Perceived effectiveness of interpersonal persuasion strategies in computer-mediated communication

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Abstract

This paper investigates interpersonal persuasion strategies in computer-mediated communication (CMC), a topic that has received little prior attention. Significant differences were found in perceived effectiveness of asynchronous, text-based CMC vs. face-to-face communication (FTFC) for achieving interpersonal persuasion in general and for applying persuasion strategies of reward, punishment, logic, and emotion. Findings of the study indicate that different persuasion strategies are emphasized in CMC than in FTFC, implying that need to persuade is an important factor in choosing effective media for a given communication.

Keywords: Computer-mediated communication; Interpersonal persuasion; Interpersonal influence; Interpersonal communication

1. Introduction

With the continued proliferation of computer-mediated communication (CMC) applications, such as e-mail, it is a foregone conclusion that we will use these new media in our attempts to persuade others, a process termed interpersonal persuasion.

Interpersonal persuasion occurs when two or a few people interact in a way that involves verbal and nonverbal behaviors, personal feedback, coherence of behaviors (relevance fit of remarks and actions), and the purpose (on the part of at least one interactant) of changing the attitudes and/or behaviors of the
other(s). This definition separates interpersonal persuasion from mass media persuasion, in which personal feedback and coherence are not present (Reardon, 1991, p. 112).

Questions of whether and how CMC will affect interpersonal persuasion have not yet been answered by an empirical study, and findings from studies conducted in domains of face-to-face communication (FTFC) and mass media communication have proved difficult to generalize to the CMC domain (Wilson, 2002). It is clear that CMC affects key characteristics of interpersonal persuasion, such as communication of nonverbal cues (McGrath & Hollingshead, 1993), and differences between CMC and FTFC have been shown to affect outcomes in studies of related topics. For example, message senders perceive CMC to be significantly different from FTFC regarding the pattern of support it offers for various tasks and socialization (Wilson & Morrison, 1999, 2000; Wilson, Morrison, & Napier, 1997) and the mechanisms that are considered effective in achieving influence goals (Wilson & Zigurs, 2001). While certainly not definitive, these findings suggest the process of interpersonal persuasion deserves additional study specific to the CMC domain.

2. Background

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

With 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 (McGrath & Hollingshead, 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 & Lengel, 1986; Trevino, Lengel, & 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 & Hollingshead, 1993).

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

The equivocal findings of media-effects research suggest there is a need to explore alternative explanations for differences observed between CMC and FTFC using research designs that 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, for example, effects of interpersonal persuasion goals on appropriation of CMC features (Wilson & Zigurs, 2001). This study extends this line of research to address use of interpersonal persuasion strategies in asynchronous, text-based CMC. In the following sections, three related research questions are posed, and hypotheses are developed from them.

3. Research questions

3.1. Interpersonal persuasion and CMC

3.1.1. Is it harder to persuade via CMC?

There are two sides to this question. First, there is the issue of actual effectiveness of CMC in persuading message recipients, i.e. the primary attribute of persuasion. Media-effects theories predict that CMC will be a poor medium for persuasion because it restricts nonverbal cues. However, empirical studies find persuasiveness of CMC is equivalent to that of printed text (Hill & Monk, 2000), telephone (Citera, 1998), and FTFC (Citera, 1998; Matheson & Zanna, 1989), providing little basis to recommend one medium over another for persuasion purposes. The present study focuses on a second issue, how persuasive message senders perceive CMC to be. This is conceptualized as the perceived effectiveness of the medium (hereafter abbreviated as P-E). It is appropriate to measure system users’ perceptions when these are likely to determine their subsequent actions, relative to other attributes of a system. Moore and Benbasat write,

Primary attributes are intrinsic to an innovation independent of their perception by potential adopters. The behaviour of individuals, however, is predicated by how they perceive these primary attributes. Because different adopters might perceive primary characteristics in different ways, their eventual behaviours might differ. This is the root of the problem of using primary characteristics as research variables (Moore & Benbasat, 1991, p. 194).

Media-effects theories propose that CMC limits the range and variety of persuasion strategies that are available for use, for example, strategies that employ nonverbal cues. If this is the case, it is likely that message senders will perceive it to be
more difficult to attempt interpersonal persuasion using CMC than FTFC, regardless of the actual outcomes of their attempts. Admittedly, this comparison is somewhat artificial in that relatively few people actually are limited to persuading exclusively via CMC. Nonetheless, it is important to test this issue within the design of the present study.

