Social Goals in Communication Media Choice

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Choice of communication media is an important topic in Information Systems research. To complement the prevailing research which focuses on the effective delivery of message through communication media, this research regards communication as a way to accomplish social exchanges. Because communication media vary in their capacity to deliver nonverbal cues, they vary in their capacity to produce social resources such as self-status, other’s status and love. Consequently, a communicator strategically chooses a medium to produce the desired level of social resources which help the communicator maintain a comfortable level of social balance. Our empirical findings suggest that media choice is affected by social motivations.

Keywords: Communication media choice, Computer mediated communication, Social balance, Social resources, Social exchange
1 INTRODUCTION

With the advances in modern information technology, electronic communication is expected to complement and to substitute face-to-face communication with the advantages of lower cost and improved efficiency in many circumstances. Organizations spend a considerable amount of effort, time and money to introduce and to utilize so-called “new media” such as electronic mail, video conference, and instant messaging.

Two representative theories investigating media choice in a computer-mediated communication (CMC) context are the social presence theory and the media richness theory. However, both theories have been criticized as not considering situational factors (Markus 1987). Other theories include social influence model (Fulk et al. 1990), media symbolism (Trevino et al. 1987), critical mass theory (Markus 1987), and channel expansion theory (Carlson et al. 1999). Nevertheless, these theories have been criticized for flooding factors influencing media choice without a proper hierarchical order among the factors. Thus, there is a pressing need for a concise theoretical alternative to explain individuals’ media choice behavior.

Recognizing this knowledge gap, the research question of this study is to explain how social goals in communication affect media choice. By integrating nonverbal communication and social exchange theory, we posit that the social status and love valence of a message are critical factors in media choice. This effect is expected to be stronger when a communicator is in a deficit in social balance. Therefore, the potential contribution of the study is to extend media choice research with a focus on information delivery to a focus on relational communication.

2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

We group the antecedents of media choice in extant literature into two major categories, i.e., benefits and costs. The benefit corresponds to media effectiveness in accomplishing a communicative goal. Every communicative message has both social and informational goals (Trenholm et al. 2004). Thus, media effectiveness is further divided into media informational effectiveness and media social effectiveness. Media efficiency refers to the saving of effort to achieve these goals. This research focuses on media effectiveness.

2.1 Informational and Social Effectiveness of Media

The first stream of literature on media choice regards the main utility of media as to effectively deliver the content of a message. Media richness theory is a representative. Media richness theory argues that organizational effectiveness could be improved by matching medium characteristics to the needs of a task. In Daft and Lengel’s definition, a task has two types of characteristics, uncertainty and equivocality. Media can be sorted by their richness. Face-to-face is claimed to be the richest medium; therefore, it would lead to a better performance for equivocal task. In contrast, leaner media such as written memos would lead to a better performance for less equivocal tasks (Daft et al. 1986).

The media richness theory focuses on the informational effectiveness of media to accomplish a task. However, human communication is not for task completion only. People communicate to define and redefine social relationships (Trenholm et al. 2004). Individuals might choose a medium based on its effectiveness to produce a desired social relationship. Alternative theories have been proposed to address this issue.

In the social presence theory (Short et al. 1976), social presence is defined as the degree of salience of another person in an interaction and the consequent salience of an interpersonal relationship. Short et al. (1976) stated that electronic communication media differ in their “capacity to transmit information about facial expression, direction of looking, posture, dress and nonverbal, vocal cues” [p. 65]. Electronic communication media, with their paucity of nonverbal cues, are said to be low in social presence.
The social information processing theory (Walther 1992) explains the way communicators process relational cues (i.e. social information) in different media. The limited bandwidth of CMC offers less information per exchange than does face-to-face. Consequently, relational development in CMC is delayed by text-based and asynchronous exchanges. However, the theory posits that given sufficient time and message exchanges, relational communication in the later periods of CMC and face-to-face communication will be the same (Walther 1992).

Sheer and Chen (2004) is an exceptional study that explicitly addresses the social goals in media choice. They suggested there are three types of goals in human communication: instrumental, relational, and self-presentational. Media richness theory is questioned for addressing only the instrumental goal. The study proposes that relational and self-presentational goals are of at least equal weight in manager-subordinate interactions. Their empirical study showed that media richness theory holds when messages are positive. Self-presentational goals are the most powerful predictor of media choice when messages are negative. These relational goals have some impact on media choice.

