance of specific values, a central value system or unit culture may exist.

Much previous research has suggested that person-culture fit increases commitment, satisfaction, and performance, but very little empirical research on these relationships has been done. The general research question examined here was the following: To what extent is person-culture fit associated with individual commitment, satisfaction, and longevity with an organization (Holland, 1985; Meir & Hasson, 1982; Mount & Muchinsky, 1978). We expected to find that high levels of person-culture fit would be positively associated with those outcomes.

Addressing that question required two types of analyses. First, we needed to demonstrate that preferences individual s have for organizational cultures are comparable to cultures that exist. Second, the relationship between individual preferences and organizational culture needed to be assessed across a broad range of values. Therefore, we tested our general research question by developing a method of assessing culture based on the extant values of organizations and measuring person-culture fit through a semi-idiographic technique based on the profile comparison process (Caldwell & O'Reilly, 1990; O'Reilly et al., 1990).

METHODS

Overview

To investigate person-culture fit, we developed an instrument we called the Organizational Culture Profile (OCP). This instrument contains a set of value statements that can be used to idiographically assess both the extent to which certain values characterize a target organization and an individual's preference for that particular configuration of values. Person-culture fit can be calculated by correlating the profile of organizational values with the profile of the individual's preferences.

In a set of related investigations using multiple sets of respondents, we explored the characteristics of the OCP and demonstrated its ability to assess both organizations and people. In addition, we explored the relationship between preferences for organizational values and individual personality variables. Finally, we used the OCP to assess person-culture fit and test for the relationship between fit and work-related outcomes.

Development and Use of the Organizational Cultura Profile

The OCP was developed and used to measure person-organization fit. The approach to its development followed Caldwell and O'Reilly (1990). The OCP contains 54 value statements that can generically capture individual and organizational values. Following the general procedure for generating Q-sort profiles (Block, 1978), we had respondents 50ft the 54 items into nine categories, ranging, for instance, from most to least desirable or from most to least characteristic, and to put a specified number of statements in each category; the required item-category pattern is 2-4-6-9-12-9-6-4-2. Fewer items are required at the extremes than in the central, more neutral categories. The question respondents were asked to keep in mind while sorting the deck varied according to whether they were describing their own preferences or the value system or culture of a focal organization. To develop a profile of an organization's culture, we instructed respondents familiar with the organization to sort the 54 value statements according to the extent to which the items were

characteristic of the organization. For individual preferences, individuals were asked to sort according to their personal preferences for each value in their ideal organization. With this procedure, separate groups of individuals can be used to assess a firm's culture and provide ratings of preferences. The degree to which the organization's values are consistently shared can be investigated by the intercorrelation among raters using a variation of the Spearman-Brawn general prophecy formula (Nunnally, 1978). A more complete description of the development and general use of the OCP follows.

Step l-Describing organizational values. The set of value statements was developed on the basis of an extensive review of academic and practitioner-oriented writings on organizational values and culture (d. Davis, 1984; Deal & Kennedy, 1982; Kilmann, 1984; Ouchi, 1981; Peters & WaterfiaD, 1982; Schein, 1985). The purpose of this review was to identify a comprehensive set of values that could be used to characterize both individuals and organizations. An attempt was made to identify items that (1) could be used to describe any person or organization, (2) would not be equally characteristic of all people or organizations, and (3) would be easy to understand.

The initial pool of items consisted of over 110 items. For the final set, we used four criteria: (1) generality-an item should be relevant to any type of organization, regardless of industry, size, and composition; (2) discriminability-no item should reside in the same category for all organizations; (3) readability- the items should be easily understandable to facilitate their having commonly shared meanings; and (4) nonredundancy-the items should have distinct enough meanings that they could not substitute for one another consistently. Therefore, in addition to the literature search, we made a systematic empirical check to insure that the items met those criteria.

We asked 38 undergraduates participating in a vocational interest feedback program, all seniors majoring in business administration, and four faculty members to screen the 110 items, identifying items that were redundant, irrelevant, or difficult to understand. They were also asked to identify any unincluded items that would be important descriptors of an organization's culture. We made a similar check with respondents from a set of accounting firms. After several iterations, we obtained a final set of 54 value-based characteristics, which are listed in the Appendix.

Step 2-Assessing characteristics of firms. To obtain profiles of the cultures of firms, we identified sets of key informants with broad experience and asked them to sort the 54 items in terms of how characteristic each was of their organization's culture. Respondents received the following definition and instructions: "Important values may be expressed in the form of norms or shared expectations about what's important, how to behave or what attitudes are appropriate. Please sort the 54 values into a row of nine categories, placing at one end of the row those cards that you consider to be the most *characteristic* aspects of *the* culture of your organization and at the other end those cards that you believe to be the *least characteristic*...."

To study eight accounting firms, Chatman (1988) used an average of 16 accountants per film with an average tenure of eight years. She constructed separate film profiles by averaging the responses of the raters within each firm. The extent to which individuals in a firm described it in a consistent way was assessed through a variation of the Spearman-Brown general prophecy formula. The eight profiles showed substantial reliability, with an average alpha of .88, representing a range of .84 to .90, indicating relatively high levels of agreement among the raters in each firm. The similarity of the cultures of the eight firms was assessed by correlating the overall film pro files with one another. These correlations ranged from .29 to .85 suggesting substantial variability in the extent to which any two firms had similar cultures. Reliabilities for the government agency and other accounting firms used in the studies reported here were also high.

Step 3-Assessing individual preferences. To assess individual preferences for organizational cultures, respondents were asked to sort the 54-item deck into the nine categories by responding to the question. "How important is it for this characteristic to be a part of the organization you work for?" The answers ranged from "most desirable" to "most undesirable." To assess the test-retest reliability, or stability, of such preferences, we had 16 M.B.A. degree candidates complete Q-sorts 12 months apart. The instructions for these respondents were identical to those for the other groups providing data for the overall effort reported here. Correlations over the year averaged .73 suggesting a high stability of preferences. To investigate possible social desirability bias in the sorts, we gave eight doctoral students at the same university a description and definition of what constitutes social desirability bias and asked them to sort the 54 items in the most socially desirable way. Such biases, if undetected, could limit the variability of the profiles In order to minimize such limitation. We cast all items in the OCP in socially neutral or slightly positive terms. This social desirability profile was then compared to film profiles for the eight accounting firms. No evidence of social desirability bias emerged-organizations' members did not appear to be sorting the OCP in a way calculated to make their firms look like good places to work.

Step 4-Calculating the person-organization fit score. We calculated a person-organization lit score for each individual by correlating the individual preference profile with the profile of the film for which the person worked. More thorough descriptions of this approach to assessing fit appear in Chatman (1989) and in Caldwell and O'ReilIy (1990).

Respondents

Data to develop and test the OCP were obtained from five separate groups of respondents. The first consisted of 131 first-year M.B.A. students at a west coast university voluntarily participating in a managerial and personality assessment project (group 1). They completed the OCP to assess their preferences for organization values and provided substantial personality data, completing the Adjective Check List (Gough & Heilbrun, 1980), a well-developed and widely used measure of personality. Men comprised 57 percent of group 1, women 43 percent; the average age was 27.7 and the average years of work experience was 3.2. We used this group in two ways, first in combination with other groups to assess the structure of individual preferences for organizational values and second, to

investigate the relationship between personality and preferences for organizational cultures.

A second group of 93 M.B.A. students at a midwestern university provided OCP data on individual culture preferences (group 2). Men comprised 54 percent of this group; the average age was 26 and the average number of years of work experience was two. We combined ibis group with others to assess the structure of individual preferences.

The third group of respondents was part of a longitudinal study that tracked new accountants as they entered and proceeded through their first two years in west coast offices of eight of the largest U.S. public accounting firms (Chatman, 1988). In each of the eight firms, most or all of the accountants hired in 1986 into the audit function participated in the study; for all the firms, there were 171 respondents, representing 84 percent of the eligible employees (the mean par firm was 22, s.d. = 5). The demographic characteristics of group 3 were as follows: 47 percent were men; the average age was 24 in the fall of 1986; aU had bachelor's degrees; and 25 percent had master's degrees. At the time of data collection, salaries were nearly identical across the eight firms (x = \$21,500, s.d. = \$1,000), and all respondents entered their firms with the title of staff accountant.

These individual s provided data on their preferences by completing the OCP. In addition we surveyed them approximately 12 months later regarding their job satisfaction, organizational commitment, and intent to leave. A measure of actual turnover was obtained approximately 24 months after the OCP data were collected. Data from this group were used in two ways. First, we combined their OCP responses with those obtained from the first two groups to assess the structure of individual preferences for organizational values. Second, we correlated individual OCP data with firm-level measures of corporate culture (obtained from a fourth group of respondents) to provide a measure of person-culture fit. This fit score was related to the individual outcome variables of job satisfaction commitment, intent to leave and actual turnover.

Data were also obtained from 128 senior accountants employed by the eight firms taking part in the longitudinal study of new accountants. Approximately 18 individuals completed the OCP for each film, describing the pattern of values that characterized the organization. All these informants had at least two years experience in the firm. We developed an overall profile of the culture of each film by averaging the individual responses. There was a high level of agreement among the members of each film, as shown by Spearman-Brawn coefficients ranging from .84 to .90. We used data from this sample to generate the aggregate profiles describing the culture of each of the eight accounting firms. These were then used to calculate the person-culture fit scores for the newly hired accountants.

The fourth group of respondents consisted of 96 certified public accountants from six offices of major accounting firms in the west central United States. Of group 4, 63 percent were men; the group's average tenure was 85 months and 55 percent were over 30 years of age. These respondents provided assessments of film culture. We combined these data with data from a fifth group of respondents to analyze the structure of OCP descriptions of firm cultures.

The fifth group consisted of 730 middle-level managers employed by a government agency who were attending a continuing management development program at an east coast university. In group 5, 88 percent of the respondents were men; the average age was 45.9 and the average tenure with the employing agency was 21.4 years. All described the values of their organization by completing the OCP. We combined these data with those from group 4 to analyze the structure of the values defining corporate culture.

Measures

To test the general hypothesis that person-organization lit is related to work outcomes, we measured a number of other variables:

Person-organization fit. The new accountants in group 3 sorted the items in the OCP in terms of their own preferences for organizational culture. The genial accountants in group 3 sorted the items in terms of how descriptive they were of their firms. Thus, we developed a profile of the culture of each firm and calculated person-organization lit by correlating the rankings of the set of 54 individual preferences obtained from the new accountants with the rankings of the 54 values obtained from the senior accountants in the film that employed them. The person-organization fit correlations ranged from - .36 to + .62.

To establish the predictive validity of person-organization fit, follow-up data were collected from the entry-level accountants, through surveying respondents from seven of the eight firms about one real after the initial data collection. Because of a delay in collecting initial data at the eighth film, it was impossible to survey the individuals at this firm, although the film provided information about turnover. This limitation reduced the potential number of respondents in the second survey to 144. Of that number, 6 had left their firms and 2 were on extended leaves of absence at the time of the follow-up survey. Eligible respondents returned a total of 127 surveys, yielding a response rata of about 92 percent. Questions in the survey used related to commitment, job satisfaction, and intent to leave.

Organizational commitment. Commitment was measured using O'ReiIly and Chatman's (1986) 12-item scale. A principal components analysis with varimax rotation yielded two factors. One factor, normative commitment, was defined by eight items representing commitment based on an acceptance of an organization's values. The second factor, instrumental commitment, was defined by tour items

describing commitment based on exchange, or in response to specific rewards. These factors are consistent with recent findings (Caldwell, Chatman, & O'Reilly, 1990). We calculated separate factor scores for normative and instrumental commitment and used them in subsequent analyses.

Job satisfaction. Overall satisfaction with a job was measured using the single-item Faces Scale (Kunin. 1955). Recent research has shown this scale to be the most balanced job satisfaction measure in terms of capturing positive and negative affect and cognitions (Brief & Roberson, 1989).

Intent to leave. Intentions of leaving an organization were measured with tour 7-point Likert-type questions: (1) "To what extent would you prefer another more ideal job than the one you now work in?" (2) "To what extent have you thought seriously about changing organizations since beginning to work here?" (3) "How long do you intend to remain with this organization?" and (4) "If you have your own way, will you be working for ibis organization three years from now?" since a principal components analysis of the questions yielded a single factor, we calculated one factor score to measure intent to leave.

Turnover. Approximately one year after the administration of the second survey and two years after person-organization fit was measured, each of the eight firms provided a list of individuals who had left and the dates of their departures. Although responses to the commitment, satisfaction, and intent-to-leave questions were available from only 127 individuals, actual turnover data were available for all the original respondents. Of the 171 individuals for whom person-organization fit scores were available, about 28 percent (N = 47) had left their firms in the two-year period.

Control variables. Since the initial person-organization fit data were obtained very soon after individuals joined their firms, during what is potentially a key time in shaping future attitudes (e.g., Louis, 1980), we controlled tenure with a firm at the time initial data were collected (x = 19 days, s.d. = 27). Age and gender were also used as control variables. Although respondents differed in the degrees they had obtained, we did not use degree as a control because all these individuals had identical jobs and because the quality of the programs from which they had graduated varied substantially. It therefore seemed that issues degree might normally index, such as expectations and career prospects, would not be related to that variable for the individuals studied.

RESULTS

Although the initial development of the OCP showed good infernal and test-retest reliability, validity remained a major concern; did the OCP discriminate among individuals and organizations in terms of their central value systems and did the measure of individual-culture fit have predictive validity? To test those questions, we used two general types of analyses. First, we conducted separate factor analyses of the individual (Table 1) and organizational profiles (Table 3) to examine the dimensionality underlying the OCP. To be useful, the dimensions of individual preferences and organizational cultures should be comparable. Evidence of such comparability would indicate that the types of cultures individuals indicate they want are generally equivalent to the cultures organizations offer, and lack of comparability would reduce the meaningfulness of person-organization fit. In addition, evidence that the individual dimensions of culture are associated with characteristically different personality types would suggest that the underlying factors are psychologically meaningful (Table 2). In addition to seeking evidence of discriminant validity, we used a second set of analyses based on person-organization fit scores to predict satisfaction, commitment, and tenure (Tables 4-6). Taken together, the results of these analyses demonstrate that person-organization fit possesses predictive validity and is organizationally useful.

				,				
Organizational Culture	Innovation	Attention to Detail:	Outcome Orientation:	Aggressiveness:	Supportiveness:	Emphasis on Rewards:	Team Orientation:	Decisiveness:
Profile Item	Factor	1 Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
Stability	66	.04	25	.04	.05	03	01	.06
Innovation	.51	05	07	.07	02	02	09	05
Experimenting	.59	12	03	05	08	08	04	04
Risk taking Careful Rule oriented	.65 42 43	04 .33 .38	06 25 .06	.22 11 04	20 15 16	10 07 02	08 .06 .07	05 .16 .09
Security	53	24	30	06	.10	.15	03	.13
Highly organized	47	.24	21	01	17	05	03	24
Analytical	.01	.56	.13	09	.01	03	03	.06
Attention to detail	08	.75	05	.02	06	06	03	08
Precise	09	.75	.12	.01	09	.01	05	11
Calm Achievement oriented Demanding High expectations	16 14 .19 12	.10 04 01	46 .62 .57	.08 .08 .21	04 00 15	.04 .25 15	.00 03 07	.12 .05 .02
Results oriented Opportunities	.07 .17	01 .01	.49 08	15 .55	14 18 05	.20 .25	.05 .04	14 10

TABLE 1 Results of Factor Analysis of Individual Preferences

Table 2 presents the correlations among a set 01 Adjective Check List measures and the eight OCP factor scores.

Although we do not report specific hypotheses here, good support for seven of the eight factors can be seen in the form of easily interpretable patterns of personality and cultural preferences. For instance, individuals with high needs for achievement show a significant preference for aggressive, outcome-oriented cultures. Respondents with high needs for autonomy show a preference for innovative cultures and negativity toward those characterized by an emphasis on supportiveness and teamwork. Only the detail-orientation factor defined by a preference for precision, analysis and attention to detail shows no correlation with any personality dimension

Organizational		Attention	Outcome			Emphasis on	Team	
Culture Profile ltem	Innovation: Factor 1	to Detail: Factor 2	Orientation: Factor 3	Aggressiveness: Factor 4	Supportiveness: Factor 5	Rewards: Factor 6	Orientation: Factor 7	Decisiveness: Factor 8
Aggressive	.09	08	.13	.75	11	09	12	14
Socially responsible	.11	19	06	51	09	28	05	.06
Competitive	.00	09	.18	.55	40	.00	13	.04
Shares information	.30	08	00	12	.44	01	.21	.24
Supportive	08	.03	21	08	.63	03	.14	.09
Praises performance	19	11	06	.00	.54	,lO	13	.07
Long hours	01	.21	.14	.20	53	.02	.12	.16
Professional growth	08	05	08	.12	15	.68	.03	.03
High pay for								
performance	.07	-'.08	.14	.03	.16	.66	20	.06
Fitting in	23	02	.00	09	,17	.41	.03	.21
Autonomy	.19	02	04	27	21	00	45	07
Team oriented	10	.02	06	.01	.07	.03	.75	.03
Collaboration	.04	09	.01	19	12	12	.70	.03
Predictability	33	.22	03	.04	.03	00	.02	.44
Decisiveness	03	.10	02	.09	04	06	15	.65
Low conflict	26	20	25	15	.09	.09	09	.56
Eigenvalues	5.28	4.16	3.11	2.33	1.93	1.73	1.61	1.49
Proportion of variance								
accounted for	,10	,08	.06	.04	.04	.03	.03	.03

TABLE 1 (continued)

• N = 395. Boldface statistics represent loadings greater than .40 on that factor.

Discriminant Validity and the Factor Structure of the Organizational Culture Profile

Recall that each respondent was asked to sort the 54 items in the OCP into nine categories ranging from most to least desirable according to how important it was for the person that the characteristic represented be a part of an organization's culture. Following Block (1978), we analyzed data from the two groups of M.B.A. students and the new accountants (groups 1, 2, and 3, N = 395) using principal components analysis with varimax rotation. Results of an analysis of all 54 items revealed 33 items with loadings of greater than .40 on a single factor. Table 1 shows results; items with significant cross-loadings are not reported.

From a scree test, eight interpretable factors with eigenvalues greater than 1.0 and defined by at least three items emerged. This pattern shows that an organization's culture can be characterized by innovation and risk taking (factor 1), attention to detail (factor 2), orientation toward outcomes or results (factor 3), aggressiveness and competitiveness (factor 4), supportiveness (factor 5), emphasis on growth and rewards (factor 6), a collaborative and team orientation (factor 7), and decisiveness (factor 8). These eight orthogonal factors are unambiguously defined. In general, they approximate many of the dimensions to which the qualitative literature on culture has often referred (e.g., Deal & Kennedy, 1982; Peters & Waterman, 1982).

It would support the reasonableness of those dimensions if different types of individuals reported preferences for cultures differing along the dimensions. To investigate, we computed factor scores for the west coast M.B.A. students (group 1, N = 131). We then correlated those scores with a very well-developed measure of normal personality, the Adjective Check List (Gough & Heilbrun, 1980). The instrument, which provides multiple measures of the strength of motives such as affiliation, aggression, and achievement, has demonstrated substantial reliability and validity, with a median scale alpha of .76. One indication of the validity of the OCP dimensions would be the emergence of distinctive preferences for different organizational cultures among respondents with characteristically different personality attributes. Table 2 presents the correlations among a set of Adjective Check List measures and the eight OCP factor scores.

Although we do not report specific hypotheses here, good support for seven of the eight factors can be seen in the form of easily interpretable patterns of personality and cultural preferences. For instance, individual s with high needs for achievement show a significant preference for aggressive, outcome-oriented cultures. Respondents with high needs for autonomy show a preference for innovative cultures and negativity toward those characterized by an emphasis on supportiveness and teamwork. Only the detail - orientation factor, defined by a preference for precision, analysis, and attention to detail, shows no correlation with any personality dimension. This absence may reflect the fact that the Adjective Check List does not contain any assessment of obsessive-compulsive tendencies. Overall, the results suggest that the dimensions underlying individual preferences for distinctive cultures are meaningfully associated with characteristic differences in underlying personality variables.

Adjective						Emphasis		
Check List		Attention	Outeome			on	Team	
SeRIes	Innovation	to Detail	Orientation	Aggressiveness	Supportiveness	Rewards	Orientation	Decisiveness
Abasement	30**	.09	06	26**	.19*	05	.07	03
Achievement	12	12	.24**	.25**	13	.04	.04	.03
Affiliation	01	10	.05	.03	.02	19*	.20**	.29**
A	.26**	01	06		27**	.09	13	09
Aggression			.06	.16				
Autonomy	.33**	07	03	.10	22*	.05	21 *	16
Change	.30**	13	01	.05	16*	.04	07	05
Creativity	11	.02	.10	19*	.30**	.,03	15	15
Deference	40**	.05	02	15	.21 *	07	.17	.13
Dominance	.26**	11	.18*	.26**	19*	.05	01	.04
Endurance	.02	.04	.19*	.13	.01	02	.08	.04
Exhibition	.23*	05	.05	.11	21 *	.09	07	05
Nurturance	19*	10	02	17	.14	25**	.28**	.21 *
Self-confidence	.20*	10	.15	.18*	12	04	.12	.09
Succorance	23*	.10	08	22*	.16	.03	.05	05

 TABLE 2

 Correlations Between Adjective Check List Measures and Organizational Culture Profile Factors

• N = 119.

* P < .05 ** P < .01 117

TABLE 3

Results of Factor Analysis for Firm Descriptions

Organizational	—		Respect for	Outcome	Attention	Team	
Culture	Innovation.	Stability ·	People	Orientation	to Detail:	Orientation	A ggressiveness.
Profile Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Innovation	.76	08	06	.07	.00	.12	04
Opportunities	.50	23	09	.07	01	03	.22
Experimenting	.76	03	.04	15	11	06	06
Risk taking	.76	08	.02	08	13	.04	.07
Careful	48	.27	09	14	.24	16	22
Rule oriented	45	.40	13	02	.14	16	18
Stability	09	.75	.08	11	.01	01	.06
Predictability	39	.55	.04	10	.03	06	03
Security	23	.63	.09	06	25	12	17
No rules	.18	41	.09	20	11	03	.32
Respect for individual	05	.06	.75	04	12	.00	14
Fairness	.01	.06	.68	03	03	.07	10
Tolerance	13	.04	.49	28	06	.02	.11
Achievement oriented	.01	08	07	.73	04	.00	03
Action oriented	.14	.04	05	.49	11	09	.34
High expectations	02	33	15	.41	.05	01	.03
Results oriented	02	06	04	.71	.00	.02	.10
Precise	08	.03	06	05	.74	19	01
Attention to detail	16	.02	06	.00	.70	07	.00
Analytical	04	13	10	02	.55	.06	01
Team oriented	.14	06	.03	02	07	.69	.12
Collaboration	.00	22	03	01	15	.58	06
People oriented	.10	.03	.33	05	17	.48	11
Aggressive	.13	17	24	.22	02	24	.42
Competitive	04	25	19	.14	06	02	.49
Socially responsible	13	03	.12	08	05	22	63
Eigenvalues	6.75	4.14	2.20	2.12	1.84	1.69	1.54
Proportion of variance							
accounted for	.13	.08	.04	.04	.03	.03	.03

a The data represent 826 accountants in seven firms. Boldface statistics represent loadings greater than .40 on that factor.

Additional important questions are whether the OCP reflects meaningful organizational dimensions and whether the individual and organizational matrices are similar. To address those issues, we had 826 respondents from the government agency and six accounting firms (groups 4 and 5) profile the culture in their organizational units. Each respondent sorted the 54 items into nine categories on the basis of how much each attribute characterized the focal organization; that is, individuals described their organization's culture, not their personal preferences. We performed a principal components analysis and varimax rotation using those data, again retaining items with loadings greater than .40. Table 3 shows the factor loadings for the 26 items that loaded cleanly on factors retained on the basis of a scree test.

In this instance, seven clearly defined factors emerged. An inspection of the two factor analyses reveals that five of the eight factors shown in Table 1 are replicated almost exactly-innovation, outcome orientation, aggressiveness, detail orientation, and team orientation. Sixteen of the 20 items shown in Table 3 which are also in Table 1, load on the same factors. The nonreplication of the other three individual preference dimensions (supportiveness, emphasis on rewards, and decisiveness) seems to result from a lack of inclusion of the same items. Although direct comparison of the factor structures could be misleading because of the different stem questions, overall there appears to be good comparability between cultures as defined by individual preferences and actual organizational descriptions. The results of the factor analyses suggest that the OCP can provide a reasonable mapping of organizational culture.

Person-Organization Fit and Individual Outcomes

The evidence suggests that the 54 statements represent one possible approach to depicting culture, but an important question remains: Is person organization fit systematically related to relevant organizational outcomes such as satisfaction, commitment, and turnover? Table 4 shows the correlations between person-organization fit and a set of outcome and control variables. The correlation between an individual's preferences and a firm's characteristics across the entire set of 54 items measures person-organization fit.

Of central interest are the correlations between person-organization fit and normative commitment (r = .25, P < .01), overall job satisfaction (r = .35, P < .01), and intent to leave an organization (r = -.37, P < .01). These relationships suggest clearly that high person-organization fit as measured at time 1, when respondents originally entered their firms, is associated with high positive affect and a low intent to leave at time 2, a year later. Person organization f it is not significantly related to either age or gender; however, in order to insure that these variables were not affecting the bivariate relationships, we included them as controls in the regression equations. Again, the results, reported in Table 5, are straightforward. Person-organization fit is a significant predictor of normative commitment, job satisfaction, and intentions to leave, independent of age, gender, and tenure.

Approximately 12 months alter the collection of satisfaction and commitment measures, or 24 months after we assessed personorganization fit, we collected data on the employment status of all respondents. To assess whether person-organization fit would predict actual turnover 24 months later, we usad survival analysis (Kalbfleish & Prentice, 1980). Several recent papers (e.g." Fichman, 1988; Morita, Lee, & Mowday, 1989; Peters & Sheridan, 1988) have demonstrated the appropriateness of survival analysis for turnover research. This technique takes explicit account of time in the analysis of turnover and corrects for right censoring in the data. Table 6 presents these findings.

	Means, Standard Deviations. and Correlations										
Variables	Means	s.d.	1	2	3	4	5	6	7	8	
1. Person-organization fit	0.23	0.19									
2. Age	23.32	3.45	.14								
3. Gender	1.S3	O.SO	08	10							
4. Tenure	19.00	27.00	.12	.04	01						
S. Normative commitment	0.00	1.00	.2S**	08	.01	02					
6. Instrumental commitment	0.00	1.00	.1S	03	.01	.02	,00,				
7. Job satisfaction	S.10	1.31	.35**	.03	01	.09	.39**	.62**			
8. Intent to leave	0.00	1.00	37**	11	.12	.00	34"	S3**	7S**		
9. Turnover	1.27	O.4S	16*	.13	06	.OS	16*	.10	30**	.24**	

"a Tenure was measured in days.

b This variable had a value of 1 for intent to stay and 2 for intent to leave.

* p < .05 ** P < .01

Calculation would be e(.54X1) = 1.89. Conversely, for a person with the lowest possible person organization fit score (-1) the calculation would be $e(..X_{-1}) = .53$. The interpretation is that with a perfect score on person-organization fit, an individual is likely to stay twice as long as we would have predicted without having information about their score. Conversely, a person with the lowest possible person-organization fit score will stay approximately half the time we would have predicted without knowing their score

Variables	Normative Commitment	Instrumental Commitment	Job Satisfaction	Intent to leave
Person organization fit	0.28**	-0.07	0.36**	0.36**
Age	-0.11	-0.06	-0.05	-0.04
Gender	-0.04	-0.11	-0.01	0.12
Tenure	0.01	0.06	0.08	0.01
Adjusted R2	0.06		0.10	0.12
F	2.62	n.s.	4.31**	5.04**

Entries represent standardized regression coefficients.

* p < .05**p < .01

To determine whether person-organization fit has an effect on staying with a film, the lag likelihood of the base equation (model 1) was compared to the lag likelihood of model 2. The chi-square of this difference is statistically significant (X2 = 8.69, P < .01), indicating that person-organization lit positively predicts the probability of a person's staying with a firm. Although the form of the relationship between person-organization lit and staying is nonlinear, an individual with a perfect fit score would be predicted to stay approximately twice as long as would be predicted using the base model alone, Similarly, an individual with a very high negative lit score would be predicted to stay about half as long as would be predicted with the base model.2

TABLE 6Results of Survival Analysis

Independient Variables	Model 1 Parameter	Model 1 s.e.	Model 2 Parameter	Model 2 s.e.
	Estimates		Estimates	
Person organization fit	-0.02	.01	.64*	.29
Age	-0.02	.01	-0.02	.01
Gender	.05	.10	.05	.10
Scale parameter	.34		.34	
Logarithmic likelihood	-97.7		-93.36	

Estimates are unstandardized. *p < .05 for the chi-square value.

² For any respondent in this group, the predicted time of staying can be calculated by multiplying the exponential of the coefficient for person-organization lit (.64 in this group) by each respondent's person-organization fit score. Thus, for a person who has a fit score of 1.0, the (continued)

Figure 1 is a graph of the survival curve of the effects of person organization fit on the likelihood of staying with an organization. We estimated the survivor function using Kaplan and Meier's nonparametric approach, as recommended by Turna and Rannan (1984). Because it makes no assumptions about the functional form of the curve, the Kaplan and Meier estimator is one of the most common methods for assessing relationships when data are right-censored. Each of the descending legs indicates one or more instances of leaving. We divided the data into quartiles based on person-organization fit scores; Figure 1 shows the survival curves of the top and bottom quartiles. As shown, the curve for individuals with low person organization fit scores has a steeper descent than the curve for high scores that is, low scorers are more likely to leave an organization than high scorers. Taken together, the data shown in Table 6 and Figure 1 offer compelling evidence for the positive effect of person-organization fit on an individual's staying with an organization.

Although it is not reported in detail, in addition to the measurement of person-organization lit, we obtained an assessment of person-job fit. Following the approach of Caldwell and O'Reilly (1990), we conducted a job analysis for the position held by all the entry-level accountants (group 1). We obtained a profile consisting of 60 competencies using six subject-matter experts from each of the eight firms. The reliability of ibis job profile across raters and within firms, assessed using a variation of the Spearman-Brown general prophecy formula, was quite high (.97). Entering accountants also provided a self-assessment using the same 60 competencies, and a person job fit score was computed (average r = .27, s.d. = 14). We then included this score in the analyses shown in Table 5 and as a control variable in the survival analysis. Although person-job fit did have some independent effects on job satisfaction and intent to leave, it had no impact on the person-culture fit relationships reported. The simple correlation between person-job and person-organization fit was .16 (n.s.). Thus person-organization fit has quite independent effects on commitment, job satisfaction, and turnover.

