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Research note

Information culture and organizational effectiveness

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ABSTRACT

This paper develops a typology of information cultures by synthesizing empirical and theoretical research in organization science and information science. Four information culture types are proposed. In a *Result-oriented culture*, the goal of information management is to enable the organization to compete and succeed in its market or sector. In a *Rule-following culture*, information is managed to control internal operations, and to reinforce rules and policies. In a *Relationship-based culture*, information is managed to encourage communication, participation, and a sense of identity. In a *Risk-taking culture*, information is managed to encourage innovation, creativity, and the exploration of new ideas. We expect most organizations to display to varying degrees norms and behaviors from all four types, and that the information culture profile of an organization would be related to its effectiveness. The paper ends by looking at the practical and theoretical value of a systematic examination of information culture and its link to organizational effectiveness.

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1. Introduction

While organizational culture has been found to affect many aspects of organizational behavior, this paper explores the idea that a part of organizational culture that is concerned with information—the assumptions, values, and norms that people have about creating, sharing, using information—would have its own effect on organizational behavior and effectiveness. This concept of "information culture" is largely missing from current research. As a first step, we need to develop a systematic conceptualization of information culture that is based on a firm theoretical and empirical foundation. This paper reports research toward that goal. We build on a widely applied and validated framework that has been used to differentiate organizational culture types and their relationships to organizational effectiveness. We introduce elements from information behavior research to develop a typology of information cultures. We then suggest a number of research propositions that would explore the relationship between information culture and organizational effectiveness.

2. Information culture

A review of the literature on information culture is in Choo, Bergeron, Detlor, and Heaton (2008). For our purposes here, we focus on two studies that explicitly examined the link between information culture and organizational effectiveness.

In an early paper, Ginman (1988) defined information culture as the culture in which "the transformation of intellectual resources is maintained alongside the transformation of material resources. The primary resources for this type of transformation are varying kinds of knowledge and information. The output achieved is a processed intellectual product which is necessary for the material activities to function and develop positively" (p. 93). Analyzing interviews with 39 CEOs, Ginman found a connection between CEO information culture, the company life cycle, and information interest and use. A highly developed information culture was positively associated with organizational practices that led to successful business performance. She concluded that information culture is a strategic goal and should be planned for as much as the transformation of physical resources. Ginman's work formed the impetus of a study "Information Culture and Business Performance" supported by the British Library R&D Department (Grimshaw, 1995).

In more recent studies, Choo et al. (2006, 2008) looked at information culture as the socially shared patterns of behaviors, norms and values that define the significance and use of information in an organization. *Values* are the deeply held beliefs about the role and contribution of information to the organization. *Norms* are rules or socially accepted standards that define what information behaviors are normal or to be expected in the organization. Values and norms together mold the information *behaviors* of people and groups in an organization. Insofar as information behaviors are enacted by a social structure of roles, rules, and warrants, they are a manifestation of cultural norms and values.

Choo et al. (2008) adapted six information behaviors and values identified by Marchand, Kettinger, and Rollins (2001) to profile an organization's information culture. *Information integrity* is defined

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as the use of information in a trustful and principled manner. *Information formality* is the willingness to use and trust formal information over informal sources. *Information control* is the extent to which information is used to manage and monitor performance. *Information transparency* is the openness in reporting on errors and failures. *Information sharing* is the willingness to provide others with information. *Proactiveness* is actively using new information to innovate and respond quickly to changes. The study collected data via a survey that was applied to a national law firm, a public health agency, and an engineering company. Over 650 persons answered the survey. Data analysis found that the information behaviors and values adopted were able to systematically characterize each organization's information culture. Moreover, these behaviors and values were able to account for significant proportions of the variance in information use outcomes that were related to organizational effectiveness.

