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Cross Cultural Study of Multimedia Effects on First Impression Bias

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ABSTRACT

The body of knowledge about the relationship between multimedia and first impression bias, which has been mainly accumulated in North America, may not be generalizable in other countries because theories ground on one culture may not necessarily apply in other cultures. To better understand how multimedia can be applied successfully in various cultures for reducing first impression bias, researchers need to compare multimedia effects systematically across different cultures. This paper discusses the importance and necessity of considering the culture dimensions, such as collectivistic cultures versus individualistic cultures, in studying multimedia's impact on first impression bias. It arrives at several propositions for future empirical investigations. These propositions delineate the relationships between first impression, media type (text based versus multimedia based), and culture.

Keywords

Multimedia; culture; first impression bias.

INTRODUCTION

First information bias (FIB) denotes limited human information processing in which people are strongly influenced by the first piece of information that they are exposed to, and that they are biased in evaluating following information in the direction of initial influence (Lim et al., 2000). First impression bias can create serious impact on organizational decision making. Evidence from psychological research indicates that people have a cognitive bias that leads them to misinterpret new information as supporting previously held hypotheses (Rabin, and Schrag, 1998). With a strong first impression, decision makers will reinterpret information obtained subsequently to fit their first impressions. If the first piece of information provides an accurate representation of events, following decisions may not be negatively affected. However, if this first piece of information is partial or incorrect, then the resulting bias may have undesirable consequences. This concern is particularly significant for tasks that are amorphous or lack well-defined procedures because much of the relevant information is ambiguous. In such situations, the information might be interpreted in numerous ways leading to errors.

The globalization of business has led to the presence of many culturally diverse project teams. Leidner and Kayworth (2006) suggest that more research needs to be conducted to examine how diverse team member values compliment or contradict each other as the project development process unfolds over time. In an increasingly interdependent world there is a need for a well-integrated and rational IS which will coordinate the activity of multiple participants in conducting international business (Hunter and Beck, 2000). Cross cultural teams communicate frequently using both text-based communication tools (e.g. e-mail) and multimedia communication tools (e.g. Windows Live Messenger).

Errors, such as FIB in interviews, can be mitigated by technical advances (Viswesvaran, 2003). Lim et al. (2000) suggests that multimedia presentations, but not text-based presentations, reduce the influence of FIB. Because management research is substantially based on North America organizations and subjects, research findings and theories arising from such work might not be valid in other cultures (Tan et al., 1998). Srite (2006) finds that the well established technology acceptance model showed interesting differences when applied in a Chinese setting. Srite reports that in the Chinese setting, the relationship between perceptions of usefulness and behavioral intentions to use was not significant while the relationship between subjective norms and behavioral intention to use was. The exact opposite was found in the US sample by Srite (2006) and he attributes the contradictions to differences in certain cultural dimensions. This signifies that management theories may need to incorporate a culture dimension to remain robust and useful. This takes on added significance as organizations routinely conduct business beyond national boundaries (e.g. off-shore outsourcing). Culture can affect (either facilitate or impede) the diffusion of information and communication technology (Tedre et al., 2006).

HYPOTHESES BASED ON THE LITERATURE REVIEW

Multimedia technology brings together the symbolic and processing capabilities of various media and thus creates a richer symbolic system of communication. A rich representation is particularly useful in the cross-culture settings, especially when more than one language is used. The reason is that often times the non-native speakers may not be as proficient as the native speakers in using a specific language. Then, the visual and audio information (e.g. body language, facial expression, tone of the voice) embedded in multimedia become helpful in cross-culture communication. Via a set of rich symbolic languages, multimedia presentations can express the authentic meaning of information in a less distorted and ambiguous fashion. Thus potential misunderstandings can be reduced. Using media richness theory, it has been found that multiple cues and immediacy of feedback lead to better decision making performance (Dennis and Kenney, 1998).

Empirical evidence (Wetzel et al., 1994) shows that complementary cues increase retention and improve understanding through a more vivid presentation that offers more potential links with existing information in long-term memory. Consequently, the information is not easily disregarded. With video and audio capabilities, multimedia makes the evidence disconfirming the original bias hard to ignore.

Unlike a uniform cultural setting, a cross cultural setting, such as a virtual team with participants from several countries, is unique in such a way that people tend not to share same native language and values (e.g. the value about the relative importance of a group versus an individual). This uniqueness could make multimedia relatively more fully utilized to achieve better communication and understanding, and therefore reduce FIB more extensively.

Multimedia presentations, but not text-based presentation, were found to reduce perceived equivocality in less-analyzable tasks (Lim and Benbasat, 2000). In studies of multimedia presentations, results have indicated that users were more engaged and affected in presentations that were more vivid (Hess et al., 2006). The reduced perceived equivocality and increased user engagement can possibly decrease the influence of first impression. We therefore have the following hypothesis:

Hypothesis 1: In cross-culture settings, a multimedia system will reduce the influence of first impressions more than a text-based system.