Calculation would be el.54xt) = 1.89. Conversely, for a person with the lowest possible person organization fit score (-1). the calculation would be e(-64' - 1) = .53. The interpretation is that with a perfect score on person-organization fit, an individual is likely to stay twice as long as we would have predicted without having information about their score. Conversely, a person with the lowest possible person-organization fit score will stay approximately half the time we would have predicted without knowing their score.

DISCUSSION

Overall, the results presented here offer strong support for the validity of assessment of person-organization fit on the basis of value congruency. The results suggest that the Organizational Culture Profile shows reasonable reliability and convergent-discriminant validity. As results shown in Table 2, indicate individual variations in preferences for different organizational cultures are associated with interpretable differences in personality characteristics. The structure underlying individual preferences (Table 1) also appears comparable to the structure underlying the culture in a selection of firms (Table 3).

The comparatively large number of values examined here also provides a fine-grained evaluation of organizations' cultures. As Chatman (1988) demonstrated even organizations that appear highly similar such as accounting firms as a group, may vary widely in their underlying value structures. Although there mar be characteristic similarities in cultures within industries (e.g., Burns & Stalker. 1961), use of a Q-sort approach allows for the identification of contrasts within and across organizations.

The factor analytic results provide a basis for future research. In view of those results, one general hypothesis might be that organization's cultures tend to be similar when the organizations are in relatively homogeneous industries and thus have similar sizes, structures, levels of technological maturity, personnel configurations, regulatory demands, and orientations. Conversely, the cultures of firms in heterogeneous industries may be less similar. Our factor analytic results would be especially useful for addressing this hypothesis because they allow assessment of differences in both factor patterns across industries and the mean values of particular firms on each relevant factor. For example, there may be greater variation on the innovation factor within a high-technology industry than within the public accounting industry. Previous researchers have conducted a similar kind of analysis of cultural factors across nations (Hofstede, Neuijen, Ohayv, & Sanders, 1990).

The results reported here also suggest that person-organization fit may provide meaningful insights into individuals' adjustments to organizations (e.g., Holland, 1985; Louis, 1980). The predictive validity shown in Tables 4 through 6 is evidence of this potential. Measures of person-organization fit at time 1 were significantly related to individual commitment and satisfaction approximately 12 months later. Interestingly, person-culture fit is related to normative, value-based commitment but not to instrumental, compliance-based commitment. Caldwell and colleagues (1990) showed that normative commitment is often associated with firms with strong cultures. Researchers have often suggested that high commitment and satisfaction are outcomes of high person-organization fit (e.g., Kilmann et al., 1986; Ouchi & Wilkins, 1985), but little empirical evidence of this association has been available. The lack of a significant correlation between congruence and instrumental commitment here is not surprising, given that our measures of congruence are predicated on fit between individual preferences and organizational values rather than on specific attributes of extrinsic rewards (Meyer & Allen, 1984).

Of perhaps more practical importance is the association between person-organization fit and turnover almost 24 months later (Table 6). Recall that new accountants completed the OCP during their first few days with their organizations. We then compared individual preferences for a particular organizational culture to an organizational profile provided by a set of experienced organizational members. The degree to which individual preferences matched organizational realities was predictive of turnover two years later. Although some authors have questioned whether the strength of an organization's culture can be measured (Saffold, 1988), others have argued that strong agreement among organizational members about a few central norms or values defines an organizational culture (e.g., Enz, 1988; O'ReiUy, 1989; Rousseau, 1990). These results seem to support that view.

In this regard, the OCP appears useful. First, as recent advances in the study of person-situation interaction have suggested, a Q-sort approach provides an idiographic assessment of the unique patterning of a large number of defining attributes for individuals and organizations. In the case of organizational culture, such a broad assessment would allow organizations to screen candidates against the organizational attributes that are most relevant to their personal values, not against some general rating of a few values that mar not be personally important. In this respect, the profile comparison approach is simply a formalization of the logic of fit we use in everyday life. We ask "Will person X lit in situation Y?" This is genuinely a question about person-situation congruence, not a main effect. We are not interested in how the person will do in situations A and B or whether person Z will fit in situation Y. To answer such questions, we must know what a situation demands and how an individual's competencies and preferences lit a specific situation. This is precisely the information the profile comparison process yields. Most models of lit assess individual and environmental characteristics separately and then combine the two independent variables to predict behavior and attitudes (e.g., Joyce, Slocum, & Van Glinow, 1982); the profile comparison process, however, provides a direct evaluation of the simultaneous effects of person and situation. The process assesses the relative salience and configuration 0f characteristics within individuals and then permits a comparison across situations. By evaluating the individual and situation on items that are relevant to both, the process is similar to what Wright and Mischel (1987) referred to as the "competency demand hypothesis." This method also permits individuals to hold values that may, in a broad sense, be conflicting. 80th Ashforth and Mael (1989) and Swidler (1986) noted that value conflicts are common in organizations and are not measurable with more restrictive approaches.

In earlier studies, the idea of fit, although important, has remained elusive. As Rynes and Gerhart (1990) pointed out, most discussions of lit have implied something more than a simple match of an individual to a job's requirements and have frequently invoked notions of "chemistry" or finding the "right type" of person. In a study of recruiting M.B.A. graduates, they showed that firm-specific characteristics had significant impacts on recruiters' judgments beyond general employability attributes such as grade point averages and previous accomplishments. The results of the present study are consistent with those findings and suggest the lit of firm-specific and individual values mar underlie earner discussions of chemistry. Controlling person-job lit did not affect the results for person-culture lit as assessed here. Both are relevant. For an individual to be satisfied and attached to an organization, the person may need both task competency and a value system congruent with the central values of the organization. As for the organization, it needs to select people who fit a given situation, which is likely to include some combination of task and cultural requirements. Failure to fit on either dimension may reduce employees' satisfaction and commitment and increase the likelihood of their leaving.

The results of this study can contribute to future research in a number of ways. First, as organizational researchers continue to debate the importance of congruence between individuals and situations, these results demonstrate that a widely used tool for assessing personality can be adapted to provide comparable measures of persons and situations. The development of such methods can allow for research in a number of areas where fit to a job, occupation or organization is conceived as either an important causal or outcome variable. Second and more substantive, this research provides an empirically based definition of the pattern of values that define organizational culture. Although further validation of this approach to culture is necessary, the relatively consistent patterns of the individual preferences for values and the observation of those values in organizations suggests that the pattern defining organizational culture is relatively robust Third, and perhaps of greatest importance, these results demonstrate that the fit between an individual's preference for a particular culture and the culture of the organization the person joins is related to commitment, satisfaction and turnover. This study and others like it can help clarify both the nature of organizational culture and the impact of cultures on individuals.

REFERENCES

Albert, S., &: Whetten, D. 1985. Organizational identity. In L. L. Cummings &: B. M. Staw (Eds.), Research in organizational behavior, vol. 7: 263-295. Greenwich. CT: JAI Press.

Ashfortb, B., &: Mael, F. 1989. Social identity theory and the organization. Academy of Management Review. 14: 20-39.

Barley, S. 1983. Semiotics and the study of occupational and organizational cultures. Administrative Science Quarterly, 28: 393-413.

Barley, S., Meyer, G., 8: Gash, D. 1988. Cultures of culture: Academics, practitioners, and the pragmatics of normative control. Administrative Science Quarterly. 33: 24-60.

Bem, D., &: Allen, A. 1974. On predicting some of the people some of the time: The search for cross-situational consistencies in behavior. *Psychological Review*. 81: 506-520.

Bem. D., &: Funder, D. 1978. Predicting more of the people more of the time: Assessing the personality of situations. *Psychological Review*. 85: 485-501. Block, J. 1978. *The* Q-sort *method in personality* assessment *and psychiatric research*. Palo Alto. CA: Consulting Psychologists Press.

Block, J., Block, J., &: Morrison, A. 1981. Parental agreement-disagreement on child rearing orientations and gender-related personality correlates in children. *Child Development*, 52: 965-974.

Brewer, M. B. 1979. In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. Psychological Bulletin. 86: 393-400.

Brief, A., &: Roberson, L. 1989. Job attitude organization: An exploratory study. Journal of Applied Social Psychology. 19: 717-727. Burns, T., &: Stalker, G. 1961. The management of innovation. London: TavistockPublications.

Caldwell, D., &: O'Reilly, C. 1990. Measuring person-job fit using a profile comparison process. Journal of Applied Psychology. 75: 648-657.

Caldwell, D., Chatman, J., &: O'Reilly, C. 1990. Building organizational commitment: A multifirm study. Journal of *Occupational Psychology*. 63: 245-261.

Chatman, J. 1988. *Matching people and organizations: Selection and socialization in public accounting firms*. Unpublished doctoral dissertation, Walter A. Haas School of Business, University of California, Berkeley.

Cbatman, J. 1989. Improving interactional organizational research: A model of person organization fit. Academy of Management Review. 14: 333-349.

Cooke. R., & Rousseau. D, 1988. Behavioral norms and expectations: A quantitative approach to the assessment of organizational culture. *Group and Organizational Studies*, 13: 245-273.

Davis. S. 1984. Managing corporate culture. Cambridge, MA: Ballinger.

Davis-Blake. A., & Pfeffer J. 1989. Just a mirage: The search for dispositional effects in organizational research. Academy of Management Review, 14: 385-400.

Deal. T. & Kennedy. A. 1982. Corporate cultures. Reading. MA: Addison-Wesley.

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: 580592.

Downey, H., Hellriegel, D., & Slocum, J. 1975. Congruence between individual needs, organizational climate, job satisfaction and performance. *Academy of Management Journal*, 18: 149-154.

Enz. G. 1988. The role of value congruity in intraorganizational power. Administrative Science Quarterly, 33: 284-304.

Fichman, M. 1988. Motivational consequences of absence and attendance: Proportional hazard estimation of a dynamic motivation model. *Journal of Applied Psychology*, 73: 119-134.

Geertz, C. 1973. The interpretation of cultures. New York: Basic Books.

Gough, H., & Heilbrun, A. 1980. The Adjective Check List manual. Palo Alto, CA: Consulting Psychologists Press.

Gouldner, A. 1954. Pattems of industrial bureaucracy. New York: Free Press.

Graham, W. 1976. Commensurate characterization of persons, groups and organizations: Development 01 the Trait Ascription Questionnaire (TAQ). *Human Relations*, 29: 607-622,

Hackman. J, R.. & Oldham. G. 1980. Work redesign. Reading. MA: Addison-Wesley.

Harrison. J.. & Carroll, G. 1991. Keeping the faith: A model of cultural transmission in formal organizations. Administrative Science Quarterly, 36: in press.

Hofstede, G., Neuijen, B., Ohayv, D., & Sanders, G. 1990. Measuring organizational cultures: A qualitative and quantitative study across twenty cases. *Administrative Science Quarterly*, 35: 286-316.

Holland, J. L. 1985. *Making vocational choices* (2d ed.). Englewood Cliffs, NJ: Prentice-Hal!. Joyce, W., & Slocum, J. 1984. Collective climate: Agreement as a basis for defining aggregate climates in organizations. *Academy of Management Journal*, 27: 721-742.

Joyce, W., Slocum, J., & Van Glinow, M. 1982. Person-situation interaction: Competing models of fit. Journal of Occupational Behavior, 3: 265-280.

Kalbfleisch. J., & Prentice, R. 1980. The statistical analysis of failure time data. New York: Wiley.

Kenrick, D., & Funder, D. 1988. Profiting from controversy: Lessons from the person-situation debate. American Psychologist, 43: 23-35.

Keon, T., Latack, J., & Wanous, J. 1982. Image congruence and the treatment of difference scores in organizational choice research. Human *Relations*, 35: 155-165.

Kilmann, R. 1984. Beyond the quick fix. San Francisco: Jossey-Bass.

Kilmann, R.. Saxton. M., & Sarro, R. 1986. Gaining control of the corporate culture. San Francisco: Jossey-Bass.

Kunin, T. 1955. The construction of a new type of attitude measure. Personnel Psychology, 8: 65-78.

Lamiell, J. 1981. Toward an idiothetic psychology of personality. American Psychologist, 36: 276-289.

Lofquist, lo, & Dawis, R. 1969. Adjustment to work. New York: Appleton-Century-Crofts.

Louis, M. 1980. Surprise and sense making: What newcomers experience in catering unfamiliar organizational settings. *Administrative Science Quarterly*, 25: 226-251.

Louis, M. 1983. Organizations as cultura-bearing milieux. In L. Pondy, P. Frost, G. Morgan, & T. Dandridge (Eds.), *Ol'8anizational symbolism:* 186-218. Greenwich, CT: TAI Press.

Luthans, F., & Davis, T. 1982. An idiographic approach to organizational behavior research: The use of single case experimental designs and direct measures. Academy of Management Review. 7: 380-391.

Martin, T.. & Siehl, C. 1983. Organizational culture and counterculture: An uneasy symbiosis. Organizational Dynamics, 12(1): 52-64.

Meir, E., & Hasson. R. 1982. Congruence between personality type and environment type as a predictor of stay in an environment. *Journal of Vocational Behavior*, 21: 309-317.

Meyer, T. P., & Allen, N. T. 1984. Testing the "side-bet" theory of organizational commitment: Some methodological considerations. *Journal of Applied Psychology*, 69: 372-378.

Moreland, R. 1985. Social categorization and the assimilation of "new" group members. Journal of Personality and Social Psychology, 48: 1173-1190.

Morita, T., Lee, T., & Mowday, R. 1989. Introducing survival analysis to organizational researchers: A selected application to turnover research. *Journal of Applied Psychology*, 74: 280 292.

Mount, M., &: Muchinsky, P. 1978. Person-environment congruence and employee job satisfaction: A test of Holland's theory. *Journal of Vocational Behavior*, 13: 84-100.

Nadler, D" &: Tushman. M. 1980. A model for diagnosing organizational behavior: Applying a congruence perspective. *Organizational* Dynamics, 9(3): 35-51.

Nunnally. J. C. 1978. Pychometric theory. New York: McGraw-Hill. O'Reilly, C. A.. III. 1977. Personality-job fit: Implications for individual attitudes and performance. Organizational Behavior and Human Performance, 18: 36-46.

O'Reilly, C. A., III. 1989. Corporations culture and commitment: Motivation and social control in organizations. *California Management Review*, 31(4): 9-25.

O'Reilly, C. A., III, Caldwell, D., & Mirabile, R. 1990. More than a mirage: Disposition situation interaction as explanations of work behavior. Working paper, Walter A. Haas. School of Business, University of California. Berkeley.

O'Reilly, C, A., III, & Chatman, J. 1986. Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization of prosocial behavior. *Journal of Applied Psychology*, 71: 492-499.

Ouchi. W. 1981. Theory Z. Reading, MA: Addison-Wesley.

Ouchi, W., & Wilkins. A. 1985. Organizational culture. In R. Turner (Ed.), Annual review of sociology, vol. 11: 457-483. Palo Alto, CA: Annual Reviews.

Parsons, T. 1951. The social system. New York: Free Press.

Pervin, L. 1968. Performance and satisfaction as a function of individual-environment fit. Psychological Bulletin, 69: 56-68.

Peters, L., & Sheridan, J. 1988. Turnover research methodology: A critique of traditional designs and a suggested survival model alternative. In K. Rowland &: G. Ferris (Eds.), *Research in personnel and human* resources *management*, vol. 6: 231-262. Greenwich, CT: JAI Press.

Peters, T., & Waterman, R. 1982. In search of excellence. New York: Harper &: Row.

Rokeach, M. 1973. The nature of human values. New York: Free Press.

Rousseau, D. 1990. Quantitative assessment of organizational culture: The case for multiple measures. In B. Schneider [Ed.), *Frontiers in industrial and organizational psychology*, vol. 3: 153-192. San Francisco: Jossey-Bass.

Rynes. S., & Gerhart, B. 1990. Interviewer assessments of applicant "fit": An exploratory investigation. Personnel Psychology, 43: 13-34.

Saffold, G. 1988. Cultura traits, strength. and organizational performance: Moving beyond "strong" culture. Academy of Management Review, 13: 546-558.

Sampson. E. 1978. Personality and the location of *identity*. Journal of Personality, 46: 552 568.

Schein. E. 1985. Organizational culture and leadership. San Francisco: Jossey-Bass. Schneider. B. 1987. The people make the place. Personnel Psychology, 40: 437-453. Selznick. P. 1949. TVA and the grass roots. Los Angeles: University of California Press.

Smircich. L. 1983. Concepts of culture and organizational analysis. Administrative Science Quarterly, 28: 339-359.

Spokane. A. 1985. A review of research on person-environment congruence in Holland's theory of careers .Journal of Vocational Behavior, 26: 306-343.

Springfield. A. 1988. An Aristotelian resolution of the idiographic versus nomothetic tension. American Psychologist, 43: 425-430.

Stephenson. W. 1953. The study of behavior: Q-technique and its methodology. Chicago: University of Chicago Press.

Stryker. E., & Serpe. R. 1982. Commitment identity salience, and role behavior: Theory and research example. In W. Ickes & E. Knowles (Eds.), *Personality, roles, and social behavior*:119-218. New York: Springer-Verlag.

Super. D. 1957. The psychology of careers. New York: Harper & Row.

Swidler, A. 1986, Culture in action: Symbols and strategies. American Sociological Review, 51: 273-286.

Terborg. 1. 1981. Interactional psychology and research on human behavior in organizations. Academy of Management Review, 6: 569-576.

Tom. V. 1971. The role of personality and organizational images in the recruiting process. Organizational Behavior and Human Performance, 6: 573-592.

Trice. H.. & Beyer, I. 1984. Studying organizational cultures through rites and ceremonials. Academy of Management Review. 9: 653-669.

Tsui, A & O'Reilly. C. A. 111. 1989. Beyond simple demographic effects: The importance of relational demography in superior-subordinate dyads. Academy of Management Journal, 32: 402-423,

Turna. N., & Hannan. M. 1984. Social dynamics: Models and methods. Orlando, FL: Academic Press.

Wanous, I. P. 1977. Organizational entry: Newcomers moving from outside to inside. Psychological Bulletin, 87: 601-618.

Weiner. Y. 1988. Forms of value systems: A focus on organizational effectiveness and cultural change and maintenance. Academy of Management Review, 13: 534-545.

Weiss. H., & Adler. S. 1984. Personality and organizational behavior. In B. M. Staw & L. L. Cummings (Eds.), *Research* in *organizational behavior*, vol. 4: 1-50. Greenwich. CT: JAI Press.

Wilkins, A., & Ouchi. W. 1983. Efficient cultures: Exploring the relationship between culture and organizational performance. Administrative Science Quarterly, 28: 468-481.

Wright. J., & Mischel. W. 1987. A conditional approach to dispositional constructs: The local predictability of social behavior. Journal of Personality

and Social Psychology, 53: 1159 1177.

APPENDIX Organizational Culture Profile Item Set

- 1. Flexibility
- 2. Adaptability
- 3. Stability
- 4. Predictability
- 5. Being innovative
- 6. Being quick to take advantage of opportunities
- 7. A willingness to experiment
- 8. Risk taking
- 9. Being careful
- 10. Autonomy
- 11. Being rule oriented
- 12. Being analytical
- 13. Paying attention to detail
- 14. Being precise
- 15. Being team oriented
- 16. Sharing information freely
- 17. Emphasizing a single culture throughout the organization
- 18. Being people oriented
- 19. Fairness
- 20. Respect for the individual's right
- 21. Tolerance
- 22. Informality
- 23. Being easy going
- 24. Being calm
- 25. Being supportive
- 26. Being aggressive
- 27. Decisiveness
- 28. Action orientation
- 29. Taking initiative
- 30. Being reflective
- 31. Achievement orientation
- 32. Being demanding
- 33. Taking individual responsibility
- 34. Having high expectations for performance
- 35. Opportunities for professional growth
- 36. High par for good performance
- 37. Security of employment
- 38. Offers praise for good performance
- 39. Low level of conflict
- 40. Confronting conflict directly
- 41. Developing friends at work
- 42. Fitting in
- 43. Working in collaboration with others
- 44. Enthusiasm for the job
- 45. Working long hours
- 46. Not being constrained by many rules
- 47. An emphasis on qua lit y
- 48. Being distinctive-different from others
- 49. Having a good reputation
- 50. Being socially responsible
- 51. Being results oriented
- 52. Having a clear guiding philosophy
- 53. Being competitive
- 54. Being highly organized

Charles A. O'Reilly III is a professor of organizational behavior in the Walter A. Haas School of Business, University of California. Berkeley, where he received his Ph.D. degree. His current research interests include studies of executive teams CEO compensation and person-job fit.

Jennifer A. Chatman is an assistant professor of organization behavior at Northwestern University. Her current research interests include studies of person-job and person organization fit and the role of selection and socialization. She received her Ph.D. degree from the University of California. Berkeley.

David F. Caldwell is professor in the Leavey School of Business and Administration. Santa Clara University. His current research interests include studies of group demography and group process in product development teams. He received his Ph.D. degree from the University of California, Los Angeles.

Anexo 1b. The Organizational Culture Profile Revisited and Revised: An Australian Perspective

The Organizational Culture Profile Revisited and Revised: An Australian Persp... James C Sarros; Judy Gray; Iain L Densten; Brian Cooper *Australian Journal of Management*, Jun 2005; 30, 1; ABI/INFORM Global pg.159

by

James C. Sarros t Judy Gray t lain L. Densten § Brian Cooper t

Abstract:

This paper examines the development and validation of an updated version of the Organizational Culture Profile (OCP) (O 'Reilly, Chatman & Caldwell 1991). The current study aimed to overcome the limitations associated ,with the Q-sort methodology used in earlier versions by developing an instrument based on a Likert type scale and using a large, Australian-wide sample of executives (N = 1918). Confirmatory factor analysis usil1g AMOS (Arbuckle & Wothke 1999) was used to test the theoretically-derived factor structure. The psychometric properties of the seven factor instrument were examined and provided evident of the reliability and validity of the OCP Using confirmatory factor analyses, competing models were specified and assessed according to a range al fit indices. A higher-order model produced the most parsimonious solution and indicated that innovation appeared to play a pivotal role in terms of executive perceptions of organizational culture. The further development of a rigorous instrument to evaluate perceptions of culture should encourage researchers and practitioners to use the instrument for empirical and diagnostic purposes.

Keywords:

ORGANIZATIONAL CULTURE, AUSTRALIA.N MANAGERS: CONFIRMATORY FACTOR ANALYSIS; PSYCHOMETRIC PROPERTIES; CONTENT VALIDITY, CONSTRUCT VALIDITY: PREDICTIVE VALIDITY, NEW MEASUREMENT PROPERTIES, HIGHER ORDER FACTORS

t Monash University, PO Box 197, Caulfield East VIC 3J45. E mail: James.sarros@buseco.monash.cdu.au § University Of New South Wales, UNSW, Sydney, NSW 2052.

This research has been supported by an Australian Institute of Management Research Grant, a Monash University Faculty of Business and Economics Research Grant, and a University of New South Wales Research Grant.

1.Introduction

The purpose of this paper is to examine the development and validation of an updated version of the Organizational Culture Profile (OCP) (O'Reilly, Chatman & Caldwell 1991). The current study overcomes the limitations of Q-sort methodology used in earlier versions of the OCP by developing a more user-friendly Likert-type scale format for the instrument and using a large, Australia wide sample of executives in its psychometric validation.

Studies of organizational culture are varied, multilevel (department, division, company, country), and ubiquitous. Denison (1996, p. 654) asserts that culture is 'the deep structure 'of organizations, which is rooted in the values, beliefs and assumptions held by organizational members.' That is, when we speak of organizational culture, we refer to the meanings inherent in the actions and procedures of organizational commerce and discourse. *Culture* evolves and is not manipulated easily, while *climate* is temporal and often subject to manipulation by people with power and int1uence (Denison 1996).

General/y, culture studies are conducted at different levels of analyses (for instance, organizational versus societal) using different methodological approaches (conceptual, quantitative, and qualitative) and a variety of associated constructs. For example, culture has been studied in association with leadership as proposed by Schein (1985), or values as examined by O'Reilly, Chatman and Caldwell (1991). The focus for the present study is delimited to an examination of organizational culture from an individual perspective (e.g.

Kristof 1996; Van Vianen 2000) and uses the perspectives of managers and senior executives as the data source. This approach is consistent with the proposition that on]y the top echelons of leaders are in a position to significantly influence cultural identity and change (Barlow, Jordan & Hendrix 2003; Katz & Kahn 1978), and replicates the approach adopted by O'Reilly, Chatman and Caldwell (1991 p. 491) in their development of the original version of the Organizational Culture Profile (OCP).

A llumber of measures of organizational culture have been developed. We chose to investigate the OCP because it represents one of the major measures of organizational culture in use today (Agle & Caldwell 1999; Howard 1998; Judge & Cable 1997), Based on the review of 18 culture measures published between 1975 and 1992, Ashkanasy, Broadfoot and Falkus (2000) reported that the OCP was one of only a few instruments to provide details concerning reliability and validity. This instrument is designed to measure the culture profile of organizations. The original version of the OCP uses a Q-sort method of data collection (Block] 978) to identify values that characterize a target organization and an individuals preference for that particular configuration of values. O'Reilly, Chatman and Caldwell (1991) and Chatman and Jehn (1994) used Q-methodology on the understanding that there is no better way to understand the shared meanings of cultures than by exploring the conceptual frameworks and subjective meanings underlying these cultures. However, the Q-sort method for acquiring respondent data could compromise the utility of using the OCP in large samples, because it requires a facilitator to assist respondent answering the survey. Consequently the current study aimed to overcome the limitations associated with Q-methodology by developing a revised version of the OCP using a Likert-type type scale format. Permission to use an amended and revised version of the OCP was received from the American Psychological Association (27 September 1999) and Professor Charles O'Reilly (21 December 1999).

Our study also further contributes to the extant research by clarifying the factor structure of the revised OCP as a foundation for subsequent research. We also felt it important to develop a more user-friendly version of the OCP that has been modernized through its factor names and structure to reflect more precisely the competitive and social aware nature of the business world (Chatman 1991).

2. The Original OCP Instrument

The original version of the OCP consisting of 54 value statements_was developed using exploratory factor analysis to establish eight dimension of organizational culture, namely innovation, attention to detail, outcome orientation, aggressiveness, supportiveness, emphasis on rewards, team orientation, and decisiveness. O'Reilly, Chatman and Caldwell (1991, pp. 494-95) developed factor names that test matched the descriptions in the literature of organizational culture and values at the time, and that were easy to understand. O'Reilly, Chatman and Caldwell (\991, p.495) reported an average reliability coefficient for the OCP of 0.88, while Vandenberghe's (1999a) study established an average reliability of 0.86. The OCP has since been revised and shortened by Cable and Judge (1997) to measure organizational and personal culture orientations. Recent research by Vandenberghe (1999a) has applied the OCP in a European context (Belgium) and a different occupational setting (health care industry) compared to the original US study.

Several researchers have suggested that validation studies should be conducted using the OCP. Vandenberghe (1999a, p. 183) recommended that more cross-cultural analysis of the OCP is warranted: 'additional work is needed on the structure of the OCP across nations and industries.' Windsor and Ashkanasy (1996) suggested that items in the original OCP should be evaluated in terms of their suitability for particular samples. In addition, Howard (1994) suggested that the reliability of all OCP dimensions requires investigation. In personal correspondence to the researchers, both Cable (1999) and Vandenberghe (] 999b) confirmed the need to examine the structure of the OCP in more detail.

Because the sample of interest for this study was Australian managers, their perceptions of organizational culture might not be generalizable to the wider international community of organizational managers (e.g. Javidan & House 200 1, p. 292). Organizational culture is shaped by varying aspects of organizational life, such as strategies, interpersonal relationships, and context (Cabrera & Bonache 1999: Carroll & Harrison 1998: Dension & Mishra 1995; Joyce & Slocum 1982, 1984; Schneider] 980; Seih! & Martin 1990) which vary across and within cultures. For instance, a study by Ashkanasy and Trevor-Roberts (2001/2002) of Australian executives attitudes to nine discrete cultural dimensions as part of the international 62-nation GLOBE (Global Leadership and Organizational Behaviour Effectiveness program) project (House, Hanges, Ruiz-Quintanilla, Dorfman, Javidan, Dickson, Gupta & GLOBE 1999; House, Javidan & Dorfman 200 1) identified considerable idiosyncrasies of Australian leader behavior. In brief, Australian manager-leaders reported higher levels of egalitarianism compared to their Anglo-American and European counterparts. The findings of the present study need to be interpreted in light of these historical and cultural imperatives. Therefore, we hypothesized that:

H 1: The factor structure of the revised OCP for a sample of Australian executives will differ from the original OCP factor structure.

3. Predictive validity of the OCP

Validity refers to the extent to which a measure reflects what it purports to measure (Babbie 2004). In addition to establishing the content and construct validity of a measure, predictive validity is important in examining whether the revised OCP using a Likert-type scale can actually predict outcomes on hypothesized theoretical relationships. Organizational culture is linked to organizational effectiveness and is presumed to create the mental, emotional, and attitudinal states that precede and affect employee performance_(Robertson, Callinan & Bartram 2002). Wilderom, Glunk and MaslowskI (2000,p.193) advocate the conduct of comprehensive, empirical studies using sophisticated measures to validate the 'strong belief among researchers that the performance of organizations is attributable, in part, to organizational culture. Existing research suggests that organizational culture influences the development of loyalty, satisfaction, and trust (Ashforth & Mael 1989) and affects the level of stress experienced by organizational members (Barney & Gritfm 1992). More specifically, it appears that organizational culture directly influences trustworthy behavior through social learning processes (Whitener, Brodt, Korsgaard & Werner 1998), whereby managers receive social rewards when they behave in a manner consistent with cultural values and norms (O'Reilly & Caldwell 1985). Therefore, in terms of the predictive validity of the OCP, we hypothesized that:

H2a: There will be a positive relationship between OCP scores and managers' self reported trust. H2b: There will be a positive relationship between OCP scores and managers' self reported loyalty. H2c: There will be a negative relationship between OCP scores and managers' self reported stress.

Differences in organizational culture have been identified across various industries (see Anderson & West 1998). Chatman and Jehn (1994) demonstrated that organizations within an industry share distinct cultural values and consequently, industry groups would be expected to differ significantly in terms of OCP factors such as supportiveness and innovation. Examining differences among industry groups provides for a test of the sensitivity of the OCP to discriminate among groups with varying characteristics. For example, Chatman and Jehn (1994) argued that manufacturing industries rely less on cultural values as control mechanisms compared with service oriented industries, given that the latter may benefit more from a 'strong culture' to guide members' service delivery actions. Therefore we hypothesized that:

H3: Manufacturing industries will score lower on the OCP than service sector industries.

