Emoticons and Impression Formation

Chris Fullwood [1] & Orsolina I. Martino [2]

[1] University of Wolverhampton, School of Applied Sciences, Psychology Subject Group, Wolverhampton, West Midlands, WV1 1SB, UK.

[2] Department of Medicines Management, Keele University, Staffordshire, ST5 5BG, UK.

Abstract

Although the efficacy of computer-mediated exchanges may be lessened by the paucity of nonverbal cues, emoticon use is said to improve the communication of socio-emotional information. The current study aimed to test this further by exposing participants to verbal information that was either supplemented by emoticons or not. Participants were then requested to rate their chat partner on a number of personality variables. Results indicated that emoticon users were generally perceived as being more outgoing and friendly than non-users, with men rating non-users as less outgoing. Furthermore, women in both conditions rated online chat partners as more emotionally stable. It was concluded that using emoticons helps to alleviate the constraints associated with cue restriction in CMC, and that sex differences may be a function of the perceived sex of the chat partner and subsequent motivations for the exchange. Further research should therefore consider the context and nature of online communications.

Introduction

In recent years, there has been a rapid growth in the number of people using computers from home. Figures indicate that in the United States alone computer ownership rose from 36.6% of the population in 1997 to 61.8% of the population in 2003. Internet use has also increased, escalating by 36.7% from 1997 to 2003 in the United States (Cheesman-Day *et al*., 2005). As a consequence, computer-mediated communication (CMC) has also experienced a comparable upsurge (Heitner, 2003). This means that more individuals are using computers as a means to interact with others than ever before. It is common today for individuals to communicate with one another via computers even though they may be in close proximity (for example, e-mail interactions in the workplace).

These types of communication scenarios are especially likely to arise between individuals who have already made face-to-face contact with each other. Nevertheless, with the widespread adoption of chat rooms, forums and social network sites (for example, Myspace) individuals may not only be distant from one another, but could also be experiencing their first â€˜meetingâ€™ in cyberspace. Consequently, the nature of the interaction is likely to impact significantly on the impressions formed.

In a face-to-face context, individuals tend to have little difficulty in accurately judging the personality of others (e.g. Funder, 1987, 1999), even after only brief encounters (Blackman & Funder, 1998). Over the Internet, however, accurate impression formation may be more difficult. Comparing face-to-face and online acquaintances, Fuller (1996) found that online perceptions of an individualâ€™s personality were less accurate and more open to misinterpretation. A similar pattern was discovered by Rouse and Haas (2003), who noted that there was little in the way of correspondence between an individualâ€™s rating of their own personality and an online chat partnerâ€™s perceptions of that person. Furthermore, individuals who had been using the Internet for longer periods of time did not fare any better. It is nonetheless important to consider the context of these interactions and factors that could influence the formation of these judgements. Both the Fuller (1996) and Rouse and Haas (2003) studies were based solely on conversations in text format, with no additional nonverbal cues. The â€˜cues-filtered outâ€™ perspective (Sproull & Kiesler, 1986) would associate this with more impersonal communication. This is because the lack of â€˜social context cuesâ€™ results in an increased difficulty in establishing common ground and mutual understanding, thus rendering socio-emotional and relational information harder to communicate. Moreover, the Fuller study found online acquaintances were often perceived as being colder and more logical, which suggests that emotional expression was in some way limited or restricted.

One consequence of cue restriction is the sense of psychological distance experienced by interlocutors (Rutter, 1987). In other words, users of cue-restricted technology are less likely to experience a sense of social co-presence, the mutual sensation of proximity. Diminished co-presence can be problematic, particularly as it has been noted to lead to more aggressive and anti-social behaviour (see Hiltz *et al*., 1989; Walther *et al*., 1994). Fullwood *et al.* (2006) suggest that behaviour of this kind is probably a result of users feeling anonymous, and may therefore be more likely to occur in chat room contexts, as communication between strangers occurs more frequently. Yet there is evidence to suggest that such problems may not necessarily result from a lack of information being imparted *per se*; rather, the lack of visual cues may result in the misinterpretation of emotional messages. A study by Coomey and Wilczenski (2005), in which participants were asked to rate the emotional intensity of a message (relating to sexual and psychological abuse), found that those who received the message in text form tended to rate it as more emotionally intense compared to those who received the message via video or audio channels. This is surprising considering that the participants in the audio and video conditions would have had nonverbal affective information available to them (for example, tone of voice and facial expressions). Perhaps when this type of information is unavailable, users overcompensate in the knowledge that the message should be more emotionally intense than it seems. Either way it appears that information presented in text-only form is more susceptible to errors in interpretation. Further support for this notion comes from Harrigan *et al*. (1994), who found that participants were more accurate at rating the anxiety level of an individual from transcripts which contained speech errors (for example, false starts or stutters) compared to ones which did not. Thus the central issue to the present study is not the amount of emotional information that is conveyed via CMC, but how the manner in which it is imparted affects its interpretation and subsequent impressions formed.

