

COMPUTER-MEDIATED PERSUASION:
EMOTICONS AS A PROXY FOR
NONVERBAL BEHAVIOR

by

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A THESIS

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ABSTRACT

The current research examined whether or not emoticons (in this case, smiley faces) could be used as proxies for nonverbal behavior when inserted into email discussions. Specifically, previous research has suggested that women who are more communal and focused on forming interpersonal bonds may not be able to form such bonds easily when communicating via email due to the lack of nonverbal cues (Guadagno & Cialdini, 2002; 2007). It was predicted that by inserting emoticons into a persuasive email communication, women would be more open to persuasion compared to women who saw no emoticons, whereas we did not expect this to matter for men. A total of 98 (47 men, 51 women) undergraduate students completed the study. Contrary to predictions, results indicated that using a verbal equivalent of the emoticon in an email discussion actually produced more favorability towards the message for both men and women. Additionally, results indicated that individuals' level of femininity predicted attitude towards the topic. Also, the verbal equivalent proxy affected positive mood, which may also help explain the results. Implications for persuasion via email will be discussed.

LIST OF ABBREVIATIONS AND SYMBOLS

α	Cronbach's index of internal consistency
F	Fisher's <i>F</i> ratio: A ration of two variances
LSD	Fisher's least significant difference
M	Mean: the sum of a set of measurements divided by the number of measurements in the set
SD	Standard deviation
N	Sample size
n	Sample size for group
<i>p</i>	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
<i>b</i>	Unstandardized regression coefficient
<i>t</i>	Computed value of <i>t</i> test
<	Less than
=	Equal to

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INTRODUCTION

Since the 1990s, social interaction via the Internet has been and continues to be a popular topic of study (Bargh & McKenna, 2004). In today's society it is the norm to chat with others using text-based messaging (Rainie, 2005, November). For instance, about 73% of American adults use the Internet and believe that it has improved the way they are able to get information and communicate. Furthermore, on any given day about 52% of American Internet users are engaged in communication via email. Additionally, about 53% of adults use instant messaging (Shiu & Lenhart, 2004, September). Within seconds such communications allow one to communicate with friends, colleagues, relatives, etc. Advancements in technology including the introduction of the Internet, cell phones with Internet capabilities, wireless technologies (i.e. Bluetooth) have provided people with more variability in communication options, greater mobility, and efficiency in communicating with many others.

Text-based computer-mediated communication (CMC) such as email and instant messaging, facilitate interpersonal interaction, but in ways that differ from everyday face-to-face interactions and even from other communication mediums (i.e. telephone). Specifically, CMC allows for asynchronous, non-present communication (Di Blasio & Milani, 2008). In other words, all members of an interaction or communication are not necessarily present in the same physical location, and the interaction does not need to take place in real time. Additionally, individuals may maintain a somewhat self-selected level of anonymity when communicating with others through CMC (Bargh & McKenna, 2004). That is, one can choose how much personal information to reveal or not to reveal during text-based communications. Hence, CMC

may result in an impoverished or less rich interaction since it restricts important nonverbal information and cues that may normally be available in face-to-face interactions (Sproull & Kiesler, 1986). More specifically, text-based communications may suffer or may be less meaningful due to the increased difficulties in interpreting the nuances of the conversation since nonverbal cues such as facial expressions or tone of voice, and other cues that are important to social interactions such as social status cues (attire, posture, proximity during interaction, etc.) may be restricted (Guadagno & Cialdini, 2007). Previous research has found that women, in particular, may be particularly sensitive to the restriction of nonverbal cues and in consequence may be less open to text-based persuasive messages (Guadagno & Cialdini, 2002; 2007). This purpose of this paper is to examine communication modality effects on persuasion by testing the effect of proxies for nonverbal behavior (such as the use of emoticons) in text-based persuasive communications. Specifically, we aim to examine whether the use of emoticons in a persuasion setting will be an effective means of persuading women over email.

Restricted Approaches to Computer-Mediated Communication

Classic theories of computer-mediated communication are built upon the assumption that the mediated nature of the computer results primarily in negative interpersonal effects due to the impersonal nature of that medium (Tanis & Postmes, 2007). For instance, Social Presence Theory emphasizes the salience of the communicator as central to an online interaction (Ramirez & Zhang, 2007). As such, the level of communicator salience directly depends on the amount of cues (such as non verbal signals like facial expression) available through a medium (Short, Williams, & Christie, 1976). That is, social presence is less salient in computer-mediated communications where there are a limited number of cues available, and this ultimately has an

effect on the interpersonal interaction such as reduced liking for an interaction partner (Ramirez & Zhang, 2007).

Similarly, the Social Context Cues and the Reduced Cues Approaches propose the importance of status and position cues in electronic communication, suggesting that the absence of such cues and depersonalizing nature of the computer leads to greater anonymity and less focus on the self, which consequently can lead to a deprived interaction (Kiesler et al., 1984). Additionally, such approaches emphasize the importance of nonverbal cues in determining how to interact or behave appropriately in a given context (Sproull & Kiesler, 1986). When cues are limited or unavailable, individuals tend to act in ways that are self-focused and unregulated (Sproull & Kiesler, 1986).

Other cues filtered-out approaches assume that individuals do not engage in normal impression formation of their interaction partner(s) as they would in a face-to-face interaction because the modality causes attention to switch to the self and also the task at hand (Ramirez & Walther, 2002). Additionally, the Cuelessness model utilizes a similar approach, in which the absence of nonverbal cues and identity markers leads to more impersonal interactions and communication (Rutter, 1987). Indeed, Rutter et al. (1981) demonstrated that settings which differed in cuelessness, resulted in differences in conversation, such that more cueless settings (lacking transmission of cues) led to more task-focused and impersonal conversation, as well as conversation that lacked spontaneity.

The Uncertainty Reduction Theory (URT) provides additional insight on the importance of nonverbal information in interactions (Tanis & Postmes, 2007). Specifically, one of the main goals in an interaction is said to be the reduction of uncertainty and ambiguity (Berger & Calabrese, 1975). According to the URT, individuals attempt to reduce their uncertainty in a

situation to a more acceptable or comfortable level, which allows for successful and understandable interactions to occur (Goldsmith, 2001). Consequently, individuals rely on the exchange of information (which may include nonverbal cues) to reduce uncertainty in interactions (Tanis & Postmes, 2007). That is, one may use status cues such as appearance (i.e., attire or posture) to form an impression or make a judgment of the communication partner thus reducing the level of uncertainty about that partner (Berger & Calabrese, 1975). Accordingly then, restriction of cues may have a particularly negative impact the ability to form accurate impressions, and to hence reduce levels of uncertainty.

Each of these different approaches assume that the physical visibility, presence, and proximity of interaction partners will not only provide necessary nonverbal information needed for communication, but will ultimately foster better interpersonal interactions as compared to restricted communications such as computer-mediated communications (Tanis & Postmes, 2007). The upshot of each approach is the same: that computer-mediated communication is a less rich modality in that it restricts important nonverbal information as compared to face-to-face interactions which allow important interpersonal cues such as facial expression, body language, tone of voice, and so on to be detected. Accordingly, computer-mediated communications will lead to more impoverished personal interactions, where face-to-face communications will result in more personal and successful interactions.