The relationship between organizational culture and innovation has been the subject of much debate. There is an assumption in the extant literature that innovation is important in organizations and research has been conducted to investigate the relationships between and among organizational culture, innovation, and creativity (e.g. Amabile, Schatzel, Moneta & Kramer 2004; Mumford, Scott, Gaddis & Strange 2002; Shalley & Gilson 2004). According to some researchers, innovation has been viewed as an outcome of particular organizational cultures (See Anderson & West 1998; Chandler, Keller & Lyon 2000; Hurley 1995). In contrast, innovation has been considered a discrete dimension of organizational culture as measured by the OCP. Following O'Reilly, Chatman and Caldwell (1991), we hypothesized that:

H4: Factor analysis will identify innovation as a discrete dimension of the OCP.

Originally, the OCP was developed to examine the congruence between individual and organizational values (O' Reilly, Chatman & Caldwell 1991) and to confirm the importance of person-organization fit when evaluating and hiring job applicants (Cable & Parsons 2001). Such a focus suggests that the OCP factor structure would reflect a pattern of relationships among factors based on individual (e.g. supportiveness, emphasis on rewards, team orientation, decisiveness) and organizational (e.g. innovation, attention to detail, outcome orientation, aggressiveness) concerns. However, in the current climate, organizational culture cannot be examined in isolation without taking into account the impact of the external environment. Further, a critical aspect of executive behaviors concerns boundary-spanning activities which involve interacting with multiple external constituencies (Zaccaro 2001). Consequently, we predict that in addition to the individual and organizational aspects of culture, the factor structure of the OCP would consist of a discrete dimension that takes into account the importance of the external environment on executive perceptions. Therefore, we hypothesized that:

H5: Factor analysis will identify an environment factor as a discrete dimension of the OCP.

4. Method

4.1 Sample

The sample consisted of senior executive members of the Australian Institute of Management (AIM) from all Australian states and territories. The sample was stratified on the basis of personal membership categorized by state of origin. A total of 1918 usable responses was returned from a target sample size of 4962, representing a 39% response rate. This was a good response rate considering that the

average survey response rate for top managers is 36% (Baruch 1999). There were no statistically significant differences between the achieved and proposed sample categorized by state of origin. Responses were collected through four mail-outs of the survey to the AIM database over a three-month period. Non-respondents were not able to be identified because of confidentiality agreements between the AIM and the researchers' institutional research ethics regulations.

The majority of respondents were male (76%), between 40-59 years of age (68%), evenly distributed between top and executive (CEO, COO, VP) (50%) and upper middle (Department Executive, Superintendent, Plant Manager) (50%) levels of management. had 12 or more years experience as an executive (55%), with 54% in organizations of 499 or fewer employees and 30% in organizations with 1000 or more employees.

4.2 Instrumentation

An abbreviated version of the OCP as used by Cable and Judge (1997) and consisting of 40 items was used, which had a reported overall test-retest reliability of 0.87. This version of the OCP was further modified for the current study by developing a Likert-type scale for easy of completion of the instrument by respondents without the need of the researcher facilitating the study as required in Q-sort methodology. In this modified and reformatted version, respondents were asked to complete the statement 'To what extent is your organization recognized for its . . .' in relation to each of the 40 OCP value items and using a five-point Likert-type scale where I = Not At All, 2 = Minimally, 3 = Moderately, 4 = Considerably, and 5 = Very Much (amending the original Q-sort procedure to a normative scale). Representative items were:

'To what extent is your organization recognized for its adaptability;' 'To what extent is your organization recognized for its emphasis on quality;' "To what extent is your organization recognized for its being innovative.'

4.3 Procedure

The 40-item OCP was incorporated into a multi-instrument survey which was mailed to the target sample of 4962 AIM members. Due to excess statistical power, large samples can inflate tests of statistical significance (e.g. chi-square estimates of model fit and standard errors) (Loo & Loewen 2002) and satisfactory models can be rejected because of trivial discrepancies (Boilen J 989). Consequently, randomly selected sub-samples of 20% (n = 397) 01' the total sample (N = 1918) were used, and all investigations of the factor structure were repeated for each group to cross-validate the results.

4.4 Statistical Analyses

Previous analysis of the OCP conducted by O'Reilly, Chatman and Caldwell (1991) used exploratory factor analysis to establish the underlying dimensions of the OCP. The current study followed the recommendation of Schriesheim, Powers, Scandura, Gardiner, and Lankau (1993) that Confirmatory Factor Analyses (CFA) should be used to improve the rigor with which content and construct validity is assessed.

The statistical software package AMOS (Arbuckle & Wothke 1999) was used to undertake confirmatory factor analysis (CFA), which tests the theoretically derived, hypothetical structure 01' factors. CFA overcomes the limitations associated with mathematically determined factor structures using exploratory factor analysis (Long 1983). Empirical data reduction techniques such as exploratory factor analysis do not address the issue of content adequacy which should be based on the theoretical correspondence between a measure's items and a factor's delineated content domain (Schriesheim et al. 1993). In contrast, specific theoretical relationships among observed indictor items can be identified and tested using CFA to produce composite factors.

The most basic form of CFA is a one-factor congeneric measurement model as described by Joreskog (1971), and which enables the specified interrelationships among observed variables (items) for a single latent factor to be examined in detail. One-factor congeneric measurement models were calculated for each of the factors of the OCP to determine factor score weights for composite factors, to model error in the measurement of observed variables, and to calculate composite factor reliabilities. We followed Chin's (1998) recommendation that four items loading on each factor are required to test for convergent validity. Items which had t-values which were not statistically significant, and where low squared multiple correlations (e.g. < 10% explained variance) indicated that the item was not a good measure of the factor were omitted from further calculations.

The resulting composite factors took into account the differences in the degree to which each individual item contributed to the overall composite (latent) factor, thus ensuring that each factor provided a more realistic representation of the data (Fleishman & Benson 1987). This method is more rigorous than computing composite factors based on factor scores or additive indices of items which ignore the relative contribution of each item to the composite factor. Further, congeneric measurement models minimize measurement error in the

items contributing to each factor and thus increase the reliability (and validity) of the composite factors (Rowe 1995). The validity of the composite factors was assessed by examining the fit statistics which estimate how well the model fits the data.

The CFA models were tested using maximum likehood estimation. The assumption of multivariate normality was assessed by examining the skewness and kurtosis of all variables in the variance-covariance matrix as recommended by Marcoulides and Hershberger (1997). Once composite factors were determined, several plausible measurement models were specified to investigate the relationships in the data ser (see Bentler & Bonett 1980; Hoyle 1991). A one factor model with all items loading on to a single factor was estimated. Subsequently, two, three, and seven factor item-level models were estimated, as were several higher order factor models. Following Anderson and West (1998), each model was tested in turn with correlated factors and then with uncorrelated factors. These models are outlined in more detail in the results section.

The models were assessed sequentially by comparing fit indices including *X2/dj*'where a value of less than 2 was considered adequate (Loo & Loewen 2002); Root Mean Square Residuals where zero indicates perfect fit; The Tucker-Lewis Index (TU) where a value of .90 or greater indicates goodness of fit (Tucker & Lewis 1973); the Normed Fit Index (NFI) with measures ranging from zero (no fit) to 1.0 (perfect fit) and values of .90 or' more indicating acceptable fit (Bentler & Bonett] 980); the Comparative Fit Index (CFI; Bentler 1990) where values close to 1 indicate goodness of fit and values of 0.90 or greater indicate adequate fit; and the Akaike Information Criterion (AIC) where small values indicate parsimony (Akaike 1987). Finally, bootstrapping procedures (Bollen & Stine 1992) provided additional data to determine the best fitting model

5. Results

The assumption of norl11ality was examined which indicated that the skewness for individual variables ranged from -0.78 to -0.19 and the kurtosis for individual variables ranged from -0.66 to 0.45. All values were considered acceptable and meeting the assumption that if variables are individually normally distributed, then it is likely that the assumption of multivariate normality is met (Mercoulides & Hershberger 1997).

Exploratory factor analyses revealed that the factor structure of the Cable and Judge (1997) version of the OCP was not replicable when the Q-sort method of data collection was not utilised. Using one-factor congeneric measurement models, the hypothesized factors derived from theory were tested for each factor separately. All items were examined for face validity and for their contribution to the particular latent variable by assessing standardised factor loadings, critical ratios, and factor scores. Factors such as outcome orientation and innovation which had more than four items were trimmed in accordance with the recommendations by Anderson and Gerbing (1988). The aim was to retain only those items which best measured the construct. For example, there were eight items in the original factor structure that loaded on outcome orientation. Our analyses indicated that outcome orientation should be split into two factors. The first factor included the items of achievement orientation, an emphasis on quality, being distinctive-different from others, and, being competitive. This factor corresponds to the original OCP factor labelled aggressiveness' (O'Reilly, Chatman & Caldwell 1991) which was not an appropriate label because items from the original OCP such as 'opportunities' and 'aggressiveness' no longer loaded on the factor. The new factor subsequently was labeled competitiveness to reflect an external orientation. The second factor included the items of being results oriented, being highly organized, enthusiasm far the job, and, having high expectations for performance. This factor was labelled performance orientation to reflect an internal or individual orientation. The results indicated that the two single factors of competitiveness and performance orientation to reflect an a combined factor). The results indicated that the two single factors of competitiveness and performance orientation to reflect an a sa combined factor). The results indicated that the two single factors of competitiveness and performance

Several items had negative loadings on their corresponding factor such as being rule oriented, stability, and being highly organized which had negative loadings on innovation. These items subsequently were removed from the factor of innovation. Several items became redundant such as tolerance, informality, and confronting conflict directly, and were excluded from further analyses. The item, fairness, was examined in terms of its contribution to the factor labelled emphasis an rewards and consequently, augmented the existing three items to produce a four-item, parsimonious model. The factors of team orientation, attention to detail, decisiveness, and aggressiveness, with only three items each and low Cronbach 's alphas produced inadequate models, and were removed. However, two new factors were identified, namely social responsibility, and stability. Several items lacked face validity in terms of their contribution to particular factors which was confirmed on further analyses. For example, the items of being rule oriented (previously loading on innovation) and working long hours (previously loading on supportiveness) had low standardized factor loadings and non-significant critical ratios, and were excluded from further analyses. All calculations were cross validated resulting in no significant differences among the randomly selected subsamples. Therefore, results have only been reported for a single sub-sample to simplify the reporting of the results.

Based on the nature of the items loading on each composite factor and taking into account the original factor labels where appropriate, the new, shortened version of the OCP consists of a 28-item, seven factor structure comprising the following factors: supportiveness,

innovation, competitiveness, performance orientation, stability, emphasis on rewards, and social responsibility. *These results indicate that Hypothesis 1, that the factor structure of the revised OCP for a sample of Australian managers would differ from the original OCP factor structure, was supported.* The 28 items comprising the revised OCP are shown in Table 1.

Factors	Items					
	Achievement orientation					
Competitiveness	An emphasis on quality					
	Being distinctive- being different from others					
	Being competitive					
Casial Deenansihility	Being Reflective					
Social Responsibility	Having a good reputation					
	Being socially responsible					
	Having a clear guiding philosophy					
Cupacitivanaaa	Being team oriented					
Supportiveness	Sharing information freely Being people oriented					
	Collaboration					
Innovation	Being innovative					
Innovation	Quick to take advantage of opportunities					
	Risk taking					
	Taking individual responsibility					
Emphasis on Rowards	Fairness					
	Opportunities for professional growth					
	High pay for good performance					
	Praise for good performance					
Performance Orientation	Having high expectations for performance					
	Enthusiasm for the job					
	Being results oriented					
	Being highly organized					
Stability	Stability					
Stability	Being calm					
	Security of employment					
	Low conflict					

Table 1Factors and items or the Revised OCP

Table 2 presents the means, standard deviations, and variances for each composite factor which were used to calculate the composite factor reliability coefficients according to the procedure suggested by Fleishman and Benson (1987) and Joreskog (1971) which maximises the reliability of the composite factor. For comparative purposes, the traditional estimates of internal consistency, Cronbach's alpha coefficients have been provided. However Cronbach's alpha coefficients are lower-bound estimates based on negatively-biased and inappropriate Pearson product-moment correlations among the constituent items (McDonald 1981). The results indicate that the composite factor reliability coefficients exceed the Cronbach's alpha coefficients for all factors except for supportiveness and social responsibility. Both measures indicate acceptable internal consistency for each factor. A Cronbach's alpha coefficient of 0.66 was recorded for stability which exceeded the minimum recommendation for Cronbach's alpha of 0.60 for a new instrument (Hair, Anderson, Tatham & Black 1998).

132

Table 2

Means, Standard Deviations, Variance, and Internal Reliabilities for OCP Factors (N = 1,918)

Mean	SD	Variance	Range of Inter-	Alpha	r
4.02	0.71	0.51	0.54-0.57	0.74	0.88
3.93	0.74	0.55	0.59-0.69	0.74	0.00
3.70	0.90	0.81	0.67-0.74	0.87	0.77
3.61	0.90	0.80	0.48-0.59	0.80	0.87
3.50	0.91	0.82	0.44-0.59	0.80	0.92
3.46	0.72	0.52	0.41-0.47	0.66	0.94
3.37	0.65	0.42	0.49-0.73	0.75	0.85
	Mean 4.02 3.93 3.70 3.61 3.50 3.46 3.37	MeanSD4.020.713.930.743.700.903.610.903.500.913.460.723.370.65	MeanSDVariance4.020.710.513.930.740.553.700.900.813.610.900.803.500.910.823.460.720.523.370.650.42	MeanSDVarianceRange of Inter- Item correlations4.020.710.510.54-0.573.930.740.550.59-0.693.700.900.810.67-0.743.610.900.800.48-0.593.500.910.820.44-0.593.460.720.520.41-0.473.370.650.420.49-0.73	MeanSDVarianceRange of Inter- Item correlationsAlpha4.020.710.510.54-0.570.743.930.740.550.59-0.690.743.700.900.810.67-0.740.873.610.900.800.48-0.590.803.500.910.820.44-0.590.803.460.720.520.41-0.470.663.370.650.420.49-0.730.75

1= Not at all 2= Minimally 3= Moderately 4= Considerably 5= Very much

Alpha= Cronbach's alpha coefficient

r=composite factor reliability coefficient

In addition, table 2 provides the inter-item correlations which provide diagnostic information concerning internal consistency and unidimensionality (Stanton, Sillar, Balzer & Smith 2002). The mean inter-item correlations for each factor ranged from 0.53 to 0.62, in other words, the items loading on each factor were moderately correlated and thus provide evidence of convergent validity at the item level. According to Kivimaki, Kuk, Elovaninio, Thomson, Kalliomaki-Levanto and Heikkila (1997), the range of correlations suggests that the items represent a broad variety of characteristics for each factor.

Table 3 presents the correlations between the observed factors of the OCP. There were statistically significant correlations at the p < 0.01 among all OCP factors. The most highly correlated factors were performance orientation with competitiveness (0.76), and emphasis on rewards and supportiveness (0.80). Weaker correlations were evident for stability with innovation (0.34), stability with competitiveness (0.43) and stability with performance orientation (0.35). These correlations may vary across sall1ples (Jackson, Wall, Martin & Davids 1993), but should not compromise the overall validity of the instrument. However, given the relatively high correlations among some of the factors, further testing of construct validity using high order factor analysis was conducted and is reported below.

Table 3 Correlation Matrix for the Organizational Culture Profile (N= 1,918)

	1	2	3	4	5	6	7	8	9
Supportiveness									
Innovation	0.61**								
Competitiveness	0.62**	0.67**							
Performance	0.55**	0.58**	0.76**						
Stability	0.58**	0.34**	0.43**	0.35**					
Rewards	0.80**	0.62**	0.66**	0.62**	0.57**				
Social	0.67**	0.49**	0.66**	0.57**	0.58**	0.67**			
responsibility									
Stress	-0.03	0.02	0.04	0.07**	-0.10**	-0.05*	-0.00		
Trust	0.61**	0.47**	0.48**	0.43**	0.54**	0.61**	0.53**	-0.05	
Loyalty	0.54**	0.40**	0.43**	0.388**	0.48**	0.49**	0.49**	-0.01	0.70

Note: * p < 0.05; ** p < 0.01

Three Three

5.1 Analyses of Competing Models

As recommended by Anderson and West (1998), several competing models with uncorrelated and correlated factors was examined. Item-level models consisting of one (where all 28 items loaded on to a single factor), two, three, and seven factors were calculated to further examine the factor structure of the OCP. The two factor model grouped items according to whether the focus was on 'concern for people' (i.e. items loading on emphasis on rewards, supportiveness, and social responsibility), or 'goal accomplishment' (i.e. items loading on innovation, competitiveness, performance orientation, and stability) (see Van Vianen 2000). The three factor model was the same as the two factor model except items loading on stability and social responsibility formed the third factor which was consistent with the dimension labeled 'environment' in the study by Ashkanasy, Broadfoot and Falkus (2000).

Table 4 provides details of the fit indices for the range of models assessed and indicates that of the item level models, the seven correlated factor model (7b) provided the best overall fit. However, the fit indices for the model suggested poor fit. The model was respecified using the seven composite factors to reduce the complexity of the model and to produce more stable estimates of structural relationships (Landis, Beal & Tesluk 2000). When all the factors were correlated, an over-specified model (with zero degrees of freedom) resulted but the seven composite factor model (uncorrelated) (7c) resulted in improved overall fit with a substantially reduced chi-square compared to previous item-level models and all relative fit indices above 0.90. However, the model was still unsatisfactory with a X2/df of 9.95 which exceeded the ratio of 2 recommended by Anderson and West (1998).

Finch and West (1997) suggested that where several constructs are highly correlated, a more general factor may underlie several constructs which can be tested using higher order factor analysis. Table 3 indicates that supportiveness and emphasis *on* rewards were highly correlated (r = 0.80). These factors are congruent with two dimensions identified by Ashkanasy, Broadfoot and Falkus (2000, p. 141), namely 'humanistic workplace' where 'the organization respects and cares for individuals; [and] represents the people end of the task-versus-people dichotomy,' and 'development of the individual'. When supportiveness and emphasis on rewards are grouped together, these factors and their constituent items are consistent with the dimension labeled 'concern for people' in a Dutch study of organizational culture by Van Vianen (2000). The label 'people' was retained in the current study, as indicated in figure 1. The factors of competitiveness and performance orientation which were highly correlated (r = 0.76), and competitiveness and innovation (r = 0.67) reflect aspects similar to 'goal accomplishment' (Van Vianen 2000), and therefore were grouped together and labeled 'business' in this study. The remaining composite factors of stability and social responsibility (r = 0.58) formed a third group where the factors reflected a concern for aspects in the external environment beyond the organization. These aspects correspond to the dimension labeled 'environment'.

	Absolute Indices				Relative Indices		ParsimonyIndex		
Item level models	X2	df	X2/df	RMR	GFI	TLI	NFI	CFI	Akaike
Null	6179.99	378	16.34	0.37	0.19				
One factor(1)	1680.26	349	4.81	0.07	0.70	0.75	0.73	0.77	1794.26
Two uncorrelated factors (2a)	4096.07	351	11.67	0.28	0.76	0.71	0.72	0.73	4206.07
Two correlated factors (2b)	3166.88	350	9.05	0.12	0.78	0.78	0.78	0.79	3278.89
Three uncorrelated factors (3a)	4328.70	350	12.37	0.31	0.76	0.69	0.70	0.72	4440.70
Three correlated factors (3b)	2756.27	346	7.97	0.07	0.79	0.81	0.80	0.83	2876.27
Seven uncorrelated factors (7a)	3204.88	349	9.18	0.34	0.55	0.47	0.48	0.51	3318.88
Seven correlated factors (7b)	1316.90	338	3.88	0.07	0.71	0.83	0.80	0.85	1366.90
Composite factor model									
Seven uncorrelated factors (7C)	99.51	10	9.95	0.03	0.94	0.90	0.95	0.95	135.51
Higher order factor models		-							
Three higher order factors correlated (model A)	55.01	10	5 51	0.02	0.96	0.95	0.97	0.98	91.05
ree higher order factors correlated on OCP (model R)	53.97	9	5.99	0.02	0.96	0.94	0.97	0.97	91.96
as higher order factors correlated on OCP (model C)	0.32	7	1 33	0.01	0.90	0.94	0.90	0.97	051 31
the inglier of the factors correlated on OCF (III0der C)	2.34	/	1.55	0.01	0.77	0.22	0.22	0.99	051.51

Table 4 Overall fit indices for the Organizational Culture Profile

The second order factors were correlated (Model A) resulting in a $x^2 = 55.05$, df= 10, X2/df=5.51, RMR=0.02, all relative indices above 0.90, and AIC = 91.05. The model was subsequently respecified with all second order factors loading on OCP, (Model B). The results indicated improved but still unsatisfactory overall fit ($X^2 = 53.97$, df= 9, X2/df= 5.99, RMR = 0.02, all relative indices above 0.90, and AIC = 91.96). However, when innovation was loaded on the higher order factors of people and business, and the overall OCP factor (Model *C*), the results indicated parsimonious fit ($x^2 = 9.32$, df= 7, $x^2/df= 1.33$, RMR = 0.01). The ratio of chi-square to degrees of freedom being less than 2.0 indicated a good fit of the data to the model (Anderson & West 1998), all relative indices were above 0.90, and the Akaike index was the lowest compared to all other models tested (AIC = 51.31). Model C was the only model without modification indices listed and was the best overall. Although Model C was identified as the best fitting model, these results do not clearly support Hypothesis 4 that factor analysis will identify innovation as a discrete dimension of the OCP. Rather, the factor of innovation is multidimensional in nature and loads on the higher order factors of people and business. However, Model C with its identification of environment as a higher order factor pro vides support for Hypothesis 5 that factor analysis will identify an environment factor as a discrete dimension of the OCP.

Further evaluations of the competing models A, B, and C were made through bootstrapping (Bollen & Stine 1992), where the original sample served as the population for bootstrap sampling of 200 sub-samples. Table 5 indicates that the lowest mean discrepancy was achieved for Mode! C (8.37), which confirmed the model choice based on fit indices, the Akaike Information Criterion, and Consistent Akaike Criterion statistics.

Figure 1 Competing Models A, B, and C



Model C



Table 5
Fit Measures for Three Competing Models

Index	Model A	Model B	Model C
Mean discrepancy	9.51	10.84	8.37
Standard Errors	0.38	0.39	0.34
Akaike information criterion	91.05	91.96	51.31
Akaike information criterion	170.85	186.66	155.98

5.2 Predictive Validity

The current study gathered data concerning respondents' perceptions of stress, trust, and loyalty. The correlation matrix in Table 3 indicates that there were statistically significant positive relationships between supportiveness and trust (r = 0.61) and loyalty (r = 0.54) and between emphasis on rewards and trust (r = 0.61) and loyalty (r = 0.52). There was a statistically significant but weak, negative correlation between emphasis on rewards and stress (r = -0.05). Additionally, there was a statistically significant weak, negative correlation between stability and stress (r = -0.10) and a significant weak positive relationship between performance orientation and stress (r = 0.07). Overall, these results provide some evidence of the instruments predictive validity. Specifically, the findings pro vide some support for Hypotheses 2a and 2b that OCP scores will be positively related to managers' self-reported trust and loyalty. Hypothesis 2c that DCP scores will be negatively related to stress received only partial support, given that the correlations, although statistically significant, were relatively weak in magnitude.

The current study examined differences on the OCP factors among industry groups. As shown in Table 6, one-way ANOVAS and Tukey post-hoc tests revealed there were statistically significant differences for supportiveness among manufacturing, retail/wholesale, service, and IT/communications; a significant difference between manufacturing and services for innovation; significant differences between manufacturing and services, and services and IT/Communications for competitiveness; a significant difference between manufacturing and services for performance orientation; for stability there were significant differences between manufacturing and services, retail /wholesale and IT/Communications, and services and IT/Communications; and for emphasis on rewards there were significant differences between manufacturing and retail/wholesale, and manufacturing and services. Finally, there were significant differences in social responsibility between manufacturing and retail/wholesale, manufacturing and IT/communications, and services and IT/communications. On all statistically significant comparisons, manufacturing firms scored lowest on organizational culture. The effect sizes ranged from 0.02 to 0.05 which suggests that the differences although statistically significant due to the large sample size were relatively small in magnitude. Nevertheless, the results provide evidence of the sensitivity of the OCP to discriminate among industry groups and support

Hypothesis 3 that manufacturing industries will score lower on organizational culture than service sector industries.

		Т

	1	2	3	4	F	Sig. Diff	Effect size
Suportiveness	3.54	3.89	3.95	3.83	12.31***	1-2, 1-3, 1-4	0.04
Innovation	3.52	3.67	3.77	3.73	4.71**	1-3	0.02
Competitiveness	3.42	3.52	3.62	3.34	9.29***	1-3, 3-4	0.03
Performance	3.96	4.10	4.23	4.07	8.56***	1-3	0.03
Stability	3.43	3.70	3.63	3.29	11.39***	1-2, 1-3,2-4, 3-4	0.04
Rewards	3.49	3.77	3.93	3.75	13.59***	1-2, 1-3	0.04
Soc. Resp.	3.79	4.03	4.13	3.75	16.70***	1-2, 1-3,2-4, 3-4	0.05

Table 6 One-Way ANOVA for Mean Organizational Culture Profile Factors Classified by Industry (N = 1,918)

6. Discussion

The purpose of this paper was to examine the psychometric properties of the revised Organizational Culture Profile. Our analyses did not support the original factor structure which led to revision and restructuring of the measurement attributes of the OCP. The revised OCP uses a Likert-type scale instead of an ipsative scale, and provides a more versatile and user-friendly means to investigate individual perceptions of organizational culture using large samples. The total number of items has been reduced from 40 items (Cable & Judge 1997) to 28 items in our revised version, demonstrating good psychometric practices as suggested by Stanton, Sillar, Balzer and Smith (2002).

Based on an examination of the face validity of all items and using a content oriented approach, thorough testing of the relationships between items and their corresponding factors was conducted using one- factor congeneric models to produce seven composite factors which substantiated the overall content validity of the instrument. The mean Cronbach's alpha coefficient of 0.75 indicates acceptable reliability for the revised instrument, despite being lower than the overall reliability of 0.87 achieved in the Cable and Judge (] 997) study. The lower Cronbach's alpha in the current study may be the result of the reduced number of items per factor. Cortina (\ 993) confirms that fewer items may reduce the Cronbach's alpha coefficient. However, having a greater number of items (i.e. > 4) which may improve the Cronbach's alpha could create problems in terms of item redundancy (Kivimaki et al. 1997). Further, Bagozzi and Heatherton (1994) suggest that having more than four or five indicators per factor in a large sample could lead to an unsatisfactory fit in the measurement model.

The content, construct, and predictive validity of the revised instrument were investigated in the current study. The failure to investigate and report the content validity of the OCP has been a major shortcoming in the research field. Schriesheim et al. (1993) advocated that demonstration of instrument content validity should be an initial step toward construct validation for new or modified instruments. In general, the seven factors of the OCP were significantly intercorrelated to a moderate extent. The high correlation between supportiveness and emphasis on rewards (r = 0.80) may indicate a lack of discriminant validity, which could suggest that the factors are measuring the same construct. The higher order factor analysis confirmed that the two factors are related, as both loaded on the same higher order factor, 'people'.

The evidence provided by our study of predictive validity and sensitivity to discriminate among industry groups suggests that the revised instrument is robust, and the factors are likely to reflect true differences among aspects being measured. Further, the identification of the higher-order factor structure clarifies the relationships among factors. The current study thereby advances our understanding of the construct validity of the OCP previously investigated by exploratory factor analyses.

We found support for our hypothesis that the factor structure of the revised OCP would differ from the original OCP factor structure. The current study identified two new factors, namely stability and social responsibility, which together loaded on to a higher order factor labelled environment. These factors are consistent with executives taking responsibility for decisions which extend beyond the organization (Jacobs & Jaques 1987; Jacobs & Lewis 1992). According to Zaccaro (2001), a large proportion of leaders' responsibilities involve direct boundary management between external and internal environments. Further, the importance of these factors is consistent with the views of Jacobs and Jaques (I 987) who suggest that a major concern for leaders (executives) is interacting with the external

environment in order to produce a more rational (stable) environment for the organization. As predicted, the findings emphasize the importance of an environmental factor, which is in contrast to previous studies where culture has been regarded as an infernal construct of organizations (Chandler, Keller & Lyon 2000). Thus, the identification of stability and social responsibility may represent a more up-to-date perspective of organizational culture where executives are concerned.

The pivotal role of innovation in the evaluation of organizational culture was evident in the higher order factor analyses where the higher order factors of people and business loaded on to innovation. The importance of innovation is consistent with recent management literature which emphasizes the importance the innovation management in meeting the challenges of a rapidly changing environment (Amabile et al. 2004; Mumford et al. 2002; Shalley & Gilson 2004; West & Anderson 1996). However, because the factor of innovation is multidimensional in nature (loading on two higher order factors comprising both interpersonal and performance orientation), our results do not clearly support Hypothesis 4 that factor analysis will identify innovation as a discrete dimension of the OCP.

Instead, an important finding of this study is in its presentation of organizational culture as a multilayered construct that has an internal people focused dimension and external business and environment-specific dimensions.

Our study reports on organizational as distinct to societal cultures, different to Asbkanasy and Trevor-Roberts (2001/2002) comparisons of nine societal culture dimensions in Australia with American, European, and Asian societies (see also House et al.'s GLOBE study, 1999, 2001). Ashkanasy and Trevor-Roberts (2001/2002) found that Australian manager-leaders reported higher levels of egalitarianism compared to their Anglo-American and European counterparts. In the context of the GLOBE study, egalitarianism refers to the ability of Australian leaders to engage socially with workers while also nurturing and developing their careers. This national predilection of concern for others is in part replicated in our study, where supportiveness is the third most prominent culture in Australian organizations after performance orientation and social responsibility. Supportiveness is represented by the people-focused higher construct in Model C and is a team-oriented approach that consists of the ability to collaborate and share information with work colleagues. Other Australian societal culture dimensions identified by Ashkanasy and Trevor-Roberts (2001/2002:35) included low power distance, high uncertainty avoidance, high humane orientation, low collectivism, high assertiveness, high future orientation, and high performance orientation. Similar to the GLOBE study findings, a high performance orientation is the prominent form of culture among Australian organizations in our study. In both studies, a performance orientation culture is rewards focused and is identified by its expectations of high performance among workers. As the second most prominent type of culture in Australian organizations, social responsibility in this study is unlike any of the GLOBE culture dimensions, and may reflect a growing awareness of organizations to not only be successful fiscally but also environmentally. For instance, Model C reveals tl1at social responsibility is a sub-dimension of the environment higher order construct. There may be linkages with social responsibility and the future orientation dimension identified by Ashkanasy and Trevor-Roberts (2001/2002), as both are geared toward future initiatives while being grounded firmly in everyday operational realities such as strategic planning and reflection. These relationships bear further scrutiny and validation.