Despite the obvious limitations of CMC, it is clear that this technology is still employed for social interactions (see Derks *et al*., 2007). Clearly, if the technology were not fit for social purposes then CMC would have limited appeal. Although it is evident that cues are restricted in CMC, computer users are not powerless; they can shape and adapt to the technology in order to communicate messages effectively. Indeed a number of approaches have been developed to soften CMC (see Wallace, 2001). For example, the understanding that emotional cues are important in human communication has led to the development of emoticons (or â€˜smileysâ€™) in computer-mediated interactions (Crystal, 2001). Emoticons are produced by the arrangement of keyboard characters, which are combined in a manner to represent an emotional facial expression (for example, :-) indicates happiness) (Crystal, 2001). A number of communication services (for example MSN Instant Messenger) also allow for the use of pre-designed emotional graphics, or â€˜winksâ€™, which are animated versions of emoticons and more sophisticated than the simple combination of keyboard characters. According to Derks *et al*. (2007), emoticons can serve as â€œnonverbal surrogates, suggestive of facial expressionâ€ (Pg. 2). Furthermore, Walther and Addario (2001) indicate that they are used commonly and are easily recognised by CMC users.

There is clear evidence that emoticons can be used to express emotional information (Derks *et al*., 2007; Kamada *et al*., 2005; Rezabek & Cochenour, 1998; Thompson & Foulger, 1996) and included in this might be an individualâ€™s own emotional state. Therefore, one would expect that people who use emoticons would be judged differently to those who do not. Given the suggestion that emoticons act as linguistic softeners (Wallace, 2001), one would expect them to buffer against the perceived â€˜coldnessâ€™ of online communication. Therefore, emoticon users should be perceived in a more favourable light. The role of emoticons in impression formation may also be influenced by the sex of the communicator, particularly as men and women are said to use emoticons differently. Huffaker and Calvert (2005) for example suggest that teenage girls use emoticons less frequently than teenage boys. Drawing on the current literature, Witmer & Katzman (1997) however found evidence to suggest that women use more emoticons than men in CMC. The use of emoticons in communication may be influenced to some extent by the sex of the partner with whom one is interacting. Indeed, Wolf (2000) found that when males are communicating with females they tend to adopt the female standard of expressing more emotion. Wolf (2000) also noted that men and women used emoticons for different purposes. Men tended to use emoticons in a sarcastic or teasing manner, whereas women tended to uses emoticons more often when they were attempting to communicate humorous messages. The current study aims to investigate the effects of emoticon use on impression formation, namely perceptions of personality type. In this study, participants will be randomly assigned to one of two conditions: a condition in which messages will be accompanied by emoticons, and a condition in which emoticons will not be used. Participants will be asked to rate the personality of their partner using the Ten Item Personality Inventory (TIPI) (Gosling *et al*., 2003). It is expected that emoticon use will enhance perceptions of the online chat partner. It is also expected that there will be sex differences in the ratings of the online chat partner, and that men and women will react to the use of emoticons differently.

Method

Participants

The sample comprised 16 male and 16 female Undergraduate Psychology students from a large U.K University. Eight female participants and 8 male participants were randomly allocated to the Emoticon condition, and 8 female and 8 male participants were randomly allocated to the Control condition (no emoticons). All participants were aged between 18-24 years.

Design

This study employed a between-participants design. Participants were randomly assigned to either the Emoticon condition or the Control condition. This meant that although participants were exposed to identical verbal information, in one condition this was supplemented by the use of emoticons and in the other it was not. It was expected that exposure to emoticons would result in more favourable perceptions of the chat partner. It was also expected that males and females would react to emoticon use differently.