3. Organization culture and organizational effectiveness

The link between organizational culture and effectiveness is examined in a substantial body of research by Cameron, Quinn and others using the Competing Values Framework (Quinn & Rohrbaugh, 1983; Quinn, 1988). The framework was selected because it was empirically derived, has shown both face and empirical validity, and integrated many of the dimensions derived from research. The framework was developed by analyzing the large number of effectiveness criteria that had been identified and reducing them through multidimensional scaling to two basic dimensions (Quinn & Rohrbaugh, 1983; Cameron & Quinn, 2011). One dimension differentiates effectiveness criteria that stress flexibility, discretion, and agility from criteria that stress stability, order, and control. The second dimension differentiates criteria that emphasize an internal orientation, integration, and unity from criteria that emphasize an external orientation, differentiation, and competition. Thus, "each dimension as a continuum highlights a core value that is opposite from the value on the other end of the continuum—flexibility versus stability, internal versus external." (Cameron & Quinn, 2011, p. 40).

Together these two dimensions form four quadrants—Hierarchy, Market, Clan, and Adhocracy—each representing a distinct set of organizational effectiveness attributes (Fig. 1). Because these quadrants and their attributes represent the shared values, assumptions, and interpretive frames of an organization, each quadrant is also said to identify a *cultural type*: "That is, each quadrant represents basic assumptions, orientations, and values—the same elements that comprise an organizational culture." (Cameron & Quinn, 2011, p. 41) Moreover, empirical studies found that an organization's cultural type had an important relationship with its effectiveness (Cameron & Ettington, 1988; Cameron & Freeman, 1991).

In a *market culture*, the shared assumption is that striving for goals and market success are the drivers of organizational effectiveness. Norms and behaviors thus emphasize focusing on results, attaining or exceeding goals, and productivity. The organization is externally focused on customers and the market, and pursues the kind of stability that supports goal achievement.

In a *hierarchy culture*, the shared assumption is that formalized structures and processes increase efficiency and consistency, and therefore effectiveness. Norms and behaviors thus emphasize control, reliability, and the following of rules or procedures. The organization is internally focused on its operations, seeking a high degree of integration and predictability.

In a *clan culture*, the shared assumption is that committed, satisfied employees produce effectiveness. Norms and behaviors thus emphasize open communication, collaboration, and participation. The organization is internally focused on its people, creating a friendly environment that is flexible and empowering.

In an *adhocracy culture*, the shared assumption is that innovation and new ideas lead to effectiveness by creating new markets, customers, and opportunities. Norms and behaviors emphasize creativity, risk-taking, and entrepreneurship. The organization is externally focused on its environment, and encourages agility and individual discretion.

Applying this typology, Cameron and Quinn (2011) found that most organizations develop a dominant cultural style: "More than 80% of the several thousand organizations we have studied have been characterized by one or more of the culture types identified by the framework. Those that do not have a dominant culture type either tend to be unclear about their culture or emphasized the four different cultural types nearly equally." (Cameron & Quinn, 2011, p. 52) While mature and highly effective organizations tend to develop subunits that represent each of these four culture types, they note that almost always, one or more of the culture types dominate an organization.

4. Information cultures: a proposed typology

In this paper, we approach information culture as being analogous to organizational culture, but with a distinctive focus on the shared assumptions, values, norms, and behaviors that shape the organization's perception, management and use of information. To develop a typology of information culture, we build on Cameron and Quinn's cultural framework. We propose two basic dimensions to differentiate information cultures that are drawn from the empirical work of Marchand et al. (2001) and Choo et al. (2006, 2008). These dimensions relate to *Information Values and Norms*, and *Information Behaviors* (Fig. 2).

The *Information Values and Norms* dimension differentiates between norms that emphasize information control and integrity, and those that emphasize information sharing and proactiveness (proactive use of information). Control and integrity refers to the degree that an organization values and emphasizes the gathering and use of accurate, reliable information to control internal operations or to monitor its performance. Sharing and proactiveness refers to the degree that an organization's norms and values encourage information sharing, collaboration, and innovation.

The *Information Behaviors* dimension differentiates between behaviors that emphasize information seeking and use about the environment the organization operates in (external focus), and behaviors that emphasize information seeking about the organization's people and operations (internal focus). An external focus is directed at understanding the organization in relation to its industry, and to anticipating changes in the environment. An internal focus is directed at maintaining or strengthening organizational identity, and to improving internal functions.