Previously, the OCP could not be administered as part of an organization wide survey because of the complexities involved in Q-sort data collection procedures. The updated and revised OCP now allows organizations to incorporate the OCP into existing employee opinion surveys, with results able to be compared with the large data set reported in this paper. This option makes the instrument more viable for practitioners, and is likely to be particularly valuable for organizations that are implementing and evaluating culture change interventions, mergers, and acquisitions for example.

There is considerable evidence that the success of performance enhancing strateg1eS such as re-engineering, TQM, and downsizing IS dependent on cultural change(Becker & Gerhart 1996; Daymon 2000; Delaney & Huselid 1996; Heifetz & Laurie 1997; Martín, Sitkin & Boehm 1985; Siehl & Martin 1990). The new instrument may facilitate the monitoring of organizational cultural change in conjunction with changes in values, leadership styles, and approaches to problem solving. According to Cable and Parsons (2001), job applicants self-select into organizations based on subjective person- organization fit, and interviewers use an estimation of person-organization fit when evaluating and hiring job applicants. The revised OCP may enable more accurate information to be provided on person organization fit which could lead to improved recruitment, selection, and socialization practices.

7. Limitations

A number of limitations apply to our study, the first of which is the use of individual-level data. Similar to Subramaniam and Ashkanasy (200]), and consistent with Rousseau (1990), we assert that our approach has validity as the focus is on individuals whose job outcomes such as trust, loyalty, and stress are affected by their perceptions of culture. Nevertheless, the data are self-report and we acknowledge that the results may have been artificially inflated by common method variance (Kline, Sulsky, & Rever-Moriyama 2000; Podsakoff, MacKenzie, Lee & Podsakoff 2003). To address this second limitation, future studies should obtain measures from different sources,

including non self-report measures of criterion variables.

A third related limitation of the study is in its inability to differentiate possible social desirability bias in the responses. O'Reilly, Chatman and Caldwell (1991, p.496) assert that social desirability, if undetected, may limit the variability in responses. Further research may consider the incorporation of a social desirability measure in order to counteract this potential tendency for skewed results. Nonetheless, Donaldson and Grant- Vallone (2002, p. 256) caution us that respondents with a propensity to socially desirable attitudes report more favorable behaviors than those lower on this dispositional characteristic. It could be argued that executives willing to be surveyed and to report on their leadership behaviors or organizational cultures may be more conscious of their social responsibilities. On this point, it is crucial that more detailed research of the OCP construct using multiple data sources is conducted.

A fourth limitation relates to data collection at a single point in time (as in the case of this study), which does not allow for changes in perception and attitudes over time. For this reason, a longitudinal study of culture is strongly recommended and long overdue. Future research should examine the usefulness of the revised instrument in different populations.

A final limitation thereby stems from the previous comments when examining the findings in the context of an organizational culture in a specific national culture. As stated earlier, the formative dimensions of culture and associations in Australia may have resulted in specific organizational culture types not replicable elsewhere (e.g. Ashkanasy & Trevor-Roberts 2001/2002). As Javidan and House (2001, p. 292) assert, 'to the extent that different communities face different types of. . . challenges, their collective learning in the form of culture may be different.' Further research is needed to test this hypothesis using the modified version of the OCP included in this paper in a variety of organizational and national cultures.

8. Conclusion

140

This study represents a major revision and up dating of the OCP and addresses deficiencies evident in the research literature by examining the psychometric properties of the instrument. The results, based on a large, nation-wide, sample of business executives, established the internal reliability and validity of the seven factors of the revised OCP. The study identified two new factors associated with environmental aspects of culture, namely stability and social responsibility. Innovation appears to playa central role in terms of executive perceptions of organizational culture. Thus, the analysis advances the conceptual understanding of the instrument by clarifying the relationships among first and second order factors.

This study provides a foundation for future research concerning organizational culture and relationships with a range of organizational behavior variables, and addresses Subramaniam and Ashkanasy's (2001) call for a more comprehensive understanding of culture. The multidimensional measure of organizational culture identified in this paper should contribute to our understanding of various aspects of organizational behavior, and provide a valuable and user-friendly instrument for researchers and practitioners.

References

Agle, B.R. & Caldwell, C.B. 1999, 'Understanding research on values in business', Business and Society, vol. 38, no. 3, pp. 326-287.

Akaike, H. 1987, 'Factor analysis and AIC', Psychometrika, vol. 52, pp. 3 I 7-32.

Amabile, TM., Schatzel, E.A., Moneta, G.B. & Kramer, SJ. 2004, 'leader behaviors and the work environment for creativity: Perceived leader support', *Leadership Quarterly*, vol. 15, no. 1, pp. 5-32.

Anderson, 1.c. & Gerbing, D.W. 1988, 'Structural equation modeling in practice: A review and recommended two-step approach', *Psychological Bulletin*, vol. 103, pp. 411-23.

Anderson, N.R. & West, M.A. 1998, 'Measuring climate for work group innovation: Development and validation of the team climate inventory', *Journal of Organizational Behavior*, vol. 19, pp. 235-258.

Arbuckle, B. & Wothke, W. 1999, AMOS 4.0 User's Guide, SPSS, Chicago.

Ashforth, B. & Mael, F. 1989, 'Social identity theory and the organization', Academy 01 Management Review, vol. 14, no. 1, pp. 20-39.

Ashkanasy, N.M., Broadfoot, LE. & Falkus, S. 2000, 'Questionnaire measures of organizational culture' in *Handbook of Organizational Culture and Climate*, eds N.M. Ashkanasy, c.P. Wilderom & M.F. Peterson, Sage Publications, Thousand Oaks CA, pp. 131_6.

Ashkanasy, N.M. & Trevor-Roberts, E. 2001/2002, 'Leading in Australia: The egalitarian visionary suits OUT style,' *Mt Eliza Business Review*, Autumn, pp. 33-9.

Babbie, E.R. 2004, The Practice of Social Research, 10" ed. Wadsworth, Belmont, CA.

Bagozzi, R.P. & Heatherton, T.F. 1994, 'A general approach to representing multifaceted personality constructs: Application to state self-esteem', *Structural Equation Modeling*, vol. 1, pp. 25-67.

Barlow, CH., Jordan, M. & Hendrix, W.H. 2003, 'Character assessment: An examination of leadership levels', *Journal of Business and Psychology*, vol. 17, no. 4, pp. 563-84.

Barney, J.B. & Griffin, R.W. 1992, The Management of Organizations, Houghton Miftlin Company, Boston.

Baruch, Y. 1999, 'Response rate in academic studies: A comparative analysis', Human Relations ,vol, 52. no. 4, pp. 421-38.

Becker, B. & Gerhart, B. 1996, 'The impact of human resource management on organizational performance: Progress and prospects', Academy 01 Management Journal, vol. 39, no. 4, pp. 779-802.

Bentler, P.M. 1990, 'Comparative fit indexes in structural models', Psychological Bulletin, vol. 107, pp. 238---46.

Bentler, P.M. & Bonett, D.G. 1980, 'Significance tests and goodness of fit in the analysis of covariance structures', *Psychological Bul/etin*, vol. 88, pp. 588-606.

Block, J. 1978, The Q-sort Method in Personality Assessment and Psychiatric Research. Consulting Psychologists Press, Palo Alto CA.

Bollen, K.A. 1989, Structural Equations, with Latent Variables, Wiley, New York.

Bollen, K.A. & Stine, R.A. 1992, 'Bootstrapping goodness-of-fit measures in structural equation models', *Sociological Methods and Research*. vol. 21, pp. 205-29,

Cable, D. 1999, 'Personal correspondence', Paper JAP 82(4), 29 July, (cabled@bschool.unc.edu).

Cable, D.M. & Judge, TA. 1997, 'Interviewers' perceptions of person-organization fit and organizational selection decisions', *Journal of Applied Psychology*, vol. 82, no. 4, pp. 546-61.

Cable, D.M. & Parsons, C.K. 200], 'Socialization tactics and person-organization fit', Personnel Psychology, vol. 54, no. 1, pp. 1-23.

Cabrera, E.F. & Bonache, 1. 1999, 'An expert HR system for aligning organizational culture and strategy', *Human Resource Planning*, vol. 22, no, 1, pp. 5] -60.

Carroll, G.R. & Harrison, 1.R. 1998, 'Organizational demography and culture: Insights from a formal model and simulation', Administrative Science Quarterly, vol. 43, pp. 637-67.

Chandler, G.N., Keller, C. & Lyon, D.W. 2000, 'Unraveling the determinants and consequences of an innovative supportive organizational culture', *Entrepreneurship Theory and Practice*, vol. 25, no. 1, pp. 59-76.

Chatman, J. & Jehn, K.A. 1994, 'Assessing the relationship between industry characteristics and organizational culture: How different can you be? Academy of Management Journal, vol. 37, pp. 522-53.

Chatman, 1.A.] 991, 'Matching people and organizations: Selection and socialization in public accounting firms', *Administrative Science Quarterly*, vol. 36, no. 3, pp. 459-85.

Chin, W.W. 1998, 'Issues and opinion on structural equation modeling', MIS Quarterly, vol. 22, no. 1, pp. 8-16.

Cortina, 1.M. 1993, 'What is coefficient alpha?' Journal of Applied Psychology, vol. 78, pp. 98104.

Daymon, C. 2000, 'Culture formation in a new television station: A multi-perspective analysis', *British Journal of Management*, vol. 11, no. 2, pp. J 2 1-35.

Delaney, 1.T. & Huselid, M.A. 1996, 'The impact of human resource management practices on perceptions of organizational performance', Academy of Management Journal, vol. 39, no. 4, pp. 949-70.

Denison, D.R. 1996, 'What is the difference between organizational culture and organizational climate?' Academy of Management Review, vol. 2], no. 3, pp. 619-54.

Dension, D.R. & Mishra, A. 1995, 'Toward a theory of organizational culture and effectiveness', Organizational Science, vol. 6, pp. 204-23.

Donaldson, S.I. & Grant-Vallone, EJ. 2002, 'Understanding self.-report bias in organizational behaviour research', Journal of Business and Psychology, vol. 17, no. 2, pp. 245-60.

Finch, *I.F.* & West, S.G. 1997, 'The investigation of personality structure: Statistical models', *Journal* of *Research in Personality*, vol. 31, pp. 439-85. Fleishman, E.A. & Benson, 1. 1987, 'Using LISREL to evaluate measurement models and scale reliability', *Education and Psychological Measurement*, vol. 7, pp. 925-39.

Hair, 1.F., Anderson, R.E., Tatham, R.L. & Black, W.C. 1998, Mutiivariate Data Analysis. 5th ed, Prentice Hall, Upper Saddle River, NJ.

Heifetz, R.A. & Laurie, D.L. 1997, 'The work of leadership', Harvard Business Review, vol. 75, no. 1, pp. 124-35.

House, R.J., Hanges, P.J., Ruiz-Quintanilla, S.A, Dorfman, P.W., Javidan, M., Dickson, M., Gupta, V. & GLOBE 1999, 'Cultural influences on leadership and organizations', *Advances in Global Leadership*, vol. 1, JAI Press, Stamford CN, pp. 171-233.

House, R., Javidan, M. & Dorfman, P. 2001, 'Project GLOBE: An introduction.' Applied Psychology'.' An International Review, vol. 50, no. 4, pp. 489-505.

Howard, G. 1994, 'Why do people say nasty things about self-reports?' Journal of Organizational Behavior, vol. 15, pp. 399--404.

Howard, G. 1998, 'Validating the competing values model as a representation of organizational cultures', *International Journal of Organizational Analysis*, vol. 6, no. 3, pp. 231_50.

Hoyle, R. 1991, 'Evaluating measurement models in clinical research: Covariance structure analysis with latent variable models of self-conception', *Journal of Consulting and Clinical Psychology*, vol. 59, pp. 67-76.

Hurley, R.F. 1995, 'Group culture and its effect on innovative productivity', Journal of Engineering and Technology Management, vol. [2, pp. 57-75.

Jacobs, T.O. & Jaques, E. 1987, 'Leadership in complex systems', in Human Productivi/y Enhancement, ed 1. Zeidner, Praeger, New York.

Jacobs, T.O. & Lewis, P. 1992, 'Leadership requirements in stratified systel11s', in *Strategic Leadership: A Multiorganizational Level Perspective*, eds R.L. Phillips & 1.G. Hunt, Quorum, Westport, CT, pp. 15-26.

Jackson, P.R., Wall, 1.0., Martin, R. & Oavids, K. 1993, 'New measures of job control, cognitive demand and production responsibility', *Journal* of *Applied Psychology*, vol. 78, pp. 753-62.

Javidan, M. & House, R.J. 2001, 'Cultural acumen for the global manager: Lessons from project GLOBE', Organizational *Dynamics*, vol. 29, vol. 4, pp. 289-305.

Joreskog, K.G. 1971, 'Statistical analysis of sets of congeneric tests', Pychometricka, vol. 36, pp. 109-33.

Joyce, W.F. & Slocum, l. 1982, 'Climate discrepancy: Refining the concepts of psychological and organizational climate', *Human Relations*, vol. 35, pp. 951-72.

Joyce, W.F. & Slocum, J.W. 1984, 'Collective climate: Agreement as a basis for defining aggregate climates in organizations', Academy of Management Journal, vol. 27, no. 4, pp. 721 42.

Judge, T.A. & Cable, D.M. 1997, 'Applicant personality organizational culture and organizational attraction', *Personnel Psychology*, vol. 50, no. 2, pp. 359-94.

Katz, D. & Kahn, R.L. 1978, The Social Psychology of Organizations, 2nd edition, Wiley, New York.

Kivimaki, M., Kuk, G., Elovaninio, M., Thomson, L., Kalliomaki-Levanto, T. & Heikkila, A. 1997, 'The Team Climate Inventory (TCI) four or five factors? Testing the structure of TCI in samples of low and high complexity jobs', *Journal of Occupational and Organizational Psychology*, vol. 70, pp. 375-89.

Kline, T.J.B, Sulsky, LM. & Rever-Moriyama, S.O. 2000, 'Common method variance and specification errors: a practical approach to detection', *Journal ol Psychology*, vol. 134, no. 4, pp. 401-21.

Kotter, J.P. & Heskett, I.L. 1992, Corporate Culture and Performance, Free Press, New York.

Kristof, AL 1996, 'Person-organization fit: An integrative review of its conceptualizations, measurement, and implications', *Personnel Psychology*, vol. 49, no. 1, pp.1-49.

Landis, R.S., Bea/, D.J. & Tesluk, P.E. 2000, 'A comparison of approaches to forming composite measures in structural equation models', Organizational Research Methods, vol. 3, no. 2, pp. 186-207.

Long, K.S. 1983, Covariance Structural Model: An Introduction to LISREL, Sage Beverley, CA.

Loo, R. & Loewen, P. 2002, 'A confirmatory factor-analytic and psychometric examination of the team climate inventory: Full and short versions', *Small Group Research*, vol. 33, no. 2, pp. 254-65.

Marcoulides, G.A. & 'Hershberger, S.L 1997, Multivariate Statistical Methods, Lawrence Erlbaum Associates, Mahwah, NJ.

Martin, J., Sitkin, S. & Boehm, M. 1985, 'Founders and the elusiveness of a cultural legacy', in Organizatianal Culture, eds P. Frost, L Moore, M. Louis,
e. Lundberg & 1. Martin, Sage Publications, Beverly Hills, CA, pp. 99-124.

McDonald, R.P. 1981, 'The dimensionality of tests and items', Journal of Mathematical and Statistical Psychology, vol. 34, pp. 100-17.

Mumford, M.D., Scott, G.M., Gaddis, B. & Strange, J.M. 2002, 'Leading creative people: Orchestrating expertise and relationships', *Leadership Quarterly*, vol. 13, pp. 70S-SO.

O'Reilly, C.A. & Caldwell, D.F. 1985, 'The impact of normative social influence and cohesiveness on task perception and attitudes: A social information processing approach', *Journal of Occupational Psychology*, vol. 58, pp. 193-206.

O'Reilly, C.A., Chatman, J. & Caldwell, D.F. 1991, 'People and organizational culture: A profile comparisons approach to assessing person-organization fit', *Academy of Management Journal*, vol. 34, no. 3, pp. 487-516.

Podsakoff, P.M., MacKenzie, S.B., Lee, 1.- Y. & Podsakoff, N.P. 2003, 'Common method biases in behavioral research: A critical review of the literature and recommended remedies', *Journal* o(*Applied Psychology*, vol. 88, pp. 879-903.

Robertson, I.T., Callinan, M. & Bartram, D. 2002, Organizational Effectiveness: The Role of Psychology, Wiley, Chichester, UK.

Rousseau, D.M. 1990, 'Assessing organizational culture: The case for multiple methods', in *Organizational Climate and Culture*, ed B. Schneider, Jossey-Bass, San Francisco.

Rowe, K.J. 1995, 'Methodological issues in organizational inquiry: A discussion and worked example', Inaugural Australian Industrial and Organizational Psychology Conference, Sydney.

Schein, E.H. 1985, Organizational Culture and Leadership, Jossey-Bass, San Francisco.

Schneider, B. ; 980, Organizational Climate and Culture, Jossey-Bass, San Francisco

Schriesheim, eA., Powers, K.J., Scandura, T.A., Gandiner, e. & Lankua, M. 1993, 'Improving construct measurement in management research: Comments and quantitative approaches for assessing the theoretical content adequacy of paper-and-pencil survey-type instruments', *Journal olManagement*, vol. 19, no. 2, pp. 387-417.

Seihl, C. & Martin, 1. 1990, 'Organizational culture: A key to financial performance?', in *Organizational Culture and Climate*, ed B. Schneider, Jossey-Bass, San Francisco, pp. 241-81.

Shalley, C.E. & Gilson, LL 2004, "What leaders need to know: A review of social and contextual factors that can foster or hinder creativity, *Leadership Quarterly*, vol. 15, no. 1, pp. 33-53.

Stanton, J.M., Sillar, E.F., Balzer, W.K. & Smith, P.C. 2002, 'Issues and strategies for reducing the length of self-report scales', *Personnel Psychology*, vo\. 55, pp. 167-94.

Subramaniam, N. & Ashkanasy, N.M. 2001, 'The effect of organisational culture perception on the relationship between budgetary participation and managerial job-related outcomes', *Australian Journal of Management*, vol. 26, no. 1, pp. 35-54.

Tucker, LR. & Lewis, C. 1973, 'The reliability coefficient for maximum likelihood factor analysis', Psychometrika, vol. 38, pp. 1-10.

Vandenberghe, C. 1999a, 'Organizational culture, person-culture tit, and turnover: A replication in the health care industry', *Journal of Organizational Behavior*, vol. 20, pp. 175-84.

Vandenberghe, C. 1999b, 'JOB study', personal correspondence, vandenberghe@ergo.ucl.ac.be.

Van Vianen, A. 2000, 'Person-organization tit: The match between newcomers' and recruiters' preferences for organizational cultures', *Personnel Psychology*, vol. 53, no. 1, pp. 113-49.

West, M.A. & Anderson, N.R. 1996, 'Innovation in top management teams', Journal of Applied Psychology, vol. 8 1, no. 6, pp. 680-93.

Whítener, EM., Brodt, S.E., Korsgaard, M.A. & Werner, 1. M. 1998, 'Managers as initiators of trust; An exchange relationship framework for understanding managerial trustworthy behavior', *Academy of Management Review'*, vol. 23, no. 3, pp. 513-30.

Wilderom, C.P., Glunk, U. & Maslowski, R. 2000, 'Organizational culture as a predictor of organizational performance', in *Handbook of Organizational Culture and Climate*. eds N.M. Ashkanasy, c.P. Wilderom & M.F. Peterson, Sage Publications, Thousand Oaks CA, pp. 193210.

Windsor, c.A. & Ashkanasy, N.M. 1996, 'Auditor independence decision making: The role of organizational culture perceptions', *Behavioral Research in Accounting*, vol. 8, pp. 80-97.

Zaccaro, S.J. 2001, The Nature of Executive Leadership. American Psychological Association, Washington D.C.

Anexo 1c. Measuring organizational cultures: A qualitative and quantitative study across twenty cases.

Authors: Hofstede, Geert

Neuijen, Bram Source: Administrative Science Quarterly; Jun90, Vol. 35 Issue 2, p286, 31p, 4 charts, 1 diagram, 1 graph Document Type: Article Subject Terms: *CORPORATE culture

Abstract: Presents the results of a study on organizational cultures in twenty units from ten different organizations in Denmark and the Netherlands. Factors that explain the differences among the twenty units; Correlation between the scores of units on six dimensions and the variety of task, structural and control-system characteristics of the units.

Full Tex	kt Word Count:	15513
ISSN:	0001-8392	
Accessi	on Number:	9512190644

Persistent link to this record: <u>http://search.epnet.com/direct.asp?an=9512190644&db=buh&loginpage=Login</u>.asp&site=ehost

Database: Business Source Premier Notes: Existe version en papel de este material en Hemeroteca 1992 +

<u>MEASURING ORGANIZATIONAL CULTURES: A QUALITATIVE AND QUANTITATIVE STUDY ACROSS</u> <u>TWENTY CASES</u>

This paper presents the results of a study on organizational cultures in twenty units from ten different organizations in Denmark and the Netherlands. Data came from in-depth interviews of selected informants and a questionnaire survey of a stratified random sample of organizational members. Data on task, structure, and control characteristics of each unit were collected separately. Quantitative measures of the cultures of the twenty units, aggregated at the unit level, showed that a large part of the differences among these twenty units could be explained by six factors, related to established concepts from organizational sociology that measured the organizational cultures on six independent dimensions. The organizational culture differences found resided mainly at the level of practices as perceived by members. Scores of the units on the six dimensions were partly explainable from organizational idiosyncrasies but were also significantly correlated with a variety of task, structural, and control-system characteristics of the units.

INTRODUCTION

The "Organizational Culture" Construct

The term "organizational cultures" entered the U.S. academic literature, as far as we know, with an article in Administrative Science Quarterly by Pettigrew in 1979 ("On Studying Organizational Cultures") and is thus a relatively recent addition. In the U.S. management literature, the same term, in the singular, had been casually used by Blake and Mouton

(1964) to denote what others then called "climate." More customary became "corporate culture," a term that had already figured in an article by Silverzweig and Allen in 1976 but which gained popularity after a book carrying this title, by Deal and Kennedy, appeared in 1982 and especially after the success of its companion volume, from the same McKinsey-Harvard Business School team, Peters and Waterman's In Search of Excellence, which appeared in the same year. Since then, an extensive literature has developed on the topic, which has also spread to the European language areas accessible to us.

"Culture" has become a fad, among managers, among consultants, and among academics, with somewhat different concerns. Fads pass, and this one is no exception. Nevertheless, we believe it has left its traces on organization theory. Organizational/corporate culture has acquired a status similar to structure, strategy, and control. Weick (1985) has even argued that "culture" and "strategy" are partly overlapping constructs. There is no consensus about its definition, but most authors will probably agree on the following characteristics of the organizational/corporate culture construct: it is (1) holistic, (2) historically determined, (3) related to anthropological concepts, (4) socially constructed, (5) soft, and (6) difficult to change. All of these characteristics of organizations have been separately recognized in the literature in the previous decades; what was new about organizational culture was their integration into one construct.

The literature on organizational cultures consists of a remarkable collection of pep talks, war stories, and some insightful in-depth case studies. There is, we believe, a dearth of ordinary research as taught by standard behavioral research methodology textbooks. Such textbooks (e.g., Selltiz et al., 1965; Blalock and Blalock, 1971) tell the student to start with a qualitative orientation and to follow up with a quantitative verification. The research project described below has attempted to do just that. We were guided by three main research questions:

First, can organizational cultures be "measured" quantitatively, on the basis of answers of organizational members to written questions, or can they only be described qualitatively? In operational terms, the issue is whether membership in one organization rather than another explains a significant share of the variance in members' answers to questions dealing with culture-related matters. Our hypothesis was that it would.

Second, if organizational cultures can be measured in this way, which operationalizable and independent dimensions can be used to measure them, and how do these dimensions relate to what is known about organizations from existing theory and research? Our hypothesis was that the analysis would produce a discrete number of independent dimensions and that these dimensions should correspond to issues covered in the organizational literature, since it was unlikely that we would find aspects of organizations that nobody had discovered before.

Third, to what extent can measurable differences among the cultures of different organizations be attributed to unique features of the organization in question, such as its history or the personality of its founder? To what extent do they reflect other characteristics of the organization, like its structure and control systems, which in themselves may have been affected by culture? To what extent are they predetermined by given factors like nationality, industry, and task? Our hypothesis was that organizational cultures are partly predetermined by nationality, industry, and task, which should be visible in significant effects of such factors on culture dimension scores. Partly, we expected them to relate to organization structure and control systems. However, we expected that correlations between culture measures and such nonculture data would leave sufficient variance unexplained to allow a considerable amount of uniqueness to each organization.

Previous Research on National Cultures

Our research project into organizational cultures was modelled after an earlier project by the first author that covered differences among national cultures (Hofstede, 1980, 1983a, 1983b, 1983c, 1983d). That study used an existing data bank from a large multinational business corporation (IBM), covering matched populations of employees in national subsidiaries in 64 countries. The data consisted of answers to questionnaires about employee values and perceptions of the work situation that were collected in the context of two worldwide rounds of employee attitude surveys. Their use for studying differences in national cultures was an unintended, serendipitous by-product, for which the corporation opened its files of 116,000 survey questionnaires collected between 1967 and 1973. Twenty different language versions were used. Initially, from the 72 different national subsidiaries for which data were available, only the 40 largest were selected for the analysis (Hofstede, 1980). Subsequent follow-up research showed data from another 24 subsidiaries to be usable, 10 as separate countries and 14 grouped into three historical/geographical regions (Arab-speaking countries, West Africa, and East Africa), thus raising the total number of units in the analysis to 53. In the remaining eight countries the number of native respondents was insufficient to allow statistical use of their data (Hofstede, 1983a).

The questions in the IBM surveys had been composed from initial in-depth interviews with employees in ten countries and from suggestions by frequent travellers in the international headquarters' staffs who reported on value differences they had noticed among subsidiaries. The surveys had been managed by an international team of social scientists (both from inside and outside the corporation) who were participant observers or observing participants in the daily life of one or more of the subsidiaries. During the years devoted to the analysis of the data, the first author and his family lived and worked in four different countries. This background provided a qualitative context to the cross-national study. The possibilities for quantitative analysis of the precoded answer scores were excellent. National idiosyncrasies and nuances of questionnaire translation weigh heavily in a two-, 'three-, or four-country study, but with the unusually large number of 40 or 53 countries and regions, national patterns start to show a global structure, which the "noise" of the idiosyncrasies of individual countries cannot suppress. The structure revealed by the IBM data consisted of four largely independent dimensions of differences among national value systems. **These were labelled "power distance" (large vs. small), "uncertainty avoidance" (strong vs. weak), "individualism" vs. "collectivism," and "masculinity" vs. "femininity." All 53 countries and regions could be scored on all four dimensions; the four together accounted for 49 percent of the variance in country mean scores on 32 values and perceptions questions.**

Differences in values among matched populations of employees of national subsidiaries of a multinational should be a conservative estimate of differences among the national populations at large, as respondents are supposed to share the same worldwide corporate culture. Differences found among IBM subsidiary personnel, as revealed by their scores on each of the four dimensions mentioned above, do correlate significantly with a multitude of comparative national data from other sources: results of surveys of other narrow but matched samples, results of representative samples of total national populations, and country-level indicators, such as indices of income inequality, government budget composition, or medical statistics (Hofstede, 1980: 326-331). The four-dimensional model of national culture differences certainly does not represent the ultimate truth about the subject, but it has so far served as a useful framework for teaching both practitioners (such as future expatriates) and students and for guiding research design in the previously fuzzy field of national cultures (e.g., Bourgoin, 1984; Triandis, 1984; Triandis et al., 1986; Kreacic and Marsh, 1986; Gudykunst and Ting-Toomey, 1988). Recently, another study on student populations from 23 countries using a survey questionnaire designed by Chinese scholars has revealed a fifth meaningful dimension independent of the four others (Hofstede and Bond, 1988; Bond and Mai, 1989). This fifth dimension, "Confucian dynamism," opposing a long-term to a short-term orientation in life and work, has the merit of providing a cultural explanation for the remarkable economic success within the past 25 years of the East-Asian countries.

A Study of Organizational Cultures

Paradoxically, the cross-national research in IBM did not reveal anything about IBM's corporate culture, except that it engaged in a survey project of this size: all units studied shared the same corporate culture, and there were no outside points of comparison. However, the cross-national study was a model of how a cross-organizational study could be undertaken. Instead of one corporation in many countries, we would study many different organizations in one and the same country. The plan for this project had been formulated as early as 1980, at the time of the foundation of the Institute for Research on Intercultural Cooperation (IRIC), under the umbrella of which the research was carried out. At that time, the "organizational culture" construct was just gaining popularity. The logistics of such a cross-organizational study, however, proved quite formidable. Whereas in the cross-national IBM study existing data were used, the Institute itself now had to acquire access to the participants and raise the necessary funds. We were finally able to go ahead with the research in 1985 and 1986. In order to find a sufficient number of participating organizations we had to include two national environments rather than one: besides in IRIC's home country, the Netherlands, we also operated in Denmark. On the national culture dimensions from the cross-national study, these two countries scored fairly similarly, and they belong to the same Nordic-Dutch cluster.[1]

METHOD

Sample. We attempted to cover a wide range of different work organizations, to get a feel for the size of culture differences that can be found in practice, which would then enable us to assess the relative weight of similarities and differences. A crucial question is what represents "an organization" from a cultural point of view. One organization may include several culturally different departments, and these departments may consist of culturally different work groups. Determining what units are sufficiently homogeneous to be used for comparing cultures is both a theoretical and an empirical problem. We took the pragmatic approach, to accept as units of study both entire organizations and parts of organizations and to follow management's judgment as to whether a unit was culturally homogeneous. In a few cases, the research results later gave us reason to doubt a unit's cultural homogeneity, but it is unlikely that the results have been substantially affected by this. In the end, we got access to 20 units from 10 different organizations, five in Denmark, five in the Netherlands. These 20 units were from three broad kinds of

organizations: (1) private companies manufacturing electronics, chemicals, or consumer goods (six total divisions or production units, three head office or marketing units, and two research and development units); (2) five units from private service companies (banking, transport, trade); and (3) 1 four units from public institutions (telecommunications, police). Unit sizes varied from 60 to 2,500 persons. Twenty units was a small enough number to allow studying each unit in depth, qualitatively, as a separate case study. At the same time, it was large enough to permit statistical analysis of comparative quantitative data across all cases.

