Organizational Culture and Knowledge Management Success: Assessing The Behavior–Performance Continuum

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Abstract

Traditionally, culture has been assessed by qualitative methods. However, quantitative approaches such as culture surveys offer important advantages for both cross-sectional organizational research and knowledge-based cultural change initiatives. The Organizational Culture Inventory© (OCI), an instrument designed for such uses, profiles the culture of organizations and their sub-units in terms of behavioral norms and expectations. Following a review of seminal concepts relevant to organizational culture, this paper presents a framework depicting the relationship between culture and outcomes that are consistent with successful KM environments. An examination of the data provided by approximately 60,000 OCI respondents indicates that the inventory is a powerful indicator of outcomes, which are related to both individual and organizational criteria.

1. Introduction

A number of authors (e.g., [1, 2, 3]) have stressed that competitive advantage through knowledge management is realized through identifying the valuable tacit knowledge possessed by organizational members and making that knowledge explicit. Once made explicit, the knowledge can be mined, organized, stored, and perhaps most importantly, shared throughout the organization to spur innovation. But whether within an organizational subunit or across a multiple partner global enterprise, the initial processes of knowledge management depend on harvesting knowledge, both tacit and explicit. Are the holders of this knowledge predisposed to support this harvest or not?

A nine-year study of NASA's standard operating procedure regarding risky-decision making —in which technical anomalies were repeatedly considered "acceptable risk"— showed that the organizational culture created a structure where conformity to the rules led to the fatal errors [4, 5]. The causes of the Columbia and Challenger disasters are not due to intentional managerial wrongdoing, safety rule violations or conspiracy. Rather, NASA's organizational structure is such that the decision to launch Challenger and land Columbia were inevitable mistakes. NASA's organizational culture, routines and systems are designed to allow for a process of normalizing signals of potential danger. Thus, known technical problems become an operating norm and do not prevent NASA managers from giving the go-ahead to proceed with operations [4, 5].

Examining the multi-organization system that oversees the air travel industry, a Gannet company investigation of the American Airlines Flight 587 crash has found widespread cultural and structural impediments at Airbus Industrie, the National Trans-portation Safety Board, and American Airlines. Although these IT intensive organizations are components of the nation's aviation safety system designed to prevent crashes by learning from close calls, the system is dependent on airlines and jet manufacturers sharing their knowledge and experience with federal regulators [6].

While astute information technology developers can create various systems to support KM once the knowledge is available, the availability, the source and flow of information is very much a product of human processes. Optimal communication and knowledge flow between intra and inter-organizational partners, can be *supported* by information technologies, but it is not *assured* by them. IT, then, is necessary but not sufficient for successful knowledge management, whether at the sub-unit level or across and multi-partner enterprise.

The other complimentary factor for ensuring optimal information flow in global business processes such as knowledge management is a supportive and harmonized culture shared by all organizational constituents. In this paper we present useful perspectives on organizational culture and knowledge management, along with research that uses cutting-edge information technology-based tools designed to support organization development. These tools can assess the cultures of work groups and entire organizations, and thus give the organizational and information technology leaders insight into how to better understand and support the

various cultures, and how to diagnose the true causes of underutilization of information technology resources, sub-optimal knowledge flow, and lack of cooperation and collaboration that often occur when various organizational

2. Organizational Culture

Organizational culture has been characterized as the "glue that holds organizations together" [7] and "isn't just one aspect of the game −it *is* the game" [8]. Culture can support linkages between technology adoption and organizational growth [9], it can be a critical success factor in manufacturing strategy [10] and play a crucial role in determining the success or failure of mergers and acquisitions [11, 12]. On a more micro level, researchers have found significant relationships between the "fit" of employees and the prevailing organizational culture and a number of important outcomes such as job commitment and turnover [13]. As we would expect, organizational culture has also been found to play a significant role in a number of IT management processes [14]. These can include technology-driven change [15], E-business initiatives [16], groupware development and deployment [17], new technology and adoption [18], computer-based monitoring [19], and management of new systems development [20].