**H1.** FTFC has greater P-E than CMC for achieving interpersonal persuasion.

### 3.2. Persuasion strategies

#### 3.2.1. 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 & 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, & Jordan, 1980; Miller, Boster, Roloff, & Seibold, 1977; Nelson, 1988; Schenck-Hamlin, Wiseman, & Georgacarakos, 1982). Unfortunately, none of the resulting typologies proved to generalize well to situations outside the research context. For example, Cody et al. (1980) report that 44–72% 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 Marwell and Schmitt’s original typology, 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, for example, 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 the message makes assertions vs. hints, and rational–nonrational, where the message uses logic vs. emotion. Concerned about the very general design of Falbo’s research, Wiseman and Schenck-Hamlin...
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 strategy dimensions are identified in this literature stream, two themes are prominent and recurring. The first includes strategies of rewarding compliance, for example, using promises and pregiving, vs. punishing non-compliance, for example, using threats and aversive stimulation (Marwell & Schmitt, 1967; Miller & Parks, 1982; Schenck-Hamlin et al., 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 by users 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 P-E 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 in supporting tasks and socialization, 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 (see Fig. 1).

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 imply that the need for persuasion in the course of com-

![Fig. 1. P-E of communication media for tasks and socialization (Wilson et al., 1997).](image-url)
pleting the task will depend to some degree on the nature of the task, for example, emphasizing cooperation vs. conflict. Such dependencies could explain task-based differences in users’ perceptions of CMC vs. FTFC that have been reported (Wilson & Morrison, 2000; Wilson et al., 1997). Similar dependencies may exist between communication media and persuasion strategies. In research involving socialization, a construct that is closely related to the liking strategy of Marwell and Schmitt’s typology (1967), P-E for socialization was found to differ between the two communication media (Wilson & Morrison, 1999; Wilson et al., 1997). This suggests that a similar effect will be found in P-E of the media for supporting a liking strategy. Thus, there is reason to anticipate that FTFC and CMC communication media will differ in relative P-E among various 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.** P-E of communication medium interacts with interpersonal persuasion strategy.

### 3.3. The role of context

#### 3.3.1. 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 users’ perceptions or their 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 find little association between context and strategy selection (e.g. Dillard & Burgoon, 1985). In CMC research, context has been shown to alter perceptions of system support for choice and execution task types (Wilson & Morrison, 2000) and for various aspects of socialization (Wilson & Morrison, 1999). If context effects exist in CMC, these 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 persuasion strategies.

**H3.** Context determines the relative P-E 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.

### 4. Research method

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

CMC is an umbrella term for media with a wide range of uses and capabilities. CMC includes some applications that are used asynchronously and others that are used synchronously, and recent CMC applications have been developed that incorporate graphical messaging and online video capabilities in addition to text-based messaging. This diversity of uses and capabilities presents a challenge to researchers seeking to study overarching effects relating to CMC, as no single application completely represents the full range of CMC uses and capabilities. In the present study, the decision was made to focus on asynchronous, text-based CMC, of which e-mail is the best-known example. Although this medium may appear simplistic in light of more recent innovations, such as online video chat applications, email has become an enormously popular and important way to communicate. Over 100 million Americans now use e-mail, twice the number who use instant messaging, and e-mail is being used for a steadily increasing range of activities (Horrigan & Rainie, 2002a). Even where users have high-speed broadband access, e-mail continues to be selected over other forms of CMC (Horrigan & Rainie, 2002b). Thus, research focusing on asynchronous, text-based CMC is likely to be relevant to the majority of current CMC users.

In this study, CMC was operationalized using Eudora Pro software running under Windows on Pentium PC computers. Eudora Pro is a popular e-mail application that supports asynchronous, text-based communications and features a graphical user interface conforming to Windows standards.

4.1.1. Subjects

Subjects were undergraduate students enrolled in three different information systems courses at a university located in the US Midwest. Participation in the study was a part of course requirements as reviewed and approved by the University Human Subjects Committee.

4.1.2. Treatments

Treatments were implemented over a 3-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. No students were members of more than one of the courses. 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 3-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 had minimal direct consequences to subjects.