2.2 Nonverbal Communication and Social Exchange

This study further develops Sheer and Chen’s (2004) idea on social goals in communication. We recognize three types of social goals: the management of self-status (i.e., self presentation and image), the management of other’s status and the indication of love. Research on social exchange has identified the major types of resources in social exchange (Foa et al. 1993). The resource theory classifies rewards and punishments transacted in interpersonal exchange into six classes: love, status, information, money, goods, and service. Among them, love is defined as “an expression of affectionate regard, warmth, or comfort”. Status is “an expression of evaluative judgment which conveys high or low prestige, regard, or esteem”. Information includes “advice, opinions, instruction, or enlightenment but excludes those behaviors which could be classed as love or status” (Foa et al. 1993). Among the six classes of resources, information, love and status are often directly produced in interpersonal social interactions (Foa et al. 1993). Status and love are the social goals of interest in this study. This study proposes that nonverbal communication and social exchange theory can serve as an alternative theory to explain how social goals are accomplished through media choice.

Nonverbal communication is defined as the transmission of information and influence by an individual’s physical and behavioral cues. Nonverbal communication includes any body language in interpersonal communication, such as gestures, body movements, facial expressions, gaze, dress and so on. It is claimed that a substantially large percent of the meaning a receiver perceives is based on nonverbal cues (Leathers 1997). Research on nonverbal communication suggests that a major social function nonverbal communication accomplishes is relationship building (Trenholm et al. 2004). According to Knapp et al. (1997), the first goal of nonverbal communication is communicating intimacy. The second goal is communicating dominance or status. For example, previous research suggested that relaxed and expansive postures and a raised head are used as signals of dominance or status; lowered or frowning brows indicates dominance.

Recognizing the importance of social goals (e.g., indicating love or status) in nonverbal communication, we apply social exchange theory to explain media choice (Blau 1964). A key tenet of social exchange theory is that people follow similar rules of distributive justice or fairness in non-economic relations as they do in economic exchanges. On one hand, when a person does something beneficial to the other party, naturally he or she would expect the action to be reciprocated, though it is often not clear when or in what form the action will be reciprocated. On the other hand, the beneficiary has a psychological obligation to reciprocate the favor, so as to restore the social balance (Blau 1964). In our discussion, if one party has done more favor to the other party, we consider this party as in a surplus of social balance, and the other party as in a deficit. Social balance is not static (Blau 1964). People often seek to maintain a surplus with the other party. When one is in a surplus, one has the power in demanding resource (e.g., help) from the other party in a time of need (Blau 1964). Meanwhile, one avoids being too much in a surplus because it incurs a risk of loss if the other party does not reciprocate.
2.3 Media Choice

Our research model (Figure 1) is based on an integration of relational communication, nonverbal cues and social exchange. Because communication media vary in their capacity to deliver nonverbal cues, they vary in their capacity to produce social resources such as status and love. Because media varies in social effectiveness, a communicator strategically chooses a medium to carry out a social exchange.

Figure 1. The Research Model

Our model focuses on social goals rather than on informational goals. An expressed message often suggests a social goal to accomplish. We define the strength of social motivation behind a message the social valence of a message (Sheer et al. 2004). Based on the resource theory, we identify three types of social valences, the self-status valence, the other’s status valence, and the love valence. The self-status valence of a message is the extent that a message can enhance self-status. The other’s status valence of a message is the extent that a message can enhance the partner’s status. Love valence is the extent that a message shows one’s love and care to the other.

When the self-status valence of a message is high (e.g., “I have solved the most difficult problem!”), a communicator is likely to prefer a nonverbal-cue-rich medium to nonverbal-cue-lean media. This is because a nonverbal-cue-rich medium can provide more channels, symbols, and language to demonstrate one’s pride and to enhance self-status (Sheer et al. 2004). Similarly, when one wants to praise the other or to indicate one’s submissive status (e.g., “You have done a great job!”), one may again choose a nonverbal-cue-rich medium which better conveys sincerity. When one wants to show love to the other (e.g., “I heard you are sick, take good care of yourself!”), a nonverbal-cue-rich medium can naturally better convey affection and warmth (Sheer et al. 2004). In all these scenarios, nonverbal-cue-rich media are more effective than computer mediated media.