Design. The project consisted of three phases. In the first phase, we conducted in-depth interviews of two to three hours' duration each with nine informants per unit, for a total of 180 interviews. These interviews allowed us to get a qualitative feel for the gestalt of the unit's culture and to collect issues to be included in the questionnaire for the subsequent survey. Informants were chosen nonrandomly in a discussion with our contact person(s) in the unit. They included, in all cases, the unit top manager and his (never her) secretary, and then a selection of men and women in different jobs from all levels, sometimes a gatekeeper or doorman, an oldtimer, a newcomer, an employee representative (equivalent to a shop steward). A criterion in their selection was that they were assumed to be sufficiently reflective and communicative to be valuable discussion partners. The interview team consisted of 18 members (Danish or Dutch), most of them with a social science training but deliberately naive about the type of activity going on in the unit studied. Each unit's interviews were divided among two interviewers, one woman and one man, so that the gender of the interviewer would not affect the observations obtained. All interviewers received the same project training beforehand, and all used the same broad checklist of open-ended questions. Interviews were taped and reports were written in a prescribed sequence, using respondents' actual words.

In the second phase, we administered a standardized survey questionnaire consisting of 135 precoded questions to a random sample from the unit, consisting of about 25 managers, 25 college-level nonmanagers

("professionals") and 25 non-college-level nonmanagers ("others"). Altogether, 1,295 usable questionnaires were collected, or an average of 65 per unit. About 60 of the questions in the survey were taken from the earlier cross-national study and its later extensions; the

remaining questions, with a few exceptions, were developed on the basis of the interviews and were directed at the issues that the interviewers found to differ substantially between units. These included, in particular, many perceptions of daily practices, which had been almost entirely missing in the cross-national studies. The results of the interviews and of the surveys were discussed with the management of the units and were sometimes fed back to larger groups of unit members, if management chose to do so.

In the third phase, we used questionnaires, followed by personal interviews, to collect data at the level of the unit as a whole on such factors as its total employee strength, budget composition, key historical facts, or the demographics of its key managers. The first author collected all unit-level data personally, since finding out what comparable data could meaningfully be collected from such a varied set of organizations was a heuristic process difficult to share across researchers. The informants for the unit-level data were the top manager, the chief personnel officer, and the chief budget officer.

Interviews.

The checklist used for the in-depth interviews was based on a survey of the literature on the ways in which organization cultures are supposed to manifest themselves and on our own ideas. We classified manifestations of culture into four categories: symbols, heroes, rituals, and values, as shown in Figure 1.

Symbols are words, gestures, pictures, or objects that carry a particular meaning within a culture. Heroes are persons, alive or dead, real or imaginary, who possess characteristics highly prized in the culture and who thus serve as models for behavior (Wilkins, 1984). Rituals are collective activities that are technically superfluous but are socially essential within a culture-they are therefore carried out for their own sake. In Figure 1, we have drawn these as the successive skins of an onion--from shallow, superficial symbols to deeper rituals. Symbols, heroes, and rituals can be subsumed under the term "practices," because they are visible to an observer although their cultural meaning lies in the way they are perceived by insiders. The core of culture, according to Figure 1, is formed by values, in the sense of broad. nonspecific feelings of good and evil, beautiful and ugly, normal and abnormal, rational and irrational--feelings that are often unconscious and rarely discussable, that cannot be observed as such but are manifested in alternatives of behavior. We selected these four terms from the terminology offered in the literature (e.g., Deal and Kennedy, 1982), because we believe them to be (1) mutually exclusive and (2) reasonably comprehensive, thus covering the field rather neatly.

The interview checklist contained questions like the following: "What are special terms here that only insiders understand?" (to identify organizational symbols); "What kind of people are most likely to make a fast career here?"; "Whom do you consider as particularly meaningful persons for this organization?" (to identify organizational heroes); "In what periodic meetings do you participate?"; "How do people behave during these meetings?"; "Which events are celebrated in this organization?" (to identify organizational rituals); and "What things do people very much like to see happening here?"; "What is the biggest mistake one can make?"; "Which work problems can keep you awake at night?" (to identify organizational values). Interviewers were free to probe for more and other information if they felt it was there.

The interviews were used to create a qualitative, empathic description of the culture of each of the twenty cases. The following are extracts from two of the twenty unit gestalt descriptions made on the basis of the interviews:

The TKB case. TKB is a 60-year-old production unit in the chemical industry. Many of its **employees are oldtimers. Stories about the past abound.** Workers tell about how heavy the jobs used to be, when loading and unloading was done by hand. They tell about heat and physical risk. TKB used to be seen as a rich employer. For several decades, the demand for its products exceeded the supply. Products were not sold, but distributed. Customers had to be nice and polite in order to be served. The money was made very easily. TKB's **management style used to be paternalistic**. The old general manager made his daily morning walk through the plant, shaking hands with everyone he met. This, people say, is the root of a tradition that still exists of shaking hands with one's colleagues in the morning. Rich and paternalistic, TKB has long been considered a benefactor, both to its employees in need and to the local community. Some of this has survived. Employees still feel TKB to be a desirable employer, with good pay, benefits, and job security. A job with TKB is still seen as a job for life. TKB is a company one would like one's children to join. Outside, TKB is a regular sponsor of local sports and humanitarian associations: "No appeal to TKB has ever been made in vain."

The working atmosphere is good-natured, with a lot of freedom left to employees. The plant has been pictured as a club, a village, a family. Twenty-fifth and fortieth anniversaries are given lots of attention; the plant's Christmas parties are famous. These celebrations are rituals with a long history, which people still value a lot. In TKB's culture, or, as people express it, in "the TKB way," unwritten rules for social behavior are very important. One doesn't live in order to work, one works in order to live. What one does counts less than how one does it. One has to fit into the informal network, and this holds for all hierarchical levels. "Fitting" means avoiding conflicts and direct confrontations, covering other people's mistakes, loyalty, friendliness, modesty, and good-natured cooperation. Nobody should be too conspicuous, in a positive or a negative sense. TKB-ers grumble, but never directly about other TKB-ers. Also, grumbling is reserved for one's own circle and is never done in front of superiors or outsiders. This concern for harmony and group solidarity fits well into the regional culture of the geographical area in which TKB is located. Newcomers are quickly accepted, as long as they adapt. The quality of their work counts less than their social adaptation. Whoever disrupts the harmony is rejected, however good a worker he or she is. Disturbed relationships may take years to heal: "We prefer to let a work problem continue for another month, even if it costs a lot of money, above resolving it in an unfriendly manner." Company rules are never absolute. The most important rule, one interviewee said, is

148

that rules are flexible. One may break a rule if one does it gently. It is not the rule-breaker who is at risk, but the one who makes an issue of it.

Leadership in TKB, in order to be effective, should be in harmony with the social behavior patterns. Managers should be accessible, fair, and good listeners. The present general manager is such a leader. He doesn't give himself airs. He has an easy contact with people of all levels and is felt to be "one of us." Careers in TKB are made primarily on the basis of social skills. One should not behave too conspicuously; one needn't be brilliant, but one does need good contacts; one should know one's way in the informal network, being invited rather than volunteering. One should belong to the tennis club. All in all, one should respect what someone called "the strict rules for being a nice person."

This romantic picture, however, has recently been disturbed by outside influences. First, market conditions have changed, and TKB finds itself in an **unfamiliar competitive situation** with other European suppliers. **Costs had to be cut and manpower reduced**. In the TKB tradition, this problem was resolved, without collective layoffs, through early retirement. However, the oldtimers who had to leave prematurely were shocked that the company didn't need them anymore. Second, **TKB has been severely attacked by environmentalists because of its pollution**, a criticism that has received growing support in political circles. It is not impossible that the licenses necessary for TKB's operation will one day be withdrawn. TKB's management tries to counter this problem with an active lobby with the authorities, with a press campaign, and through organizing public visits to the company, but its success is by no means certain. Inside TKB, this threat is belittled. People are unable to imagine that one day there may be no more TKB. "Our management has always found a solution. There will be a solution now." In the meantime, **attempts are made to increase TKB's competitiveness through quality improvement and product diversification**. These also imply the introduction **of new people from the outside**. These new trends, however, clash with TKB's traditional culture.

The DLM case. DLM is a European airline company that in the early 1980s went through a spectacular turnaround. Under the leadership of a new president, the company switched from a product-and-technology to a market-and-ser-vice orientation. Before, planning and sales had been based on realizing a maximum number of flight hours with the most modern equipment available. Pilots, technicians, and disciplinarian managers were the company's heroes. Deteriorating results forced the reorganization. The president recognized that in the highly competitive air transport market, success depended on catering to the needs of current and potential customers. These needs should be best known by the employees with face-to-face customer contact. In the old situation, these people had never been asked for their opinions: they were a disciplined set of uniformed soldiers, trained to follow the rules. Now, they were considered to be on "the firing line," and the organization was restructured to support them rather than to order them around. Superiors became advisors; those on the firing line received a lot of discretion in dealing with customer problems on the spot, while only checking with superiors after the fact--which involves an acceptance of employees' judgment, with all risks that entails.

One of the units participating in the study is DLM's passenger terminal at its main station. The interviews were conducted three years after the turnaround. **The employees and managers are uniformed, disciplined, formal, and punctual.** They seem to be the kind of people who like to work in a disciplined structure. People work shift hours, and periods of tremendous work pressure alternate with periods of relative inactivity. They show considerable acceptance of their new role. Talking about the company's history, they tend not to go back to before the reorganization; only some managers do. They **are proud of the company: their identity is to a large extent derived from it, and social relationships outside the work situation are frequently with other DLM-ers. The president is often mentioned as a company hero**. In spite of the discipline, relationships between colleagues tend to be good-natured, **and there is a lot of mutual help**. A **colleague who meets with a crisis in his or her private life is supported by others and by the company. Managers of various levels are visible and accessible, although more managers have trouble accepting the new role than nonmanagers. New employees enter via a formal introduction and training program**, with simulated encounters with problem clients. This serves also as a screening device, to determine whether the **newcomer has the values and the skills necessary for this profession**. Those who pass feel quickly at home in the department. The employees demonstrate a problem-solving attitude toward clients: they show considerable excitement about original ways to resolve customers' problems, in which some rules can be twisted to achieve the desired result. **Promotion is from the ranks and is felt to be on the basis of competence and collegiality**.

It is not unlikely that this department, in particular, benefitted from a certain "Hawthorne effect" because of the key role it had played in a successful turnaround. At the time of the interviews, the euphoria of the successful turnaround was probably at its highest tide. **Observers** from inside the company commented that people's values had not really changed but that the turnaround had transformed a discipline of obedience toward superiors into a discipline of service toward customers.

Survey Questionnaire and Data Analysis

The questionnaire was aimed at collecting information on the same four types of manifestations of culture as covered in the interview checklist: symbols, heroes, rituals, and values. The first three are subsumed under the common label "practices" (Figure 1). Values items describe what the respondent feels "should be, "practices items what she or he feels "is."

The distinction between the two is present not only in the conception of the researchers but also in the minds of the respondents. In a factor analysis of all 135 survey items for all 1,295 respondents, values items and practices items loaded consistently on different factors, with very little overlap. The questionnaire contained the following items:

Values. Twenty-two questions assessed work goals: the characteristics of an ideal job, like "have an opportunity for high earnings" or "have security of employment," were each rated on a 5-point scale of importance. These were taken from the earlier cross-national research project and from later extensions of it. The interviews revealed no additional goals to add to the list.

Twenty-eight questions assessed general beliefs, like "competition between employees usually does more harm than good," each rated on a 5-point scale from "strongly agree" to "strongly disagree." Twenty-five of these stemmed from earlier cross-national research, mostly from the IBM studies and from Laurent (1983). Three were added based on the interviews.

Both work goals and general beliefs deal with values, but work goals represent "values as the desired" (what people claim to want for themselves) while general beliefs represent "values as the desirable" (what people include in their world view) (Hofstede, 1980: 20). Although items from the two categories tend to intercorrelate, answers are not necessarily logically consistent from the first category to the second (Hofstede, 1980: 21), and neither of the two is a perfect predictor of actual value-driven behavior in a choice situation. However, differences in verbal behavior (in questionnaire answers) between cultures do correlate with measures of collective actual behavior, at least in the national case (Hofstede, 1980:328 ff). Seven other questions were included, in a variety of formats, on other items statistically correlated with the previous values items, including questions on desired and actually perceived decision-making styles in one's boss. Five of these occupied a key role in the earlier cross-national research; the other two were added on the basis of the interviews.

Practices. Fifty-four questions assessed perceived practices in one's work situation. The first fifteen of these were inspired by Reynolds (1986), who did a thorough scan of the anecdotal U.S. literature on corporate cultures for suggested dimensions of differences. To Reynolds' questions, we added another 39 based on the interviews. We then cast all 54 questions into a bipolar format under the general heading "where I work . . ." and used 5-point scales on which, for example, 1 = "meeting times are kept very punctually" and 5 = "meeting times are only kept approximately." These 54 questions mostly cover symbols and rituals.

Seven questions asked about the "**behavior of a typical member of the organization,''** using a 5-point "semantic differential" scale on which, for example, 1 = "slow" and 5 = "fast."

Thirteen questions asked about reasons for promotion and dismissal, rated on 5-point scales of importance or frequency.

Both the typical-member and the promotion-and-dismissal questions cover the category of "heroes" and were inspired by the interviews.

Four demographic questions asked about the respondent's sex, age group, seniority with the employer, and education level. Finally, there was an open question, asking the respondent for any additions or remarks.

RESULTS

Effects of Organizational Membership

For all 135 survey questions, without exception, unit mean scores differed significantly across the 20 organizational units. However, the 57 questions dealing with values tended to produce smaller differences between units than the 74 questions dealing with perceived practices. The range of mean scores for the group of values questions was from .32 to 2.09 (mean .87); the range for the group of perceived-practices questions was from .68 to 3.22 (mean 1.43). Because most questions were scored on 5-point scales, the mean scores from two units could maximally differ 4.0 points. A differ-ence-of-means test showed that in view of the size of the samples and the standard deviations of the individual scores within these samples, a difference of means over .29 points was sufficient for significance at the .01-level in the most unfavorable case; in all other cases the limit was lower. Even the very lowest mean score range found, .32 for one of the values questions, still indicates a significant difference from the highest to the lowest scoring unit on this question. Most ranges were far over the significance limit (the .001-limit is at .41; all but one range are over this level).

The earlier cross-national study (Hofstede, 1980: 72) included analyses of variance (ANOVAs) for ten values questions across ten countries.[2] The same ten questions were also subjected to ANOVAs across the twenty organizational units in this study. Eighteen practices questions that we had identified as being key questions for determining the practices dimensions were subjected to similar ANOVAs.

The F-values shown in Table 1 are a measure of the variance explained by the criterion (country or organization). Again, all but one are significant at the .001-level. For the questions on values, country differences explain more variance than organization differences for any single question studied; for organizations, questions on practices have almost twice as much variance explained as questions on values.

Our first hypothesis was thus supported. Membership in an organization does explain a significant share of the variance in the answers by members for all 131 culture questions used in the survey. However, we found an unpredicted difference between questions dealing with values and questions dealing with perceived practices: the latter produced a much wider range of answers across organizations than the former. In the earlier research on national culture differences, the questions about values appeared in both studies, across countries and across organizations, the ANOVAs across countries explained a much larger share of the variance than the ANOVAs across organizations, although even across organizations the variances in answers on questions about values stayed above the significance level.

A possible explanation of the differences in explained variance between values and practices could be the process by which the questions were

chosen: those about values were chosen for their potential to discriminate among countries, and those about practices for their supposed ability to discriminate among organizations. Our results could just be artifacts of this selection process. However, in selecting, we never deliberately associated "values" with "countries" only, or "practices" with "organizations." We only discovered this association after the fact. We did add five new questions about values on the basis of interviews in the organizations, but these discriminated only marginally better among organizations than those taken from the cross-national questionnaire, with mean scores ranging across the 20 units from .81 to 1.09, with a mean of .97. So we believe the "artifact" explanation does not hold.

Other criteria included in all the ANOVAs reported in Table 1 were occupation level, sex, and age. Their effects were not systematically different between the cross-national and the cross-organizational study, nor between values and practices questions in the cross-organizational study.

Dimensions of Culture

The second research question, on the dimensions on which the cultures of the twenty organizational units could be measured, can be answered by multivariate analysis, reducing the data from the 131 survey items so as to explain the maximum share of their variance by the smallest possible number of meaningful factors.

As organizational cultures are supposed features of organizational units, not of individuals, the multivariate analysis here was not to be performed on the answers to the questions by individual respondents but on their mean scores for each of the twenty organizational units, so as to move from the individual level to the social system.

Multivariate analysis is based on correlations. If one wants to determine the correlation between two variables measured at the level of individual respondents, who are also members of particular organizational units, one has three choices: (1) an overall correlation across all individuals regardless of their organizational membership;

(2) a series of within-unit correlations, one for each unit, across those individuals belonging to the unit, or (3) a between-unit correlation, based on the mean scores of the two variables for each unit. The three choices normally produce quite different correlation coefficients. First, the within-unit correlations may be significantly different from one unit to another and unlike the overall correlation. Second, whether or not the within-unit correlations." It is easy to see why they differ from within-unit correlations if we consider two extreme cases. One is that for one of the two variables all units produce the same mean score. In this case, we find only within-unit correlations; the between-unit correlation is zero. The other extreme is that one of the variables is a constant for all members of a unit but that the value of this constant differs from one unit to the other. In this case, the within-unit correlations are all zero, but the between-unit correlation is not. Usually reality is somewhere between these extremes, so both types of correlations will be different from zero. However, they are not of equal magnitude; they may even have opposite signs. The mathematical relationship between individual and ecological correlations has been described by Langbein and Lichtman (1978).

There is a fairly extensive literature on the relative merits of analyzing correlations (or other covariance measures) at the individual versus the ecological level. The classic article is from Robinson (1950:352) and deals with the "ecological fallacy": interpreting ecological correlations (in Robinson's example, between skin color and literacy in the U.S.A.) as if they applied to individuals. Various sociologists, political scientists, and cross-cultural psychologists have since shown that ecological correlations are not necessarily a source of fallacies but that they represent the proper focus for analysis when we are dealing with social systems (Menzel, 1950; Blau, 1960; Tannenbaum and Bachman, 1964; Scheuch, 1966; Prze-worski and Teune, 1970: ch. 3; Leung and Bond, 1989). Meltzer (1963) produced a striking example: using data from a survey of 539 U.S. volunteers divided into 79 groups, he showed that on issues in which group processes played a role, individuals' attitudes could be better predicted from the group's mean scores on related questions than from the individuals' own scores on these questions.

Because organizational culture is a collective characteristic, the between-unit level is the correct level of analysis. The answers on each question by 1,295 individual respondents were aggregated into mean scores for 20 organizational units.[3] Each mean score was derived from a stratified sample of approximately equal shares of managers, professionals, and others.

Our purpose was to detect the structure in a 131 (variables, excluding the demographics) x 20 (cases) ecological matrix. We computed a 131 x 131 product-moment correlation matrix, correlating the 20 mean scores for each possible pair of questions. This showed that (1) values correlated with other values but rarely with practices (as we had already found in an earlier factor analysis of individual scores); (2) perceived practices and typical-member scores correlated among each other, and (3) reasons for promotion and dismissal correlated among each other but rarely with other items. We therefore decided to divide the questions, for analytic purposes, into three categories--57 values questions, 61 perceived practices and typical-member scores, and 13 reasons for promotion and dismissal--and to conduct separate factor analyses for these three categories.

Ecological factor analyses are of necessity characterized by flat matrices, that is, few cases in comparison to the number of variables, often fewer cases than variables. The textbooks on factor analysis generally require the number of cases to be much larger than the number of variables, although they remain vague on the allowable limit: "Unfortunately, nobody has yet worked out what a safe ratio of the number of subjects to variables is" (Gorsuch, 1983: 332). The reason for wanting a large number of subjects is that, otherwise, factors become unstable and unduly dependent on the whims of individual respondents. However, this constraint does not apply to factor analyses of ecological data, in which each case is based on the mean of a large number of aggregate cases but on the number of independent individuals who contributed to each case. In our situation, it is based not on 20(units) but on 1,295 (respondents) which is sufficient: both in the cross-national and in the cross-organizational study, factor scores derived through such analyses show many significant and theoretically meaningful correlations with outside data. However, if these factors were unstable, their factor scores would offer no more than random correlations with other phenomena. For the cross-national study, these outside validation data have been summarized in Hofstede (1980: 326-331); the validation data for the cross-organizational factors are shown in Table 4, below.

As ecological correlations tend to be stronger than individual correlations, we can expect to find high percentages of variance explained. To avoid paying attention to trivialities in factor analyzing ecological data it is therefore wise to keep the number of factors small, much smaller than the number of cases and smaller than what is technically possible based on the "eigenvalues" larger than 1.0. Also, one should only consider variables with high loadings on a factor, say over .50 or .60.

Value Differences

For further treatment, the 22 questions on work goals had to be standardized. Items scored on "importance" tend to be subject to responseset bias (different categories of respondents choosing different parts of the 5-point scale across all items, regardless of content). Responseset bias in a factor analysis leads to all questions loading on one trivial response-set factor. Also, by definition, "importance" is a relative concept: something is more or less important than something else. The response-set bias can be eliminated by computing for each unit the grand mean across all 22 work-goal items and replacing the means per item by their distance from this grand mean, divided by the standard deviation of the 22 item means around this grand mean. For the other questions, which all used scales with a natural zero point (like agreedisagree), response-set bias does not normally play an important role, and the unit means can be used as they are.

For the 57 questions that we classified as dealing with values (22 standardized work goals, 28 general beliefs, and 7 other questions), an ecological principal component factor analysis was performed with orthogonal varimax rotation. A scree test indicated that we should limit the number of factors to three, which together explained 62 percent of the variance. We chose the following labels for these factors: V1 = need for security, V2 = work centrality, and V3 = need for authority. The results of the factor analysis are shown in Table 2.

V1 and V3 resemble two dimensions from the cross-national study: uncertainty avoidance and power distance, respectively. We may be dealing with basically the same value complexes, but only some questions with high loadings are the same in the cross-organizational and in the cross-national study. Uncertainty avoidance in the cross-national study deals with the extent to which a social system rejects unstructured and ambiguous situations. Power distance deals with the acceptance of inequality among ranks in the system. For the cross-organizational data in Table 2, uncertainty avoidance and power distance items from the cross-national study seem to have got somewhat mixed. V2, work centrality, does not appear among the cross-national dimensions: it expresses to what extent for most people in the system, work takes a central place in their total life pattern. It resembles the concepts of "job involvement" (Lodahl, 1964; Lodahl and Kejner, 1965) and "central life interest" (Dubin, Champoux, and Porter, 1975; Dubin and Champoux, 1977), but these were considered properties of individuals, not of the social system.

All three factors are strongly associated with the nationality of the unit: Danish or Dutch. In the cross-national study, the Danish and Dutch IBM subsidiaries, on scales from 0 to 100, differ 30 points in uncertainty avoidance (the Netherlands is more uncertainty avoiding), 20 points in power distance (Denmark shows smaller power distances), six points in individualism (both are quite individualist), and two points in masculinity (both are quite feminine). The relatively largest difference, therefore, is on the dimension of uncertainty avoidance, and this repeats itself as a difference on need for security in the cross-organizational study. However, in spite of the Danes' lower score on power distance in the cross-national study, the Danish units in the cross-organizational study scored higher than the Dutch on need for

152

authority. Of course, the organizations in the two countries were not matched, so that the difference found may be an accidental effect of the particular sample of Danish and Dutch units studied. On work centrality, the Danish units all scored high, while the Dutch varied. All in all, having gone out to study organizational value differences and having done this in two countries for reasons of convenience, we seem to have mainly caught national value differences.

In an attempt to focus on the organizational differences, we reran the factor analysis after shifting the scores of the Dutch units so that, on average, they equalled the Danish. Thus we artificially eliminated the country effects. We again found three factors, which could be labeled (1) work orientation (intrinsic vs. extrinsic); (2) identification (with company vs. with noncompany interests); and (3) ambition (concern with money and career vs. family and cooperation, somewhat resembling the masculinity-femininity dimension in the cross-national study). The first factor was strongly related to the unit population's mean education level (the higher educated had a more intrinsic work orientation) and the second to their age, seniority, and hierarchical level. Thus, even if we eliminate the nationality effect, value differences between organizational units seem primarily dependent on demographics like age and education and only secondarily on membership in the organization as such. This is an important conclusion, to which we return in the Discussion section.

Practice Differences

For fifty-four practice questions in the "where I work . . ." format and seven "typical member" questions, another ecological principal component factor analysis was performed with orthogonal varimax rotation. A scree test showed that in this case the optimal number of factors was six, together explaining 73 percent of the variance. The labels we chose for these dimensions, partly based on their interpretation by members from the participating units during the feedback discussions, are as follows: P1 = process-oriented vs. re-sults-oriented; P2 = employee-oriented vs. job-oriented; P3 = parochial vs. professional; P4 = open system vs. closed system; P5 = loose vs. tight control; and P6 = nor-mative vs. pragmatic.

We computed scores for each unit on each of these dimensions, based on three "where I work . . ." questions with high loadings (over .60) on the factor. We chose items that together represent the essence of the dimension, as we interpret it, and were suitable for conveying this essence to the members of the units in the feedback sessions, In Table 3, which presents the results, these key items are shown in boldface type. In an ecological factor analysis of only these $6 \ge 3 = 18$ questions for the 20 units, they accounted for 86 percent of the variance in mean scores between units.

Dimension P1 opposes a concern with means (process-oriented) to a concern with goals (results-oriented). On a scale from 0 to 100, in which 0 represents the most process-oriented and 100 the most results-oriented unit among the 20, TKB scored 2 (very process-oriented, little concern for results), while DLM's passenger terminal scored 100--it is the most results-oriented unit we found. This dimension has often been identified in organization sociology. One of the best examples is Burns and Stalker's distinction between mechanistic and organic management systems. According to Burns and Stalker (1961: 120) mechanistic systems are among other things characterized by "the abstract nature of each individual task, which is pursued with techniques and purposes more or less distinct from those of the concern as a whole; i.e., the functionaries tend to pursue the technical improvement of means, rather than the accomplishment of the ends of the concern." Organic systems (Burns and Stalker, 1961: 121) are characterized by "the 'realistic' nature of the individual task, which is seen as set by the total situation of the concern." Results orientation also corresponds with Peters and Waterman's (1982) maxim number 1: "a bias for action." [4]

We found confirmation of Peters and Waterman's claim that "strong" cultures are more results-oriented. We have interpreted "strong" as "homogeneous" and operationalized it as the reverse of the mean standard deviation, across the individuals within a unit, of scores on the 18 key practices questions (three per dimension). A low standard deviation means that different respondents from the same unit perceived their environment in much the same way, regardless of the content of the perceptions. Actual mean standard deviations varied from .87 to 1.08, and the Spearman rank-order correlation between these mean standard deviations, as a measure of culture strength, and the unit's scores on "results orientation" was -.71, significant at the .001-level.

Dimension P2 opposes a concern for people (employee-oriented) to a concern for getting the job done (job-oriented). On a scale from 0 to 100, TKB scored 100 and DLM's passenger terminal 95--both of them extremely employee-oriented. This dimension corresponds to the two axes of Blake and Mouton's Managerial Grid (1964). The fact that Blake and Mouton claimed employee orientation and job orientation to be two independent dimensions seems to conflict with our placing them at opposite poles of a single dimension. However, Blake and Mouton's grid applies to individuals, while our analysis was made at the level of social systems. It simply means that the units in our analysis tend to vary along the line 9,1-1,9 in Blake and Mouton's grid.

Dimension P3 opposes units whose employees derive their identity largely from the organization, which we called "parochial," to units in which people identify with their type of job, which we called "professional." Sociology has long known this distinction as "local" versus "cosmopolitan," the contrast between an internal and an external frame of reference (Merton, 1968:447 ff.). The parochial type of culture is often associated with Japanese companies. DLM passenger terminal employees scored as quite parochial (24); TKB employees scored about halfway (48).

Dimension P4 opposes open systems to closed systems. On this dimension, TKB again scored halfway (51) and DLM as extremely open (9). This dimension describes the communication climate (Poole, 1985), a focus of attention for both human resources and public relations experts.

Dimension P5 refers to the amount of internal structuring in the organization. It appears from the data that a tight formal control system is associated, at least statistically, with strict unwritten codes in terms of dress and dignified behavior. On a scale of 0 =loose and 100 =tight, DLM scored as extremely tight (96), and TKB scored, once more, halfway (52); but halfway is loose for a production unit, as comparison with other production units shows. The tight-versus-loose distinction is well known from the literature on management control (e.g., Hofstede, 1967:144 ff.).

Dimension P6 deals with the popular notion of "customer orientation." Pragmatic units are market-driven; normative units perceive their task toward the outside world as the implementation of inviolable rules. The DLM passenger terminal was the top scoring unit on the "pragmatic" side (100), which shows that the president's message came across. TKB scored 68, also on the pragmatic side; in the past, according to the interviews, it must have been more normative toward its customers, but the market changes already had their effect. This dimension receives enormous attention in the present-day business literature. The pragmatic pole corresponds with Peters and Waterman's maxim number 2: "staying close to the customer." It is interesting that our empirical data have identified "results orientation" and "customer orientation" as two separate and independent dimensions. We found examples of units being results-oriented but not customer-oriented (one of the two police corps). Examples of the opposite combination can be found in service businesses: trying to serve the customer does not automatically imply a results orientation.

Promotion and Dismissal and Relationships among Values and Practices

The questionnaire contained seven questions on reasons for promotion, and six on assumed reasons for dismissal. The reasons for promotion were, in order of average endorsement across all 20 units, as follows: personality, performance, commitment to the organization, creativity, collegiality, diplomas, and seniority. The reasons for dismissal were (in order of endorsement): stealing the equivalent of U.S. \$500, same but \$50, alcohol during working hours, poor performance, conflict with the boss, and sex with a subordinate. These items, as mentioned above, did not correlate strongly with any other parts of the questionnaire, but only among themselves. In a factor analysis of the 13 item means for the 20 units, there was a strong first factor (H1, H for heroes) opposing promotion for present merits (commitment, creativity,

performance) to promotion for past merits (diplomas and seniority). A weaker second factor (H2) opposed dismissal for job-related misbehavior

(stealing) to dismissal for off-the-job morals (sex).