These two dimensions intersect to form four quadrants, representing four information culture types which we label: Result-oriented; Rule-following; Relationship-based; Risk-taking (4R framework, Fig. 2).

Each information culture type may be characterized by a set of 5 attributes: the primary goal of information management; information values and norms; information behaviors in terms of information needs, information seeking, and information use.

In a *Result-oriented culture*, the goal of information management is to enable the organization to compete and succeed in its market or sector. Information values and norms emphasize control and integrity: accurate, reliable information is valued in order to assess performance and goal attainment. There is a focus on external information. The organization seeks information about customers, competitors, markets, as well as data to assess its own performance.

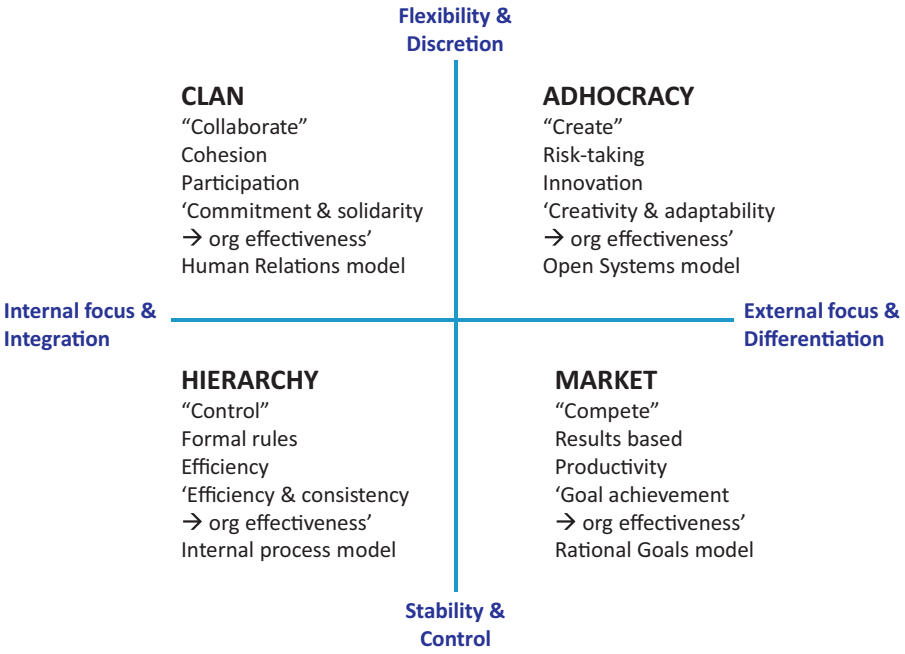


Fig. 1. Organization cultures: a competing values framework (Cameron & Quinn, 2011).

Important sources include customers, business partners, market research, industry and government sources. Information is used to understand clients and competitors, and to evaluate performance.

In a *Rule-following culture*, information is managed to control internal operations, and to reinforce rules and policies. Information values and norms emphasize control and integrity: accurate, reliable information is used to control or standardize processes, improve efficiency, and ensure compliance. There is a focus on internal information. The organization seeks information about internal processes and workflows, as well as information about regulatory or accountability requirements. Important sources include policy documents, data generated by operations, and specialists who advise on technical or legal matters. Information is used to control operations, improve efficiency, and provide accountability.

In a *Relationship-based culture*, information is managed to encourage communication, participation, and a sense of identity. Information values and norms emphasize sharing and the proactive use of information. These values promote collaboration, cooperation, and the willingness to take the initiative to contribute and act on information. There is a focus on internal information. People seek information about their colleagues, project teams, social groups, as well as information for self- and group-development. Important sources include well-connected individuals, friends, peers, and human resource data. Information