Current Approaches in Computer-Mediated Communication

While earlier models of CMC emphasized “restricted cues” and resulting deficiencies in interpersonal communication, more contemporary theories focus less on the individual level and more so on the social and group level (Tanis & Postmes, 2007). Specifically, the Social

Identity/Deindividuation (SIDE) model (Spears & Lea, 1992) places an emphasis on the way in which individuals adapt in interactions that lack social information (Becker & Stamp, 2005).

The SIDE model acknowledges that social group memberships, whether implied or actual, are important in conveying social information about an individual (Becker & Stamp, 2005; Postmes & Spears, 2002). The model proposes that when cues are limited in interactions, individuals become more responsive to categorization cues such as gender (Lee, 2007). That is, when nonverbal information that may be important to impression formation about others is restricted, people come to focus more on “stereotypical characteristics” of themselves and others. Since the computer restricts nonverbal cues and information, individuals may behave and act in ways more consistent with stereotypes (Lee, 2007). In other words, in mediated interactions when little cues may be available, people are more likely to seek information from whatever cues are available and will specifically focus on their own individual characterizations/group memberships (i.e. gender or ethnicity). In turn, they will be more likely to behave more consistently with those characterizations, leading to others perceiving this consistency as well (Postmes & Spears, 2002).

Despite the different approaches (even considering approaches that challenge earlier restricted cues models, such as the SIDE model), it is apparent that nonverbal information plays an important role in communication, whether mediated or not. Even if individuals can adapt to the lack of nonverbal information in CMC, for instance by using the social cues that may be available as a guide to interaction (Postmes & Spears, 2002), people are still affected by reduced cues in interactions. After all, adaptation implies that one was at least initially affected. Hence, further examination of nonverbal cues in computer-mediated communication is warranted.

Computer-Mediated Communication and Persuasion

The Internet provides a wide variety of opportunities for communication and interaction (McKenna & Bargh, 2000). Given that messages may now be sent or received more readily through various online venues, those who communicate through text-based messaging or CMC may often be approached with a larger amount and wider variety of persuasive attempts from sources they know and, more interestingly, from sources of unknown credibility (Flanagin & Metzger, 2000). It follows then that the attributes and processes specific to computer-mediated communication, with consideration of individual differences, should be further explored to better determine the effectiveness of persuasive appeals in such a context.

As discussed previously, computer-mediated communication constrains nonverbal information important to social interaction. Thus, we can expect that persuasion processes operate differently over such a medium as compared to mediums that are less constricting of social cues. Dual process models of persuasion such as the elaboration likelihood model (Petty & Cacioppo, 1984) and also the heuristic-systematic model (Chaiken, 1980; Chaiken & Chen, 1999) predict different persuasion patterns depending on communication modality. Specifically, face-to-face or audio persuasive messages (in which more social cues are available) may be more likely to be peripherally processed such that individuals should think less systematically and more heuristically about the message. More specifically, to the extent that social cues are more available, this may lead to more minimal cognitive elaboration since individuals may readily rely on source cues such as credibility or attractiveness when thinking about a message, resulting in less elaborate focus on the message (Chaiken, 1980). On the other hand, text-based persuasive messages (where less social cues are available) may be more likely to be centrally processed such that individuals should think more systematically, giving the message more consideration

(Guadagno & Cialdini, 2002; 2007). With less social cues available, individuals should be more focused and able to carefully think about the actual message. Accordingly, due to the availability of certain cues, which may lead to different message processing strategies, communication modality should affect the interpretation and effectiveness of persuasive messages.

Previous research does indicate that individuals communicate differently depending on whom they are communicating with and on the communication mode. Specifically, Chaiken and Eagly (1983) found that differences in the communication mode influences the persuasiveness of a message. In their study, participants completed an experiment that ostensibly was intended to examine peoples' reactions to speeches. Participants were selected through prior screening and had been found to be opposed to the idea of their university switching to a trimester system. They were then randomly assigned to read a written version of a speech advocating change to a trimester system, or to watch/listen to a video/audio tape version of the speech. Communicator likeability was manipulated by portraying the communicator as more favorable or unfavorable towards the particular university in a background interview. Overall, likeable communicators were found to be more persuasive in video or audio taped conditions as opposed to written conditions. Unlikable communicators were found to be more persuasive in the written condition. Chaiken and Eagly explained these findings in terms of differences in salience of communicator cues. That is, the more likeable the communicator and the more salient their cues were (in the audio and videotape conditions), the greater the positive persuasive impact. Conversely, an unlikable communicator was more persuasive in the written condition since the negative character cues were made less salient. Thus, the negative persuasive impact was lessened.

Similarly, Morley and Stephenson (1977) demonstrated in their work that the social constraint of some communication modalities might influence the persuasive impact of messages

in negotiations. That is, participants who were involved in a two-person negotiation were more easily persuaded in face-to-face interactions as opposed to phone interactions. Both Chaiken and Eagly (1983), and Morley and Stephenson suggest that communication modality may influence the extent to which certain cues are salient, and may ultimately affect the level of persuasiveness of a message.

More recently, research has been conducted on persuasion over computer-mediated-communication. Across three studies, Guadagno and Cialdini (2002; 2007) examined persuasion over computer-mediated-communication and found that gender and communication mode (e-mail vs. face-to-face interactions) affected the extent to which individuals were influenced by persuasive messages in same-sex dyads. The results from this research were interpreted from a Social Role Theory perspective (Eagly, 1987) indicating that gender differences in behavior result from differing gender role expectations, which make certain behaviors more normative for each gender. That is, women are traditionally more communal in their interactions and are thus likely to focus on interpersonal cooperation and the formation and maintenance of relationships. Hence, for women, the ability to form bonds plays an important role in whether or not persuasive messages will be influential. Text-based communications such as email make it harder for women to form this communal bond due to the restriction of social and relational cues.

Accordingly, women may be less responsive to persuasive attempts over email.

According to Social Role Theory (Eagly, 1987), men, on the other hand are more oriented towards agency, which makes them more likely to focus on demonstrating their independence from others (especially those perceived as being successful) and thus are more task-focused. Accordingly, communication modality for men may not affect whether or not they are influenced by counter-attitudinal messages, unless there was perceived competitiveness.

Thus, for men, e-mail may actually be a more effective means of communicating persuasive appeals due to the decreased salience of non-verbal cues of another man, particularly when he is a competitor.

