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## Cultural Models of Hall and Hofstede

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Hall (1959, 1966, 1976, 1984) and Hofstede (1980, 2001) derived two of the most popular models of culture. These models serve the purpose of describing a person's cultural context, usually in terms of communication and social relationships. Hofstede and Hall describe "culture" along several dimensions, which, in turn, constitute their models. Hofstede's approach originated from surveys with IBM employees around the world; Hall's work resulted from his international communication training experience and cultural anthropological research. While these culture models provide a good foundation for studying differences between groups, their inherent biases should be acknowledged. Both models have been developed in Western cultures and exhibit the biases of these cultures, except for one of Hofstede's dimensions described below.

Both models were developed to define dimensions along which cultures can be both described and differentiated. The models have been widely used in information technology fields (information systems, human-computer interaction) as the basis for comparing behavior across cultures. As an example, Callahan (2004) provides an overview of cultural differences impacting the use of technology and resulting variations in the design of user interfaces. However, the application of the theories in studies of information behavior (IB) has been limited, and very few cross-cultural comparisons of information-seeking behavior exist (Iivoneen & White, 2001; Duncker, 2002; Komlodi et al. 2004). In the few studies that do exist, models of culture are not considered when comparing behavior: the results are valuable for understanding variations in IB, but a basic understanding of cultural differences affecting IB is missing. Studying behavior from the cultural model starting point can enable researchers to

address this question in a novel, structured way, building on existing culture models to explore cultural differences in IB.

The *level of context* in communication is Hall's (1959, 1966, 1976, 1984) most often applied dimension. It examines how much information is conveyed by the circumstance of a given situation and the group's cultural unconscious and shared knowledge versus explicitly in the message itself. A *high context* culture places more emphasis on the unspoken meaning of a given situation than on the actual message (very little information is included in the communicated message). Cultures with *low-context* interaction place much more importance on the explicit message transmitted. Without including the complete message in this explicit transmission of information, the meaning is lost or vague. North American and Northern European cultures tend to be low context, where messages specify many details and not much information is assumed in the context. Hall's *time* dimension is also often applied. *Time* concepts vary greatly from culture to culture, and Hall defined the two extremes of this dimension: polychronic and monochronic. *Polychronic time* is a circular, renewable resource in which multiple happenings can take place at the same time. Every activity has its natural time to occur and deadlines are less important (or not important at all) than completing tasks. *Monochronic time* is linear, in which usually one event happens at a time. Deadlines are important and time is not renewable, once the time for an activity has passed it cannot be recovered. Time concepts of cultures impact the way tasks are planned and executed and so do *action chains*. *Actions chains* describe sequences of actions that need to be completed before a goal is accomplished. Both action chains themselves and adherence to them differ across cultural groups. The last two dimensions describe characteristics of communication in various groups. The *speed of messages* describes the frequency and pace of messages members of various cultures find acceptable. Some cultures are used to faster-paced messages than others. Television commercials play an important role in the United States and they create expectations of fast, short messages. If messages are communicated at a speed that the given culture is not used to, they may not achieve their desired effect. The dimension of *information flow* addresses how long it takes a message to travel through an organization and produce the desired effect. Hall's research demonstrated that high-context cultures, where relationships and information are valued more than schedules,

tend to have very fast information flow while low-context cultures tend to be much slower.

Hofstede (1980, 2001) developed a cultural model consisting of five dimensions that seek to differentiate culture. *Power distance* describes perceptions of equality and inequality by members of various cultures. A low power distance society tends to be considerably more open to challenging the status quo of superiors. People in a low power distance culture deemphasize socio-economic differences. The high power distance society tends to support inequality within the society. The dimension of *individualism/collectivism* ranks cultures based on the individual or collectivistic orientations of their members. In individualistic societies, goals and accomplishments center around the individual, while in collectivistic societies the common goal and collaborative action dominate. In groups oriented toward collectivistic goals, the individual is sheltered by the group and owes loyalty to it. *Uncertainty avoidance* describes the "extent to which the members of a culture feel threatened by uncertain or unknown situations" (Hofstede 1981, p. 113). Members of cultures ranking high on this dimension do not tolerate situations with limited information and embedded vagueness and they seek certainty and long-term planning. Members of groups with low uncertainty avoidance figures do not become anxious when faced with uncertain situations and lack of rules. The *feminine/masculine* orientation of a culture speaks to the value system of a culture. Cultures with a masculine orientation emphasize values that have traditionally been related to the male gender role in Western cultures: masculine assertiveness and competition, career advancement, and financial accomplishment. Cultures ranking high on the femininity index place in the center those values traditionally associated with the female role: nurturance, family, concern for relationships, and quality of life. Finally, *long/short-term orientation* of societies describes future-versus history-orientation of the society. This final dimension was added later and was aimed at reducing the Western bias of the model. This dimension is based on Confucius' teaching and at the long-term end of the scale includes values such as persistence, thrift, respect of status, and a sense of shame. At the other end of the scale, there is personal steadiness and stability, protecting "face," respect for tradition, and reciprocation of greetings and favors.