In order to test the relationships between the three values factors (V1 through V3), the six practice factors (P1 through P6), and the two promotion and dismissal factors (H1 and H2), we did a second-order factor analysis of the scores on the eleven dimensions represented by these factors, plus five demographic indicators--sex, age, seniority, education and nationality--across the twenty units. We found the following three clusters: (1) V3 (larger need for authority), P1 (process-oriented), H2 (dismissal for off-the-job morals), and mean age, which we call a "bureaucracy" cluster; (2) V2 (strong work centrality), P3 (professional), and higher mean education level, clearly a "professionalism" cluster; and (3) V1 (stronger need for security), P4 (closed system), H1 (promotion on past merits), and Dutch rather than Danish nationality, which we call a "conservation" cluster.

The three other practice factors, P2, P5, and P6 were not associated with other variables in the second-order analysis. The second-order analysis shows values and practices to be distinct but partly interrelated characteristics of culture. Apart from the "conservation" cluster, which reflects mainly national cultural differences among the two nations studied, the other two present major dichotomies among organizations known from organization sociology. The first, bureaucracy, opposes the mechanistic vs. organic systems described by Burns and Stalker (1961), and the second shows that the distinction between local and cosmopolitan also has a values component.

All in all, the results of the multivariate analysis of the survey data confirm our second hypothesis. We did find a discrete number of independent dimensions of organizational cultures, and these dimensions are well rooted in organizational theory and refer to quite classical distinctions among organizations. The six dimensions of perceived practices, P1 through P6, can be seen as a checklist for practical culture differences between organizations.

Relationships between Organizational Culture and Other Organizational Characteristics

In our third hypothesis we assumed that organizational cultures are partly predetermined by nationality, industry, and task, partly related to organizational structure and control systems, and partly unique products of idiosyncratic features like the organization's history or the personality of its founder. Nationality, industry, and task of a unit are directly observable features. The results reported above show that

nationality, as well as education, age, seniority, and hierarchical level, strongly affected the answers on questions dealing with values. For the answers on questions dealing with perceived practices no such dominant effect of demographic characteristics was evident.

For the organization's task, the scoring profiles of the twenty units on the six practice dimensions showed that dimensions P1 (process vs. results), P3 (parochial vs. professional), P5 (loose vs. tight), and P6 (normative vs. pragmatic) relate at least partly to the type of work the organization does and to the type of market in which it operates. In fact, these four dimensions form a major part of the industry culture, a frequently neglected component of the organizational culture (Pennings and Gresov, 1986). The two remaining dimensions, P2 (employee-vs.job-oriented) and P4 (open vs. closed) seem to be independent of the industry but more determined by the philosophy of founders and top leaders.

Of the quantitative data collected at the unit level, about forty out of a much larger number of quantifiable characteristics tried were really comparable across units. Unit scores on these forty characteristics were correlated with the unit scores on the six practices dimensions.

Table 4 lists those characteristics that yielded significant and meaningful correlations with practice dimension scores.[5] We checked for the possible effects of intercorrelations among the unit-level measures. There was a clear cluster of measures related to the unit's size, such as annual budget, total invested capital, and number of employees. From this cluster, number of employees appeared to be the indicator most strongly correlated with culture dimensions. Size strongly affected the correlations between culture and budget split (labor- vs. materials-intensive), so we controlled for it in the corresponding lines of Table 4. None of the other correlations in Table 4 were affected by controlling for size. Other inter-correlations among structural measures were of insufficient interest to be taken into account in the analyses presented in Table 4.

Table 4 contains 15 correlations significant at the .01-level and beyond and 28 at the .05-level. Crossing 40 characteristics with 6 dimensions we could expect two or three correlations at the .01-level by chance, and 12 at the .05-level. Chance, therefore, can only account for a minor part of the relationships found.

On practice dimension P1, process vs. results orientation, manufacturing and office units tended to score on the process-oriented side and research and development and service units on the results-oriented side.

Table 4 shows a strong correlation between dimension P1 and the balance of labor versus materials cost in the operating budget. Any operation can be characterized as labor-intensive, materials-intensive, or capital-intensive, depending on which of the three categories of cost takes the largest share of its operating budget. Labor-intensive units, holding number of employees constant, scored as more results-oriented, while materials-intensive units, again holding number of employees constant, scored as more process-oriented. If an operation is labor-intensive, people's efforts, by definition, play an important role in its results. This appears more likely to breed a results-oriented culture. The yield of materials-intensive units tends to depend on technical processes, which seems to stimulate a process-oriented culture.

The second highest correlation of results-orientation is with lower absenteeism. This is a nice validation of the fact that, as one of the key questions formulates it, "people put in a maximal effort."

There were three significant correlations between results orientation and structural characteristics. Flatter organizations (larger span of control for the unit top manager) scored as more results-oriented. This confirms Peters and Waterman's (1982) seventh maxim "simple form, lean staff." Three simplified scales were used, based on the Aston studies of organizational structure (Pugh and Hickson, 1976), to measure centralization, specialization, and formalization. Both specialization and formalization were negatively correlated with results orientation: more specialized and more formalized units tend to be more process-oriented. They correspond with the mechanistic systems of Burns and Stalker (1961).

The remaining correlations of results orientation are with having a top-management team with a lower education level and one that has been promoted from the ranks: doers rather than figureheads. Finally, in results-oriented units, union membership among employees tends to be lower.

Scores on dimension P2 (employee- vs. job-oriented) clearly reflected the philosophy of the unit or company's founder(s) and top leaders as we met them in the interviews. They also showed the possible scars left by past events: units that had recently been in economic trouble, especially if this was accompanied by collective layoffs, tended to score as job-oriented, even if, according to our informants, the past had been different. Opinions about the desirability of a strong employee orientation differed among the leaders of the units we studied; in the feedback discussions, we met top managers who wanted their unit to become more employee-oriented, as well as others who desired the opposite.

The strongest correlations with dimension P2 in Table 4 are with the way the unit is controlled by the organization to which it belongs. Where the top manager of the unit stated that his superiors evaluated him on profits and other financial performance measures, the members scored the unit culture to be more job-oriented. Where the top manager of the unit felt his superiors evaluated him on performance against a budget, the opposite was the case: members scored the unit culture to be more employee-oriented. It seems that operating against external standards (profits in a market) breeds a less benevolent culture than operating against internal standards (a

budget). Where the top manager stated he allowed controversial news to be published in the employee journal, members felt the unit to be more employee-oriented, which validates the top manager's veracity.

The remaining correlations of employee orientation are with the average seniority and age of employees (more senior employees scored as being in a more job-oriented culture), with the education level of the top-management team (less educated teams corresponded with a more job-oriented culture), and with the total invested capital (not with the invested capital per employee). Large organizations with heavy investment tended to be more employee- than job-oriented.

On dimension P3 (parochial vs. professional), units with a traditional technology tended to score as parochial; high-tech units as professional. The strongest correlations of this dimension in Table 4 are with various measures of size: the larger organizations foster the more professional cultures. Professional cultures also have smaller labor union membership, their managers have a higher average education level and age, and they score higher on specialization. An interesting correlation is with the time budget of the unit top manager: in the units with a professional culture, the top managers claimed to spend a relatively large share of their time in meetings and person-toperson discussions. Finally, the privately owned units in our sample tended to score as more professional than the public ones.

In the same way as for employee versus job orientation, we believe the philosophy of the organization's founder(s) and top leaders plays a strong role in P4 (open vs. closed system). Communication climates in the units we studied seemed to have been formed historically without much outside rationale; some organizations had developed a tradition of being closed, others of remarkable openness. In the national context, however, open vs. closed was the only one of the six practices dimensions that was significantly associated with nationality: an open organizational communication climate is more characteristic of Danish than of Dutch organizations. However, one Danish unit scored as extremely closed and had been perceived by its environment and by its own members as a very closed organization for over a century.

The open-closed dimension in Table 4 is responsible for the single strongest correlation in the matrix: .78 between the percentage of women among employees and the openness of the communication climate. The percentage of women among managers and the presence of at least one woman in the top-management team are also correlated with openness. However, this correlation is affected by the bi-national composition of the research population. Among developed European countries, Denmark has one of the highest participation rates of women in the workforce, and the Netherlands one of the lowest (although steeply increasing). Also, as reported above, Danish units as a group, with one exception, score as much more open than Dutch units. This does not necessarily exclude a causal relationship between the participation of women in the workforce and a more open communication climate. Among the Danish units taken separately, the correlation between the percentage of women employees and openness is also significant, but not among the Dutch units, which may be the effect of the restricted range of scores of the Dutch units on "openness." All in all, the relationship between female participation in the labor force and openness of the organization's communication climate is a finding that merits further research.

Other correlates of the open vs. closed dimension are an association of more formalization with a more closed culture (a suitable validation of both measures), of admitting controversial issues into the employee journal with a more open culture (another validation), of higher average seniority with a more open culture, and of a high percentage of supervisory personnel with a more open culture.

On dimension P5 (loose vs. tight control), units delivering precision or risky products or services (such as pharmaceuticals or money transactions) tended to score as tight on control, those with innovative or unpredictable activities tended to score as loose. To our surprise, the two municipal police corps we studied scored on the loose control side (16 and 41): the work of a policeman, however, is highly unpredictable, and police personnel have considerable discretion in the way they want to carry out their task.

The strongest correlation of the loose vs. tight control dimension in Table 4 is with an item in the self-reported time budget of the unit top manager: where the top manager claims to spend a relatively large part of his time reading and writing reports and memos from inside the organization, we found tighter control. This makes perfect sense. We also found that materials-intensive units have more tightly controlled cultures. As the results of such units often depend on small margins of material yields, this makes sense, too.

Tight control in Table 4 is also correlated with the percentage of female managers and of female employees, in this order. This is most likely a consequence of the type of activities for which women tend to be hired. Tighter control is found in units with a lower education level among male and female employees and also among its top managers. In units in which the number of employees had recently increased, control was felt to be looser; where the number of employees had been reduced, control was perceived as tighter. Employee layoffs are obviously associated with budget squeezes. Finally, absenteeism among employees was lower where control was perceived to be not as tight. Absenteeism is evidently one way of escape from the pressure of a tightly controlled system.

On dimension P6 (normative vs. pragmatic), service units and those operating in competitive markets tended to score as pragmatic, while units involved in the implementation of laws and operating under a monopoly tended to score as normative. Table 4 shows only two correlations with this dimension: privately owned units in our sample were more pragmatic, public units more normative (like the police corps), and there was a positive correlation between pragmatism and specialization, which we would not have predicted.

Conspicuously missing from Table 4 are correlations with performance measures. It has been extremely difficult to identify measures of performance applicable to so varied a set of organizational units, and the ones we have tried did not yield significant correlations. Denison (1984), using employee survey data and financial performance figures for 34 U.S. business firms, found a positive relationship between

participative decision-making practices (equivalent to our dimension P2, employee-oriented) and business success. However, we are unable either to confirm or refute such a relationship on the basis of our data.

While the task and market environment clearly affected the scores on at least four of the practice dimensions, some individual units showed surprising exceptions: a production plant with an unexpectedly strong results-orientation even on the shopfloor or a unit like TKB with a loose control system in relation to its task. These surprises confirm the possibility that a unit's culture may have distinctive elements. None of the correlations in Table 4 is so strong as to preclude deviations by individual units from general patterns. In our interviews and during the feedback discussions within the twenty participating units, we found idiosyncratic components of organization cultures within limits set by the task and the systems.

Our third hypothesis was thus confirmed as well: Organization cultures reflect nationality, demographics of employees and managers, industry and market; they are related to organization structure and control systems; but all of these leave room for unique and idiosyncratic elements.

DISCUSSION

The popular literature on corporate cultures, following Peters and Waterman (1982), insists that shared values represent the core of a corporate culture. This study, however, empirically shows shared perceptions of daily practices to be the core of an organization's culture. Our measurements of employee values differed more according to the demographic criteria of nationality, age, and education than according to membership in the organization per se.

What we called "practices" can also be labelled "conventions," "customs," "habits," "mores," "traditions," or "usages." They have already been recognized as part of culture by Edward B. Tylor in the last century: "Culture is that complex whole which includes knowledge, beliefs, art, morals, law, customs and any other capabilities and habits acquired by man as a member of society" (Tylor, 1924: 1).

An explanation for the difference between the message of Peters and Waterman (and many other U.S. authors) and our findings about the nature of organizational cultures could be that the U.S. management literature rarely distinguishes between the values of founders and significant leaders and the values of the bulk of the organization's members. Descriptions of organizational cultures are often based only on statements by corporate heroes. In our case, we have assessed to what extent leaders' messages have come across to members. We conclude that the values of founders and key leaders undoubtedly shape organizational cultures but that the way these cultures affect ordinary members is through shared practices. Founders' and leaders' values become members' practices. Even in the case of the DLM passenger terminal, employees' values did not change, but because of the new president's orientation, the rules of the game were changed, so that new practices could be developed.

In organization theory, this process of a transfer of the founders' values into the members' practices has already been recognized by Weber (1948: 297): "... when the organization of authority becomes permanent, the staff supporting the charismatic ruler becomes routinized." In Weber's typology of social action, he distinguished (among other types) action toward a value (wertrational) from action dominated by habitual response ("traditional"; Burrell and Morgan, 1979: 83). Our findings suggest that actions by ordinary organization members are more often traditional than wertrational.

If members' values depend primarily on their demographics, the way values enter the organization is via the hiring process: a company hires people of a certain nationality, age, education, and sex and, therefore, with certain values. Their subsequent socialization in the organization is a matter of learning the practices: symbols, heroes, and rituals.

Organization culture differences are thus composed of other elements than those that make up national culture differences. We have pictured the distinction in Figure 2. Among national cultures--comparing otherwise similar people--we found considerable differences in values, in the sense of broad, nonspecific feelings, such as of good and evil, notwithstanding similarities in practices among IBM employees in similar jobs in different national subsidiaries. Among organizational cultures, the opposite was the case: we found considerable differences in practices for people who held about the same values. We believe this difference can be explained by the different places of socialization for values and for practices. Values are acquired in our early youth, mainly in the family and in the neighborhood, and later at school. By the time a child is ten, most of his or her basic values are probably programmed into his or her mind. Organizational practices, on the other hand, are learned through socialization at the workplace (Pascale, 1985), which we usually enter as adults, with the bulk of our values firmly in place.

In Figure 2, we have placed an occupational culture level halfway between nation and organization, suggesting that entering an occupational field means the acquisition of both values and practices; the place of socialization is the school or university, and the time is between childhood and entering work. The place of occupational cultures in Figure 2 is supported by the results of the analyses of variance presented in Table 1: Occupation level was associated equally strongly with values as with practices. Occupational cultures have received considerably less attention in the literature than either national or organizational cultures, with a few exceptions (Van Maanen and Barley, 1984; Raelin, 1986).[6]

After having done both a large cross-national and a large cross-organizational culture study, we believe that national cultures and organizational cultures are phenomena of different orders: using the term "cultures" for both is, in fact, somewhat misleading, as has already been suggested by Wilkins and Ouchi (1983: 479).

The major outcome of our research project is a six-dimensional model of organizational cultures, defined as perceived common practices: symbols, heroes, and rituals that carry a specific meaning within the organizational unit. The source of our research data, twenty organizational units in two North-West-European countries, is obviously far too limited to claim any universality for the model. Certain types of organizations, like those in the health and welfare area, government offices, and military organizations, were missing from our set, and in other national environments, other practice dimensions could become relevant. Nevertheless, we predict that in other environments, too, differences among organizational cultures will be partly quantifiable and can be meaningfully described using perhaps five to seven practice dimensions, which should partly overlap with the six described in this paper. Information from some other sources seems to bear out this prediction. In Switzerland, Pumpin (1984; Pumpin, Kobi, and Wuthrich,

1985) has described a seven-dimensional model, five dimensions of which are very similar to ours (results orientation, employee orientation, company orientation, cost orientation, and customer orientation); however, the source of his model, other than common sense, is not clear from the published materials. In India, Khandwalla (1985), in a study of managers across 75 organizations, using 5-point bipolar survey questions similar to our "where I work . . ." questions, found a first factor closely resembling our process vs. results orientation.[7]

The usefulness of an approach that quantifies is that it makes a fuzzy field at least somewhat accessible. We do not want to deny that organizational cultures are gestalts, wholes whose flavor can only be completely experienced by insiders and which demand empathy in order to be appreciated by outsiders. However, in a world of hardware and bottom-line figures, a framework allowing one to describe the structure in these gestalts is an asset. Practitioners can use it to create awareness of cultural differences, for example, in cases of planned mergers of culturally different units. By allowing comparisons to be made with other organizations, it can suggest the cultural constraints that strategic planners will have to respect. It allows one to measure culture change over time. Finally, it can help both managers and researchers to decide whether an organization should be considered as one single culture or as a multitude of subcultures and to draw a cultural map of complex organizations.[8]

Our multidimensional model of organizational cultures does not support the notion that any position on one of the six dimensions is intrinsically "good" or "bad." Labelling positions on the dimension scales as more or less desirable is a matter of strategic choice, which will vary from one organization to another. For example, the popular stress on customer orientation (becoming more pragmatic on P6) is highly relevant for most organizations engaged in services and the manufacturing of custom-made, quality products. It may be unnecessary or even dysfunctional for, for example, the manufacturing side of organizations supplying standard products in a competitive price market or for units operating under government regulations. This conclusion stands in flagrant contradiction to the "one best way" assumptions found in Peters and Waterman's eight maxims. What is good or bad depends in each case on where one wants the organization to go, and a cultural feature that is an asset for one purpose is unavoidably a liability for another.

In this article we have reported on a piece of ordinary behavioral research in an area where, in relation to the amount of speculation offered in the literature, such research has been too rare. Our results, we believe, contribute to a demystification of the organizational culture construct, changing it from a passing fad into a regular element of the theory and practice of the management of organizations.

1. Earlier reports on this research project have appeared in Danish (Hofstede and Ohayv, 1987) and in Dutch (Sanders and Heuijen, 1987).

2. In that study, four work-goals questions were paired two by two, subtracting the score on one from the score on the other in order to eliminate acquiescence (Hor-stede, 1980: 72). We repeated the same precaution for the ANOVAs across organizations.

3. Because some of the questions were scored on ordinal scales. We cannot guarantee that the answers are equidistant (which would make them into interval scales). In this case, the median would be the mathematically more correct measure of central tendency. However, for the type of 5-point scales used. Mean and median have been shown to be almost identical (Hofstede, 1980: 70). and the mean is much easier to compute and to handle statistically.

4. Lammers (1986) has shown that Peters and Waterman's eight maxims for the "excellent corporation" correspond with the findings of a number of classics in organizational sociology on both sides of the Atlantic, among them Burns and Stalker.

5. The analysis of the relationships between the structural data and the culture dimension scores was partly done by Koop Boer and Bernd Mintjes of the University of Groningen in the context of a Master's thesis. For reasons of space, we have not listed all unit-level variables tried; interested readers are welcome to contact the first author about variables not mentioned.

6. In a methodological study, Hofstede and Spangenberg (1987) showed that the same work-goals questions form different clusters when factor analyzed at the individual, occupational, organizational, or national levels.

7. In Belgium, de Cock et al. (1984) developed a questionnaire aimed at assessing "organizational climate and culture." However, this one uses an imposed factor structure based on climate studies from the 1970s; its dimensions do not resemble ours. An article in a U.S. training journal, by Wallach (1983) describes an Organizational Culture Index with three dimensions: bureaucratic, innovative and supportive. Some aspects of these overlap with our practice dimensions, but the source of Wallach's operationalization is not made clear.

8. Gibson, Ouchi, and Sung (1987) f, und considerable subsystem variation within a multinational "Type Z" firm. In a recent and as yet unpublished study of a large service company. We collected culture data from the full population of about 2.500 employees, divided into 130 departments. A hierarchical cluster analysis revealed four clear subcultures. One of them with an almost "countercultural" profile (Martin and Siehl, 1983).

Table 1 F-values for Analyses of Variance for Survey Questions

F-values for ANOVAs				
	Min.	Max.	Media	n p 001</th
10 questions on values across 10 countries*	3.2	46.7	8.0	3.1
10 questions on values across 20 organizations	1.6	6.4	4.0	2.5
18 questions on practices across 20 organizations	4.3	12.8	7.1	2.5

* From Hofstede, 1980:72.

Table 2

Results of Factor Analysis of Unit Mean Scores on 57 Values Items across 20 Units*

Factor V1: Need for Security

- .92 Man dislikes work
- .91 Variety and adventure in work unimportant
- .89 Fringe benefits important
- .87 Main reason for hierarchical structure is knowing who has authority
- .87 When a man's career demands it, family should make sacrifices
- .86 Having little tension and stress at work important
- .83 Would not continue working if didn't need the money
- .83 The successful in life should help the unsuccessful
- .83 Pursuing own interest is not best contribution to society
- .76 Working in well-defined job situation important
- .75 Serving your country unimportant
- .75 When people have failed in life it's not their fault
- .74 Opportunity for advancement unimportant
- .74 Opportunities for training unimportant
- .73 Job you like is not more important than career
- .69 Being consulted by boss unimportant
- .66 Living in a desirable area unimportant
- .63 Employees afraid to disagree with superiors
- .63 Most people cannot be trusted
- .63 Desirable that management authority can be questioned
- (second loading)

Factor V2: Work Centrality

- .84 Work more important than leisure time
- .78 Competition between employees not harmful
- .65 Physical working conditions unimportant
- .65 Opportunities for helping others unimportant
- .64 No authority crisis in organizations
- .63 Does not prefer a consultative manager
- .62 Challenging tasks important
- .62 Prestigious company or organization important
- .61 Decisions by individuals better than group decisions
- .60 Working relationship with boss important
- Factor V3: Need for Authority
 - .81 Most organizations better off if conflicts eliminated forever
 - .70 Own manager autocratic or paternalistic
 - .70 Undesirable that management authority can be questioned
 - .65 Parents should stimulate children to be best in class
 - .64 Employee who quietly does duty is asset to organization
 - .62 Parents should not be satisfied when children become independent
 - .61 Staying with one employer is best way for making career
 - .61 Conflicts with opponents best resolved by compromise

* Loadings over .60 are shown; work-goal item scores were first standardized across 22 items; items with negative loadings have been reworded negatively. The three factors together explain 62% of the variance,

Table 3 Results of Factor Analysis of Unit Mean Scores on 61 Practices Items across 20 Units*

Factor P1: Process-Oriented vs. Results-Oriented

- .88 Employees are told when good job is done
- .88 Typical member fast
- .86 Comfortable in unfamiliar situations
- .85 Each day brings new challenges
- .78 Typical member initiating
- .75 Informal style of dealing with each other
- .73 Typical member warm
- .70 Try to be pioneers
- .70 Typical member direct
- .69 People put in maximal effort
- .67 Mistakes are tolerated
- .67 Typical member optimistic
- .63 Open to outsiders and newcomers (second loading)
- .60 Managers help good people to advance (second loading)

Factor P2: Employee-Oriented vs. Job-Oriented

- .84 Important decisions made by individuals
- .76 Organization only interested in work people do
- .69 Decisions centralized at top
- .68 Managers keep good people for own department
- .65 Changes imposed by management decree
- .64 Newcomers left to find own way
- .64 Management dislikes union members
- .62 No special ties with local community
- .60 Little concern for personal problems of employees

Factor P3: Parochial vs. Professional

- .87 People's private life is their own business
- .79 Job competence is only criterion in hiring people
- .73 Think three years ahead or more
- .63 Strongly aware of competition
- .62 Cooperation and trust between departments normal

Factor P4: Open System vs. Closed System

- .67 Only very special people fit in organization
- .67 Our department worst of organization
- .66 Management stingy with small things
- .64 Little attention to physical work environment
- .63 Organization and people closed and secretive
- .61 New employees need more than a year to feel at home

Factor P5: Loose Control vs. Tight Control

- .73 Everybody cost-conscious
- .73 Meeting times kept punctually
- .62 Typical member well-groomed
- .61 Always speak seriously of organization and job

Factor P6: Normative vs. Pragmatic

- .84 Pragmatic, not dogmatic in matters of ethics
- .68 Organization contributes little to society
- .63 Major emphasis on meeting customer needs
- .63 Results more important than procedures
- .63 Never talk about the history of the organization

* Loadings over .60 are shown; items with negative loadings have been re-worded negatively; items in boldface have been chosen as key indicators for the dimension. The six factors together explain 73% of the variance.

Table 4

Product-Moment Correlation Coefficients between Various Unit-level Characteristics and Unit Scores on Six Dimensions of Practices across 20 Units[a]

Legend for Chart:

 A - Structural characteristic B - Practice dimension P1 C - Practice dimension P2 D - Practice dimension P3 E - Practice dimension P4 F - Practice dimension P5 G - Practice dimension P6 						
	В	С	D	Е	F	G
A: Measures of size						
Annual budget			.61			
Total invested capital		41	.53			
Number of employees			.60			
Private (-) vs. public (+)			39			39
Budget split in % (holding number of employees constant						
Labor	.72					
Materials	46				.48	
Measures of structure						
Span of control, top manager	.41					
% Supervisory personnel				39		
Centralization score					.26[b]	
Specialization score	40		.41			.38
Formalization score	40)		.43	3	
Control system						
Top manager's boss focuses on profits		.61				
Top manager's boss focuses on budgets		56				
Controversial issues in employee journal		55		39		
Time budget of top manager						
% Reading/writing memos					.66	
% Meetings/discussions			.51			
Profile of top 5 managers						
At least one woman				38		

Average education level	39	42	.58		46	
Average age			.46			
Promoted from ranks	40)				
Profile of employees						
% Women				78	.45	
% Female managers				58	.54	
% Absenteeism	60				.39	
Average seniority		.53		39		
Average age		.38				
Average education men					47	
Average education women					41	
Recent growth in number					43	
Union membership	39	9	5	9 -		

a Only significant correlations are shown; limits: .05 at .38, .01 at 52. Positive correlations indicate associations with results orientation (P1), job orientation (P2), professional (P3), closed system (P4), tight control (P5), or pragmatic (P6).

b Highest correlation with centralization score. Not significant.

CHART: Figure 1. Manifestations of culture: From shallow to deep.

CHART: Figure 2. Cultural differences: National, occupational, and organizational levels.

REFERENCES

Blake, Robert R., and Jane S. Mouton. 1964 The Managerial Grid. Houston, TX: Gulf.

Blalock, Hubert M., Jr., and Ann B. Blalock .1971 Methodology in Social Research. London: McGraw-Hill.

Blau, Peter M. 1960 "Structural effects." American Sociological Review, 25:178-193.

Bond, Michael Harris, and Mai Ku Pang 1989 "Trusting to the Tao: Chinese values and the re-centering of psychology." Paper presented at the Conference on Moral

Values and Moral Reasoning in Chinese Societies, Taipei, Taiwan.

Bourgoin, Henry. 1984 L'Afrique malade du management. Paris: Jean Picollec.

Burns, Tom, and G. M. Stalker. 1961 The Management of Innovation. London: Tavistock.

Burrell, Gibson, and Gareth Morgan. 1979 Sociological Paradigms and Organizational Analysis: Elements of the Sociology of Corporate Life. London: Heinemann.

Deal, Terrence E., and Allan A. Kennedy. 1982 Corporate Cultures: The Rites and Rituals of Corporate

Life. Reading, MA: Addison-Wesley.de Cock, Gaston, Rene Bouwen, K. de Witte, and J. de Visch 1984 Organisatieklimaat en -Cultuur. Leuven, Belgium: Acco.

Denison, Daniel R.1984 "Bringing corporate culture to the bottom line." Organizational Dynamics, 13(2): 5-22.

Dubin, Robert, and Joseph E. Champoux 1977 "Central life interests and job satisfaction." Organizational Behavior and Human Performance, 18:366 377.

Dubin, Robert, Joseph E. Champoux, and Lyman W, Porter 1975 "Central life interests and organizational commitment of blue-collar and clerical workers." Administrative Science Quarterly, 20: 411-421.

Gibson, David V., William G. Ouchi, and Byung H. Sung 1987 "Organizational culture, subsystem variation and environmental context." Unpublished manuscript, College of Business Administration, The University of Texas at Austin.

Gorsuch, Richard L, .1983 Factor Analysis, 2d ed. Hills-dale, NJ: Lawrence Erlbaum.

Gudykunst, William B., and Stella Ting-Toomey. 1988 Culture and Interpersonal Communication. Newbury Park, CA: Sage.

Hofstede, Geert. 1967 The Game of Budget Control. Assen, Neth. and London: Van Gorcum/Tavistock. 1980 Culture's Consequences. Beverly Hills, CA: Sage.1983a "Dimensions of national cultures in fifty countries and three regions."

In J. B. Deregowski, S. Dziurawiec, and R.C. Annis (eds.), Expiscations in Cross-Cultural Psychology: 335 355. Lisse, Neth.: Swets and Zeitlinger.

1983b "National cultures in four dimensions." International Studies of Management and Organization, 13: 46-74.

1983c "The cultural relativity of organizational practices and theories." Journal of International Business Studies, 14:75-89.

1983d "National cultures revisited." Behavior Science Research, 18: 285-305.

Hofstede, Geert, and Michael Harris Bond 1988. "The Confucius connection: From cultural roots to economic growth." Organizational Dynamics, 16(4): 4-21.

Hofstede, Geert, and Denise D. Ohayv 1987 "Diagnosticering af Organisations kulturer." Harvard Borsen, 25: 60-69.

Hofstede, Geert, and John Spangenberg 1987 "Measuring individualism and collectivism at occupational and organizational levels."

In C.. Kagitcibasi (ed.), Growth and Progress in Cross-Cultural Psychology: 113-122.

Lisse, Neth.: Swets and Zeitlinger. Khandwalla, Pradip N. 1985 "Pioneering innovative management: An Indian excellence." Organization Studies, 6: 161-183.

Kreacic, Vladimir, and Philip Marsh 1986 "Organisation development and national culture in four countries." Public Enterprise, 6: 121-134.

Lammers, Cornelis J. 1986 "De excellente onderneming als organisatiemodel." Harvard Holland Review, 8: 18-25.

Langbein, Laura I., and Allan J. Lichtman. 1978 Ecological Inference. Beverly Hills, CA: Sage.

Laurent, Andre 1983 "The cultural diversity of Western conceptions of management." International Studies of Management and Organization, 13: 75-96.

Leung, Kwok, and Michael Harris Bond 1989 "On the empirical identification of dimensions for cross-cultural comparisons." Journal of Cross-Cultural Psychology, 20(2): 133-151.

Lodahl, Thomas M. 1964 "Patterns of job attitudes in two assembly technologies." Administrative Science Quarterly, 8: 482-519.

Lodahl, Thomas M., and Mathilde Kejner 1965 "The definition and measurement of job involvement." Journal of Applied Psychology, 49: 24-33.

Martin, Joanne, and Caren Siehl. 1983 "Organizational culture and counterculture: An uneasy symbiosis." Organizational Dynamics, 12(2): 52-64.

Meltzer, Leo 1963 "Comparing relationships of individual and average variables to individual responses." American Sociological Review, 28: 117-123.