Results show that multimedia improves the retention and subsequent recall of explanative information (Wetzel et al., 1994). The ability to retain and recall explanative information, in turn, produces a great ability to make correct inferences (Lim and Benbasat, 2002). Users prefer to obtain advice from a video based advisor as opposed to a text-based advisor even when the text-advice is clearly better and trust the video advice more (Reigelsberger, Sasse and McCarthy, 2007). Research suggests that people's confidence increases with the amount of information available (Oskamp 1965). In cross cultural settings, we expect that the richer information and multiple cues and immediate feedback from multimedia will make the users perceive that they have received more information, and therefore will be more certain about their decisions than those who use text-based systems (Hall and Reed, 1990; Wurtz, 2005). Thus, we hypothesize the following:

Hypothesis 2: In cross-culture settings, a multimedia system will lead to higher levels of confidence with the decisions made than will a text-based system.

Culture (e.g. collectivistic versus individualistic) can affect first impressions (Branzei et al., 2003). Collectivist cultures sensitize their members to "stranger danger". Consequently, trusters (e.g. Project managers) may actively search for hints signaling higher levels of risk, especially social risks, in initiating new relationships with foreign trustees (e.g. new team members) and may be inclined to use any negative information about the foreign trustee to support their initial reluctance. People outside the in-group are not expected to have the same understanding and esteem for group norms as in-group members. Memberships in various groups and/or national stereotypes may cause different levels of initial trust. For example, Japanese (collectivistic culture) are more likely than Canadians (individualistic culture) to view foreign trustees as less credible and reliable than domestic trustees (Branzei et al., 2003). The aforementioned lack of reliability and trustworthiness might positively contribute to FIB. Consequently, when people work in a globally distributed and culturally diverse team, first impression bias can potentially become more serious relative to a culturally uniform setting.

Moreover, culture conflicts may exist when people from multiple culture background interact with each other (e.g. via instance messenger or multimedia communication). For instance, there are no universally accepted standards that describe physical attractiveness. In describing beauty, cultures differ in regard to which physical features, personality traits, and moral virtues are regarded as desirable in people (Chiu and Babcock, 2002). Interpreting symbols and generating signals are highly dependent on our cultural background (Jaimes, 2006) and is an important part of human communication. Uljin and Campbell (2001) report that in a study of two Dutch-American mergers, several instances of miscommunications in email occurred due to language and cultural differences, and problems to successfully integrate internet and video conferencing opportunities.

Therefore, the potential culture conflicts in cross cultural settings might increase the first impression bias. The increased FIB could result in a greater negative impact on organization decision making (Chiu and Babcock, 2002).

We then have the following hypothesis:

Hypothesis 3: Other things being constant, there will be more first impression influence in a cross cultural setting than in a uniform culture setting.

Collectivist cultures tend to prefer completing tasks together, while members from individualist cultures tend to be more comfortable with loose ties and the division of tasks (Messey, et al., 2001). *Individualism-collectivism* is the preference to act as individuals rather than as a group. Collectivistic cultures also lean toward high context communication in the majority of social interactions, whereas individualistic cultures lean toward low-context communication (Straub, 1994). *Contextuality* is the amount of additional information required to make decisions versus the straight facts. Moreover, collectivist and high-context cultures tend to be high in *uncertainty avoidance* characterized by a lower tolerance for uncertainty and ambiguity, conflict avoidance, and a strong desire for consensus (Hall and Reed, 1990). Based on these above cultural dimensions, it may seem reasonable at first glance to assume certain cultures will prefer richer technologies while others will be satisfied with leaner forms of communication (Massey et al., 2001). In a study of global websites for non-profit organizations, multimedia and online communities are found to be more widely present and used in South Korean sites as opposed to British web sites (Inhwa Kim, 2007). They attribute this to the collectivistic culture where social values and group decision making are encouraged. In contrast, in the British sites individual freedom and personal decision making are promoted. Since multimedia includes richer content and complimentary cues, it may help users from a collectivism culture more than the users from an individualism culture (Wurtz, 2005). We therefore hypothesize the following:

Hypothesis 4: A multimedia system will reduce the influence of first impression more for users from collectivistic cultures than for the users from individualistic cultures.

Theoretically, the relationship presented in hypotheses one and two might be universally valid. Actually testing these two hypotheses in a cross cultural setting could be interesting. Unlike hypothesis one, hypothesis three has nothing to do with either text-based system or multimedia system, and hypothesis four has nothing to do with text-based system.

RESEARCH METHODOLOGY

Because internal validity is a critical concern when testing theories, laboratory experiments will be used to attain precision of measurement and control over extraneous variables (Tan et al., 1998; DeSanctis, 1989).