Materials

Participants were given a list of 6 questions to ask their â€˜conversational partnerâ€™. These questions were as follows: 1) How old are you? 2) Where are you from? 3) What hobbies do you have? 4) What kind of films do you like to watch? 5) What sort of music do you like? 6) Describe yourself in 3 words. The responses that they received were pre-determined, and either contained emoticons or not, however the written information was exactly the same in both conditions. The responses were typed in by a confederate posing as the chat partner. Participants were unaware of this and no information was given about the chat partnerâ€™s sex and age. The responses to the participantâ€™s questions were as follows: 1) Iâ€™m 22. 2) Iâ€™m from Birmingham but I now live in Wolverhampton. 3) I enjoy art. I like drawing and painting. I especially enjoy painting landscapes. 4) I like horror, especially vampire films. 5) I like listening to rock music, but I also listen to chart music. 6) Creative, warm, and friendly. In the Emoticon condition, â€˜smilingâ€™ emoticons appeared after answers 1, 3, and 5, a â€˜winkingâ€™ emoticon appeared after answer 6, and a â€˜shockedâ€™ emoticon appeared after answer 4. Participants were also requested to complete the Ten-Item Personality Inventory (TIPI) (Gosling et al, 2003), which is a 10-item scale that measures extroversion, agreeableness, conscientiousness, emotional stability and openness to experience.

Procedure

All participants were issued with a consent form, and an information sheet making them aware of the nature of the task. Participants were requested to sit down at a computer in a designated room and were logged onto MSN instant messenger. All participants were given a brief demonstration on how to use the software. After this had taken place, participants were given a list of questions, which they were asked to type directly into the chat screen. Participants were informed that they must type each question separately and in the order that they were given. Also, participants were informed that they should only type the next question in the list once an answer had been provided and when they had read this answer. A confederate responded to the questions using the pre-designed answers, in one condition using emoticons and in the other not. After all questions had been answered, participants were asked to fill out the TIPI from the perspective of the person with whom they were talking. Finally, participants were debriefed with regards to the aims of the study and the deception (i.e. that their conversational participant was a confederate).

Results

Ratings on each dimension of the Ten-Item Personality Inventory (TIPI) were entered into 2 x 2, between-subjects analyses of variance (ANOVA), with Condition (emoticon or control) and Sex (male or female) as the factors. Means and standard deviations are shown in Table 1.

Table 1: Means and standard deviations (in brackets) of TIPI ratings of online chat partners by male and female participants, with and without emoticons being used.

	Emoticon condition (n= 16)		Control condition (n=16)	
	Male ratings (n = 8)	Female ratings (n = 8)	Male ratings (n = 8)	Female ratings (n = 8)
Extraversion	5.44 (0.94)	5.00 (0.80)	2.94 (0.98)	5.25 (1.10)
Agreeableness	5.63 (0.83)	5.69 (0.53)	5.44 (0.90)	4.50 (0.46)
Conscientiousness	4.69 (1.28)	4.81 (0.96)	5.06 (0.94)	4.94 (0.62)
Emotional Stability	4.63 (1.13)	5.25 (0.65)	3.81 (0.88)	4.88 (0.79)
Openness to Experience	5.44 (1.08)	5.38 (0.99)	4.31 (1.49)	5.44 (0.73)

For Extroversion there was a significant main effect of Condition (F1, 28 = 10.93, p<0.01) and a significant main effect of Sex (F1, 28 = 7.59, p = 0.01). There was also a significant interaction (F1, 28 = 16.33, p< 0.001). Extroversion ratings were higher overall in the emoticon condition, and female participants made higher ratings. In the emoticon condition, males and females did not differ in their ratings of Extroversion; however, in the control condition male ratings were lower.

For Agreeableness there was a significant main effect of Condition (F1, 28 = 7.53, p = 0.01) but no effect of Sex (F1, 28 = 3.049, p>0.05). There was no significant interaction (F1, 28 = 3.98, p>0.05). Agreeableness ratings were higher overall in the emoticon condition, but there were no sex differences in ratings; males and females rated Agreeableness similarly regardless of condition.

For Conscientiousness there were no effects of either Condition (F<1) or Sex (F<1), nor was there an interaction (F<1). Conscientiousness ratings did not differ between emoticon and control conditions, or between males and females.