In the first study conducted by Guadagno and Cialdini (2002), participants completed a study involving a two-person interaction. Participants played the role of an interviewer, which would require them to ask another student (a confederate) a series of questions relating to a counter attitudinal topic (the implementation of comprehensive exams). The participants interviewed the confederate either in a face-to-face interaction or an email interaction. The confederate responded either with weak or strong arguments in favor of the comprehensive exams. After the discussion, attitudes towards the comprehensive exams were measured. Overall, strong arguments were found to be more persuasive than weak arguments. Additionally, women were more persuaded in the face-to-face condition than women in the email condition. Consistent with Social Role Theory (Eagly, 1987), these results were interpreted to indicate that women in the email interactions may have been less able to form a communal bond with the interaction partner due to the restriction of important nonverbal cues. Consequently, they were less persuaded. For men, there were no differences found between the face-to-face and email conditions. That is, men who are traditionally more task-oriented were not particularly affected by the differences in the restriction of cues between modalities, especially since there was no perceived competitiveness of the interaction partner.

A second study replicated the gender differences found in the first study and further shed light on gender differences in interaction styles (Guadagno & Cialdini, 2002). Participants were led to believe that they would participate in two separate studies, one being related to examining the way individuals put numbers together, and the other was about providing feedback on a

comprehensive exam proposal as in Study 1. In the first study participants interacted in dyads. The second study examined the impact of prior interaction on persuasion. That is, since research suggests that males view interactions more in terms of competition whereas females view interactions more in terms of cooperation, prior competition should most negatively affect males in face-to-face interactions where communicator cues are most salient (Tannen, 1990). Conversely, women should be most negatively affected when there is little prior interaction other than email where social cues are constricted. The results supported these predictions showing women showed the least message agreement in email interactions without a prior interaction, and men showed the least message agreement in a face-to-face interaction when there was prior competition. Hence, any prior interaction seemed to fulfill the need for women to form a bond thus decreasing the effects of communication modality. However, women who did not have prior interaction with their discussion partner and who interacted via email were the least persuaded and liked their partners less. That is, the lack of prior interaction made it more difficult for women to be able to form a bond with their interaction partner and when the succeeding interaction was through email, the lack of nonverbal cues furthermore did not allow a bond to be formed, leading to less persuasion. Second, men who experienced a competitive prior interaction were more persuaded in the email competition as compared to the face-to-face condition. Hence, men (who are focused on demonstrating independence), perceived there to be competition with the interaction partner, and were most likely to be persuaded by that partner in email interactions where the competitor cues were less salient.

Finally, a third study replicated findings and also examined oneness (the extent to which the participant felt a sense of identity overlap with the confederate) in relation to persuasion over CMC (Guadagno & Cialdini, 2007). To manipulate oneness, participants were told that the

purpose of the experiment was to examine differences in personality and the way in which individuals perceive information. They were also led to believe that they would complete a second study involving a two-person interview-discussion as in the previous two studies. Upon arrival at the lab participants and their partners (confederates) filled out a personality questionnaire. To manipulate high oneness some participants were told that they had a really similar personality profile as the confederate and that the chances of having such a similar profile were 1%. To manipulate low oneness participants were told that they were only 12% similar to the confederate. They then went on to interact with the confederate in an interview discussion about comprehensive exams as in the two studies previously reported (Guadagno & Cialdini, 2002). Overall, when given the feedback that their oneness with the confederate was low, men were more open to persuasion in the email. That is, when low oneness was perceived, email restricted the cues of a dissimilar other and allowed men to be more task-focused. Accordingly, women who perceived low oneness showed less message agreement in email interactions. Specifically, women who perceived low oneness (no bond with the interaction partner) were less persuaded in email interactions due to the decreased salience of relational cues that are important to women in being able to form a bond.

Guadagno and Cialdini's (2002; 2007) research, which only examined same-sex dyads, may be even further understood in light of research demonstrating that same-sex dyads engage in more gender-stereotypical behavior than mixed-sex dyads (Aries, 1976; Carli, 1989; Hall, 1984; Pilavian & Martin, 1978). Specifically, Hall (1984) explained the differences in stereotypical behaviors between dyads in terms of sex segregation and norms that have been well established for each gender. That is, many types of activities and behaviors that men and women normally engage in may be sex-segregated (i.e., occupations, sports, etc.) and they most likely helped to

shape the expectancies of how men and women should behave (Hall, 1984). Such expectations about how men and women should behave in same-sex groups in turn leads to behavior that confirms these expectations (Carli, 1989). For instance, women may expect an interaction with other women to be friendly and may in return act more socially and friendly towards other women as compared to men since men are traditionally thought of as being less social (Carli, 1989). Hence, participants in Guadagno and Cialdini's studies (2002; 2007) may have held expectations about how their interaction partner should behave. That is, women may have been expecting positive interactions since their partner was female, yet the restricted nature of the communication in email interactions may not have allowed these expectations to be confirmed since there were a lack of social cues. Women in the face-to-face interaction may have been more able to confirm such interaction expectations, leading to increased persuasion. Men however, may have held fewer expectations about their male interaction partners since they are generally more task-focused and thus were not affected by modality unless competition was perceived.

The Present Study

While e-mail may not be the most effective communication mode for conveying persuasive messages, particularly for women communicating with other women, it is not likely that their use of the Internet as a means of communication will decrease since it has become such a prominent means of communication. The purpose of the current research was to examine whether or not emoticons, which are graphic representations of facial expressions that many e-mail users embed in their messages (Walther & D'Addario, 2001), could be used as a proxy for non-verbal behavior in text-based communication.

Hypotheses

Since the literature indicates that electronic messaging inhibits the transmission of non-verbal cues, decreases communicator salience and may inhibit that formation of bonds (particularly for women), we expected to find that emoticons in the form of smiley faces [:)] could serve as an alternative method for transmitting non-verbal cues when inserted into electronic messages and that women then would be more open or responsive to persuasive communications, particularly from other women. Specifically, agreement with a counterattitudinal message should be significantly higher for women who view email messages including emoticons than for those who do not view any emoticons (H1). Furthermore, it was predicted that individuals with access to emoticons would rely more on heuristic processing and produce less message relevant thoughts (H2). It was also expected that women in general would be less persuaded to agree with the message compared to men based on previous research (Guadagno & Cialdini, 2002; 2007) (H3). Finally, it was expected that women who view emoticons in an email discussion would view their interaction partner more favorably compared to those who do not view any emoticons (H4). Ultimately, understanding the use of such tools may help to effectively promote more meaningful and successful online interactions.

METHODOLOGY

Design

This study utilized a 2 (Gender of Participant: male vs. female) X 3 (Nonverbal Proxy: Email w/emoticon vs. Email w/verbal equivalent of emoticon vs. Control) factorial. The nonverbal proxy variable was manipulated between-subjects. The dependent variable was the amount of message agreement with a proposal to implement comprehensive exams at the university. Since previous research suggests that women are less responsive to persuasive messages from other women via email, only same-sex dyads were included.