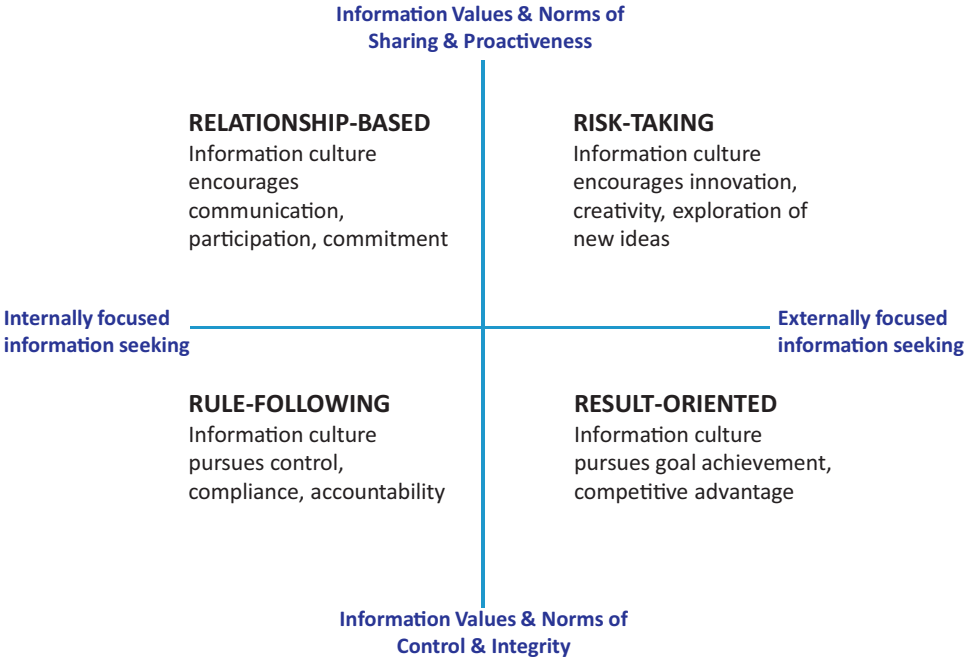


Fig. 2. Information cultures: a proposed typology.

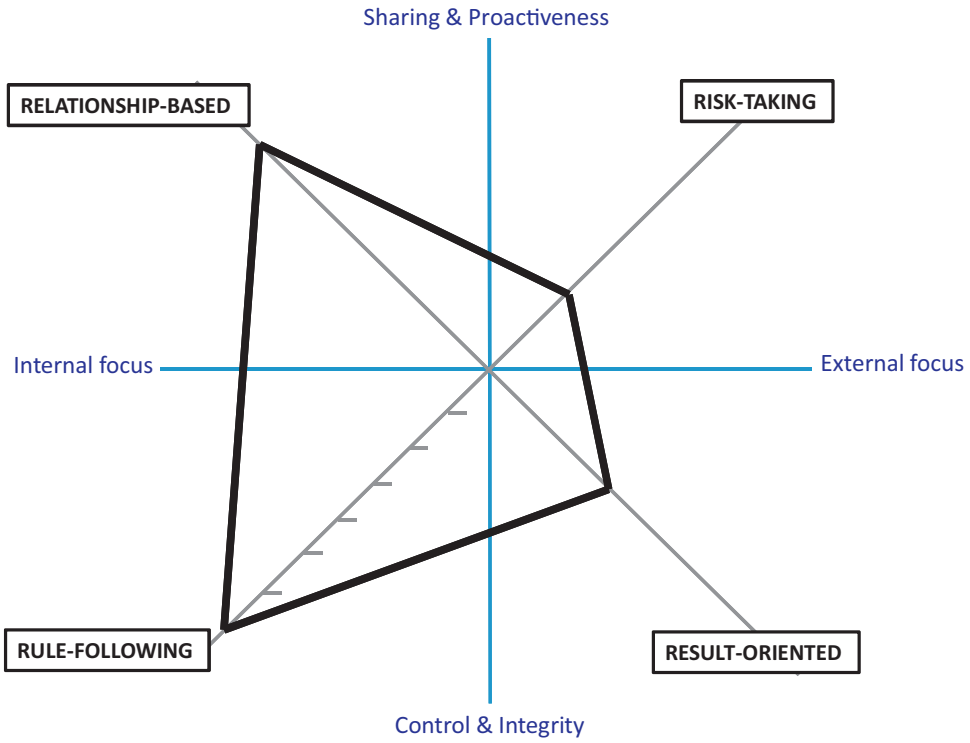


Fig. 3. An example information culture profile.

is used to foster communication and interpersonal interaction that increase engagement and commitment.