But many unanswered questions remain regarding the meaning and content of organizational culture [21, 22], the methods by which it should be measured [23, 24] and, more fundamentally, the feasibility of cultural management and change [25], especially when attempting to operationalize specific organizational goals. While debates around these issues continue, culture has been accepted as a "fact of organizational life" by managers and has become an integral aspect of many organizational development programs. Previous work on organizational cultures has focused on descriptors of culture, and frequently resulted in dimensions of culture, or a typology of culture [26, 27, 28, 29, 30]. Certain types of organizational cultures, or certain styles of cultures have been associated with either positive or negative outcomes for both the effectiveness of the organization and for individual employees within the organization [30, 31]. Positive outcomes for individuals might include motivation and satisfaction [13, 32] while negative outcomes for individuals might include job insecurity and stress [33, 34].

In contrast, our work attempts to link organizational culture to individual and organizational outcomes that are consistent with organizational learning and tenets of knowledge management.

3. Quantitative Assessment Methods

The concept of organizational culture is derived from research in the field of organizational behavior characterized by use of qualitative methods. To an extent, the use of these methods derives from the issues of interest to scholars who have studied culture in organizations: symbolism, sense-making, and socialization (e.g., [21, 35]), issues involving unique individual perspectives highly amenable to qualitative study. Yet, one of the most powerful strategies for organizational development is knowledge-based change, an approach that generally relies on the use of quantitative measures (e.g., [36, 37]). Qualitative and quantitative methods are complementary approaches to the study and assessment of organizational processes and attributes. The advantages of qualitative methods include the use of the focal unit's own terms to describe itself, the intensive and in-depth information that can be obtained about a unit, and the amenability of the method for exploratory research on issues and processes about which little information exists. Alternatively, the advantages of quantitative methods include the ease of cross-sectional assessments and comparisons (across individuals, organizations, or sub-units), the replicability of the assessment in different units and by other researchers or organizational development professionals, and a common, articulated frame of reference for interpreting the collated information. Although both methods share the potential for producing cumulative bodies of information for assessment and theory testing, quantitative approaches may be more practical for purposes of knowledge-based approaches for organizational development generally, and assessing cultural prerequisites for organizational learning and knowledge management specifically. For instance, different subgroups within an organization, such as departments or units, may have the organizational culture in common, but also experience a sub-culture unique to the individuals within the sub-group [38, 39]. Values and expectations within these groups exert pressure to create a variation of the organizational culture for group members, and ultimately affect the organizational culture as a whole. A greater understanding of what constitutes culture and the factors and values that affect intra-organizational cultural variations can only provide a richer picture of how to optimize organizational systems to promote knowledge management initiatives.

4. Organizational Culture Inventory©

At the core of our study is the Organizational Culture Inventory© (OCI), a normed and valid commercial product from Human Synergistics International of Plymouth, Michigan [40]. Since its introduction, the inventory has been used by thousands of organizations

and completed by almost three million respondents throughout the world. The instrument has been translated into French (Canadian and Parisian), Spanish (Castillian and Latin American), German, Japanese, Icelandic, Dutch, and Swedish and is, arguably, the most globally used organizational culture assessment instrument in the world. It has been used for a variety of purposes, including to direct, evaluate, and monitor organizational change (e.g., [41]); identify and transfer the cultures of high performing units [42]; study and enhance system reliability and safety [43]; facilitate strategic alliances and mergers [44]; promote collaborative relations within and across units [45]; and test hypotheses on the relationship between culture and antecedent variables [46]. This wide range of applications has produced an extensive information base regarding the ways in which culture operates in different types of organizations. However, it has yet to be examined as a predictor of individual and organizational outcomes that are consistent with organizational learning and the tenets of knowledge management.

The OCI measures 12 distinct but interrelated sets of behavioral norms and expectations that describe the thinking and behavioral styles that might be implicitly or explicitly required for people to "fit in" and "meet expectations" in an organization or sub-unit. The behavioral norms measured by the OCI are defined by two underlying dimensions, the first of which distinguishes between a *concern for people* versus *a concern for task.* The second dimension distinguishes between expectations for behaviors directed toward fulfilling higher-order *satisfaction* needs versus those directed toward protecting and maintaining lower-order *security* needs. Based on these dimensions, the twelve sets of norms measured by the OCI are categorized into three general "clusters" or types of organizational cultures: Constructive, Passive / Defensive, and Aggressive / Defensive. Empirical support for these clusters, and therefore the construct validity of the inventory, is provided by the results of principal components analyses presented elsewhere (e.g., [32, 39, 47]).