Pilot Data

Prior to running the study, we wanted to ensure that the three nonverbal proxy conditions (emoticon vs. verbal equivalent vs. control) did not differ in their level of perceived positivity in order to rule out the possibility that differences in message agreement were due to differences in perceived positivity of the interaction. Thus, we conducted an online survey containing the exact email discussion scripts used in the study and asked students to rate how positive they thought each script was. A total of 138 (52 men, 86 women) undergraduate psychology students completed the online survey from a computer of their choice. Participants were randomly assigned to view 1 of 4 scripts: emoticon script [:)], 2 verbal equivalent to emoticon scripts (“happy to meet you” or “happy times), and a control script (without emoticons or verbal equivalent). An analysis of variance indicated that participants’ mean ratings of positivity did not differ based on the type of nonverbal proxy, $F(3, 132) = 1.24, p = .30$ (See Table 1). Additionally, positivity ratings did not differ based on gender, $F(1, 128) = 2.39, p = .13$.

Additionally, we wanted to ensure that a majority of individuals derived the same meaning from the emoticon employed in this study: a simple smiley face. Thus, we had 136 undergraduate psychology students interpret the meaning of a smiley face and other emoticons. Most participants (88.2%) thought that a smiley face meant “happy”, 10.3% thought it means “smile”, 0.7% thought it meant “content”, and 0.7% thought it meant “pleased”. Since most participants thought that a smiley face stood for the word “happy” and since the two verbal equivalent scripts did not differ in positivity ratings, we selected only one of the two to include in the study (“happy to meet you”).

Table 1

Mean ratings of email scripts in pilot data (N = 136)

Condition	M	SD	n
Emoticon	4.66 ^a	1.21	35
Verbal Equivalent (“happy to meet you”)	4.55 ^a	1.21	29
Verbal Equivalent (“happy times”)	4.21 ^a	1.42	38
Control	4.18 ^a	1.22	34

Mean ratings on a scale from 1 (*Not positive at all*) to 7 (*Very positive*)

Note. Different superscripts mean significant differences ($p < .05$).

Participants

Participants were 100 (49 men, 51 women) undergraduate students recruited from the University of Alabama. Two participants were excluded because they reported that they were seniors (the persuasive communication was only personally relevant to freshmen, sophomore, or juniors). Participants’ mean age was 18.8 ($SD = 1.03$). Participants’ ethnicity was self-reported as 76.5% Caucasian, 18.4% African American, 1% Asian, and 4.1% identified of “other” ethnic

background. Participants completed the study in order to fulfill part of a course requirement. All 98 participants were U.S. citizens and reported that English was their first language.

Procedure

Participants were told that they would complete a study based on the merits of implementing a new graduation requirement that would require all seniors to take and pass a series of exams similar to the SAT, prior to graduation. Additionally, they were told that if the requirement was approved it would take place in one year (thus increasing personal relevancy for all of our participants as they were led to believe they would have to potentially take the exams themselves). Upon arrival to the laboratory, participants were randomly assigned to a nonverbal proxy condition. In the emoticon condition participants received electronic messages containing two emoticons (one at the beginning and end of the discussion). In the verbal equivalent condition, participants received electronic messages containing the phrase “happy to meet you” (at the beginning and end of the discussion). In the control condition participants did not receive any nonverbal proxy.

Participants were told that they would be in an interview-discussion about the comprehensive exam proposal with another student (a confederate to the study). Before the interview, the participant was “randomly” assigned to the role of interviewer or interviewee (all participants received the role of interviewer). Participants were informed that their job was to find out what their discussion partner believed about the exams, and why. Before the actual interaction, participants read a short paragraph further explaining the comprehensive exam proposal (See Appendix A) and also a short personal statement about their discussion partner (See Appendix B). Shortly after, participants were given a list of interview questions to be asked during the interview-discussion. The confederate was provided with scripted answers to these

questions (See Appendix C). Since findings suggest that stronger arguments are generally more persuasive (Guadagno & Cialdini, 2002; 2007; Petty & Cacioppo, 1981), the confederate always responded to the participant's questions with strong arguments in favor of implementing the comprehensive exams. Once the interview questions were chosen, participants were given a short tutorial on the email program. Prior to beginning the interview discussion, the participant was instructed to send a test message to the confederate and then they began the interview discussion. Afterwards, participants filled out the dependent measures.

Measures

Manipulation Checks

Personal relevance. A manipulation check measuring the personal relevancy of the comprehensive exam proposal was assessed with a 1-item measure (See Appendix D) that determined whether or not participants found the comprehensive exam proposal relevant, and to what extent.

Emoticon Check. In order to determine if the manipulation was effective, a 1-item measure was included to assess whether or not the participant noticed his or her discussion partner's use of emoticons during the interaction (See Appendix D).

Comprehensive Exam Attitudes

A four-item scale was used to assess participants' attitudes towards the comprehensive exams (See Appendix E). This measure was previously used by Guadagno and Cialdini (2002; 2007). Scores ranged from 1 to 9 where higher scores indicated higher agreement with the exams, $\alpha = .93$.

Partner Attitudes

Participants' attitudes towards their discussion partner were assessed with an 18-item questionnaire adapted from Guadagno and Cialdini (2002; 2007; See Appendix F). Participants were asked to rate their discussion partner on a number of different qualities such as friendliness, competence, credibility, attractiveness, likeability, etc. Scores ranged from 1 to 9, with higher scores indicating more favorable thoughts of the discussion partner, $\alpha = .85$.

Thought Listing

Participants will be asked to write down any thoughts that they had during the interview discussion in a thought listing task (Petty & Cacioppo, 1977) (See Appendix G). This will be used to assess the number of message and communicator thoughts, as well as thought valence (positive vs. negative).

Bem Sex Role Inventory

The Bem Sex Role Inventory (Bem, 1974) scale was included to determine individual levels of sex-typed standards (See Appendix H). This assessment was used to examine the possibility that having high or low sex-typed standards may account for differences in the amount of gender-typical behavior displayed in the interactions. The Bem Sex Role Inventory (BSRI) consists of three 20-item scales that measure four separate constructs (Masculinity, Femininity, Androgyny, and Social Desirability). Results showed all three scores to be highly reliable (Masculinity $\alpha = 0.87$; Femininity $\alpha = 0.84$; Social desirability $\alpha = 0.76$; Androgyny difference score $\alpha = 0.81$).

Positive and Negative Affect Schedule

The PANAS (Watson & Clark, 1988) (See Appendix I) was administered to rule out the possibility that affect (positive or negative mood) is responsible for different levels of liking

of the communicator and ultimately differing levels of persuasion. Extreme scores may indicate that mood may have effected participant interactions. The Positive and Negative Affect Scale consists of two 10-item scales that measure for positive and negative affect respectively (Watson & Clark, 1988). The alpha reliabilities were acceptably high, $\alpha = 0.89$ for positive affect and $\alpha = 0.82$ for measures of negative affect.

RESULTS

Manipulation Checks

Results indicated that all 98 participants fully completed the study measures and reported that the comprehensive exams would affect them if implemented the following academic year. Additionally, all 32 participants in the emoticon condition reported that their discussion partner did use emoticons during the interaction. Likewise, all 66 participants in the other two conditions did not report seeing an emoticon during the interaction.