Menzel, Herbert 1950 "Comment on Robinson's 'Ecological Correlations and the Behavior of Individuals'." American Sociological Review, 15: 674.

Merton, Robert K. 1968 Social Theory and Social Structure, rev. ed. New York: Free Press.

Pascale, Richard T. 1985 "The paradox of 'corporate culture': Reconciling ourselves to socialization." California Management Review, 27(2): 26-41.

Pennings, Johannes M., and Christopher G. Gresov 1986 "Technoeconomic and structural correlates of organizational culture." Organization Studies, 7: 317-334.

Peters, Thomas J., and Richard H. Waterman 1982 In Search of Excellence: Lessons from America's Best-RunCompanies. New York: Harper & Row.

Pettigrew, Andrew M. 1979 "On studying organizational cultures." Administrative Science Quarterly, 24: 570-581.

Poole, Marshall S. 1985 "Comunication and organizational climates: Review, critique, and a new perspective." In R. D. McPhee and P. K. Tompkins (eds.), Organizational Communication: 79-108. Beverly Hills, CA: Sage.

Przeworski, Adam, and Henry Teune 1970 The Logic of Comparative Social Inquiry. New York: Wiley-Interscience.

Pugh, Derek S., and David J. Hickson 1976 Organizational Structure in its Context: The Aston Programme I. Westmead, Farn-borough: Saxon House.

Pumpin, Cunio 1984 "Unternehmenskultur, Unternehmensstrategie und Unternehmenserfolg." GDI Impuls: 2: 19-30. Bern, Switz.: Gottlieb Duttweiler Institut.

Pumpin, Cuno, J. M. Kobi, and H. A. Wuthrich 1985 La culture de l'entreprise: le profil strategique qui conduit au succes. Bern, Switz.: Banque Populaire Suisse.

Raelin, Joseph A. 1986 The Clash of Cultures: Managers and Professionals. Boston: Harvard Business School Press.

Reynolds, Paul D, 1986 "Organizational culture as related to industry, position and performance." Journal of Management Studies, 23: 333-345.

Robinson, W. S. 1950 "Ecological correlations and the behavior of individuals." American Sociological Review, 15: 351-357.

Sanders, Geert, and Bram Neuijen. 1987 Bedrijfscultuur: diagnose en beinvloeding. Assen, Neth.: Van Gorcum.

Scheuch, E. K. 1966 "Aggregate data: Some problems." In R. L. Merritt and S.Rokkan (eds.), Comparing Nations: 148-157. New Haven, CT: Yale University Press.

Selltiz, Claire, Marie Jahoda, Morton Deutsch, and Stuart W. Cook 1965 Research Methods in Social Relations. London: Methuen. Silverzweig, Stan, and Robert F. Allen

1976 "Changing the corporate culture." SIoan Management Review, Spring: 33-49.

Tannenbaum, Arnold S., and Jerald G. Bachman 1964 "Structural versus individual effects." American Journal of Sociology, 69: 585-595.

Triandis, Harry C. 1984 "Toward a psychological theory of economic growth." International Journal of Psychology, 19: 79-95.

Triandis, Harry C., Robert Bontempo, and Associates 1986 "The measurement of the etic aspects of individualism and collectivism across cultures." Australian Journal of Psychology, 38: 257-267.

Tylor, Edward B. 1924 Primitive Culture. (First published in 1871) Gloucester, MA: Smith.

Van Maanen, John, and Stephen R. Barley. 1984 "Occupational communities: Culture and control in organizations." In B. M. Staw and L. L. Cummings (eds.), Research in Organizational Behavior, 6: 287-365. Greenwich, CT: JAI Press.

Wallach, Ellen J. 1983 "Individuals and organizations: The cultural march." Training and Development Journal, February: 29-36.

Weber, Max 1948 From Max Weber: Essays in Sociology. H. H. Gerth and C. Wright Mills, trans. and eds. London: Routledge & Kegan Paul.

Weick, Karl E.1985 "The significance of corporate culture." In P. J. Frost et al. (eds.), Organizational Culture: 381-389. Beverly Hills, CA: Sage.

Wilkins, Alan L. 1984 "The creation of company cultures: The role of stories and human resource systems." Human Resource Management, 23: 41-60.

Wilkins, Alan L., and William G. Ouchi 1983 "Efficient cultures: Exploring the relationship between culture and organizational performance." Administrative Science Quarterly, 28: 468-481.

by Geert Hofstede, Bram Neuijen, Denise Daval Ohayv and Geert Sanders

Geert Hofstede [coauthor, "Measuring Organization Cultures: A Qualitative and Quantitative Study across Twenty Cases"] is a professor of organizational anthropology and international management at the Department of Economics and Business Administration, University of Limburgh, P.O. Box 616, 6200 MD Maastricht, The Netherlands. He is also a director of the Institute for Research on Intercultural Cooperation

(IRIC) located at this unviersity. His current research interests include the relationships between strategy, structure, control, and culture of organizations. He is a consultant to companies and institutions in cases of international mergers, joint ventures, and other forms of cooperation. His recent publications include Culture's Consequences (Sage, 1980 and 1984) and "Organising for Cultural Diversity" (European Management Journal, 7: 390-397). He received his M.Sc. in mechanical engineering from Delft Institute of Technology and his Ph.D. in social psychology from the University of Groningen

Bram Neuijen [coauthor, "Measuring Organizational Cultures: A Qualitative and Quantitative Study across Twenty Cases"] is a doctoral student at the Department of Management of the University of Groningen, P.O. Box 800, 9700 AN Groningen. The Netherlands. His thesis project deals with the process of research on organizational cultures and the use made of the research results by the participating organizations. He contributed to the book, Bedrijfscultuur: Diagnose en Beinvloeding (Corporate Culture Diagnosis and Change, with Geert Sanders; Van Gorcum, 1987). He received his M.A. in social psychology from the University of Groningen

Denise Daval Ohayv [coauthor, "Measuring Organizational Cultures: A Qualitative and Quantitative Study across Twenty Cases"] is a clinical psychologist at the Department of Culture of Copenhagen County, Denmark, and is located at Violens Kvarter 11, 2990 Niva, Denmark. She also runs a private consulting practice and is a permanent representative in Denmark of the Institute for Research on Intercultural Cooperation (IRIC). Her interests focus on the functioning of individuals in social systems in a cross-cultural context. She contributed to a study on the impact of an organization's culture on career oportunities for women. She recently published an article "Diagnosticering af organisationskulturer" ("Diagnosing organizational cultures," with Geert Hofstede, in Harvard Borsen, 24: 60-69). She received her M.A. in clinical psychology from Copenhagen University

Geert Sanders [coauthor, "Measuring Organizational Cultures: A Qualitative and Quantitative Study across Twenty Cases"] is an associate professor of organizational behavior at the Department of Management of the University of Groningen, P.O. Box 800, 9700 AN Groningen, The Netherlands. He completed a large research project into the development of students' social skills in Dutch secondary schools. His present research interests are in changing organizational cultures and in Japanese management. He recently published a book, Bedrijfscultuur: Diagnose en Beinvloeding (Corporate Culture Diagnosis and Change, coauthored with Bram Neuijen; Van Gorcum, 1987). He received his M.A. and Ph.D. in social psychology from the University of Groningen.

Copyright of Administrative Science Quarterly is the property of Administrative Science Quarterly and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.

Source: Administrative Science Quarterly, Jun90, Vol. 35 Issue 2, p286, 31p Item: 9512190644

Anexo II. Conceptos que pueden considerarse como activos intangibles en la compra de un negocio.

1) Activos relacionados con la clientela o el mercado.

- a) Listas de clientes, distribuidores, correo, suscriptores de publicidad y otras.
- b) Base de clientes.
- c) Depositantes de instituciones bancarias o relaciones con acreditados.
- d) Rutas de venta a clientes
- e) Sistemas de entrega, canales de distribución
- f) Capacidad de servicio a clientes, respaldo de servicio al producto
- g) Efectividad de programas de promoción
- h) Marcas y nombres registrados
- i) Cabeceras de periódicos
- j) Presencia en localidades geográficas y mercados
- k) Valores de seguros vigentes, expiración de seguros contratados.
- 1) Producción contratada y pedidos fincados (backlog)
- m) Concesiones en vigor y su estado presente
- n) Salidas y módulos de atención en aeropuertos
- o) Espacio de estantería en tiendas de descuento y detallistas
- p) Archivos y registros (crédito, médicos).

2) Activos basados en contratos (termino fijo definido)

- a) Acuerdos(consultoría, ventas, licencias, regalías, manufactura, permanencia)
- b) Contratos (de propaganda, construcción, consultoría, clientes, empleo, seguro, administración, mercadeo, hipoteca, preventa, servicio, provisión)
- c) Compromisos (de no competir)
- d) Instalaciones
- e) Arrendamientos (valuables o términos favorables)
- f) Permisos (construcción)
- g) Derechos (transmisión de radio, desarrollo, distribución de gas, aterrizaje, renta, mineros, servicio de hipoteca, franquicia readquirida, servicio, corte de madera, uso o agua)

3) Activos con base tecnológica (Innovaciones o avances tecnológicos dentro del negocio).

- a) Sistemas de cómputo (software) y licencias, programas de computación, sistemas de información, formatos, programas, nombres redominio en Internet y portales.
- b) Fórmulas y procesos secretos, recetas
- c) Dibujos técnicos, manuales de procedimientos técnicos, planos
- d) Bases de datos, títulos de plantas
- e) Procesos de manufactura, procedimientos, líneas de producción
- f) Investigación y desarrollo
- g) Conocimiento técnico

4) Activos con bases contractuales (vida útil establecida en contrato)

- a) Patentes
- b) Derechos registrados (manuscritos, trabajos literarios, partituras musicales
- c) Franquicias (cable, radio y televisión)
- d) Marcas y nombres registrados

5) Activos basados en la fuerza de trabajo (personal)

- a) Fuerza de trabajo reunida, personal entrenado
- b) Personal no sindicalizado, fuertes relaciones laborales, bases de salarios favorables
- c) Gerencia superior u otros factores clave de la fuerza de trabajo
- d) Experiencia técnica
- e) Programas vigente de entrenamiento, programas de entrenamiento de personal

6) Organización corporativa y activos financieros

- a) Valor de ahorro de los fondos disponibles
- b) Capacidad para levantar fondos, accesos a los mercados de capital
- c) Relaciones favorables con las dependencias del gobierno

En cuanto al reconocimiento contable de activos intangibles tenemos que:

Descripción del activo intangible	Reconocimiento
Conocimiento técnico	Se registra y amortiza como parte del crédito mercantil
Lista de clientes de una empresa	Este activo se amortiza en 7 años de vida
	económicamente activa
Patente	Se amortiza en 15 años de vida económicamente activa
Marca Registrada. Tiene una vida remanente	El activo se amortiza sobre una vida económicamente
de 12 años y es renovable. La marca puede	útil de 35 años.
generar ingresos por 35 años.	
Generación de fuerza hidroeléctrica	Este activo se amortiza en 60 años de vida
	económicamente activa
Licencia de transmisión por radio	No se amortiza el activo intangible hasta que se
	conozca su vida útil definida.

Anexo III. Medición del capital Intelectual

Empecemos por C, el valor intelectual de una organización. Digamos que es la medida absoluta, pues

es el valor central del que partimos. ¿Qué indicadores sumamos para llegar a una cifra comparable

realista?

Indicadores de medida absoluta de Capital Intelectual (C)

Todas las medidas son para el año fiscal

- 1.- Ingresos resultantes de operación de nuevos negocios (nuevos programas / servicios)
- 2.- Inversión en desarrollo de nuevos mercados
- 3.- Inversión en desarrollo de la industria
- 4.- Inversión en desarrollo de nuevos canales
- 5.- Inversión en TI para ventas, servicio y apoyo
- 6.- Inversión en TI para administración
- 7.- Variación en inventario de TI
- 8.- Inversión en apoyo de clientes
- 9.- Inversión en servicio a clientes
- 10.- Inversión en entrenamiento de clientes
- 11.- Gastos en clientes no relacionados con productos
- 12.- Inversión en desarrollo de competencia de empleados
- 13.- Inversión en apoyo y entrenamiento de empleados para nuevos productos
- 14.- Educación especial para empleados no basados en la compañía
- 15.- Inversión especial en entrenamiento, comunicación y apoyo para empleados permanentes de tiempo completo
- 16.- Programas especiales de entrenamiento y apoyo para empleados temporales de tiempo completo

17.- Programas especiales de entrenamiento y apoyo para empleados temporales de medio tiempo completo

18.- Inversión en desarrollo de sociedades y operaciones conjuntas

- 19.- Actualización de sistemas de intercambio electrónico de datos
- 20.- Inversión en identificación de marca (logotipo / nombre)
- 21.- Inversión en patentes nuevas, copyright.

Obsérvese que la lista contiene grupos temáticos. El primer grupo (1-4) recalca el desarrollo de

nuevos negocios, el segundo (5-7) la inversión en TI, en seguida el desarrollo de la clientela (8-11),

desarrollo de los empleados (12-17), sociedades (18-19) y finalmente marcas y propiedad intelectual

(20-21).

Esta no es una lista definitiva. Su propósito es dar una idea de lo que conforma el valor del CI. Además, esta lista, que se enfoca en las inversiones, destaca únicamente la capacidad de futuras utilidades, mientras que el capital intelectual también comprende las capacidades actuales.

El coeficiente de eficiencia.(i)

El coeficiente de eficiencia del capital intelectual (i) es el detector de verdad de la ecuación. Así como la variable absoluta (C) recalca el compromiso de la organización con el futuro, la variable de eficiencia (i) asienta esas afirmaciones en el comportamiento actual.

Índices de coeficiente de eficiencia del capital intelectual (i)

- 1.- Valor de mercado (%)
- 2.- Índice de satisfacción de clientes (%)
- 3.- Índice de liderazgo (%)
- 4.- Índice de motivación (%)
- 5.- Índice de recursos de I&D / recursos totales (%)
- 6.- Índice de horas de entrenamiento (%)
- 7.- Rendimiento/ meta de calidad (%)
- 8.- Retención de empleados
- 9.- Eficiencia administrativa / ingresos (la recíproca de error administrativo / ingresos) (%)

El grupo de nueve índices debe ser susceptible de combinarse en un solo porcentaje que refleje con exactitud el grado de eficiencia con que la compañía está aprovechando actualmente su capital intelectual. Cada uno debe aumentar su valor cuanto mejor se desempeñe la compañía. Así un índice como rotación de empleados tiene que invertirse a retención de empleados y costo de errores administrativos/ ingresos debe convertirse en eficiencia administrativa / ingresos. Otros como I&D y horas de entrenamiento, se deben indicar contra los promedios de la industria.

Esta es la ecuación que se propone:

I = (n/x)

Donde n es igual a la suma de los valores decimales de los nueve índices de eficiencia y x es el número de esos índices. Es decir, retrata de determinar el promedio de los índices.

Si el coeficiente de eficiencia i fuera igual a 85 % y la medida absoluta del CI de la compañía es de 200 millones, la medida global común viene a ser:

iC = 0.85(200 millones) = 170 millones

Anexo IV. Informe general del CI de Skandia

El informe de capital intelectual de Skandia contiene 91 medidas distintas, lo cual es un número abrumador y aunque las compañías institucionalicen las medidas de estos índices y apliquen considerable poder de computar para ello, seguirá siendo una tarea monumental.

Enfoque financiero

- 1.- Activos totales (\$)
- 2.- Activos totales / empleados (\$)
- 3.- Ingresos / activos totales (%)
- 4.- Utilidades / activos totales (\$)
- 5.- Ingresos provenientes de nuevos negocios (\$)
- 6.- Utilidades provenientes de nuevos negocios (\$)
- 7.- Ingresos / empleado (\$)
- 8.- Tiempo del cliente / atención del empleado (%)
- 9.- Utilidades / empleado (\$)
- 10.- Ingresos comerciales perdidos comparados con promedio del mercado (%)
- 11.- Ingreso proveniente de nuevos clientes / ingreso total (%)
- 12.- Valor de mercado (\$)
- 13.- Rendimiento sobre valor neto de activos (%)
- 14.- Rendimiento sobre activos netos resultante de operación de un negocio nuevo(\$)
- 15.- Valor agregado / empleado (\$)
- 16.- Valor agregado / informática -empleado (\$)
- 17.- Inversiones en informática (\$)
- 18.- Valor agregado / cliente (\$)

> Enfoque al cliente

- 1.- Participación de mercado (%)
- 2.- Número de clientes (#)
- 3.- Ventas anuales / clientes (\$)
- 4.- Clientes perdidos (#)
- 5.- Duración media de relación con el cliente (#)
- 6.- Tamaño medio de clientes (\$)
- 7.- Calificación clientes (%)
- 8.- Visitas del cliente a la compañía (#)
- 9.- Días dedicados a visitar clientes (#)
- 10.- Clientes / empleados (\$)
- 11.- Personal generador de ingresos (\$)
- 12.- Tiempo medio entre contacto con cliente y venta (#)
- 13.- Proporción de contactos para vender a ventas cerradas (%)
- 14.- Índice de satisfacción de clientes (%)
- 15.- Inversión en TI / vendedor (\$)
- 16.- Inversión en TI / empleado de servicio y apoyo (\$)

- 17.- Competencia de clientes en informática (%)
- 18.- Gasto de apoyo / cliente (\$)
- 19.- Gasto en servicio / cliente / año (\$)
- 20.- Gasto en servicio / cliente / contacto (\$)

Enfoque de proceso

- 1.- Gasto administrativo / ingresos totales (%)
- 2.- Costo por error administrativo. / ingresos administrativos (%)
- 3.- Tiempo de procesamiento, desembolsos (#)
- 4.- Contratos registrados sin errores (#)
- 5.- Puntos de función / empleado-mes (#)
- 6.- Computadores personales y portátiles / empleado (#)
- 7.- Capacidad de la red / empleado (#)
- 8.- Gasto administrativo / empleado (\$)
- 9.- Gasto en Tecnología Informática / empleado (\$)
- 10.- Gasto en TI / gasto administrativo (%)
- 11.- Gasto administrativo / total primas (%)
- 12.- Capacidad de TI (CPU y DASD) (#)
- 13.- Variación en inventario de TI (\$)
- 14.- Rendimiento de calidad corporativa (#) ISO 9000
- 15.- Rendimiento corporativo / meta de calidad (%)
- 16.- Inventario de TI descontinuado / Inventario de TI (%)
- 17.- Inventario de TI huérfano / Inventario de TI (%)
- 18.- Capacidad de TI / empleado (#)
- 19.- Rendimiento de TI / empleado (#)

> Enfoque de renovación y desarrollo

- 1.- Gasto de desarrollo en competencia / empleado (\$)
- 2.- Índice de empleados satisfechos (#)
- 3.- Inversión en relaciones / cliente (\$)
- 4.- Participación en horas de entrenamiento (%)
- 5.- Participación en horas de desarrollo (%)
- 6.- Participación en oportunidades (%)
- 7.- Gasto en I & D / gasto administrativo (%)
- 8.- Gasto en entrenamiento / empleado (\$)
- 9.- Gasto en entrenamiento / gasto administrativo (%)
- 10.- Gasto de desarrollo en negocios / gasto administrativo (%)
- 11.- Proporción de empleados menores a 40 años (%)
- 12.- Gasto de desarrollo en TI / gasto en TI (%)
- 13.- Gasto en TI para entrenamiento / gasto en TI (%)
- 14.- Recursos de I&D / recursos totales (%)
- 15.- Oportunidad de base de clientes captada (#)
- 16.- Promedio de edad de clientes (#); educación (#); ingresos (#).
- 17.- Promedio de duración del cliente con la compañía, meses (#).
- 18.- Inversión en educación / cliente (\$)

- 19.- Comunicaciones directas con cliente / año (#)
- 20.- Gasto no relacionado con producto / cliente / año (\$)
- 21.- Inversión en desarrollo de nuevos mercados (\$)
- 22.- Inversión en desarrollo de capital estructural (\$)
- 23.- Valor del sistema IED (#) (Intercambio Electrónico de Datos)
- 24.- Actualización del sistema IED (\$)
- 25.- Capacidad del sistema IED (#)

26.- Proporción de nuevos productos (de menos de 2 años) a familia total de productos de la compañía (%)

- 27.- I & D invertida en investigación básica (%)
- 28.- I & D invertida en diseño de productos (%)
- 29.- I & D invertida en aplicaciones (%)
- 30.- Inversión en apoyo y entrenamiento para nuevos productos (\$)
- 31.- Promedio de edad de patentes de la compañía (#)
- 32.- Patentes pendientes (#)

> Enfoque humano

- 1.- Índice de liderazgo (%)
- 2.- Índice de motivación (%)
- 3.- Índice de empleados facultados (#)
- 4.- Número de empleados (#)
- 5.- Rotación de empleados (%)
- 6.- Promedio de años de servicio en la compañía (#)
- 7.- Número de gerentes (#)
- 8.- Número de mujeres gerentes (#)
- 9.- Promedio de edad de los empleados (#)
- 10.- Tiempo de entrenamiento (días / año) (#)
- 11.-Competencia del personal en TI (#)
- 12.- Número de empleados de tiempo completo/ empleados permanentes (#)
- 13.- Promedio de edad de empleados de tiempo completo/ empleados permanentes (#)
- 14.- Promedio de años con la compañía, de empleados permanentes de tiempo completo (#)
- 15.- Rotación anual de empleados permanentes de tiempo completo (#)
- 16.- Costo anual per cápita, de programas de entrenamiento, comunicación y apoyo a empleados permanentes de tiempo completo (\$)

17.- Número de empleados temporales de tiempo completo; promedio de años con la compañía, de empleados temporales de tiempo completo. (#)

18.- Costo anual per cápita, de programas de entrenamiento y apoyo para empleados temporales de tiempo completo (#)

- 19.- Número de empleados de tiempo parcial o contratistas no de tiempo completo (#)
- 20.- Promedio de duración de contrato (#)

21.- Porcentaje de gerentes que tienen grado académico superior:

- a) En negocios (%)
- b) En ciencias e ingeniería (%)
- c) En artes (%)

Paso	Descripción	Procedimiento	Tiempo sugerido
1	Definir la industria, describir su desarrollo y el role de la compañía	Entrevistar a la mayor cantidad de gente posible. Debe ser realizada por un tercero para que sea objetiva. Investigar la situación de la industria y sus tendencias	1-2 meses
2	Establecer y confirmar la visión de la organización	Realizar seminarios con la alta gerencia y líderes de opinión	1-2 juntas de 1.5 días cada una
3	Establecer las perspectivas	Realizar un seminario con la alta gerencia, el grupo de proyecto y alguna persona experimentada en proyectos de CMI	1-2 días
4	Seccionar la visión de acuerdo a cada perspectiva y formular metas estratégicas generales	Realizar seminario con el mismo grupo del paso 2	Ver siguiente paso
5	Identificar los factores críticos del éxito	En el mismo seminario del paso 4	2 – 3 días Incluyendo el paso 4
6	Desarrollar unidades de medida, Identificar causas-efectos y establecer un balance	Si se puede en el mismo seminario del punto 4-5. Aunque es recomendable realizar otro por separado.	Además del tiempo del paso 5, 1-2 días más
7	Estableciendo el nivel más alto del CMI	Es la determinación final hecha por la alta gerencia y el grupo de proyecto. Preferentemente con la participación de un experto en CMI	1-2 días
8	Desglosamiento del CMI y sus medidas por unidad organizacional	Es conveniente para un proyecto dividirlo en unidades organizacionales bajo el liderazgo del grupo de proyecto. Todo el personal involucrado debe tomar parte en el proyecto de trabajo de cada unidad; Se puede realizar un seminario. Revisar los reportes de progreso con la alta gerencia. Ayudarse de un arquitecto experimentado en CMI es importante para alinear los factores de éxito y las medidas.	De 2 meses a más. Para cada seminario local, al menos de 0.5 – 1 día.
9	Formular metas	Propuestas para cada líder de proyecto de cada unidad. Aprobación final de metas por la alta gerencia	No estimado
10	Desarrollar un plan de acción	Preparado por cada grupo de proyecto	No estimado
11	Implementar el CMI	Asegurar el monitoreo de avance bajo la total responsabilidad de los alta gerencia	No estimado

Anexo V. Pasos para construir un CMI

En una empresa pequeña, es más probable el crear un CMI para toda la organización, mientras que en una compañía grande o en un grupo corporativo, es mejor iniciar con uno o dos proyectos piloto.

En una compañía pequeña, el proyecto de CMI puede ser concluido en 6 meses y en una de gran tamaño, se pueden llevar varios años. Sin embargo, el proceso del CMI nunca finaliza. Un estudio de la Universidad de Oxford (Ruddle & Feeny, 1998) menciona que el proceso de cambio en algunas empresas en las que se ha implementado el CMI ha sido de 4 a 6 años. Esto se debe a que, dado que el CMI es una parte del control estratégico, debe estar operando y en continua adaptación a los cambios en la situación de la organización.

Anexo VI. Ejemplos de medidas en las cuatro perspectivas

- Perspectiva financiera
- 1.- Activos totales (\$)
- 2.- Activos totales / empleado (\$)
- 3.- Ingresos / total de activos (%)
- 4.- Ingresos de los nuevos productos u operaciones de nuevos negocios (\$)
- 5.- Ingresos / empleado (\$)
- 6.- Utilidad / total de activos (%)
- 7.- Utilidad de los nuevos productos u operaciones de nuevos negocios (\$)
- 8.- Utilidad / empleado (\$)
- 9.- Valor de mercado (\$)
- 10.- Retorno sobre activos netos (%)
- 11.- Valor agregado / empleados (\$)
- 12.- Retorno sobre activos totales (%)
- 13.- Retorno sobre capital empleado (%)
- 14.- Margen de utilidad (%)
- 15.- Contribución / ingreso o contribución marginal (%)
- 16.- Contribución / empleado (\$)
- 17.- Flujo de caja (\$)
- 18.- Capital accionario / activos totales o solvencia (%)
- 19.- Retorno de inversión (%)
- 20.- Costos totales (\$)

Perspectiva del cliente

- 1.- Número de clientes (#)
- 2.- Participación de mercado (%)
- 3.- Ventas anuales / clientes (\$)
- 4.- Clientes perdidos (# ó %)
- 5.- Tiempo promedio gastado en relaciones con el cliente (#)
- 6.- Clientes / empleado (# ó %)
- 7.- Ventas realizadas / ventas potenciales (%)
- 8.- Índice de satisfacción del consumidor (%)
- 9.- Índice de lealtad del cliente (%)
- 10.- Costo / cliente (\$)
- 11.- Número de visitas a clientes (#)
- 12.- Número de quejas (#)
- 13.- Gastos por mercadotecnia (\$)
- 14.- Índice de imagen de marca (%)
- 15.- Duración promedio de la relación con el cliente (#)
- 16.- Tamaño promedio del cliente (\$)
- 17.- Clasificación del cliente (%)
- 18.- Visitas del cliente a la empresa (#)
- 19.- Tiempo promedio desde el contacto con el cliente hasta la respuesta de ventas (#)
- 20.- Gasto de servicio / cliente / año (\$)

- Perspectiva del proceso
- 1.- Gastos administrativos / Ingresos totales (%)
- 2.- Tiempo de proceso (#)
- 3.- Entregas en tiempo (%)
- 4.- Tiempo promedio requerido (#)
- 5.- Tiempo promedio, desarrollo de producto (#)
- 6.- Tiempo promedio, de la orden a la distribución (#)
- 7.- Tiempo promedio, proveedores (#)
- 8.- Tiempo promedio, producción (#)
- 9.- Tiempo promedio de toma de decisiones (#)
- 10.- Rotación de inventario (#)
- 11.- Mejora en productividad (%)
- 12.- Capacidad en TI (#)
- 13.- Capacidad en TI / empleado (#)
- 14.- Cambio en inventario de TI (\$ ó %)
- 15.- Gasto en TI / gasto administrativo (%)
- 16.- Emisiones al ambiente del área de producción (#)
- 17.- Impacto ambiental del uso del producto (#)
- 18.- Costo de errores administrativos / ingresos administrativos (%)
- 19.- Contratos sin error (#)
- 20.- Gasto administrativo / empleados (\$)

Perspectivas de renovación y crecimiento

- 1.- Gasto en I&D (\$)
- 2.- Gasto en I&D/ gastos totales (%)
- 3.- Gasto por desarrollo en TI / gasto en TI (%)
- 4.- Horas invertidas en I&D (%)
- 5.- Recursos de I&D / recursos totales (%)
- 6.- Inversión en entrenamiento / clientes (#)
- 7.- Inversión en investigación (\$)
- 8.- Inversión en nuevos productos de apoyo y entrenamiento (\$)
- 9.- Inversión en desarrollo de nuevos mercados (\$)
- 10.- Comunicaciones directas con clientes / año (\$)
- 11.- Patentes pendientes (#)
- 12.- Edad promedio de las patentes de la empresa (#)
- 13.- Mejoras sugeridas / empleado (#)
- 14.- Gasto en el desarrollo de competencia / empleado (\$)
- 15.- Índice de satisfacción del empleado (%)
- 16.- Gasto en mercadotecnia / cliente (\$)
- 17.- Punto de vista del empleado (índice de empowerment) (#)
- 18.- Empleados debajo de cierta edad (%)
- 19.- Gasto en productos no relacionados / cliente / año (\$)
- 20.- Porcentaje de nuevos productos (menores a X años de haber sido lanzados) comparado con el catálogo completo de la compañía (%)

- Perspectiva del recurso humano
- 1.- Índice de liderazgo (#)
- 2.- Índice de motivación (#)
- 3.- Número de empleados (#)
- 4.- Rotación de empleados (%)
- 5.- Años promedio del empleado al servicio de la compañía (#)
- 6.- Edad promedio de los empleados (#)
- 7.- Tiempo de capacitación (días / año) (#)
- 8.- Empleados temporales / empleados permanentes (%)
- 9.- Proporción de empleados con grado universitario (%)
- 10.- Promedio de ausentismo (#)
- 11.- Número de mujeres Gerente (#)
- 12.- Número de solicitudes de empleo hacia la compañía (#)
- 13.- Índice de empowerment (#), número de Gerentes (#)
- 14.- Cantidad de empleados menores a los 40 años
- 15.- Costo anual per cápita por entrenamiento (\$)

16.- Trabajadores permanentes que permanecen menos del 50 % de sus horas de trabajo en las instalaciones corporativas.