In contrast, when the self-status valence of a message is low (e.g., “I have not touched the allocated task at all.”), a communicator might prefer a nonverbal-cue-lean medium to avoid embarrassment. Similarly, a message that decreases other’s social status (e.g., “You have failed the project.”) might be easier to deliver through a nonverbal-cue-lean medium, so as not to embarrass the other party too much (Sheer et al. 2004). Therefore:

H1: The self status valence of a message is positively related to the probability of a communicator choosing a nonverbal-cue-rich medium.

H2: The other’s status valence of a message is positively related to the probability of a communicator choosing a nonverbal-cue-rich medium.

H3: The love valence of a message is positively related to the probability of a communicator choosing a nonverbal-cue-rich medium.

Social exchange theory is governed by the norm of reciprocity. People want to maintain a resource balance and this motivation is stronger when a person is in a deficit in balance than when in a surplus (Blau 1964). We define contextual balance as the balance of resource levels accumulated within the context of a specific task. For example, in a group project, the one who has done most of work is in a surplus in the contextual balance. When one is already in a surplus, more status gain brings only a
diminishing marginal return (Blau 1964). The communicator would have a weaker motivation to further increase the surplus via nonverbal communication. For the one in a deficit, one is more motivated to restore the balance. Meanwhile, if one is in a surplus, one is less likely to increase the other party’s surplus via nonverbal communication. One would like to enjoy the surplus and wait for the other party to take initiatives to restore the balance. For the one in a surplus of love (i.e., showing more love to the other party), one might be less pressured to use nonverbal communication to enhance it. Therefore, we hypothesize:

H4: When one is in a surplus in contextual balance, self-status valence of a message will have a weaker effect on the choice of nonverbal-cue-rich medium than when one is in a deficit.

H5: When one is in a surplus in contextual balance, other’s status valence of a message will have a weaker effect on the choice of nonverbal-cue-rich medium than when one is in a deficit.

H6: When one is in a surplus in contextual balance, love valence of a message will have a weaker effect on the choice of nonverbal-cue-rich medium than when one is in a deficit.

3 RESEARCH METHOD

Vignette is often used in media choice research to describe various occasions in which a subject needs to make a decision (Sheer et al. 2004; Straub et al. 1998). Similar to experimental design, versions of the same basic vignette are randomly assigned to different respondents.

3.1 Vignettes Design and Data Collection

College students were used as our subjects. Given a vignette, a respondent was asked to list multiple real life names and randomly picked one as a communication partner. Then the respondent was asked to choose a communication medium based on the vignette description. A sample scenario is:

1. Scenario Description
GE2350 is one of your major courses. This course requires students to form two-person groups for the term project which accounts for 60% of the course grade. You have formed a group with [communication partner] since the beginning of this semester. It is now close to the end of the semester. 75% percent of the project work is contributed by you. [Communication partner] has contributed relatively less. Some major work still needs to be done to complete the project.

2. Communication Task
With effort, you have solved the toughest problem in the remaining part of the project. It is 12:30 pm Monday and you are at your usual place. You need to leave for another country for a two-week exchange program in 12 hours. You want to just inform [communication partner] and tell him/her “I have solved the toughest problem”, but you do not plan to explain the details involved in problem-solving at this moment.

Table 1 summarizes our manipulations of social valence of a message. For example, “The solution you came up with is genius” indicates a high other’s status, while “The solution you came up with is incorrect” indicates a low other’s status. The contextual balance was manipulated by the amount of work that was contributed by a communicator or the partner.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Value</th>
<th>Manipulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social valence of a message</td>
<td>Self-status high</td>
<td>I have solved the toughest part of the project.</td>
</tr>
<tr>
<td></td>
<td>Self-status low</td>
<td>I have not started the assigned part yet.</td>
</tr>
<tr>
<td></td>
<td>Other’s status high</td>
<td>The solution you came up with is genius.</td>
</tr>
<tr>
<td></td>
<td>Other’s status low</td>
<td>The solution you came up with is incorrect.</td>
</tr>
<tr>
<td></td>
<td>Love</td>
<td>I heard you got a cold. Take care!</td>
</tr>
<tr>
<td></td>
<td>Natural</td>
<td>I was told that we need to turn in a hardcopy for the project.</td>
</tr>
<tr>
<td>Balance</td>
<td>High</td>
<td>You have contributed 75% of the work.</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Your partner has contributed 75% of the work.</td>
</tr>
</tbody>
</table>

Table 1. Summary of Vignettes Variations
Based on the four independent variables, a total of 2 (contextual balance) * 6 (social valance) = 12 versions of vignette were designed. Student subjects were randomly assigned to one of the 12 versions. 294 valid questionnaires were returned. Among them, 66.7% respondents were 20-25 years old, 66.3% were male and 33.7% were female, 98.3% were undergraduates and 1.7% were postgraduates. Across all vignettes, 37.1% respondents chose face-to-face, 34.7% chose phone (mainly cell phone), 21.1% chose SMS, 4.4% chose Email, and 2.7% chose instant messaging.