Exam Attitudes

In order to test the first two hypotheses, an Analysis of Variance (ANOVA) was conducted to determine whether or not gender of the participant and nonverbal proxy condition influenced participants' attitudes towards the comprehensive exams. There was a significant main effect of condition, $F(1, 92) = 5.15, p = .008$ (See Table 2). Post-hoc analyses (Fischer's LSD) indicated unexpectedly that participants in the verbal equivalent condition agreed more with implementing comprehensive exams compared to those in the emoticon condition, $p = .002$. Additionally, participants in the verbal equivalent condition agreed more with the exams compared to those in the control condition, $p = .03$. However, agreement with the exams did not differ between those in the emoticon and control conditions. Contrary to predictions, there was no significant influence of gender on attitudes towards the exams, such that women were not less persuaded compared to men. See Table 3 for mean exam attitude ratings by gender and condition. Next, we wanted to determine whether or not participants' sex role standards as assessed by the Bem Sex Role Inventory (year) could explain some of these unpredicted

findings. Thus, a regression with effect coding was conducted to determine whether or not gender, condition, and sex role standards predicted attitudes towards the comprehensive exams. Femininity was a significant predictor of exam attitudes, $F(1, 92) = 5.78, p = .02$, such that those with higher femininity scores held more favorable attitudes towards the comprehensive exams. However, there were no interactions among these variables. Additionally, masculinity had no significant effect on exam attitudes.

Table 2

Mean ratings of attitudes towards the comprehensive exams by condition (N = 98)

Condition	M	SD	n
Emoticon	5.09 ^a	1.85	32
Verbal Equivalent	6.58 ^b	1.42	30
Control	5.54 ^b	2.09	36

Mean ratings on a scale from 1 (*Extremely un* __) to 9 (*Extremely* __)

Note. Different superscripts mean significant differences ($p < .05$).

Table 3

Mean ratings of attitudes towards the comprehensive exams by gender and condition (N = 98)

Condition	Men			Women		
	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Emoticon	5.07 ^a	1.83	13	5.10 ^a	1.91	19
Verbal Equivalent	6.50 ^b	1.54	15	6.67 ^b	1.34	15
Control	5.50 ^a	2.11	19	5.73 ^a	1.92	17

Mean ratings on a scale from 1 (*Extremely un* __) to 9 (*Extremely* __)

Note. Different superscripts mean significant differences ($p < .05$).

Partner Attitudes

To control for Type I error rates, we analyzed the discussion partner ratings using a 2(gender) X 3(condition) multivariate analysis of variance (MANOVA) with the Pillai Trace as the test statistic. There was a significant main effect of gender, $F(18, 69) = 7.52, p < .001$. There was also a significant main effect of condition, $F(36, 140) = 1.82, p = .008$. No multivariate interactions were found. From these multivariate analyses, we more closely examined univariate relationships.

Univariate analyses indicated that there was a significant main effect of condition on friendliness, $F(2, 86) = 9.52, p < .001$ (See Table 4). Post-hoc analyses (Fischer's LSD) indicated that individuals in the emoticon and verbal equivalent conditions rated their discussion partners as being more friendly than did those in the control conditions. The verbal equivalent and emoticon conditions did not significantly differ from each other.

There was a significant main effect of condition on warmth, $F(2, 86) = 5.65, p = .005$. Post-hoc analyses indicated that individuals in the emoticon condition rated their partners as being more warm compared to the control condition $p = .01$, and individuals in the verbal equivalent rated their partners as being more warm compared to the control condition, $p = .001$. However the emoticon and verbal equivalent conditions did not significantly differ.

There was a significant main effect of condition on competitiveness, $F(2, 86) = 3.18, p = .05$. Post-hoc analyses indicated that individuals in the control condition rated their discussion partner as more competitive compared to those in the emoticon condition, $p = .02$. Additionally, those in the verbal equivalent condition rated their partners as more competitive compared to those in the emoticon condition, $p = .04$. However, those in the control and verbal equivalent conditions were not significantly different in their ratings on competitiveness.

There was a significant main effect of condition on how interesting participants perceived their discussion partners to be, $F(2, 86) = 4.62, p = .01$. Post-hoc analyses indicated that individuals in the verbal equivalent rated their partners as more interesting than the control condition, $p = .003$, and those in the verbal equivalent condition also rated their partners as more interesting compared to the emoticon condition, $p = .01$. However, ratings did not differ between those in the emoticon and control conditions did not differ.

Finally, there was a significant main effect of condition on likeability, $F(2, 86) = 6.76, p = .002$. Post-hoc analyses indicated that individuals in the verbal equivalent condition rated their discussion partner as more likeable compared to those in the control condition, $p = .001$. There were no differences between those in the verbal equivalent and emoticon conditions, or between those in the emoticon and control conditions. Finally, there were no effects of gender or condition on the remaining partner ratings: competent, sincere, trustworthy, modest, cooperative, confident, honest, masculine, feminine, approachable, informed, or attractive.

Table 4

Mean ratings of individual discussion partner traits by condition (N = 98)

Trait	Emoticon (n = 32)		Verbal Equivalent (n = 30)		Control (n = 36)	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Friendly	7.69 ^a	1.28	8.20 ^a	1.09	6.72 ^b	1.43
Warm	7.25 ^a	1.24	7.60 ^a	1.25	6.39 ^b	1.61
Competitive	4.50 ^b	1.64	5.47 ^a	2.06	5.53 ^a	1.87
Interesting	6.44 ^a	1.59	7.37 ^b	1.22	6.28 ^a	1.54
Likeable	7.31 ^{a,b}	1.38	7.83 ^a	1.18	6.67 ^b	1.55

Mean ratings on a scale from 1 (*Not very* __) to 9 (*Very* __)

Note. Different superscripts mean significant differences ($p < .05$) across conditions.

In effort to understand these unexpected findings, an Analysis of Variance was conducted to determine whether or not gender and nonverbal proxy condition influenced participants' mood. Results indicated that there was a significant main effect of gender on mood, $F(1, 92) = 4.05, p = .05$ (See Table 5). Post-hoc (Fischer's LSD) analyses indicated that females reported more positive moods than males, $p = .05$. Additionally, there was a significant main effect of condition on participants' mood, $F(1, 92) = 3.34, p = .04$ (See Table 5). Post-hoc analyses indicated that individuals in the verbal equivalent condition reported more positive mood than those in the emoticon condition, $p = .02$. Also, participants in the verbal equivalent condition reported more positive mood than those in the control condition, $p = .04$. There were no differences in mood between those in the emoticon and control conditions. There was no interaction effect of gender and condition on mood, $F(2, 92) = 1.10, p = .34$.

Table 5

Mean ratings of positive mood (N = 98)

Gender	M	SD	n
Men	24.89 ^a	7.69	47
Women	28.18 ^b	8.77	51
Condition	M	SD	n
Emoticon	24.91 ^a	7.19	32
Verbal Equivalent	29.53 ^b	8.05	30
Control	22.63 ^a	9.17	36

Note. Different superscripts mean significant differences ($p < .05$).

