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HOW CAN I GET MY WAY? A STUDY OF PERSUASION STRATEGIES IN COMPUTER-MEDIATED COMMUNICATION

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Abstract

This paper investigates interpersonal persuasion strategies in text-based computer-mediated communication (CMC). Significant differences were found in perceived effectiveness of CMC vs. face-to-face communication (FTFC) for achieving interpersonal persuasion and for applying persuasion strategies of reward, punishment, logic, and emotion. The findings suggest that persuasion in CMC will emphasize different strategies than are typical in FTFC.

Introduction

Questions of whether and how CMC will affect interpersonal persuasion have not yet been answered by empirical study, and findings from studies conducted using face-to-face communication (FTFC) and mass media communication have proved difficult to generalize to the CMC domain (Wilson, Forthcoming). Research does show that message senders perceive CMC to be significantly different from FTFC in the level of support the medium provides for various tasks and for socialization (Wilson and Morrison, 1999; Wilson, Morrison, and Napier, 1997). In addition, message senders' persuasion goals have been linked with use of specific CMC system features, such as rich text formatting, in ways that have not been reported outside the CMC domain (Wilson and Zigurs, 2001). These findings suggest that the relationship between CMC and persuasion deserves expanded study. This paper investigates whether perceptions of effectiveness for different interpersonal persuasion strategies differ between FTFC and CMC.

In FTFC, persuasion entails communicating not only factual information, but also values, attitudes, and affective messages conveyed through a variety of mechanisms (Burgoon, Buller, and Woodall, 1994). In CMC, communication is conducted through a medium that mainly supports verbal cues in the form of written text. McGrath and Hollingshead write

> [W]ith various types of electronic communication, group members can communicate with one another by means of only a reduced set of modalities. Various channels—auditory, visual, nonverbal, paraverbal, and so on—are precluded. (1993, p. 81)

Media effects researchers have theorized that lack of nonverbal cues reduces the "richness" of the computer medium below that of other media, such as audio, video, and FTFC (Daft and Lengel, 1986; Trevino, Lengel, and Daft, 1987). According to this view, the "lean" CMC medium constrains transmission of nonverbal messages, presenting serious barriers to tasks that emphasize persuasion, such as decision-making and negotiation (McGrath and Hollingshead, 1993).

Empirical CMC research finds equivocal support for media effects theories. Early supporting studies report that, in comparison to FTFC, CMC decreases message comprehension (Daly, 1993; Siegel, Dubrovsky, and Kiesler, 1986), reduces group consensus (Daly, 1993), lowers satisfaction with the decision processes of the group and the results of group activities (Gallupe and McKeen, 1990), and increases negative behaviors, such as "flame" messages that contain derogatory statements and threats (Dubrovsky, Kiesler, and Sethna, 1991, Siegel et al. 1986). However, later research suggests that problems with CMC are mitigated as interpersonal relationships develop over time (Walther and Burgoon, 1992), that some findings were probably overstated to begin with (Walther, Anderson, and Park, 1994), and that CMC frequently is an effective mechanism for initiating close, lasting relationships (Parks and Floyd, 1996; Walther, 1996).

The equivocal findings of media effects research suggest the need to look beyond simple characteristics of the medium (Walther, 1997). One promising research stream studies how CMC is used by message senders to support specific aspects of communication, e.g., effects of interpersonal persuasion goals on appropriation of CMC system features (Wilson and Zigurs, 2001). The present study extends this line of research to address use of interpersonal persuasion strategies in CMC. In the following section, three related research questions are posed, and hypotheses are developed from them.

Hypotheses

Is it harder to persuade via CMC? There are two sides to this question. First, there is the issue of how persuasive message senders believe CMC to be, as this assessment will provide the basis for their subsequent actions. Second is the issue of actual effectiveness of CMC in persuading message recipients. Both these issues are interesting and deserve research, however, the present study focuses on the former issue of *perceived effectiveness* (hereafter abbreviated as PE). Perceptions are particularly relevant antecedents to a variety of important outcomes relating to effectiveness, e.g., satisfaction with CMC for a given purpose and subsequent decisions to use CMC.

Media effects theories suggest that message senders will perceive it to be more difficult to accomplish interpersonal persuasion using CMC than FTFC, based on the constraints CMC places on nonverbal communication. Admittedly, this comparison is somewhat artificial in that few people are likely to be limited in practice to persuading exclusively via CMC. However, it is important to test the issue within the design of the present study, if only to replicate prior research.