- 17.- Porcentaje de empleados permanentes (%)
- 18.- Costo anual per cápita de entrenamiento, comunicación y programas de apoyo (\$)
- 19.- Número de empleados temporales de tiempo completo (#)
- 20.- Número de empleados de tiempo parcial o con contratos de tiempo parcial (#)



Anexo VII. Soluciones de Tecnología de Información para el CMI

El nivel más bajo de ambición, es limitado para proveer una interfase de usuario por presentación. El siguiente nivel es usar la forma y el contenido del CMI para hacer disponible la información gerencial (p.ej. el SIE-Sistema de Información para Ejecutivos o las soluciones WEB). El tercer nivel es incluir las relaciones causa-efecto entre las medidas y realizar posibles simulaciones.

datos

formatos

datos de una gran base de

* Disponibilidad de datos en

multidimensionales

alternas

*Instrumentos

para

comunicación efectiva de las

estrategias seleccionadas y de las relaciones causa - efecto

una

178

Como información, en Mayo del 2004, Information Builders Ibérica, empresa líder en software de Business Intelligence (BI) y distribución de información en tiempo real a través de la web, lanzó el WebFOCUS Balanced Scorecard 3.0.




El diseño de los modelos, objetivos e indicadores se realizan en Blueprint y la habilitación electrónica en SEM.

a) Mapa estratégico



b) Objetivos e indicadores

Diseño del modelo (Blue Print)

Estrategia Incremento de productividad **Real** Prop Meta Incrementar el Retorno de capital * Utilidad marginal vs promedio de segmento 69% 89% 95% * Retorno sobre total de activos 23% 36% 40% Líder de costos en la industria 94% * Costo/Galón vs resto de la industria 94% 98% Maximizar uso de activos 68% 102% 110% * Flujo de efectivo actual Deleitar al consumidor * Participación de mercado relativa 36% 36% 43% 9P 9P 7P * Porcentaje de compradores misteriosos Relación Ganar-Ganar con distribuidores * Utilidad del distribuidor 23% 22% 27% * Satisfacción del distribuidor 29% 29% 30% Crear productos no relacionados a la gasolina 30% * Tasa de aceptación de nuevos productos 29% 29% 29% 29% * Retorno de inversión de nuevos productos 30% Mejorar el hardware y la administración de inventarios 4% * Brecha en el campo de la refinería 5% 5% * Interrupciones no planeadas 31D 25D 20D * Nivel de inventario 88% 89% 80% Adoptar nuevas tecnologías * Implantación de sistemas en tiempo 96% 90% 98% Alineación de negocios y metas personales * BSC personal 75% 85% 97%

Habilitación Tecnológica (SEM)

Scorecard 'Mobil Oil Scorecard': Cause-Effect Chain

🕲 🎖 🛛 Overview Analysis Cause-Effect Chain Drilldown Scorecard Comparison 🗓

Period	009.2001	🖁 Initiatives 🛛	Laj	out period 009.2
100 % 🛙	Productivity Growth Strategy 🛛 🛞	Objective / Measure	Actual	Plan
Become ind cost	hcrease Mobil's Return on Capital Employed	Generate Mobil's Return on Capital Employed Generate Margin vs. Segment Average Generate Return on Total Assets Cetrone ind. cost leader in every SC category Centrolallon Compared with the Best of the	69 % 23 % 62 %	106 % 36 % 94 %
ici leader in every SC category	Maximize the use of existing assets	Coccegation compared with the test of existing assets Actual Cash Flow Compared with the Busin	68 %	102 % (
Delight the consume	Wn-win Dealer Q	C Delight the consumer Relative Market Share in Specific Market S Mystery Shopper Rating O Win-win Dealer Relations	36% 9 P	36 % 9 P
Customer	Helstors	C Dealer Profitability C Dealer Satisfaction	23 % 29 %	22 % 29 %
Create nor product	ygasoline s and ces	 ♀ C Create nongasoline products and services C New Product Acceptance Rate C New Product Return on Investment ♀ @ Impt. hardware perf. & inventory management 	29 % 29 %	29 % 29 %
Underst. cust. s E E E E	egm. Inprove environmental Realman and safety	 Refinery Yield Gap Unplanned Downtime Inventory Levels 	5 % 31 D 88 %	5% 25D 89%
nd Growth 10	Adopt new technology. process inprovements	Adopt new technology: process improvements On-time Deployment of Systems Align business and personal goals	96%	90 %





Se recomienda que los indicadores balanceados se revisen semanalmente. Los mapas estratégicos trimestralmente. Los objetivos (ponderación), indicadores (vigencia) y relaciones de causalidad trimestralmente. Las metas e iniciativas también trimestralmente.

Anexo IX. Grupo Bimbo

Introducción

Grupo Bimbo es uno de los productores más grandes de pan en el mundo. En México, es el líder productor de pan de caja y pastelitos. Tiene presencia en 14 países de los cuales 12 son de Latinoamérica. En Estados Unidos, tiene una gran presencia en los estados de Texas, California y algunos otros estados fronterizos con México. Apoyado de 72 fábricas y 4 comercializadoras, se dedica a la producción, distribución y venta de una gran variedad de productos (más de 4500 y más de 100 marcas de prestigio) destacándose los siguientes: pan de caja, pan dulce, pastelitos, galletas, tortillas de trigo y de maíz, confitería, botanas saladas, tostadas, comida procesada y pastas. Está dividida en 6 organizaciones: Panaderas (Bimbo, Marinela), Ricolino, Barcel, BBU (Estados Unidos), Latino América y Nuevos Negocios. Cuenta con una de las más grandes y sofisticadas redes de distribución de Latinoamérica, la cual incluye más de 25,300 vehículos y atiende a más de 690,000 clientes.

Desde su fundación, se ha expandido mediante la construcción y la adquisición de compañías involucradas en la producción de pan, consolidando marcas como: Bimbo, Wonder, Tía Rosa, Milpa Real, Del Hogar, Marinela, Lara, Barcel, Ricolino, Candy Max, Park Lane, Ideal, Barcel, Coronado, Suandy, Lonchibon, Bocadin, Lunetas y Dubalín entre otras.

La compañía se ha caracterizado por su constante innovación e introducción de nuevos productos, llegando a ser un líder indiscutible en los mercados en los cuales participa.

Iniciando en 1990 y como parte de su estrategia de crecimiento, Bimbo hizo y continúa haciendo grandes inversiones en Latino América y en Estados Unidos con el fin de lograr ser el líder del Continente Americano.

Bimbo cuenta con 72 fábricas distribuidas en los siguientes lugares: México, Estados Unidos; Argentina, Chile, Colombia, Perú, Venezuela, Guatemala, El Salvador, Costa Rica y Brasil. En Europa se encuentra en República Checa y Austria. Tiene instalaciones de distribución en Uruguay, Nicaragua y Honduras.

Estratégicamente y debido a la naturaleza de sus operaciones estaba dividida en tres sectores de negocio:

- 1. Pan, galletería y pastelería.
- 2. Botanas saladas y botanas dulces
- 3. Negocios complementarios.

A continuación expresamos la misión, propósitos y valores actuales de Grupo Bimbo.

Misión

"Elaborar y comercializar productos alimenticios, desarrollando el valor de nuestras marcas y comprometiéndonos a ser una empresa:

- Altamente productiva y plenamente humana
- Innovadora, competitiva y fuertemente orientada a la satisfacción de nuestros clientes y consumidores.
- Líder internacional en la industria de la panificación con visión a largo plazo"

Propósitos

- Hacer de nuestro negocio un negocio, ser productivos. Alcanzar los niveles de rentabilidad establecidos.
- Lograr un creciente volumen y participación de nuestras marcas. Estas cerca de nuestros consumidores y clientes, son nuestra razón de ser.
- Buscar que nuestro personal se desarrolle y realice plenamente, (vivir nuestra filosofía). Orientados permanentemente a aprender.
- Asegurar la operación en un adecuado ambiente de control (información, sistemas y confianza).
 Participación y autocontrol.

Valores

<u>Pasión</u>

"Vemos nuestro trabajo como una misión, una pasión, una aventura. El compartir esto en un ambiente de participación y confianza es lo que constituye el alma de la empresa." *Don Lorenzo Servitje*

<u>Rentabilidad</u>

"Es el resultado visible de todas nuestras ideas, esfuerzos e ilusiones. Es el oxígeno que permite a nuestra empresa seguir viviendo." *Daniel Servitje*

<u>Efectividad</u>

"Lograr que las cosas sucedan: Resultados. Servir bien es nuestra razón de ser." Don Roberto Servitje

<u>Trabajo en equipo</u>

"Agiles, activos, entusiastas, con los tenis puestos. Compartir, aprender de todos." Daniel Servitje

<u>Confianza</u>

"Base sobre la que se construye todo. Contar con el otro para la tarea común." Daniel Servitje

Calidad

"Nuestra empresa debe ser creadora, eficiente, productiva y con un altísimo ideal de Calidad y Servicio."

Don Roberto Servitje

<u>Persona</u>

"Ver siempre al otro como persona, nunca como un instrumento."

Don Lorenzo Servitje

Organización

Está dividida en 6 organizaciones: Panaderas (Bimbo, Marinela), Ricolino, Barcel, BBU (Estados Unidos), Latino América y Nuevos Negocios.



Competencia Global

Para tener una idea clara de la situación actual de la empresa es necesario conocer quienes son los competidores de Grupo Bimbo.

En la República Mexicana, en la línea de panes, de caja y dulce, su competencia está representada por las panaderías tradicionales y por los tiendas de autoservicio como Wal-Mart, Price, Aurrera, Comercial Mexicana, Carrefour, Gigante, Sumesa, etc.

Además, existen algunas empresas cuyo giro incluye la venta de pan de caja tales como: GRUMA (Breddy) y Pan Don Toño.

En cuanto a empresas cuyos productos son competencia de BIMBO por ser sustitutos:

Pepsico a través de Frito Lay (botanas), Sonric's (confitería)

Nestlé a través de los cereales, galletas y yoghurts.

Quaker a través de su línea de productos light

Kellog's a través de sus cereales y sus nuevas presentaciones de cereales y galletas integrales

Nabisco a través de sus galletas

Maizoro a través de sus cereales

Alpura, Danone, Lala en el segmento de yogurts

En México existe una canal que es el pequeño comercio (changarro) que es el principal punto de venta y que por lo tanto todos los productos de compra por impulso representan una competencia para la mayor parte de los productos de GRUPO BIMBO. En Estados Unidos la competencia en el segmento de panes de caja está representada por Interstate Bakeries Corp, The Earthgrains company, Nabisco Inc, Lepage Bakeries Inc., Peperridge Farme Inc., General Foods Bakery Companies (ahora Best Foods Baking Co.), Metz Baking y Flowers Industries.

Por otro lado la competencia también está representada por las mismas firmas internacionales que compiten en el mercado mexicano.

Anexo X. Petróleos Mexicanos (PEMEX)

Introducción.

El 7 de junio de 1938, el presidente Lázaro Cárdenas del Río creó Petróleos Mexicanos para administrar y operar la industria petrolera nacionalizada.

En los años cuarenta la industria petrolera inició el camino de su crecimiento al pasar de 51 millones de barriles producidos en 1940 a 86 millones en 1950 y la exportación en este último año sobrepasó los 12 millones de barriles. Este aumento productivo se debió a una labor intensa en la exploración, cuyo resultado más espectacular fue el descubrimiento -en 1952- de los primeros campos de la nueva Faja de Oro.

Se construyeron las refinerías de Poza Rica, de Salamanca, de Ciudad Madero, la nueva refinería de Minatitlán y se amplió la de Azcapotzalco. También, en 1951, empezó el funcionamiento de una planta petroquímica básica en Poza Rica, con lo cual se iniciaba la industria petroquímica en México. Entre 1964 y 1970, se impulsaron las actividades exploratorias y la perforación, descubriéndose el campo Reforma, en los límites de Chiapas y Tabasco, y el campo Arenque, en el Golfo de México y, en 1966, se creó el Instituto Mexicano del Petróleo.

En 1972, se detectó una nueva provincia productora de hidrocarburos en el Estado de Chiapas, mediante la perforación de los pozos Cactus I y Sitio Grande I, lo que constituyó el hallazgo de mayor importancia en esa época. La productividad de los pozos de la zona sureste conocida como el Mesozoico Chiapas-Tabasco hizo posible la reanudación de las exportaciones petroleras de México en 1974. Así, en 1976, las reservas de hidrocarburos ascendieron a siete mil millones de barriles, la producción a 469 millones de barriles anuales y las exportaciones de crudo a 34 millones y medio de barriles anuales. En los años setenta, se da un impulso importante a la refinación, al entrar en operación la refinerías de "Miguel Hidalgo", en Tula, Hgo.; "Ing. Héctor Lara Sosa", en Cadereyta, N.L., así como la "Ing. Antonio Dovalí Jaime", en Salina Cruz, Oax.

A partir de 1976, se impulsó una mayor actividad en todas las áreas de la industria, ante la estrategia política del Presidente José López Portillo de dar un gran salto en la producción petrolera y en las reservas de hidrocarburos, por lo que el petróleo se convirtió en la principal fuente de divisas del país, ya que llegó a representar el 75 por ciento de sus exportaciones. El aumento productivo de esta época estuvo ligado al descubrimiento de los campos de la Sonda de Campeche, considerada hasta la fecha como la provincia petrolera más importante del país y una de las más grandes del mundo. En la década de los ochenta, la estrategia de la industria petrolera nacional fue la de consolidar la planta productiva mediante el crecimiento, particularmente en el área industrial, con la ampliación de la capacidad productiva en refinación y petroquímica.

A partir de 1990, se inició un programa de inversiones financiado por el Eximbank y el Overseas Economic Cooperation Fund de Japón denominado "Paquete Ecológico", que comprendió la construcción de un total de 28 plantas de proceso en el sistema nacional de refinación, el cual fue terminado en 1997 y cuyos objetivos fueron mejorar la calidad de la gasolinas, reducir el contenido de azufre en el diesel y convertir combustóleo en combustibles automotrices, así como elevar las características de los residuales, a fin de cumplir con las normas ambientales adoptadas por el Gobierno de México.

En julio de 1992, el Congreso de la Unión aprobó la Ley Orgánica de Petróleos Mexicanos y sus Organismos Subsidiarios, iniciativa que envió el Ejecutivo Federal, mediante la cual se emprendió una reestructuración administrativa y organizativa bajo el concepto de líneas integradas de negocios que incorpora criterios de productividad, responsabilidad, autonomía de gestión, definiendo bajo un mando único actividades operativas y de apoyo. Por tanto, PEMEX descentralizó y desconcentró funciones y recursos para cumplir todas las actividades implícitas de la industria petrolera y sus áreas estratégicas.

Esta ley establece la creación de los siguientes organismos descentralizados subsidiarios de carácter técnico, industrial y comercial, cada uno de ellos con personalidad jurídica y patrimonio propios: PEMEX Exploración y Producción, PEMEX Refinación, PEMEX Gas y Petroquímica Básica y PEMEX Petroquímica, bajo la conducción central del Corporativo PEMEX.

A partir de esta reestructuración administrativa de PEMEX, se llevó a cabo una transformación profunda de la empresa para maximizar el valor económico de las operaciones y para planear y ejecutar proyectos de inversión con mayor solidez y rentabilidad. De esta manera, en los años 1995 y 1996 se fortalecieron los programas operativos de PEMEX para mantener la producción de hidrocarburos y aumentar la elaboración y distribución de productos petrolíferos de mayor calidad, principalmente gasolinas PEMEX Magna y PEMEX Premium, así como PEMEX Diesel a nivel nacional.

El año de 1997 marcó el inicio de una nueva fase de expansión de la industria petrolera mexicana, mediante la ejecución de importantes megaproyectos de gran envergadura para incrementar los volúmenes de producción de crudo y gas y mejorar la calidad de los combustibles.

Por su importancia estratégica y económica, se iniciaron el "Proyecto Cantarell" para renovar, modernizar y ampliar la infraestructura de este complejo, con el fin de mantener la presión en este yacimiento, ubicado en la Sonda de Campeche, a través de la inyección de nitrógeno; el "Proyecto Cadereyta" orientado a la modernización y reconfiguración de la refinería "Ing. Héctor Lara Sosa", en el Estado de Nuevo León para construir 10 nuevas plantas de proceso y ampliar otras 10 existentes; y el "Proyecto Cuenca de Burgos" para aprovechar el enorme potencial gasífero de la región norte de Tamaulipas y obtener una producción adicional de gas natural de 450 mil a mil 500 millones de pies cúbicos por día en el año 2000.

Durante el año 2000, se establecieron las bases para el diseño del Plan Estratégico 2001-2010, en el cual se proponen las estrategias operativas para maximizar el valor económico de las actividades operativas de PEMEX, la modernización de su administración para generar ahorros, así como los cambios necesarios en la relación con el Gobierno Federal, tales como un nuevo tratamiento fiscal, una nueva regulación basada en el desempeño y un control administrativo moderno de acuerdo a resultados.

A partir del mes de diciembre de 2000, se inició una nueva era en la industria petrolera mexicana con la implantación de estrategias orientadas a buscar un crecimiento dinámico de Petróleos Mexicanos, mediante la ejecución de importantes proyectos dirigidos a la producción de crudo ligero, a la aceleración de la reconfiguración de las refinerías, al mejoramiento de la calidad de los productos, a la optimización de la exploración para gas no asociado y a la integración de alianzas con la iniciativa privada para revitalizar y fomentar a la industria petroquímica.

Para cumplir estas metas, se lleva a cabo una reestructuración del Corporativo, con el propósito de mantener el liderazgo en la operación integral de la empresa, dar seguimiento a la nueva planeación e identificar los cambios encaminados a alcanzar mayores rendimientos y una mejor operación de las instalaciones con costos y calidad de nivel mundial.

Visión y propósito

PEMEX orgullo de México y de los petroleros, se ha convertido en una de las empresas estatales más competitivas del mundo, ya que opera en forma oportuna, moderna, transparente, eficiente y eficaz, con estándares de excelencia y honradez.

La economía nacional ha dado un giro gracias a que PEMEX, a través de sus alianzas con la industria, se ha posicionado como palanca del desarrollo nacional generando altos índices de empleo.

Su tecnología de vanguardia le ha permitido aumentar sus reservas y reconfigurar su plataforma de exportación, vendiendo al exterior crudo de mayor calidad y valor, además de ser autosuficiente en gas natural. Abastece materias primas, productos y servicios de altísima calidad a precios competitivos. Cuenta con una industria petroquímica moderna y en crecimiento.

PEMEX es una empresa limpia y segura, comprometida con el medio ambiente, su alta rentabilidad y moderno régimen fiscal le han permitido seguir siendo un importante contribuyente al erario público, cuyos recursos se utilizan en beneficio del país.

Propósito de Pemex

Maximizar el valor económico de los hidrocarburos y sus derivados, para contribuir al desarrollo sustentable del país.

Organización

PEMEX opera por conducto de un corporativo y cuatro organismos subsidiarios:

- Corporativo De Petróleos Mexicanos

- PEMEX Exploración y Producción

- PEMEX Refinación
- PEMEX Gas y Petroquímica Básica
- PEMEX Petroquímica



Corporativo de Petróleos Mexicanos es el responsable de la conducción central y de la dirección estratégica de la industria petrolera estatal, de asegurar su integridad y unidad de acción.

PEMEX Exploración y Producción tiene a su cargo la exploración y explotación del petróleo y el gas natural.

PEMEX Refinación produce, distribuye y comercializa combustibles y demás productos petrolíferos.

Las funciones básicas de Pemex Refinación son los procesos industriales de refinación, elaboración de productos petrolíferos y derivados del petróleo, su distribución, almacenamiento y venta de primera mano. La Subdirección Comercial de Pemex Refinación realiza la planeación, administración y control de la red comercial, así como la suscripción de contratos con inversionistas privados mexicanos para el establecimiento y operación de las Estaciones de Servicio integrantes de la Franquicia Pemex para atender el mercado al menudeo de combustibles automotrices

PEMEX Gas y Petroquímica Básica procesa el gas natural y los líquidos del gas natural; distribuye y comercializa gas natural y gas LP; y produce y comercializa productos petroquímicos básicos.

Dentro de la cadena del petróleo, Pemex Gas ocupa una posición estratégica, al tener la responsabilidad del procesamiento del gas natural y sus líquidos, así como del transporte, comercialización y almacenamiento de sus productos. En el ámbito internacional, Pemex Gas es una de las principales empresas procesadoras de gas natural, con un volumen procesado durante 1999 de 3,527 millones de pies cúbicos diarios (mmpcd) y la segunda empresa productora de líquidos, con una producción de 446 miles de barriles diarios (mbd). Cuenta con una extensa red de gasoductos a través de la cual se transportan cerca de 4,000 mmpcd de gas natural, lo que la ubica en el 100 lugar entre las principales empresas transportistas de este energético en Norteamérica.

En México, nuestra empresa se encuentra entre las 10 más grandes por su nivel de ingresos, superiores a 52,500 millones de pesos en 1999, con activos del orden de 41,000 millones de pesos. Adicionalmente, Pemex Gas constituye una fuente importante de trabajo, al emplear a poco más de 10,500 trabajadores.

PEMEX Petroquímica a través de sus siete empresas filiales (Petroquímica Camargo, Petroquímica Cangrejera, Petroquímica Cosoleacaque, Petroquímica Escolín, Petroquímica Morelos, Petroquímica Pajaritos y Petroquímica Tula) elabora, distribuye y comercializa una amplia gama de productos petroquímicos secundarios.

Pemex Petroquímica que elabora, comercializa y distribuye productos para satisfacer la demanda del mercado a través de sus empresa filiales y centros de trabajo. Su actividad fundamental son los procesos petroquímicos no básicos derivados de la primera transformación del gas natural, metano, etano, propano y naftas de Petróleos Mexicanos. Pemex Petroquímica guarda una estrecha relación comercial con empresas privadas nacionales dedicadas a la elaboración de fertilizantes, plásticos, fibras y hules sintéticos, fármacos, refrigerantes, aditivos, etc.

P.M.I. Comercio Internacional realiza las actividades de comercio exterior de Petróleos Mexicanos.

PMI Comercio Internacional, S.A. de C.V. surgió en el año de 1989, producto de la estrategia comercial de Petróleos Mexicanos (PEMEX) para competir en el mercado internacional de petróleo y productos derivados; con autonomía patrimonial, técnica y administrativa. Entidad constituida bajo el régimen de empresa de participación estatal mayoritaria, de control presupuestal indirecto que opera a través de recursos propios.

Estableciendo dentro de sus objetivos y metas, el asegurar la colocación en el mercado exterior de las exportaciones de petróleo crudo de PEMEX; así como, proporcionar servicios comerciales y

administrativos a empresas del Grupo PEMEX que realizan actividades relacionadas al comercio de hidrocarburos.

Competencia Global. En cuanto a competencia nacional, PEMEX no tiene competencia. En cuanto a competencia global se encuentra Petrobras de Brasil, Exxon-Mobil, Chevron Texaco, Shell, etc.

Anexo XI. Grupo Bal

Introducción.

Alberto Bailléres es el actual presidente de grupo Bal el cual está conformado por un conjunto de empresas de vanguardia que incorpora a un grupo diversificado, de negocios:

Peñoles, GNP, Profuturo GNP, Porvenir GNP, Medica Integral GNP, El Palacio de Hierro, Valmex y arrendadora Valmex.

Cada uno de ellos se esfuerza por alcanzar en su industria la mayor **rentabilidad**, y en su conjunto el conglomerado busca crear valor superior para los grupos interesados, ofreciendo Productos y servicios excepcionales a sus clientes, apoyando el desarrollo personal y profesional de sus empleados, contribuyendo así al avance de México.

Valores

Grupo Bal se apoya en dos valores fundamentales para el logro de sus objetivos:

La INTEGRIDAD que implica honestidad, correlación de palabras y acciones, respeto por las compañías y los empleados del Grupo, así como un profundo compromiso por acatar la ley y su espíritu y por proteger el ambiente.

La LEALTAD que es su compromiso con grupos interesados, clientes y empleados.

Organización Grupo Bal Técnica Administrativa Bal

Operaciones

Industriales

- Industrias peñoles

División Agropecuaria

División

Agropecuaria

Sus actividades principales incluyen la producción lechera, la cría de ganado de engorda, equino y de lidia, así como la producción y comercialización de productos forrajeros y hortalizas.

Operaciones

comerciales

- Bal Holdings

- Palacio de Hierro

La compañía es una de las productoras principales de lácteos en México. El ramo del ganado de engorda disfruta de nuevas posibilidades de exportación, de ganado en pie que se envía a Estados Unidos cada año. Asimismo, una base de clientes diversificada y nuevas oportunidades de exportación contribuyen a crear una industria de productos agrícolas más firme, cuyas cosechas principales son los forrajes y las hortalizas. Finalmente, nuevas técnicas de producción permiten un mayor rendimiento y mejor aprovechamiento.

Además de lo anterior, la crianza y manejo del ganado de lidia mereció que se le otorgara al Lic. Alberto Bailléres la Medalla al Mérito Ganadero, presea nacional que hace honor a su gran desempeño y liderazgo en este sector.

Servicios financieros

-Aseg. Porvenir GNP
- Arrendadora valmex
- Crédito afianzador
- Valores mexicanos

-Profuturo GNP

- GNP

Operaciones comerciales

Participa en el sector comercial por medio de su cadena de tiendas departamentales con el Palacio de Hierro. Además grupo Bal aprovecha su filial mercantil e internacional para comercializar productos industriales de otras compañías del grupo.

Fundada en 1891, con una tienda en el centro de la Ciudad de México, pasando a formar parte de Grupo Bal en el año de 1963, cuenta con siete tiendas en el área metropolitana de la Ciudad de México y otras en importantes ciudades del interior, Puebla y Monterrey.

Por otra parte, las operaciones de comercialización internacional de Grupo Bal están centralizadas en Bal Holdings, Inc., localizada en Stamford, Connecticut, EE UU.

La función de Bal Holdings es comercializar los principales productos fabricados por Industrias Peñoles en México: zinc, plomo, plata y productos químicos industriales. A través de su subsidiaria Bal New York, la compañía cumple una importante función de compras en el mercado de EE UU, para las tiendas de El Palacio de Hierro y otras tiendas departamentales de países de América Latina

Operaciones Industriales

Grupo Bal participa en el sector de la minería, la metalurgia y los químicos a través de Industrias Peñoles, primer productor mundial de plata afinada, bismuto metálico y sulfato de sodio, mayor productor latinoamericano de plomo y zinc afinados, y primer productor mexicano de oro afinado.

Peñoles es dueña y operadora de minas en territorio mexicano, de las cuales extrae y procesa mineral para producir concentrados de plata, plomo, zinc y cobre, precipitados de plata y oro, y doré. Entre sus propiedades mineras clave se encuentra Fresnillo, la mina de plata más grande y rica del mundo, que ha

estado en operación casi continua desde 1550. Fresnillo produce alrededor de 5% del total de la producción mundial de plata, es decir, aproximadamente 30 millones de onzas anuales.

La Herradura, la mina de oro más grande de México, y La Ciénega, a su vez la más rica en oro en el país, son otros de los activos mineros importantes de la empresa. Met-mex, ubicada en Torreón, México es el cuarto complejo metalúrgico más grande del mundo, donde se refinan y funden metales no ferrosos para producir plata, oro, zinc, plomo, bismuto y cadmio, conformando un complejo integrado por minas-refinería que compite en los mercados internacionales.

La División Químicos desarrolla especialidades de alto margen y valor agregado por medio del aprovechamiento de subproductos obtenidos y producidos en las operaciones mineras y metalúrgicas. Esta división cuenta con diversas patentes obtenidas por su Laboratorio de Investigación y Desarrollo, cuya calidad ha merecido un sinnúmero de reconocimientos, y entre sus instalaciones se incluye la planta más grande de sulfato de sodio del mundo.

Peñoles, empresa fundada en 1887, cotiza en la Bolsa Mexicana de Valores desde 1968. Sus exportaciones, principalmente a Estados Unidos y Japón, comprenden 50% de las ventas.

A través de Peñoles, Grupo Bal busca agregar valor a los recursos naturales no renovables de manera sustentable, proporciona a sus clientes productos y servicios de la más alta calidad, mantiene relaciones productivas de largo plazo con sus proveedores. Peñoles fomenta relaciones mutuamente beneficiosas con las comunidades en las que opera, protege y preserva el ambiente.

Servicios Financieros

Uno de los principales objetivos clave de Grupo BAL es el de contribuir al desarrollo de México a través de una oferta de servicios financieros de valor superior.

Sus objetivos son dar un excepcional servicio al cliente, tecnología de punta y creación de valor para clientes y accionistas.

GNP tiene más de cien años de experiencia en el mercado, y como una de las primeras aseguradores en México abarca aproximadamente 20% del mercado mexicano de seguros en todos los ramos.

Su misión es satisfacer las necesidades de protección y previsión financiera de los clientes, frente a los riesgos a que están expuestos, así como satisfacer sus necesidades de servicios de salud

Su visión es verse en un futuro como el proveedor de protección financiera, pensiones y servicios de salud más eficiente de América Latina, situándose al lado de los mejores proveedores de estos servicios a nivel internacional

Con sus propios recursos financieros, y como resultado de cambios significativos en la legislación de la seguridad social en el país, GNP fundó Profuturo GNP, Porvenir GNP y Médica Integral GNP, que proporcionan servicios innovadores de pensiones y salud.

Técnica Administrativa Bal

Da soporte técnico y desarrolla sistemas adecuados a las necesidades de los integrantes del grupo Bal.

Educación

Por más de 50 años, Grupo Bal y su presidente Alberto Bailleres han apoyado, tanto financieramente como guiando a la Junta de Gobierno, al ITAM.

Anexo XII. Principales Aportaciones.

a) Realizar una bibliografía totalmente en español sobre el CMI

b) Dar a conocer las organizaciones mexicanas que han implantado con éxito el CMI

c) Realizar un instrumento de medición sencillo de la cultura organizacional

d) Dado que es un estudio exploratorio, que sea la base de futuras investigaciones con un mayor alcance de investigación como son los estudios descriptivos, correlacionales o explicativos.

e) Dar una idea rápida al lector sobre lo que es el valor de mercado y sus componentes (capital intelectual y financiero). Presentar de forma breve pero sustanciosa, temas relativamente nuevos como lo son el CMI (BSC) y la cultura organizacional.

f) Presentar entrevistas con expertos en la materia

g) Presentar índices de medición por perspectivas que pueden dar una gran idea de lo aspectos tangibles e intangibles que se han llegado a medir, controlar y administrar en las empresas.

ANEXO XIII. GRAFICO COMPARATIVO DE LA ENCUESTA DE CULTURA ORGANIZACIONAL.



COHESION					COMPROMISO					CONFLICTOS			EXPECTATIVAS						
1	15a	15b	15c	15d	15e	15f	16a	16b	16c	16d	16e	16f	17a	17b	17c	18a	18b	18c	
	8	8	8	8	8	9	10	9	8	9	9	9	8	8	8	9	8	8	67
	6	6	5	6	8	8	9	6	8	10	9	8	7	5	5	9	9	8	56
	7	6	6	6	7	8	8	7	4	7	8	7	8	8	8	7	6	7	54