

Culture and Anonymity in GSS Meetings

Moez Limayem

City University of Hong Kong, Hong Kong

INTRODUCTION

Group support systems (GSSs) are an increasingly popular means of aiding decision making in a variety of organizational settings, by combining the computer, communication, and decision technologies to improve the decision-making process (Briggs, Nunamaker, & Sprague, 1998). Such technologies make use of anonymity as a key tool to improve the quality of decisions (Nunamaker et al., 1991; Pinsonneault & Heppel, 1997; Postmes & Lea, 2000).

Managers spend a considerable part of their work in meetings and participating in group decisions. Anonymity is generally believed to create an environment that improves group participation, communication, and the objective evaluation of ideas, enhancing the productivity of groups and their decision-making processes. Anonymity, as a distinct aspect of GSS, was expected to increase productivity by reducing the level of social or production blocking, increasing the number of interpersonal exchanges, and reducing the probability of any one member dominating the meeting (Newby, Soutar, & Watson, 2003). Barreto and Ellemers (2002) manipulated two aspects of anonymity separately: visibility of respondents (i.e., participants could or could not see who the other group members were) and visibility of responses (participants could or could not see the responses given by other group members). Results show that when group identification is low, anonymity manipulations affect group members' efforts.

A number of empirical findings have suggested that the use of anonymity and process structure in electronic brainstorming (EBS) generally promote a positive effect on the number of ideas generated (Jessup, Connolly, & Galegher, 1990; Gallupe, Bastianutti, & Cooper, 1991), and quality of ideas achieved in decision making (Zigurs & Buckland, 1998). However, the anonymity function inherent in multiworkstation GSSs has been found to heighten conflict, as members tend to communicate more aggressively because they tend to be more critical (Connolly, Jessup, & Valacich, 1990; Jessup, Connolly, & Tansik, 1990; Valacich et al., 1992); to have no effects on inhibition (Valacich, Dennis, & Connolly, 1994; Valacich et al., 1992); to increase group polarization (Sia, Tan, & Wei, 2002); and to have no effects on group performance (Valacich, Dennis, & Connolly, 1994). Other empirical findings show that, in terms of effectiveness, nominal brainstorming may be

equal to (Gallupe, Cooper, & Bastianutti, 1991; Cooper et al., 1998; Barki & Pinsonneault, 2001) or sometimes less than (Valacich, Dennis, & Connolly, 1994; Dennis & Valacich, 1993) electronic brainstorming, indicating that at least as far as laboratory studies are concerned, empirical investigations have proved inconclusive.

BACKGROUND

Ferraro (1998) provided a succinct definition of culture as follows: "Culture is everything that people have, think, and do as members of their society."

Culture has been defined as the collective programming of the mind that distinguishes the members of one group or category of people from another (Hofstede, 1991; Tan, Watson, & Wei, 1995). Culture involves the beliefs, value systems, and norms of a given organization or society, and can exist at national, regional, and corporate levels. In fact, even information systems theories and research are heavily influenced by the culture in which they developed, and a theory grounded in one culture may not be applicable in other countries (Tan, Watson, & Wei, 1995; Triandis, 1987). The theories explaining the effects of GSS have come mainly from a North American perspective and may need to be adjusted for appropriate explanation of the same phenomena in different contexts. Therefore, in order to incorporate a global dimension, theories and models that attempt to explain the effectiveness of technology will need to take into account the cultural background of the group being examined.

Hofstede (1991) identified five dimensions of culture based on his IBM study in 72 different countries:

- *Uncertainty avoidance* is the degree to which a society feels threatened by uncertain and ambiguous situations, which leads members of the society to support beliefs promising certainty and to maintain institutions protecting conformity.
- *Masculinity* refers to a preference for achievement, heroism, assertiveness, and material success; as opposed to *femininity*, which implies a preference for relationships, modesty, caring for the weak, and quality of life.
- *Long-term orientation* stands for the fostering of virtues oriented toward future rewards, in particu-

lar, perseverance and thrift. Its opposite pole, short-term orientation, stands for the fostering of virtues related to the past and present, in particular, respect for tradition, preservation of “face,” and fulfillment of social obligation.