This focus on behavioral norms distinguishes the OCI from other questionnaires that measure more global aspects of culture such as shared beliefs and values (e.g., [27, 31, 48]). While norms and expectations are both closely related to beliefs and values, the former have a more direct impact on the day-to-day activities and work situation of organizational members than do the latter. Thus, norms also have a relatively great impact on individual and organizational outcomes and are potentially indicative of environments that support organizational learning and knowledge management. In short, by measuring norms and expectations, the OCI makes the concept of culture somewhat less abstract and easier for organizational members to understand and manage.
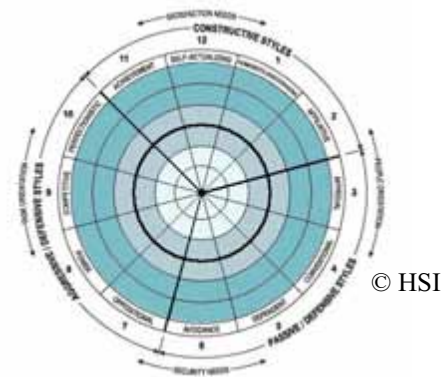

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Figure 1. The Human Synergistics Circumplex

The 12 styles measured by the OCI are graphically represented using a circumplex (above), a circular diagram on which the distance between behavioral norms reflects their degree of similarity and correlation. The collection of styles generates a cultural profile of the respondent's organization [49]. The styles measured by the OCI were identified and positioned around the circumplex on the basis of the interpersonal personality system proposed by Leary [50] and research on personality by McClelland, et al. [51], and others [51, 52, 53]. Developmental work was especially influenced by research on human needs (e.g., [54]) and the growing body of literature on leadership styles. Behavioral norms on the *right* side of the OCI Circumplex reflect expectations for behaviors that are people-oriented; those on the *left* side reflect expectations for behavior that are relatively task-oriented. Norms toward the *top* of the OCI Circumplex promote behaviors that are directed toward the fulfillment of higher-order satisfaction needs; those near the *bottom* promote behaviors directed toward the fulfillment of lower-order security needs.

The statistically-normed OCI Circumplex also allows members of an organization to compare their results to those of others who have completed the inventory. The bold center ring on the OCI profile reflects the median score for each of the twelve styles. More specifically, the concentric circles (from the center of the profile outward) represent the 10th, 25th, 50th, 75th, 90th and 99th percentiles, or progressively stronger norms along each of the twelve styles.

5. Impact of Culture and KM

The culture of an organization is shaped by many factors —some of which can be changed, and some of which are intractable. Organizations adapt to their external environments by designing responsive structures and systems, adopting relevant technologies, and harvesting appropriate skills and qualities. Though constrained by its environment, an organization makes

a number of "choices" which, collectively, eventually define its culture. These choices are influenced by the philosophy of the organization, the values of top management, and the "assumptions" of founding principals and succeeding generations of organizational leaders. Ultimately, the choices will also define the success or failure of KM initiatives.
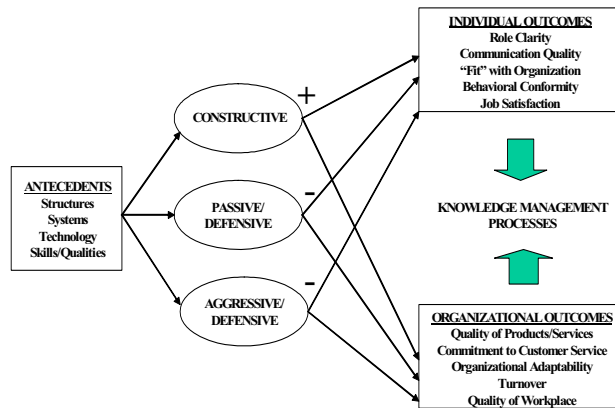

Figure 2. The culture-KM relationship

Our model of the role of organizational culture (see Figure 2 above) proposes a relation between culture and outcomes consistent with, for example, the work of Kotter and Heskett [55]. Their description of the effects of adaptive versus non-adaptive cultures on organizational performance, problem solving, enthusiasm, and innovation suggests that Constructive (as opposed to Defensive) norms should lead to organizational effectiveness. Our model, however, introduces a number of different outcomes –such as organizational adaptability, role clarity, and communication quality– that would more directly foster organizational learning and KM environments.