> *H1: FTFC has greater PE than CMC for achieving interpersonal persuasion.*

Which persuasion strategies are most important in CMC? The study of strategies in interpersonal persuasion, also called compliance-gaining strategies, is an offshoot of theoretical social power research (French and Raven, 1960). The concept of power associated with rewards and coercion provided a conceptual basis for the work of Marwell and Schmitt (1967), who developed a typology of 16 different persuasion strategies, including promises, threats, expertise, liking, debt, altruism, and esteem. Other researchers followed by developing their own strategy typologies, each with different theoretical and/or situational bases (e.g., Cody, McLaughlin, and Jordan, 1980; Miller, Boster, Roloff, and Seibold, 1977; Nelson, 1988; and Schenck-Hamlin, Wiseman, and Georgacarakos, 1982). Unfortunately, none of the resulting typologies proved to generalize well between different situations. For example, Cody et al. (1980) report that 44% to 72% of strategies their subjects created in response to a variety of new situations could not be categorized using Marwell and Schmitt's typology.

Probably the most important outcomes of interpersonal persuasion strategy research derive from empirical studies that attempted to reduce factors and isolate key dimensions of the phenomena. In a review of the literature in this area, O'Keefe writes

> We may classify strategies differently—and so have very different strategy lists—depending on which facet of strategies is of interest. Thus there is no one correct (or best, or most nearly correct) list of compliance-gaining strategies.... Rather, there are many different possible "strategy" classifications, each potentially useful for capturing a different dimension. (1990, p. 207)

Several important strategy dimensions have emerged. Based on the original typology of Marwell and Schmitt, Miller and Parks (1982) developed and validated a model with dimensions of reward-punishment (e.g., message contains positive outcomes vs. negative outcomes) and communicator-onus, in which the communicator manipulates promises and threats vs. recipient onus, in which the recipient is stimulated to respond, e.g., through altruism or debt. Falbo (1977) asked her subjects to write a paragraph about "How I get my way." From this she constructed an initial 16-item inventory and subsequently derived and validated two strategy dimensions. These are direct-indirect, where messages make assertions vs. hints, and rational-nonrational, where messages use logic vs. emotion. Concerned about the very general context used in Falbo's research, Wiseman and Schenck-Hamlin (1981) conducted a study that incorporated 10 separate persuasion situations. Their study isolated four dimensions that arose in some or all situations: explicitness of the communicator's intent (e.g., straightforward vs. vague); sanctions (e.g., rewards vs. punishments); locus of control (e.g., recipient treated as equal to communicator vs. communicator dominating recipient); and rationale (e.g., message is reasonable vs. unreasonable).

Although numerous strategic dimensions are identified in this literature stream, two themes are prominent and recurring. The first includes strategies of rewarding compliance, e.g., using promises and pregiving, vs. punishing noncompliance, e.g., using threats and aversive stimulation (Marwell and Schmitt, 1967; Miller and Parks, 1982; Schenck-Hamlin, Wiseman, and Georgacarakos, 1982). The second dimension includes strategies of rational arguments, such as reason and expertise, vs. nonrational arguments, such as emotion and altruism (Cody et al., 1980; Falbo, 1977; Schenck-Hamlin et al., 1982).

CMC is viewed as being qualitatively different from FTFC for a variety of activities. In a study of teams that developed software development projects over a three month period (Wilson et al., 1997), subjects were asked at the end of the project to rate the PE of CMC and FTFC for supporting generation tasks, choice tasks, and execution tasks—group task types theoretically defined by McGrath (1984)—and for supporting socialization. FTFC was rated more effective than CMC overall, however, significant interaction occurred among the studied activities. FTFC was rated as more effective for execution tasks and socialization than for generation tasks. CMC was rated as less effective for socialization, execution, and choice tasks than for generation tasks.

McGrath's theoretical definition of group tasks distinguishes between task types based on two dimensions: intellectual vs. behavioral and cooperation vs. conflict (1984). These distinctions suggest that the need for persuasion and effective persuasion strategies will depend to some degree on the nature of the task, e.g., tasks that emphasize cooperation vs. conflict. It is likely that similar dependencies exist between communication medium and persuasion strategies. One example may be seen in research involving socialization, a construct that is closely related to the *liking* strategy of Marwell and Schmitt's typology (1967). Findings show that PE for socialization differs between the two communication media (Wilson et al., 1997, Wilson and Morrison, 1999), suggesting that a similar effect will exist in PE of the media for supporting a liking strategy. Thus, there is reason to anticipate that FTFC and CMC communication media will differ in relative PE for different strategies, however, there is little precedent for predicting the direction of this interaction. For this reason, Hypothesis 2 is written in non-directional form.