- *Power distance* is the extent to which society accepts the fact that power in institutions and organizations is unevenly distributed, and how this fact of inequality is dealt with. It is found that individuals in societies with low power-distance cultures (e.g., United States) may be more inclined to adopt technologies that reduce power distance (Reinig & Mejias, 2003).
- *Individualism* refers to a preference for a loose-knit social framework in society in which individuals are only supposed to take care of themselves and their immediate families. This is opposed to *collectivism*, which implies a preference for a tightly knit social framework in which individuals can expect their relatives and clan to protect them in exchange for loyalty. The people of collectivistic-culture societies (e.g., Hong Kong) may use technologies to sustain group harmony and agreement.

It is interesting that power distance and individualism are found to be inversely related (Hofstede, 1991; Kim et al., 1994; Triandis, 1995). Many Western countries, such as the United States, Great Britain, and Australia, have been described as individualistic, low power-distance cultures, while many Asian countries, such as Hong Kong, Singapore, and China, have been described as collectivistic, high power-distance cultures (Hofstede, 1991).

CULTURE IN GSS STUDIES

Culture was not specifically considered as an important dimension in the early studies of GSS. However, with globalization, it is becoming increasingly important to adapt this tool to the cultural background of the organization or group that intends to use it effectively. These dimensions have been investigated in cross-culture GSS studies (such as those of Robichaux & Cooper, 1998; Tan et al., 1998; Tung & Quaddus, 2002; Watson, Ho, & Raman, 1994). Among the five dimensions, power-distance and individualism have been shown to have impacts on group behavior and group outcomes (Tan et al., 1998; Watson, Ho, & Raman, 1994). This occurs because the anonymity and simultaneous input features of GSS support low power-distance and individualistic cultural norms of desirable group behavior (Watson, Ho, & Raman, 1994).

Watson, Ho, and Raman (1994) later provided empirical support for the inclusion of culture as a dimension of GSS to add to DeSanctis' and Gallupe's (1987) dimensions of group size, member proximity, and task type. Their study examined U.S. and Singaporean cultures using GSS, and the findings suggested that Singaporean groups tended to have a higher pre-meeting consensus and less change in consensus than the U.S. group. This may be explained with reference to the collectivist nature of Singaporean culture, as collectivists have a tendency toward group consensus (Mejias et al., 1997).

Tan, Watson, and Wei (1995) suggested ways that different cultures can be studied with other important variables, such as task type and group size. The study focused on finding a way to examine the robustness of previous and current GSS research across different cultures and to add a cultural perspective to existing GSS knowledge. Hofstede's dimension of power distance was examined in relation to GSS, and the possible impacts of GSS intervention in both high and low power-distance countries were explored.

In studies examining only Singaporean groups (Tan, Watson, & Wei, 1995), the use of GSS resulted in a decreased impact of status and normative influences on decision making. These findings showed that change in consensus was greater in U.S. groups than in Singaporean groups, and influence was more equal in Singaporean groups than in U.S. groups. The higher power-distance of Singaporean groups may explain the differences between these two meeting outcomes, and the study supports the proposition that GSS can overcome the effect of high power-distance on group meetings.

A study comparing North American and Mexican groups participating in GSS sessions showed differences in terms of perception of consensus and satisfaction levels of group members (Mejias et al., 1997). U.S. and Mexican groups were also studied for GSS' effects on participation equity, with Mexican groups reporting higher participation equity levels than U.S. GSS groups (Mejias et al., 1997). It was suggested that high power-distance cultures benefit from GSS, and that these findings indicate that culture has a significant bearing on crucial aspects of GSS meeting outcomes.

Limayem, Khalifa, and Coombes (2003) conducted a study to explain the different effects of anonymity on the behavior of Hong Kong and Canadian groups during GSS sessions. In the Hong Kong Chinese culture, group interactions tend to emphasize harmony, conformance, and reciprocal respect rather than openness and spontaneity. However, the Canadian group's culture, which frequently exhibits openness and spontaneity, will usually allow individuals to deviate from the norm. Anonymity was found to have more significant positive effects for Hong

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