Though organizational effectiveness is influenced by a myriad of factors, we posit that the norms quantified by the OCI are expected to have an impact that is discernable and significant. Specifically, strong norms for Constructive behaviors should lead to desirable outcomes and should minimize undesirable outcomes—using measures pertinent to the individual and to the organization. Conversely, expectations for Defensive behaviors, should have the opposite impact according to our model of how culture affects outcomes. Specifically, targeting outcomes affecting individuals we predict:

H1a: A Constructive culture will be <u>positively</u> related with the types of individual outcomes (such as role clarity, communication quality, organizational fit, creativity, and job satisfaction) that promote KM success.

H2a: A Defensive (Passive and Aggressive) culture will be <u>negatively</u> related with individual outcomes that promote KM success.

Similar relationships targeting the individual have been reported with respect to the relationship between culture and stress [34] and that between culture and member satisfaction [56, 57, 58, 59]. Further insight into the impact of operating cultures on employees is provided by other studies that have incorporated the OCI instrument directly. For example, Haley found that Constructive norms were positively associated with *affective* commitment (that is, commitment based on emotional attachment to the organization) [59]. On the other hand, Lahiry [60] found that Defensive norms (particularly Passive/Defensive) were positively related to *continuance* commitment (that is, when people stay with their organizations because they feel that the costs of leaving are relatively great). Finally, Weidner [61] reported a positive relationship between Constructive norms and the trust of hospital personnel in their supervisors and the organization.

If these hypotheses are confirmed, it would suggest that the organizational members have achieved a relationship with their environment conducive to sharing knowledge, an important antecedant to KM success. In concert, we predict several outcomes affecting the organization consistent with a knowledge management environment:

H1b: A Constructive culture will be <u>positively</u> related with organizational outcomes (such as quality of products and services, quality of customer service, organizational adaptability, limited turnover, and quality of the workplace) that promote KM success.

H2b: A Defensive culture (Passive and Aggressive) will be <u>negatively</u> related with organizational outcomes that promote KM success.

Quality of customer service is a commonly measured organizational outcome in KM studies, and studies of culture. The need for organizations to gain greater knowledge of their customers in order to not only improve customer service and preserve customer loyalty but also to increase revenue streams has never been stronger. Klein, Masi, and Weidner [46] analyses suggest that a positive outlook, combined with employees' perceptions of control led to improved customer service. Quality of customer service has also been considered in a number of cultural analyses of health care organizations (e.g., [59, 62]). Haley's study is particularly interesting in that it included patient satisfaction data and other quality indicators (e.g., "untoward events" such as medication error rates and patient falls). Consistent with Haley's hypotheses, patient

satisfaction was positively related to Humanistic (Constructive) norms and negatively related to Dependent (Passive/Defensive) norms. In contrast, rates of medication errors and patient falls appeared to be higher in units with Constructive cultures and lower in units with Defensive cultures. Based on qualitative data collected on the units and previous research on the discrepancies between the number of untoward events that *actually occur* in hospitals and the number that are *reported,* Haley proposed that Constructive norms encourage and permit nurses to report problems; in contrast, Defensive norms may impede organizational transparency by forcing members to look good and please those in positions of authority. Although not examined with a knowledge management perspective, the case clearly links organizational culture to the tenets of KM.

Beyond quality of service, cross-sectional studies on culture have considered a number of other organizational-level outcomes. A post-hoc analysis of OCI data on supermarkets [42] showed that Achievement (Constructive) norms were positively related to sales per square foot of selling space as well as to subjective measures of store effectiveness. Klein found a significant relationship between the Constructive norms and sales growth in a study of apparel stores [63]. Thornbury's study of 17 units of 4 European companies showed that effectiveness in dealing with change was positively related to Constructive norms and negatively related to Passive/Defensive norms [64]. Rousseau's study of multiple units of a large fund-raising organization demonstrated that Passive/Defensive norms were negatively related to the generation of revenues [65].

Evidence that the norms measured by the OCI are causally related to organizational performance is also provided by cultural change programs that have been evaluated longitudinally [66, 67]. Such programs were designed to bring about cultural change and performance improvements by means of interventions directed at systems, structures, technologies, and/or skills.