We also conducted analyses using partner trait ratings as one averaged measure of likeability (after reverse scoring one of the items--competitiveness, which was seen as a less

favorable trait). Higher trait ratings all indicated more favorable attitudes towards the partner so we thought this could be averaged as one measure of likeability. However, when examining this likeability measure by gender and condition, we found that similar to the above reported results, only condition was significant, $F(2, 92) = 3.33, p = .04$, such that those in the verbal equivalent condition rated their partners as more likeable.

Cognitive Responses

Number of thoughts. In order to examine possible effects of the independent variables on participants' cognitive responses obtained in the thought listing task, an undergraduate research assistant was asked to count the total number of thoughts, number of thoughts focused on the message (comprehensive exams), and the number of thoughts focused on the discussion partner. A series of ANOVAs were conducted to determine whether or not gender and condition affected the total number of thoughts participants listed, the number of message related thoughts they listed, and the number of partner related thoughts they listed. Results indicated that there was a significant main effect of gender on the number of message thoughts that participants listed, $F(1, 91) = 7.95, p = .006$ (See Table 6), such that women listed significantly more thoughts related to the comprehensive exam proposal compared to men. Additionally, there was a significant main effect of condition, $F(2, 91) = 3.24, p = .04$. Post-hoc analyses (Fischer's LSD) indicated that individuals in the control condition listed significantly more message related thoughts compared to those in the emoticon condition, $p = .03$. Last, individuals in the control condition listed significantly more message related thoughts compared to those in the verbal equivalent condition, $p = .03$. The number of message related thoughts between those in the emoticon and verbal equivalent conditions did not differ. There were no significant effects of gender or condition on the number of partner related thoughts (See Table 7).

Table 6

Mean message related thoughts (N = 98)

Gender	M	SD	n
Men	4.54 ^a	3.32	47
Women	6.43 ^b	2.98	51
Condition	M	SD	n
Emoticon	5.22 ^a	3.32	32
Verbal Equivalent	5.54 ^a	3.22	30
Control	6.28 ^b	2.97	36

Note. Different superscripts mean significant differences ($p < .05$).

Table 7

Mean partner related thoughts (N = 98)

Gender	M	SD	n
Men	1.67 ^a	2.44	47
Women	1.12 ^a	1.71	51
Condition	M	SD	n
Emoticon	1.53 ^a	2.03	32
Verbal Equivalent	1.07 ^a	1.71	30
Control	1.50 ^a	2.43	36

Note. Different superscripts mean significant differences ($p < .05$).

Finally, a series of regression analyses with effects coding were conducted to determine whether total number of thoughts, number of message thoughts, or number of partner thoughts

along with gender and condition predicted exam attitudes. There were no significant main effects or interaction effects of total number of thoughts, number of message thoughts, or number of partner thoughts.

Valence of thoughts. A series of ANOVAs were conducted to determine whether or not gender and condition affected the valence of the thoughts participants listed. Results indicated that neither gender nor condition significantly influenced how many positive or negative thoughts participants reported during the interaction. Two regression analyses with effects coding were conducted to determine whether or not the number of positive or negative thoughts along with gender and condition predicted exam attitudes. In addition to the previously mentioned effect of condition on exam attitudes (see results section on exam attitudes), results indicated that the number of positive thoughts did significantly predict attitudes towards the comprehensive exams, $b = .348$, $t(96) = 18.37$, $p < .001$. Specifically, those with a greater number of positive thoughts rated the exams as being more favorable. In the second analysis, negative thoughts also significantly predicted attitudes towards the exams, $b = -.443$, $t(96) = 27.23$, $p < .001$. Participants who reported a greater number of negative thoughts rated the exams as being less favorable. There were no significant interactions between thought valence, gender, and condition.

DISCUSSION

Overall, the findings from the study did not support the hypothesis that emoticons serve as a nonverbal proxy for behavior, particularly for women communicating via email with other women. In fact, we found that contrary to our predictions, women (and also men) who saw the verbal equivalent emails were more persuaded to agree with the comprehensive exams. Additionally, those in the verbal equivalent condition also viewed their discussion partners more favorably as compared to control condition (but not the emoticon condition). These results were surprising in that we also found that the nonverbal proxy condition seemed to influence mood, such that those in the verbal equivalent condition reported higher levels of positive mood. This is in contrast to what our pilot data suggest—that none of the conditions (emoticon, verbal equivalent, or control) differed in their perceived positivity (although, it should be noted that we did not directly measure mood with the pilot data). It may be the case that since individuals in the study were directly interacting with another individual (whereas those in the pilot study simply viewed the script and rated it on positivity) that mood was influenced more by having a direct interaction with someone. That is, knowing that someone is happy to meet you versus reading the phrase out of context may lead to more direct effects on mood. Furthermore, when we pretested the emoticons to determine their verbal meanings, we simply asked students to look at and rate the meaning of the emoticons, but these were not actually directed at the students. That is, the students were not rating the emoticons as if they were seeing them in an interaction with another person. Emoticons may have different interpreted meanings in the context of actual conversation compared to simply viewing them.

Another possible explanation lies in the slight differences between the emoticon and verbal equivalent conditions. Initially, we attempted to ensure that the verbal equivalent was the exact translation of the emoticon. As the pilot data indicate, most participants interpreted the smiley face to mean “happy”. However, we felt that if we inserted the word “happy” into our confederate script, this would seem out of context and may elicit unwanted reactions out of participants. Thus, we used a phrase “happy to meet you” instead of just the word “happy”, which fit in better with the context of the script. Since we did not use the exact equivalent of the emoticon, it may be that participants interpreted these two manipulations somewhat differently. That is, participants in the verbal equivalent condition may actually have interpreted the manipulation as a compliment, whereas those in the emoticon condition may have been less likely to interpret a smiley face as a compliment. Specifically, when a person says that they are happy to meet someone, this may be likely to be taken as a compliment or flattery, which in return may lead to more liking of the compliment giver, better mood, and overall more persuasion.

Results from participants’ cognitive responses on the thought-listing task were in accordance with the hypotheses. That is, individuals in the control condition reported more message related thoughts. This suggests that in the condition which had no nonverbal cues available, participants may have relied on more systematic processing of the message, thus producing more message related thoughts. On the other hand, individuals in both the emoticon and verbal equivalent condition produced less message relevant thoughts. This is in accordance with research demonstrating that when cues are more readily available individuals often rely on more heuristics processing (Chaiken, 1980). Thus, participants who had access to some sort of

nonverbal cue may have relied on more heuristic processing and produced less message relevant thoughts compared to those without access to any cues.