### 4.1.3. Measurement

Subjects’ P-E of a communication medium is a logical antecedent to a variety of important outcomes, such as satisfaction with the medium for achieving interpersonal persuasion and the decision to use the medium at a future time. A measure was developed to assess P-E of CMC and FTFC media for achieving interpersonal persuasion. Survey items related to this construct were developed from prior interpersonal persuasion studies conducted in the FTFC domain (e.g., Clark & Delia, 1979; Dillard, Segrin, & 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, 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 P-E 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”.

5. Results

5.1. Statistical methods

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.

5.1.1. Interpersonal persuasion

Hypothesis 1 tested the P-E of each communication medium for achieving interpersonal persuasion. The mean P-E score for FTFC (4.58) was significantly higher than for CMC (3.20), supporting Hypothesis 1 (paired t-test, t = 17.71, P < 0.001, two-tailed, 149 d.f.).

5.1.2. Interaction of strategy with communication medium

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

5.2. Context and strategy

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...
Table 2; Fig. 3). Interaction between the context and P-E 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. No significant differences were found between the two team context groups. Mean P-E ratings of CMC for reward strategy were 3.92 for the general context vs. 3.38 for the combined team context; ratings for logic strategy were 3.52 for the general context and 2.71 for the combined team context. The findings support Hypothesis 3.

Table 1
Repeated measures ANOVA and planned contrasts: P-E of communication media for applying interpersonal persuasion strategies

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>d.f.</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium: FTFC vs. CMC</td>
<td>1</td>
<td>310.11</td>
<td><em>P &lt; 0.0001</em></td>
</tr>
<tr>
<td>Strategy</td>
<td>3</td>
<td>13.28</td>
<td><em>P &lt; 0.0001</em></td>
</tr>
<tr>
<td>Medium×Strategy</td>
<td>3</td>
<td>61.58</td>
<td><em>P &lt; 0.0001</em></td>
</tr>
</tbody>
</table>

Strategy contrast

<table>
<thead>
<tr>
<th></th>
<th>d.f.</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reward vs. Punishment</td>
<td>149</td>
<td>0.74</td>
<td><em>P &gt; 0.05</em></td>
</tr>
<tr>
<td>Reward vs. Logic</td>
<td>149</td>
<td>6.22</td>
<td><em>P &lt; 0.0001</em></td>
</tr>
<tr>
<td>Reward vs. Emotion</td>
<td>149</td>
<td>13.50</td>
<td><em>P &lt; 0.0001</em></td>
</tr>
<tr>
<td>Punishment vs. Logic</td>
<td>149</td>
<td>4.46</td>
<td><em>P &lt; 0.0001</em></td>
</tr>
<tr>
<td>Punishment vs. Emotion</td>
<td>149</td>
<td>11.16</td>
<td><em>P &lt; 0.0001</em></td>
</tr>
<tr>
<td>Logic vs. Emotion</td>
<td>149</td>
<td>6.02</td>
<td><em>P &lt; 0.0001</em></td>
</tr>
</tbody>
</table>

Fig. 2. P-E of communication media for interpersonal persuasion strategies.
6. 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 3 months prior to measurement, so the findings cannot be attributed strictly to novelty.

Table 2
Repeated measures ANOVA and planned contrasts: P-E of communication media by strategy, within and between contexts

<table>
<thead>
<tr>
<th>Construct</th>
<th>Factor</th>
<th>$F$</th>
<th>Significance</th>
<th>Eta$^2$</th>
<th>Planned contrasts$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reward strategy</td>
<td>Medium</td>
<td>55.38</td>
<td>$P &lt; 0.001$</td>
<td>0.274</td>
<td>not significant Within context: $P = 0.012$</td>
</tr>
<tr>
<td></td>
<td>Medium by context group</td>
<td>3.50</td>
<td>$P = 0.05$</td>
<td>0.045</td>
<td></td>
</tr>
<tr>
<td>Punishment strategy</td>
<td>Medium</td>
<td>36.89</td>
<td>$P &lt; 0.001$</td>
<td>0.201</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medium by context group</td>
<td>0.77</td>
<td>Not significant</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>Logic strategy</td>
<td>Medium</td>
<td>169.65</td>
<td>$P &lt; 0.001$</td>
<td>0.536</td>
<td>not significant Within context: $P = 0.011$</td>
</tr>
<tr>
<td></td>
<td>Medium by context group</td>
<td>9.70</td>
<td>$P &lt; 0.001$</td>
<td>0.117</td>
<td></td>
</tr>
<tr>
<td>Emotion strategy</td>
<td>Medium</td>
<td>496.46</td>
<td>$P &lt; 0.001$</td>
<td>0.772</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medium by context group</td>
<td>0.33</td>
<td>Not significant</td>
<td>0.004</td>
<td></td>
</tr>
</tbody>
</table>

$^a$ Helmert contrasts were used to compare within context (team vs. team) and between contexts (general vs. team) where significant interaction resulted from ANOVA.