Although not based on controlled experimental designs, these practitioner led field studies lend support to the notion that culture has an impact on effectiveness. To test our hypotheses, we conduct a secondary data analysis of actual respondents from the field and provide a case study comparison of 4 state government departments that completed an organizational change initiative prior to deploying a KM initiative.

6. Method

Sample. We examined the responses of 60,900 *OCI* questionnaires scored by the publisher of the inventory between 1999 and the second quarter of 2002. These responses represent a small but significant subset of OCI respondents in the field: specifically those requesting from the publisher a comprehensive computer-generated report analyzing the corporate culture of their companies (most users self-score their inventory). The broad sample represents the demographics of organizations in America in terms of gender, age, ethnicity, education, organizational type, professions/occupations of respondents, and managerial level.

Independent variables. The OCI contains 96 items designed to produce 12 scales of 8 items each. Each item describes a behavior or personal style that respondents feel should be expected of individuals in an organization. On a scale of 1 to 5, respondents are asked to indicate the extent to which each behavior should be expected and encouraged in their organization in order to maximize its effectiveness. As stated earlier, empirical support for these styles and the three clusters, and therefore the construct validity of the OCI, is provided by the results of principal components analyses presented elsewhere (e.g., [32, 39, 47]). Means, standard deviation, and Cronbach alphas for each scale are offered in Table 1.

The table subtly indicates that the mean scores for the Constructive styles (Achievement, Self-Actualization, Humanistic-Encouraging, and Affiliative) are higher than the mean scores for the two Defensive styles. Since the social desirability bias (i.e., the tendency to endorse positive or desirable items and descriptions) can operate on such responses, circumplex profiles are normatively scaled to correct for such biases.

Table 1. Scales, reliabilities, and example items

Constructs	Measurement Items/First-Order Constructs	n	Cronbach Alpha	Mean	Standard Deviation
Constructive Culture	(CC1) Humanistic-Encouraging scale (e.g., "help others to grow and develop")	59,878	0.91	3.28	1.30
	(CC2) Affiliative scale (e.g., "use good human relations skills")	60,690	0.91	3.53	1.26
	(CC3) Achievement scale (e.g., "work on self-set goals")	60,323	0.85	3.41	1.21
	(CC4) Self-actualizing scale (e.g., "emphasize quality over quantity")	60,005	0.80	3.00	1.32
Passive Culture	(PC1) Approval scale (e.g., "switch priorities to please others")	59,985	0.80	2.71	2.01
	(PC2) Conventional scale (e.g., "rules more important than ideas")	60,246	0.84	3.10	1.36
	(PC3) Dependent scale (e.g., "do what is expected")	60,391	0.83	3.23	1.36
	(PC4) Avoidance scale (e.g., "take few chances")	59,869	0.86	2.36	1.40
Aggressive Culture	(AC1) Oppositional scale (e.g., "look for mistakes")	59,589	0.73	2.40	1.17
	(AC2) Power scale (e.g., "use the authority of their position")	59,829	0.85	2.61	1.51
	(AC3) Competitive scale (e.g., "turn the job into a contest")	59,946	0.85	2.51	1.51
	(AC4) Perfectionistic scale (e.g., "never make a mistake")	60,199	0.77	3.01	1.34

Dependent variables. The OCI instrument contains a supplemental questionnaire that assesses some of the outcomes of an organization's culture. Data generated by these items provide initial insights as to whether culture change should be considered and in what direction such change should take place. The items assess 5 outcome areas that pertain to individuals and 5 outcome areas pertaining to organizations. The outcomes promote KM success.

At the *individual* level, the most immediate outcomes are the thinking and behavioral styles exhibited by organizational members. Although it is imperative for all members to be socialized into the culture to optimize a knowledge management environment, when organizational norms and expectations are weak or inconsistent, their impact on members' personal styles will be minimal. Nevertheless, organizations with strong cultures and/or effective cultural change programs reinforce the targeted behaviors. People who "fit in" will become a node on the network and gain influence; and those who do not will be disconnected from the network and will eventually leave. Those who do not fit in but stay will experience "person/norm conflict," a source of stress resulting from inconsistencies between personal predispositions and the demands of the situation. The following individual level measures were collected (response options ranged along a five-point Likert scale from (1) not at all to (5) to a very great extent):

- *Role Clarity:* The extent to which organizational members know what is expected of them.
- *Communication Quality:* The extent to which organizational members exchange clear messages.
- *"Fit" with organization:* The extent organizational members comfortably "fit in" the organization.
- *Behavioral Conformity:* The extent organizational members are required to think and be-

have differently than otherwise would be the case.
- *Job Satisfaction:* The extent organizational members report positive appraisals of their work situation.