> *H2: PE of communication medium interacts with interpersonal persuasion strategy.*

Are research outcomes dependent upon context? Context is the set of circumstances in which interpersonal persuasion occurs. It is not clear how important or pervasive context is in determining CMC system users' perceptions and subsequent selection of interpersonal persuasion strategies. In FTFC research, Cody and McLaughlin (1980) reported six context factors that significantly determined which strategies their subjects selected. These are intimacy, dominance, resistance, rights, personal benefits, and consequences. However, other studies found little association between context and strategy selection (e.g., Dillard and Burgoon, 1985). In CMC research, context has been shown to alter perceptions of system support for various aspects of socialization (Wilson and Morrison, 1999) and for choice and execution task types (Wilson and Morrison, 2000). It is apparent that context effects, if they exist in CMC, could have important ramifications for generalizability of findings from the present study. Hypothesis 3 is proposed as a means of assessing this issue as it relates to strategies.

> *H3: Context determines the relative PE of CMC vs. FTFC for applying interpersonal persuasion strategies.*

In the following section the research method is described. Results are then reported and implications and conclusions of the findings are discussed.

Research Method

The study was conducted using a within-group design to compare CMC and FTFC media and a between-groups design to study context effects. Measurements were taken using a post-treatment survey instrument.

CMC was operationalized using Eudora Pro software running under Windows 95 on Pentium PC computers. Eudora Pro is a popular communication application that supports text-based communications and features a graphical user interface conforming to Windows standards. Subjects were undergraduate students enrolled in three different information systems courses at a university located in the U.S. Midwest. Treatments were implemented over a three-month period as part of the requirements of three undergraduate courses in which students used FTFC and CMC. In two of the courses, the communication media were used to support team development of large software projects, one using third generation programming language (3GL) and the other using a database management system software (Database). In the third course, the communication media were used for general communication. Each course was taught by a different instructor and implemented a different curriculum. Pooled data were used for analyses related to the first two hypotheses.

To test effects of context as postulated in Hypothesis 3, data from the three courses were used for between-groups analysis. In the Database and the 3GL course, students participated in project teams of approximately four members over a three month period. During this time they used both FTFC and CMC to support their team projects. The treatment was designed to provide a context that is homogeneous between groups, and the database and 3GL groups are jointly referred to hereafter as *team context*.

The team context was contrasted with results from the third course, in which FTFC and CMC were used by students to interact with the instructor and other students and for receiving course materials. This treatment was designed to be heterogeneous to the team context and is referred to hereafter as *general context*. Assumption of heterogeneity is based on three of the context dimensions proposed by Cody and McLaughlin (1980):

- *Intimacy:* Work in the team context was more intimate than interaction in the larger group situation underlying the general context;
- *Personal benefits:* Students in the team context received 20% of course credit for their team projects, promising direct benefits from the associated communication; in the general context group no specific benefits were linked to communication;
- *Consequences:* Communication in the team context emphasized long term consequences involved in an ongoing project that focused on a specified deliverable; in the general context, communication was primarily short term due to variety and changing focus of the ongoing the course curriculum.

A measure was developed to assess PE of the communication medium for achieving interpersonal persuasion. Subjects' PE ratings are logical antecedents to a variety of important outcomes, such as satisfaction with CMC for achieving interpersonal persuasion and subsequent decision to use CMC. Survey items related to this construct were developed from prior interpersonal persuasion research conducted in the FTFC domain (Dillard, Segrin, and Harden, 1989). Survey items also were developed for reward and punishment strategies, representing the reward-punishment dimension, and for logic and emotion strategies, representing the rational-nonrational dimension.

Measurement was made by administering a survey instrument following the treatment period. The instrument posed a question in one of two forms, depending on the context of the treatment:

- *Team context:* Based on your experiences with computer-mediated communication and face-to-face communication in your project team, how effective do you feel each communication method is for the following activities?
- *General context:* Based on your experiences with computer-mediated communication and face-to-face communication in this course, how effective do you feel each communication method is for the following activities?

The question was followed on the instrument by the survey items.

- *Interpersonal persuasion items:* Influencing someone to get what you want; motivating someone to do their part in a group; task; and getting someone to do a favor for you
- *Reward strategy item:* Persuading others by offering rewards
- *Punishment strategy item:* Persuading others by threatening negative consequences
- *Logic strategy item:* Using a logical argument to get what you want
- *Emotion strategy item:* Using an emotional argument to get what you want

Each item was accompanied by a five-position scale for rating PE of each communication medium for that item. The rating scale was labeled at the endpoints with 1 marked "Very Ineffective" and 5 marked "Very Effective".