3.2 Measurements Development

Our dependent variable was the choice of a communication medium. There were five media to choose: face-to-face (F2F), phone, email, short message service (SMS) and instant messaging (IM). Respondents were asked to select only one medium to initiate communication. Self-status valence, other’s status valence, love valence and contextual balance were measured with an instrument. Semantic differential scales were employed. The items for the main constructs are given in Table 2.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item No.</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self- or other’s status (Retting et al 1993)</td>
<td>SS1/OS1</td>
<td>(Greatly damage – Greatly enhance) your (or the other party’s) personal image</td>
</tr>
<tr>
<td></td>
<td>SS2/OS2</td>
<td>(Greatly decrease – Greatly increase) recognition of your (or the other party’s) personal accomplishments</td>
</tr>
<tr>
<td></td>
<td>SS3/OS3</td>
<td>(Much unlikely – Much likely) to make you (or the other party’s) be appreciated as an important person</td>
</tr>
<tr>
<td></td>
<td>SS4/OS4</td>
<td>(Decrease – Increase) confidence in your (or the other party’s) abilities</td>
</tr>
<tr>
<td>Love (Retting et al, 1993)</td>
<td>LOV1</td>
<td>This communication (can hardly – can strongly) increase the closeness and sense of belonging</td>
</tr>
<tr>
<td></td>
<td>LOV2</td>
<td>The message is (hardly – surely) an expression of friendliness and affection</td>
</tr>
<tr>
<td></td>
<td>LOV3</td>
<td>The message (hardly – surely) conveys warmth and tenderness</td>
</tr>
<tr>
<td>Contextual Balance</td>
<td>CB1</td>
<td>(I -- The other party) have/has made a big contribution.</td>
</tr>
</tbody>
</table>

Table 2. Main Variables Measurements

4 DATA ANALYSIS

4.1 Instrument Validation

To ensure instruments quality, convergent validity and reliability were assessed for constructs with multiple items through (1) Cronbach’s alpha, (2) composite reliability, and (3) average variance extracted (AVE). The convergent validity was found satisfactory. We further verified the discriminant validity of these constructs. As shown in Table 3, none of the correlations was greater than 0.5, suggesting satisfactory discriminant validity.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean-High (SD)</th>
<th>Mean-Low (SD)</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-status</td>
<td>0.64(0.75)</td>
<td>-0.21(1.18)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Love</td>
<td>5.02(1.06)</td>
<td>4.11(1.21)</td>
<td>.406**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Other’s status</td>
<td>1.41(0.62)</td>
<td>0.02(0.88)</td>
<td>.208**</td>
<td>.456**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4. Contextual balance</td>
<td>1.12(1.17)</td>
<td>-1.43(1.21)</td>
<td>.229**</td>
<td>-.063</td>
<td>-.289**</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3 Correlations

Although our analysis was not based on experimental design, we tested whether manipulations were effective to produce sufficient variance. Our manipulations were found successful.
4.2 Hypothesis Testing

Multinomial logistic regression is appropriate for testing hypotheses with categorical outcomes. The averages of items were used as factor scores for self-status (SS) valence, other’s status (OS) valence and love (LOV) valence of a message. These factor scores were then centralized. Single item was used to measure contextual balance (CB). The interaction terms CB*SS, CB*LOV, and CB*SS were computed based on centralized values.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Phone</th>
<th>Instant Messaging</th>
<th>Email</th>
<th>SMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-status valence (SS)</td>
<td>.003</td>
<td>.111</td>
<td>-.572</td>
<td>.265</td>
</tr>
<tr>
<td>Love valence (LOV)</td>
<td>-.158</td>
<td>.058</td>
<td>-.069</td>
<td>-.426**</td>
</tr>
<tr>
<td>Other’s status valence (OS)</td>
<td>-.273</td>
<td>-.667</td>
<td>-.823*</td>
<td>-.618**</td>
</tr>
<tr>
<td>Contextual balance (CB)</td>
<td>.062</td>
<td>-.477</td>
<td>.474</td>
<td>.204</td>
</tr>
<tr>
<td>CB * SS</td>
<td>.095</td>
<td>.240</td>
<td>.253</td>
<td>.071</td>
</tr>
<tr>
<td>CB * LOV</td>
<td>-.023</td>
<td>.046</td>
<td>-.155</td>
<td>-.056</td>
</tr>
<tr>
<td>CB * OS</td>
<td>-.006</td>
<td>.290</td>
<td>.211</td>
<td>-.092</td>
</tr>
</tbody>
</table>