Outcomes at the *organizational* or sub-unit level, while less direct and more difficult to establish, are nevertheless important to consider. Some of these outcomes are due to the aggregated effects of norms and expectations on individual members. For example, "quality of workplace" should be higher in organizations with Constructive cultures than in those with Defensive cultures. Similarly, turnover (based on members' intentions to leave) should be lower in the former organizations than in the latter. This translates into members exercising more control at various levels of the organization, making better decisions, and more effectively implementing decisions and solutions. The following organizational level measures were collected (response options ranged along a five-point Likert scale from (1) not at all to (5) to a very great extent):

- *Quality of Products/Services:* The extent to which organizational members appraise the quality of their organization's products.
- *Commitment to Customer Service:* The extent to which the organizational members make sure customers feel good about the service the organization has provided.
- *Adaptability:* The extent to which the organization responds effectively to the changing needs of its customers.
- *Turnover:* The extent to which organizational members expect to leave the organization within two years.
- *Quality of Workplace:* The extent to which organizational members appraise their organization as a good place to work.

7. Findings

As shown in the correlation analysis (Table 2), Constructive norms are positively associated with members' reports regarding role clarity, "fit," and job satisfaction. Constructive norms are also negatively related to members' reports of communication ambiguity and behavioral conformity. Conversely, expectations for Defensive behaviors (Passive and Aggressive) are negatively associated with role clarity, "fit," and job satisfaction and are positively associated with communication ambiguity and behavioral conformity.

Examining organizational outcome measures (Table 3), Constructive norms are positively associated with quality of products & services, quality of customer service, adaptability, and the quality of the workplace. Constructive norms are also negatively related to turnover. Conversely, expectations for De-

fensive behaviors are negatively related to quality of products & services, quality of customer service, adaptability, employee retention, and the quality of the workplace.

Table 2. Correlations, individual outcomes

		Role Clarity	Communication Quality	"Fit" with organization	Behavioral Conformity	Job Satisfaction
Constructive	Humanistic-Encouraging	.43**	.33**	.48**	-.25**	.53**
	Affiliative	.43**	.29**	.45**	-.23**	.50**
	Achievement	.42**	.28**	.43**	-.20**	.48**
	Self-Actualization	.42**	.28**	.46**	-.20**	.52**
Passive	Approval	-.16**	-.31**	-.20**	.31**	-.20**
	Conventional	-.17**	-.37**	-.27**	.33**	-.29**
	Dependent	-.16**	-.35**	-.25**	.30**	-.27**
	Avoidance	-.36**	-.45**	-.39**	.40**	-.42**
Aggressive	Oppositional	-.13**	-.27**	-.17**	.29**	-.17**
	Power	-.24**	-.38**	-.31**	.37**	-.33**
	Competitive	-.15**	-.29**	-.20**	.31**	-.19**
	Perfectionistic	-.03**	-.26**	-.11**	.26**	-.14**
	Number of respondents:	60,742	60,693	60,615	60,531	60,670

Table 3. Correlations, group outcomes

		Quality of Products/ Services	Quality of Customer Service	Adaptability	Turnover	Quality of Workplace
Constructive	Humanistic-Encouraging	.46**	.40**	.42**	-.31**	.54**
	Affiliative	.46**	.41**	.40**	-.30**	.50**
	Achievement	.46**	.39**	.40**	-.29**	.48**
	Self-Actualization	.44**	.41**	.42**	-.30**	.52**
Passive	Approval	-.14**	-.08**	-.12**	.13**	-.20**
	Conventional	-.19**	-.12**	-.18**	.14**	-.30**
	Dependent	-.17**	-.12**	-.16**	.13**	-.29**
	Avoidance	-.37**	-.28**	-.33**	.25**	-.42**
Aggressive	Oppositional	-.17**	-.09**	-.10**	.12**	-.17**
	Power	-.26**	-.20**	-.23**	.20**	-.34**
	Competitive	-.13**	-.08**	-.11**	.14**	-.19**
	Perfectionistic	-.04**	.00	-.04**	.08**	-.14**
	Number of respondents:	60,334	60,391	60,578	60,532	60,651