When considering the results that we obtained with positive mood in relation to the cognitive responses and overall persuasion, the findings seem to be somewhat mixed. That is, in some contexts happiness or positive mood have indeed been found to be related to a decrease in message elaboration (Mackie & Worth, 1989), which appears to be the case in our study in that those in the verbal equivalent condition reported the most positive moods and also produced less message relevant thoughts compared to those in the control condition. However, while less thinking about a message can lead to more persuasion, this has been generally found when using weak arguments (Petty, Wells, & Brock, 1976). Our results are conflicting in that only strong arguments were used in the current study. Additionally, according to the hedonic contingency view of mood (Wegener et al., 1995), the hedonic consequences of thinking about a message are important in determining whether or not a person in a good mood will scrutinize a message carefully. That is, generally a negative or threatening message would be scrutinized less carefully by a person in a happy mood, because he or she would want to avoid ruining that pleasant state by thinking hard about something negative (i.e., a counterattitudinal message). We found evidence suggesting that those who were in the most positive mood (verbal equivalent condition) did think less about the counterattitudinal message, suggesting that they heuristically processed the strong arguments for the implementation of exams. However, these individuals were also the most persuaded to agree with the implementation of the exams. Surprisingly, participants' valences of thoughts were not affected by gender or condition. However, it does make sense that those who reported more positive thoughts also rated the exams more favorably and that those with more negative thoughts rated the exams less favorably.

Femininity was also found to be a significant predictor of attitudes towards the comprehensive exams, such that individuals higher in femininity agreed more with the implementation of the exams. This makes sense since some research suggests that higher levels of compliance and influenceability are traditionally characterized as more feminine traits (Eagly, 1978). Hence, those with higher levels of femininity may have been easier to persuade. It should be noted that we did not directly manipulate femininity and thus did not have an equal distribution of individuals both high and low in femininity across conditions. Hence, we were not able to thoroughly examine this variable and its possible interaction with gender and the nonverbal proxy condition.

Finally, we did not find any gender differences in persuasion that had been demonstrated before (Guadagno & Cialdini, 2002, 2007). That is, the prediction that women would overall demonstrate less agreement with the exams compared to men was not supported. It may be that this is also in part due to the unequal distribution of participants high and low on the BSRI or that the aforementioned alteration of mood produced this failure to replicate. More specifically, it may be the case that gender did not have a main effect on attitudes because femininity moderates the relationship between gender and agreement with a counterattitudinal topic. A more thorough examination involving femininity would be needed to test this explanation. Likewise, a direct manipulation of mood may have had more powerful effects on exam attitudes, consequently washing out any effects of gender on attitudes towards the exams. Finally, we did not directly measure individuals' orientation towards communion and agency. It is likely that an individuals' tendency to be other- versus task-oriented, rather than their level of femininity or masculinity would have been more closely related to the effectiveness of the nonverbal proxy manipulation and overall persuasion.

The current research does shed some light on the usefulness of nonverbal proxies for behavior within persuasive electronic communications. Overall, it appears that emoticons may not be the best nonverbal proxy for behavior for women communicating via email, although this may not be true for individuals with certain levels of femininity. However, the findings on the effectiveness of nonverbal proxies may be more conclusive with additional research. For example, a future research study could control for mood when attempting to determine whether or not nonverbal proxies can influence persuasion over email by including a verbal equivalent condition that is an exact equivalent of the emoticon. To better control for differences in interpretation and the context of use, pilot testing could be done in which students are asked to rate different emoticons and verbal meanings that are actually directed towards them (as in a real conversation). Ratings should be taken on how equivalent the emoticons and verbal meanings are, and participant mood itself (instead of perceived level of positivity) should be assessed during pilot testing. Only emoticons and verbal meanings that are rated the most similar when used in a conversation directed towards the participant (and that do not differ in terms of influence on mood) should be selected for use in further research. Furthermore the roles of femininity/masculinity as well as communion/agency should be clarified. Future studies could directly manipulate individuals to have low and high levels of femininity/masculinity and agency/communion based on condition in order to better determine directly whether or not and how traditional sex roles interact with gender and nonverbal proxies to influence attitudes towards a counterattitudinal topic.

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Appendix A

Comprehensive Exam Information

THE UNIVERSITY OF ALABAMA

Department of Psychology

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University of Alabama

Tuscaloosa, AL 35487-0348

United States

Phone: (205) 348 5083 Fax: (205) 348-8648

Thank you for participating. You are here because the University Administration is considering instituting a new graduation prerequisite. This graduation prerequisite would require all seniors to take and pass a series of comprehensive examinations before they graduate. The proposed comprehensive exams are similar to the SAT in that graduating seniors would have to take a Math and English exam. However, unlike the SAT, graduating seniors would also have to take an exam in their major area of study. The content of this portion of the exam would be different for each major. If approved, the exams will be instituted next year. The Administration would like some feedback from students. You will spend about ten minutes with another UA student discussing the proposition in a structured interview. Then, you will be asked to give us your opinion on the matter.

Appendix B

Confederate Personal Statement:

Please take a few minutes to write a few things about yourself for your interview-discussion partner to read. This can include such information as your major, year in school, and any personal interests.

My name is __. I am a junior. When I graduate from UA, I am not completely sure what I want to do. I have been thinking about going to graduate school, but have not made up my mind yet. We'll see what happens. When I am not at school, I like to read, bike ride, and eat Mexican food. My friends think I'm reserved before they get to know me and then they see that I'm more outgoing.

Appendix C

Confederate Script

Thank you for participating today. To help you with your interview-discussion, here is a list of questions for you to ask the other participant. Please ask the first two questions in the order they are given. Then, ask 5 of the 6 remaining questions. You may choose the five questions you want to ask. Also, please choose the order in which you ask the questions. Remember, your task is to form an interview strategy that will allow you to learn enough about your discussion partner to understand what they believe and why they believe it.

Ask these two questions first:

Have you always lived in Alabama?

- *Yes, I grew up in Duncanville and moved to Tuscaloosa to go to school.*

What have you heard about the proposed exams?

- *Well (pause), I read an article about them in an Education class I took last semester*

Ask any combination of five of the next six questions:

What's your opinion on the exam proposal?

- *I think it's a good idea because according to this article I read, um, schools that have these exams attract larger and more well-known corporations to recruit students for jobs*

What are your career goals?

- *Well, (pause) I'm not really sure, but whatever they are, I think the comprehensive exams will help me because (um) the average starting salaries are higher for graduates of schools with exams.*

How do you like it here at UA?

- *Well, (pause) I like it, but it could be improved. That's why I'm in favor of the exams. I remember the article saying that the quality of undergraduate teaching is better at schools with the exams.*

What reasons do you have for feeling this way about the comprehensive exam proposal?

- *(Um) The agencies that rate universities give schools a higher rating if they require comprehensive exams*

Have you ever talked to anyone from a school that requires comprehensive exams?

- *No (pause), not really (pause), but my professor in the Ed. class I took last semester said that grad schools give a preference to applicants who have passed a comprehensive exam*

What's your major?

- *Education*

Appendix D

Personal Relevancy Measure

To what degree will the plan (to require comprehensive exams) affect you personally (i.e., if the plan is approved, will you have to take these exams when you graduate)?