Information seeking and use are important user tasks supported by computerized information systems. There is a long tradition of studying IB in electronic environments, however, the study of the impact of end-user national culture on the use of information systems to find, retrieve, and use information is very limited. This area of research is becoming more and more important as the users of many search systems access electronic systems from all over the world and often have to use the same user interface (e.g., Web search engines, online database systems). As noted at the beginning of this paper, the existing cross-cultural studies of IB often do not consider culture models. The application of these models to the study of IB has been limited, however, they are more often used in related fields.

Hofstede's model is popular among scholars of information systems and human-computer interaction. Researchers of information technology have applied Hofstede's theory to studying cultural differences in the management and classification of information systems, although cultural comparisons in information systems development, operations, and use have received limited attention (Ford et al., 2003). Cross-cultural usability experts applied Hofstede's dimensions to the design and understanding of user interfaces (e.g., Evers, 2001) and Web design (e.g., Gould & Marcus, 2000). Even though culture models have been applied in these related fields, they were often not considered in the cultural comparisons of IB.

Two attempts at relating culture models to IB and identifying potential interactions between them have been identified. Steinwachs (1999) examined the impact of culture on four elements of IB: the sender, the recipient, the information itself, and the channel of communication. She applied Hofstede's first four dimensions to study these elements. She concluded that all these elements of IB are deeply embedded in the cultural context and thus impacted by it, and provided recommendations to information intermediaries based on cultural differences in IB. In recent research (Komlodi & Carlin, in press) we relate both Hofstede's and Hall's models to an abstract model of information seeking to identify potential areas of impact. Strong and weak potential impact areas of cultural dimensions on information-seeking steps were identified. The previously discussed applications of culture models to the study of IB are proposed as the foundation for future cross-cultural studies of IB.

Cultural comparisons of IB can greatly benefit from the application of culture theories, as these help not just identify but also explain potential

areas of differences in IB. Most of the existing cross-cultural IB research reports differences in behavior, without examining cultural variables to identify why these differences occur. A more thorough study of the impact of culture on IB will lead to deeper understanding of behavior and enable the designers of search systems to create interfaces that will be more usable by users from different cultural backgrounds.

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**Dervin's Sense-Making**

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Brenda Dervin's Sense-Making is a conceptual tool of broad applicability for use in understanding the relationship of communication, information, and meaning. Sense-Making, (capitalized to distinguish the methodology from "sense making," which encompasses the phenomenon of making and unmaking sense) is integral to understanding how human beings derive meaning from information. In library and information science (LIS), Sense-Making methodology is associated with a shift in research emphasis from information *sources* to information *users* (Dalrymple, 2001). This shift was accomplished by conceiving of "information seeking and use" as "modes of communication practice" (Savolainen, 1993, p. 13).

Within various disciplines, including Communication and LIS, the methodology has been used to study information seeking associated with myriad settings and services, including libraries, information systems, media systems, Web sites, public information campaigns, classrooms, and counseling services. Sense-Making has also served to help understand intrapersonal, interpersonal, small group, organizational, national, and global communication practices, and has been used in tandem with constructivist, critical, cultural, feminist, postmodern, and communitarian research viewpoints (see Sense-Making Methodology Site in the references at the end of the chapter).

Sense-Making frequently has been operationalized through time-line and neutral questioning interview techniques. The former asks participants to describe their information-seeking sequence and analyzes the results using the situation-gaps-uses schema traditionally connected with the methodology. The latter—neutral interview strategy—guides users in expressing information needs in their own (instead of the information professional's) words, and has been applied to reference interview models.