The results presented in Tables 2 and 3 clearly indicate the relationships that exist between the styles measured in OCI and outcomes. Although correlations do not imply causation, it does suggest that impacting on one variable may cause another to alter. This is a key underlying tenet of any cultural change initiative targeting the creation of an environment appropriate for KM initiatives. As our culture-outcome framework suggests, "alignment" is the key. If the organization's structure, systems, technology, and skills/qualities are in alignment with goals and direction, then it is highly likely that KM success will follow. However, it is more likely for this alignment to be lacking, resulting in difficulties for KM initiatives.

These figures alone provide the importance of collecting this type of information prior to attempting the implementation of a KM initiative.

8. Discussion

Results of this study illustrate how the OCI can be used to gauge efficiency, effectiveness, and potential for KM success. The relationships between organizational culture and a comprehensive set of outcomes were consistent with our predictions. More generally, results of the study indicate that normative beliefs and shared behavioral expectations are quantifiable and are consistent with the focal organization's management

style. In contrast to the traditional use of qualitative assessments in the study of culture (e.g., [21]), quantitative methods facilitate large-scale studies of organizations and their sub-units, replication, and triangulation of other forms of assessment. Results of this study further suggest that quantitatively assessed behavioral norms and expectations can supplement the qualitative study of more semiotic facets of organizational culture to indicate a propensity for organizational learning and knowledge management processes.

Beyond facilitating the research process, quantitative devices such as the OCI have important advantages for organization development interventions and other programs directed toward system-wide change, including creating a transparent environment for knowledge management. Culture interventions based solely on qualitative data collection techniques tend to be broad, and from the focal organization's perspective, possibly somewhat vague. By bringing significantly more structure to the assessment, survey instruments like OCI can reduce uncertainty on the part of the focal organization and possibly decrease resistance among members to activities promoting knowledge management processes.

From the perspective of a practitioner seeking to oversee or manage the change processes that accompany the development and deployment of a project such as global enterprise-wide knowledge management, quantitative assessments of culture such as those made possible by the OCI can be extremely valuable. An OCI analysis can identify distinct differences across sub-units and levels, and offer specific information on features of corporate culture, especially subgroup norms and behavior patterns, not readily available from more global assessments. The opportunity for extensive surveys enhances not only broad scale participation but also the representativeness of the data obtained. In our experience, participants in culture assessments respond very favorably to the self-scoring feature of the OCI, which allows them to get immediate feedback on how they as individuals perceive the behavioral norms of their organization or sub-unit. This feedback not only facilitates the process of debriefing participants, but also involves them in discussion and interpretation of their profiles in comparison to those of other respondents, a feature useful in both validating and making sense of the data the OCI provides. In this manner, cultural assessment and interpretation can be both public and participative, thereby promoting perceived legitimacy and commitment to change.

9. Conclusion

Political and social realities shape all forms of human conduct within and between organizations and

their partners. Regardless of professionalism and joint "enrollment" of a professed common goal, organizational collaborators may be reluctant to contribute or exchange knowledge if doing so is inconsistent with their reference prevailing culture. Within any organization there may be a variety of cultures, shaped by characteristic differences in professional orientation, status, history, power, visibility, or other factors. In this paper we have shown that understanding these cultures in terms of expected behaviors can explain why some organizational units (or the entire organization) exhibit behaviors that are counter to the organization's expressed values or mission. On a more practical level, behavior expectations can also drive the level of cooperation in a group or team. Thus, culture creates expectations of behaviors, some of which can result in non-constructive interactions that hamper knowledge exchange and ultimately, knowledge management. We have also presented a proven technology for cultural assessment and shared some insights from our research with this tool.

For those planning a global knowledge management strategy, understanding the cultures of partner stakeholders can spell the difference between project success or failure. This fact transcends both the flow of knowledge fundamental to this type of initiative, as well as harnessing the complete cooperation and commitment of those enterprise members involved in the effort.

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