The plan will apply to me
before I graduate (check one) **YES** _____ **NO** _____

Emoticon Manipulation Check

Did your discussion partner use any emoticons (graphical representations of facial expressions such as smiley faces) during your interview discussion?

1 = Yes

2 = No

Appendix F

Partner Attitudes

Please take a moment to rate your discussion partner on the following personality qualities. Your responses are completely confidential. Circle the number which best describes your opinion:

Was your partner . . . ?

1	2	3	4	5	6	7	8	9
not at all friendly				neutral				very friendly

1	2	3	4	5	6	7	8	9
not at all competent				neutral				very competent

1	2	3	4	5	6	7	8	9
not at all credible				neutral				very credible

1	2	3	4	5	6	7	8	9
not at all warm				neutral				very warm

1	2	3	4	5	6	7	8	9
not at all competitive				neutral				very competitive

1	2	3	4	5	6	7	8	9
not at all interesting				neutral				very interesting

1	2	3	4	5	6	7	8	9
not at all attractive				neutral				very attractive

1	2	3	4	5	6	7	8	9
not at all sincere				neutral				very sincere

1	2	3	4	5	6	7	8	9
not at all				neutral				very

masculine								masculine
1	2	3	4	5	6	7	8	9
not at all trustworthy				neutral				very trustworthy
1	2	3	4	5	6	7	8	9
not at all modest				neutral				very modest
1	2	3	4	5	6	7	8	9
not at all cooperative				neutral				very cooperative
1	2	3	4	5	6	7	8	9
not at all likable				neutral				very likable
1	2	3	4	5	6	7	8	9
not at all confident				neutral				very confident
1	2	3	4	5	6	7	8	9
not at all honest				neutral				very honest
1	2	3	4	5	6	7	8	9
not at all approachable				neutral				very approachable
1	2	3	4	5	6	7	8	9
not at all informed				neutral				very informed
1	2	3	4	5	6	7	8	9
not at all feminine				neutral				very feminine

Appendix G

Thought Listing Task

We are now interested in what you were thinking WHILE YOU WERE INTERVIEWING YOUR PARTNER. You might have had thoughts that were favorable toward the proposal, opposed or irrelevant, or some of each. Those are all fine, simply list what you were thinking during the interview-discussion. Below and on the next page are boxes you can use to record your thoughts and idea.

Write down the first thoughts you had in the first box, the second idea in the second box, etc. PLEASE PUT ONLY ONE IDEA IN A BOX. Try to record only those thoughts you had during the interview discussion. Ignore spelling, grammar, and punctuation. You will have 3 minutes to fill all of the boxes, more space has been provided than most people will need. Please be completely honest and list all your thoughts.

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Appendix H

Bem Sex Role Inventory, Bem (1974)

Instructions: Rate the following attributes on a scale of 1(never or almost never true of me) to 7 (Always or almost always true of me), depending on how much each of the attributes describes you.

1	2	3	4	5	6	7
Never or almost never true of me						Always or almost always true of me
1. _____	Self- reliant			35. _____	Eager to soothe hurt feelings	
2. _____	Yielding			36. _____	Conceited	
3. _____	Helpful			37. _____	Dominant	
4. _____	Defends your beliefs.			38. _____	Soft spoken	
5. _____	Cheerful			39. _____	Likeable	
6. _____	Moody			40. _____	Masculine	
7. _____	Independent			41. _____	Warm	
8. _____	Shy			42. _____	Solemn	
9. _____	Conscientious			43. _____	Willing to take a stand	
10. _____	Athletic			44. _____	Tender	
11. _____	Affectionate			45. _____	Friendly	
12. _____	Theatrical			46. _____	Aggressive	
13. _____	Assertive			47. _____	Gullible	
14. _____	Flatter-able			48. _____	Inefficient	
15. _____	Happy			49. _____	Acts as a leader	
16. _____	Strong Personality			50. _____	Childlike	
17. _____	Loyal			51. _____	Adaptable	
18. _____	Unpredictable			52. _____	Individualistic	
19. _____	Forceful			53. _____	Does not use harsh language	
20. _____	Feminine			54. _____	Unsystematic	
21. _____	Reliable			55. _____	Competitive	
22. _____	Analytical			56. _____	Loves children	
23. _____	Sympathetic			57. _____	Tactful	
24. _____	Jealous			58. _____	Ambitious	
25. _____	Has leadership abilities			59. _____	Gentle	
26. _____	Sensitive to the needs of others			60. _____	Conventional	
27. _____	Truthful					
28. _____	Willing to take risks					
29. _____	Understanding					
30. _____	Secretive					
31. _____	Makes Decisions easily					
32. _____	Compassionate					
33. _____	Sincere					
34. _____	Self- Sufficient					

Appendix I

Positive and Negative Affect Schedule (PANAS), Watson & Clark (1988)

Below are a list of words that describe feelings and emotions. Read each item and mark the appropriate answer in the space next to that word. Indicate to what extent you felt **while watching the film** based on the following scale.

0	1	2	3	4	5	6
None						A Lot

- | | |
|--|---|
| <input type="checkbox"/> bashful
<input type="checkbox"/> sleepy
<input type="checkbox"/> afraid
<input type="checkbox"/> jittery
<input type="checkbox"/> ashamed
<input type="checkbox"/> active
<input type="checkbox"/> scornful
<input type="checkbox"/> determined
<input type="checkbox"/> disgusted at self
<input type="checkbox"/> sluggish
<input type="checkbox"/> excited
<input type="checkbox"/> frightened
<input type="checkbox"/> alert
<input type="checkbox"/> blue
<input type="checkbox"/> scared
<input type="checkbox"/> angry
<input type="checkbox"/> guilty
<input type="checkbox"/> amazed
<input type="checkbox"/> dissatisfied with self
<input type="checkbox"/> astonished
<input type="checkbox"/> irritable
<input type="checkbox"/> embarrassed
<input type="checkbox"/> uncomfortable
<input type="checkbox"/> amused
<input type="checkbox"/> delighted | <input type="checkbox"/> hostile
<input type="checkbox"/> lonely
<input type="checkbox"/> sheepish
<input type="checkbox"/> downhearted
<input type="checkbox"/> tired
<input type="checkbox"/> attentive
<input type="checkbox"/> angry at self
<input type="checkbox"/> inspired
<input type="checkbox"/> loathing
<input type="checkbox"/> proud
<input type="checkbox"/> surprised
<input type="checkbox"/> disgusted
<input type="checkbox"/> sad
<input type="checkbox"/> nervous
<input type="checkbox"/> blameworthy
<input type="checkbox"/> interested
<input type="checkbox"/> alone
<input type="checkbox"/> shaky
<input type="checkbox"/> enthusiastic
<input type="checkbox"/> shy
<input type="checkbox"/> strong
<input type="checkbox"/> uneasy
<input type="checkbox"/> distressed
<input type="checkbox"/> relaxed |
|--|---|