Matching laboratory experiments will be conducted in two distinct national cultures. Half of the 320 subjects are provided with a first impression bias cue in a task that requires the subject to evaluate the performance of a manager. The managers will present his/her performance information using text or multimedia information systems. Specifically, 160 subjects from an individualism culture, such as US culture, are randomly assigned to eight groups: (1) text about individualism presenter with FIB cue; (2) text about individualism presenter without FIB cue; (3) multimedia about individualism presenter with FIB cue; (4) multimedia about individualism presenter without FIB cue; (5) text about collectivism presenter with FIB cue; (6) text about collectivism presenter without FIB cue; (7) multimedia about collectivism presenter with FIB cue; (8) multimedia about collectivism presenter without FIB cue;

Another 160 subjects from a collectivism culture, such as Chinese culture, are randomly assign to eight groups: (1) text about individualism presenter with FIB cue; (2) text about individualism presenter without FIB cue; (3) multimedia about individualism presenter with FIB cue; (4) multimedia about individualism presenter without FIB cue; (5) text about collectivism presenter with FIB cue; (6) text about collectivism presenter without FIB cue; (7) multimedia about collectivism presenter with FIB cue; (8) multimedia about collectivism presenter without FIB cue.

Independent Variables

System type and culture are the independent variables for this experiment. Two systems (text-based system and multimedia system) are compared. Two cultures (an individualism culture and a collectivism culture) are included in the study. Since the presenters (two managers) and the subjects (evaluators) can come from either culture, there are four culture settings. For example, an individualism presenter and multiple collectivism evaluators represent one of the four settings.

Depending on the experimental group assigned, information regarding a presentation made by a person either from a collectivism culture or from an individualism culture is available in text or multimedia format. In particular, a video clip will be made for the multimedia format presentation. Subjects using text-based systems view a text-written-only transcript of

the video clip. In both systems, subjects are allowed to reexamine the information by using a scroll bar to the desired position.

Dependent Variables

The two dependent variables are appraisal score and confidence with the appraisal made. The experimental task is to conduct a performance appraisal of a manager in a Sino-American joint venture. Subjects use an instrument with an 11-item scale adopted from Denison's (1990) Leadership Index to perform the appraisal. The alpha coefficient for each of the scales ranged from 0.79 and 0.92. Another 3 item instrument from Aldag and Power (1986) is used to measure the subjects' confidence. The reported reliability of the instrument was 0.84.

Experimental Manipulation

All subjects perform the appraisal task described above. The only difference between the experimental and control groups is that the experimental groups receive a biased information cue prior to examining the presentation information.

The biased cue is presented as follows. First data related to the manager under appraisal would show that this manager did not perform as well as other managers did. Second, similar to the study (Lim et al., 2000), we ask subjects to complete their appraisal with only partial information. As in Lim's study, we attempt to simulate a biased first impression by requiring the subjects to make their first judgment based on the information lacking the full context surrounding the manager being evaluated.

To help subjects create a sense that they obtain sufficient information for the performance evaluation, a "fake" personality profile of the manager will be offered to the subjects in experimental groups after they examine the performance indicators (biased cue mentioned above). This personality profile is neutral in tone, and the statements are general enough to be true of most people. The personality profile includes four statements adapted from Lim et al (2000).

Experimental Procedures

Subjects are recruited from two business schools (one in US and another from China). The participation is voluntary. Incentives like course credits and cash prizes will be provided for subjects' participation. Specifically, 320 subjects from two cultures (US versus China) are needed for the pilot test and the experiment will be conducted in summer 2008. Two presenters (a Chinese and an American manager) from a real world joint venture in China will be involved.

Subjects in the experimental groups perform the appraisal twice. Immediately following the first appraisal they receive the performance indicators for all managers, including the biased cue. The second appraisal is conducted after the experimental group subjects have examined the complete presentation information.

Subjects in the control group perform the appraisal only once. Because subjects in the control group will not receive the biased cue, their appraisal is solely based on the presentation information. The experiments are conducted in a computer lab with the help of two research assistants. No discussion and electronic communication are allowed across subjects. Subjects all use the same type of computers. The research assistants are not told the objectives or the hypotheses of the study. Data collection will be conducted in US first and then in China. Data analysis based on US data will be presented in the conference. Data collection and analysis will be finished by October 2008.

Manipulation Checks

The manipulation on national culture will be performed in the same way as it was done in the study (Tan et al., 1998). Specifically, a perceptual question is asked on a 1 to 7 scale. A t-test will be conducted for the purpose of confirmation. A pilot test is needed to examine if the first impression bias cue is manipulated successfully.

CONTRIBUTION

This study goes beyond prior research. First, it attempts to test the prior research findings, which is based on North America data, in an Asian culture. Second, it tries to isolate a cultural trait that may moderate the impact of multimedia on first impression bias (FIB). By assessing the relationship between media, culture, and FIB, this study provides insights into the circumstances under which media (text or multimedia) can be used with minimum first impression bias, if any. A typical circumstance in a real world business organization would be a virtual team including teammates from diverse cultures. Thus, the results of this study contribute to the facilitation of the communication in cross cultural settings that exist in various organizations, especially in the environment of the ever increasing business globalization.

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