* p<.10 , ** p<.05. F2F is the benchmark. Control variables are omitted for the interest of space.

Table 4. Individual Predictor Coefficients Estimate

A multinomial logistic model was fitted to the data. The statistical significance of individual regression coefficients is given in Table 4. Because face-to-face was used as a benchmark, these coefficients indicate the significance a variable in subjects’ choice between face-to-face and other media. Comparing electronic media with face-to-face, self-status valence coefficients was insignificant, hence H1 was not supported. The other’s status valence was a marginally significant predictor of the choice of email. The negative coefficient indicates that compared with face-to-face, email was less likely to be chosen when the other’s status valence of the message was high. Moreover, other’s status valence was also a significant predictor of the choice of SMS. The negative coefficient indicates that compared to face-to-face, SMS was less likely to be chosen. However, other’s status did not affect the choice of instant messaging and phone. As both email and SMS contain less nonverbal cues than face-to-face, we conclude that H2 was partially supported. Love valence of a message was a significant predictor of the choice of SMS. The negative coefficient indicates that compared with face-to-face, SMS was less likely to be chosen for a message of higher love valence. However, love valence did not affect the choice of instant messaging, email, and phone. Therefore, H3 was only partially supported. None of the interaction effect coefficients was significant; hence H4, H5, and H6 were not supported. The goodness of model fit can be measured with pseudo R². The Cox and Snell’s, Nagelkerke’s, and McFadden’s R² were .281, .304 and .127 respectively, indicating a reasonable fit.

5 DISCUSSION AND IMPLICATIONS

Our empirical findings provide only a partial support to our hypotheses. Other’s status valence of a message and love valence of a message had received support for their effect on the choice of nonverbal-cue-rich media. The more positive the other’s status or love valence of a message, the more likely a nonverbal-cue-rich medium is preferred. However, because media vary in their non-verbal-cue-richness, social goals affect the choices between leaner media (e.g., email and SMS) and face-to-face, but not between phone and face-to-face. The effects on instant message were not significant, presumably due the very few choices of this medium (2.7%) in the sample.

Contrary to our expectation, the effect of self-status valence on media choice was not supported. The interaction effect between the self-status valence and the contextual balance (H5), between the other’s status valence and the contextual balance (H6), and between the love valence and the contextual balance (H7) were not supported either. A possible explanation that applies to all these hypotheses is that the respondents might be involved in a communal rather than an exchange relationship. In a communal relationship, a person is concerned with the group welfare rather than individual welfare. This is because project grades are often given on a group basis without differentiating individual
contribution. For the group welfare, students chose to cooperate rather than compete. This motivation might have rendered our manipulation ineffective in affecting the desire to maintain a social balance.

Theoretically, our research findings align with Sheer and Chen (2004) that in determining individual’s media choice behavior, relational goals are important factors. Furthermore, we extend their study by applying the social exchange theory to identify self-status, other’s status and love as dimensions of social goals. We propose that the social motivation is partially accomplished in media choice because media are different in transmitting nonverbal cues which are important means to produce social resources in social exchange. In this light, our research complements the instrumental utility-orientation of extant research.

For practitioners, electronic communication is believed to change traditional organizational forms into virtual organizations and virtual teams. These forms have been identified as an emerging trend. Our research findings suggest that the substitution effect of CMC for face-to-face is limited to occasions when the communicator does not have a strong social motivation. However, in organizations, it is important to establish social relationships to facilitate teamwork. Therefore, even though technology has made online communication possible, it still cannot effectively build interpersonal relationships. It is important for managers to realize the potency of different technologies to effect social goals.

References