In a *Risk-taking culture*, information is managed to encourage innovation, creativity, and the exploration of new ideas. Information values and norms emphasize sharing and the proactive use of information. These values promote innovation, development of new products or capabilities, and the boldness to take the initiative. There is a focus on external information. The organization seeks ideas for new products, new markets, and information about trends and changes in its environment. Important sources include creative, visionary individuals, market or technology experts, industry and government sources. Information is used to identify and evaluate opportunities, and encourage entrepreneurial risk-taking while managing those risks.

This typology does not imply that an organization's information culture would fall neatly into one of the four types. Rather, we suggest that most organizations would display to varying degrees norms and behaviors from all four types. We hypothesize that for many organizations, one or two culture types would dominate. For example, Fig. 3 below profiles a hypothetical university department where the dominant information cultures are Rule-following and Relationship-based. This department would be internally focused, with perhaps a strong emphasis on policy compliance and peer collegiality, and less attention on innovation and competition.

5. Research and practical implications

It would first be necessary to explore the typology empirically. Is the typology proposed here able to identify information behaviors and values that *describe* the information culture of an organization? Are organizations *differentiated* by distinctive sets of information behaviors and values that reflect their information cultures? Assuming that we are able to describe and differentiate information cultures, is information culture linked to organizational effectiveness? On this last question, we propose three sets of hypotheses for further research.

(1) *Congruence hypotheses*: An information culture that shows a high congruence with the organization's mission, strategy and beliefs about how it should become successful, could be expected to be more effective than an organization where this congruence is low.
(2) *Dexterity hypotheses*: An organization that possesses multiple information culture types, with for example subunits or segments that represent each of the four culture types, could be more effective than an organization that lacks this cultural dexterity.
(3) *Life cycle hypotheses*: Information culture type may depend on the organization's stage of growth. In the earliest stages, an organization may be dominated by Risk-taking culture; as it grows, its information culture may evolve through Relationship-, Rule-, and Result-based stages.

In practical terms, organizations may use their information culture profiles to collectively reflect on their dominant culture type, to compare how that differs from their preferred culture, and to discuss what kind of cultural change would benefit the organization. Identifying one's information culture can facilitate cultural change since "having a comprehensible picture of a culture makes it easier to systematically implement change in a consistent, coherent, and consensual way." (Cameron & Quinn, 2011, p. 80) More generally, an organization may use its information culture profile to assess the extent that its information culture is compatible with its long-term aspirations and the demands of its environment.

References

Cameron, K. S., & Ettington, D. R. (1988). The conceptual foundations of organizational culture. *Higher Education: Handbook of Theory and Research, 4*, 429–447.
Cameron, K. S., & Freeman, S. J. (1991). Cultural congruence, strength, and type: Relationships to effectiveness. *Research in Organizational Change and Development, 5*, 23–58.
Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework*. Reading, MA: Jossey Bass.

Choo, C. W., Bergeron, P., Detlor, B., & Heaton, L. (2008). Information culture and information use: An exploratory study of three organizations. *Journal of the American Society for Information Science and Technology*, *59*(5), 792–804.
Choo, C. W., Furness, C., Paquette, S., van den Berg, H., Detlor, B., Bergeron, P., et al. (2006). Working with Information: Information management and culture in a professional services organization. *Journal of Information Science*, *32*(6), 491–510.
Ginman, M. (1988). Information culture and business performance. *IATUL Quarterly*, *2*(2), 93–106.
Grimshaw, A. (1995). *Information culture and business performance*. Hatfield, UK: University of Hertfordshire Press.
Marchand, D., Kettinger, W., & Rollins, J. (2001). *Information orientation: The link to business performance*. New York: Oxford University Press.
Quinn, R. E., & Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: Towards a competing values approach to organizational analysis. *Management Science*, *29*(3), 363–377.
Quinn, R. E. (1988). *Beyond rational management: Mastering the paradoxes and competing demands of high performance*. San Francisco, CA: Jossey-Bass.

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