Results

Data were analyzed for completeness in responses to test items. Two subjects did not mark responses to all the items, and these were removed from subsequent analysis, resulting in 56 subjects in the 3GL team context group, 34 in the database team context group, and 60 in the general context group. The data were screened for outliers, particularly for those indicating reverse marking on the scale, i.e., consistently marking 1 instead of 5 to indicate "Very Effective". No extreme outliers or reverse-marked scales were found in the data.

Hypothesis 1 tested the PE of each communication medium for achieving interpersonal persuasion. A three-item instrument was used to measure this relationship, and the results were analyzed using paired t-tests. The mean PE score for FTFC (average rating = 4.58) was significantly higher than for CMC (average rating = 3.20), supporting Hypothesis 1 (t = 17.71, p < 0.001, paired t-test, two-tailed, 149 df).

Hypothesis 2 investigated dependencies between four interpersonal persuasion strategies comprising two strategy dimensions and the PE of the communication medium. Using repeated-measures ANOVA, significant interaction effects were found between strategy and medium (see Figure 1). Follow-up contrasts indicate the interactions stemmed exclusively from the rational-nonrational strategy dimension. For logic and emotion strategies, PE received high ratings for FTFC and low ratings for CMC. In CMC, the directional strategies of reward and punishment assumed greater prominence than was the case in FTFC. These findings support Hypothesis 2.

The data were analyzed for each of the four strategies using repeated measures ANOVA. In order to identify the source of variance in those analyses where interaction occurred, planned contrasts were conducted within the team context, i.e., between

the two team context groups, and between general and team contexts (see Figure 1). Significant interaction between the context and PE of the communication medium resulted from analysis of the reward and logic strategies. Subsequent contrasts indicate both interactions arose from differences between context groups, as hypothesized. Mean PE ratings of CMC for reward strategy were 3.92 for the general context vs. 3.38 for the team context; ratings for logic strategy were 3.52 for the general context and 2.71 for the team context. The findings support Hypothesis 3.
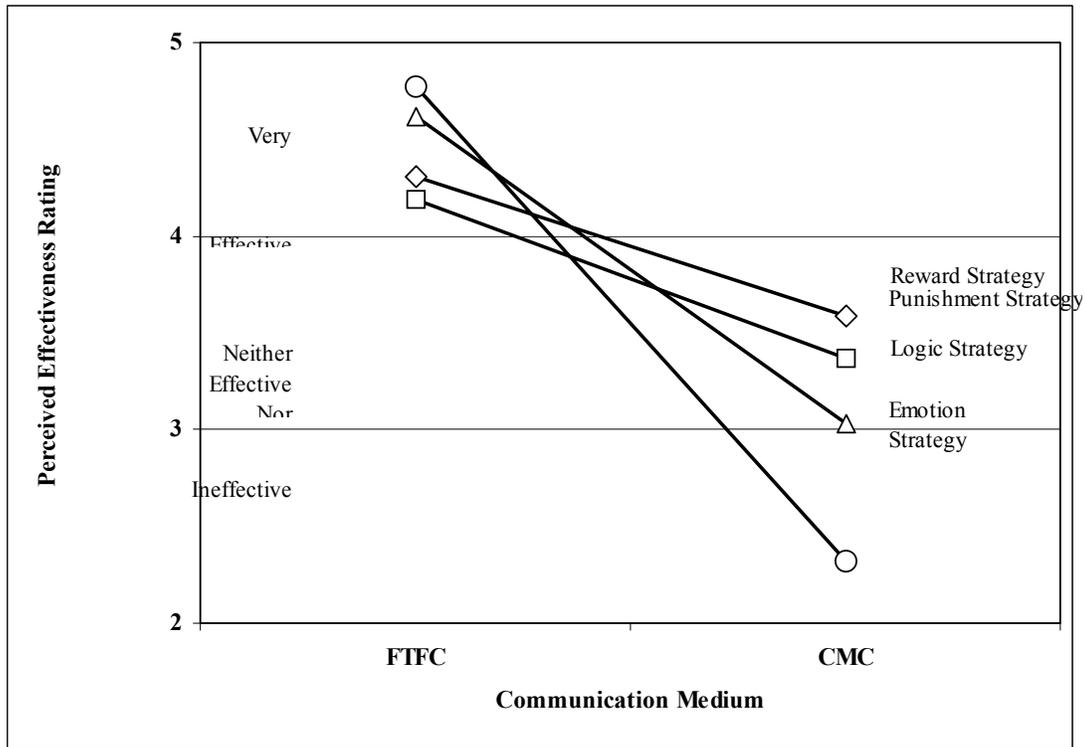