Fig. 3. Perceived effectiveness by context.
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) and other studies find actual persuasiveness of CMC to be similar to FTFC and other media (Citera, 1998; Hill & Monk, 2000; Matheson & Zanna, 1989). 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 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 for the two media. In FTFC, average P-E 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 restricted by CMC. 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 P-E ratings of FTFC for both emotion and logic suggest aspects of the persuasion process, i.e. how persuasion is accomplished, were 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 subjects considered themselves to be 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 of P-E in CMC research studying tasks (Wilson & Morrison, 2000) and socialization (Wilson & Morrison, 1999). This study applied several of the context dimensions 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 P-E ratings than the general context group. Use of rewards, for example, as quid pro quo, is important in attempts to achieve
personal benefits, a 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, for example, 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, for example, delivery of tangible rewards typically must be delayed when these are promised via CMC.

The team context also produced significantly lower P-E 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 effects a priori relating to contexts that have yet to be studied. However, it is reassuring that the interaction effects found between context are relatively small compared to main effects between communication media (see eta² measures in Table 2). Thus, the findings provide some support for anticipating that the major effects found in interpersonal persuasion strategy research in CMC will be generalizable among contexts.

Taken as a whole, the findings suggest that the need to persuade should be viewed as an important factor in the decision of which medium to use for a given communication. On the surface, this may appear to be a trivial observation, as people naturally tend to gravitate toward FTFC when dealing with issues that emphasize interpersonal persuasion, such as dealing with problems and sensitive issues in the workplace (Fallows, 2002). However, under many circumstances, our choice of communication medium is dictated by others rather than being made at the personal level. For example, asynchronous, text-based CMC applications are promoted as near-ideal communication media for distance education (DE) courses (Wilson et al., 1997), but incorporating CMC into DE courses largely eliminates students’ choice of communication medium. Findings of the present study suggest this will impair students’ perceptions of their ability to persuade their classmates in comparison with classes conducted via FTFC. This impairment may be acceptable in lecture-based courses but could have very negative ramifications in courses involving team projects or other activities that require persuasion, for example, negotiation, motivation, leadership, and self-organization (Wilson, 2002; Wilson et al., 1997). In situations characterized by strong need to persuade, the findings suggest that it is necessary to augment CMC to provide the ability for users to carry out a full range of persuasion strategies.
6.1. Limitations

Limitations in this study include the following. Because the research focuses on asynchronous, text-based CMC, it is not clear that the findings will generalize well to applications of CMC for synchronous communication, for example, instant messaging and computer chat, or with capabilities that transcend text-based messaging, for example, graphical messaging and online video. Synchronous use and extended messaging capabilities increase feedback in communication, an important factor in interpersonal persuasion (Reardon, 1991) that could mitigate the low P-E found for CMC in this study. Although the treatment period utilized was of 3-months duration, it is possible that perceptions of effectiveness regarding CMC could change over a longer period. Therefore, caution is suggested in applying the findings to long-term CMC users. In addition, numerous strategy dimensions also have been proposed that it was not possible to test in this study. Alternate strategies and other factors in persuasion, such as influence goals, may prove more important in understanding interpersonal persuasion in CMC than the dimensions that were chosen for this study.

7. Conclusions

This study drew from a long stream of research in persuasion strategies to test perceived differences between FTFC and CMC media. Although no validated theory of interpersonal persuasion strategies has yet emerged, a number of typologies and predicted relationships were available to guide this research. Important differences were found between FTFC and CMC regarding which persuasion strategies were viewed to be effective as well as some effects relating to context. Overall, the findings indicate that need for persuasion is an important factor in choosing communication media and suggest that the study of interpersonal persuasion in CMC is a fertile area for future research.

References