Figure 1. PE Hierarchy of Communication Media for Interpersonal Persuasion Strategies

Discussion

The results suggest a number of interesting implications. First, there is the issue of relative effectiveness, where results show CMC is perceived to be substantially less effective than FTFC for achieving persuasion as well as for applying persuasion strategies. Subjects in the present study used CMC actively for at least three months prior to measurement, so the findings cannot be attributed strictly to novelty, although such differences may be reduced over time, as suggested by Walther and Burgoon (1992). In addition, the results are not likely to be part of an overarching deficiency in CMC, as at least one study has reported activities for which CMC and FTFC are perceived to have similar effectiveness (Wilson et al., 1997). Thus, it seems likely that the perceptions reported in the present study form relatively stable and specific attitudes that users will act upon in determining their use of CMC systems in the future. The results imply that CMC users find it more difficult to accomplish activities that require interpersonal persuasion, and this may help explain why CMC is perceived to be less effective in supporting negotiation, choice, and execution tasks than generation tasks, as reported by Wilson and Morrison (2000). This implication cautions against wholesale replacement of FTFC with CMC where there is a mix of tasks, as CMC users are likely to become frustrated with perceived constraints. Note that this statement is not meant to condemn CMC or to deny organizations the cost benefits inherent in the medium; rather, the results suggest only that CMC not be oversold as a complete replacement for FTFC.

Second, the results raise concerns regarding the distinctive hierarchy of strategies that emerged for CMC vs. FTFC. A striking difference was found between measures of the rational-nonrational dimension within the two media. In FTFC, average PE of this dimension was rated 4.64 vs. 2.67 in CMC. It might be anticipated that emotion would rate poorly in CMC, in light of close ties of emotion to nonverbal communication, which is inherently constrained by this medium. However, the very low ratings attached to logic strategies in CMC suggest that rational communication is perceived to require a larger palette than is provided by written words, at least in the studied contexts. Whether this is due to slow speed of keyboard entry vs. speech, cognitive differences

between writing and speaking, or a lack of immediate feedback is not clear, and this issue would benefit from further study. High ratings occurred in FTFC for both emotion and logic, suggesting the persuasion process, i.e., how persuasion is accomplished, was more important to the subjects of the present study than the particular direction of the persuasion attempt, i.e., positive or negative direction. In the reward-punishment dimension, smaller mean differences and no significant interaction were found between CMC and FTFC, indicating that, overall, subjects felt relatively unhindered by CMC technology in this dimension.

The third issue concerns the role of context in determining persuasion strategies. Context frequently is cited as a key factor in studies of persuasion strategy selection (see reviews by O'Keefe, 1990; Perloff, 1993) and has been identified as an important determinant to PE in CMC research studying socialization (Wilson and Morrison, 1999) and tasks (Wilson and Morrison, 2000). The present study applied several of the situational perception factors identified by Cody and McLaughlin (1980) to develop distinct contexts for testing Hypothesis 3.

Two significant context effects emerged. In applying reward strategies via CMC, the team context group showed lower PE ratings than the general context group. Use of rewards, e.g., as *quid pro quo*, is important in attempts to achieve personal benefits, a contextual characteristic that applies primarily to the team context. The lower ratings may result from the reduced *variety* of rewards that are feasible when using CMC, e.g., it is not possible to give someone a physical "pat on the back" via CMC. Alternatively, lower ratings may result from reduced immediacy in CMC, e.g., delivery of tangible rewards typically must be delayed when these are promised via CMC. However, further study will be required to test these explanations.

The team context also produced significantly lower PE ratings for applying logic strategies via CMC. Cody et al. note that logic strategies involve "justifying one's compliance request (reason), or providing a rationalization or some supporting argument" (1980, p. 44). Arguably, the team context required greater use of logic strategies than the general context. Although logic strategies emphasize informational content and appear for this reason to be well adapted to text-based communication, the lower ratings of CMC in this category may reflect difficulties that emerge for users in anticipating and supplying justifications in the absence of immediate feedback. Testing this idea would be an interesting topic for future research.

Context effects that arose from the present study are significant and interesting. Unlike the results found for the pooled data, interactions between context were not limited to a single strategy dimension. This finding suggests that it will be difficult to predict exact effects of context in strategy research. This is not surprising, as similar findings have been reported by researchers studying socialization (Wilson and Morrison, 1999) and task types (Wilson and Morrison, 2000).

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