For Emotional Stability there was no effect of Condition ($F1, 28 = 3.64$, $p>0.05$), although there was a significant main effect of Sex ($F1, 28 = 7.34$, $p = 0.01$). There was no interaction ($F<1$). Emotional Stability ratings did not differ between emoticon and control conditions, but females made higher ratings overall irrespective of condition.

For Openness to Experience there were no effects of either Condition ($F1, 28 = 1.84$, $p>0.05$) or Sex ($F1, 28 = 1.84$, $p>0.05$). There was no interaction ($F1, 28 = 2.30$, $p>0.05$). Openness to Experience ratings did not differ between emoticon and control conditions, or between males and females.

To summarise, participants rated their online chat partner as more extroverted and more agreeable when emoticons were used. Female participants generally rated online chat partners as more emotionally stable, whereas male participants rated chat partners not using emoticons as less extroverted. Perceptions of conscientiousness and openness to experience were not affected by emoticon use.

Discussion

Findings indicate that emoticon use affected participant evaluations of extroversion and agreeableness. Specifically, the online chat partner was regarded as more extrovert and more agreeable when emoticons were used in conversation. Ratings of extroversion however seemed to be influenced by the male participants, who perceived the chat partner not using emoticons as more introverted. This would suggest that a lack of emoticons impact upon impressions of extroversion/introversion more so than the inclusion of emoticons for male participants. Results also illustrate a sex difference with regards to perceptions of emotional stability, irrespective of whether emoticons were employed in communication. Specifically, the female participants rated the online chat partner as being more emotionally stable than their male counterparts.

The study findings support the view that using emoticons conveys socio-emotional information that is often restricted in CMC, thus alleviating some of the constraints associated with cue-restricted communication. More importantly, the perception of the online chat partner as more out-going and friendly suggests that emoticons can have a positive influence on impression formation. This is nevertheless a tentative conclusion, as the context of the interaction must be considered. The â€˜conversationâ€™ that took place in the current study was of a light and innocuous nature, with no discussion of provocative or emotive topics. In addition primarily positive emoticons were utilised, for example the smiling type, which is generally associated with happiness. One is also able to express negative emotions online (for example with a frowning emoticon), and this might influence impression formation differently. Again, context should be considered; although one might expect that a reliance on negative emoticons would result in more negative impressions, there may be situations in which negative emoticons could be used in a positive way. For example, two chat partners may use a negative emoticon to express a mutual dislike of something, signalling agreement and solidarity.

The findings of this study support assertions made by Thompson & Foulger (1996) and Rezabek & Cochenour (1998) in that emoticons provide additional social cues above what is written in text. The inclusion of emoticons in text influenced the decisions of the participants with regards to person

perceptions. It seems likely that the online chat partner was viewed as more agreeable due to the inclusion of positive emoticons. However, the results also suggest that the omission of emoticons in communication influenced the male participantsâ€™ evaluations of extroversion. This finding is interesting and suggests sex differences with regards to emoticon interpretation. Although the sex of the chat partner was not made specific, the self-description used at the end of the communication (i.e. â€˜creative, warm and friendlyâ€™) would possibly intimate feminine characteristics. Wolf (2000) provides some evidence to suggest that males change their style of communication when communicating with females to a more emotional level. This mirroring of style may reflect communication that is flirtatious in nature. Therefore, male participants may have perceived the chat partner as less flirtatious when she did not use emoticons. This may have further influenced the male participantsâ€™ perceptions of extroversion; in other words, an individual who is less flirtatious is also likely to be less gregarious and out-going. Females may not have been influenced by the use of emoticons in their evaluations of extroversion in this context, as their expectations of the communication were different to the males. This suggests context-specific uses for emotions in online communication. The fact that the male participants rated the chat partner as less emotionally stable than the female participants, irrespective of condition, may also be reflective of the perceived sex of the chat partner. Indeed, Heilman (2001) has shown that men rate women as being less emotionally stable as well as being more concerned for others. If indeed the chat partner were perceived to be a woman, then this would explain this finding. In this instance participants were not asked to indicate the sex of the chat partner, therefore further investigation into this issue is required.

An additional point that was not addressed by the present study concerns the precision of personality judgements made by online chat partners. Previous studies have found the accuracy of online personality assessments to be impaired in comparison to face-to-face or self-ratings (Fuller, 1996; Rouse & Haas, 2003). The present study only examined how the use of emoticons altered perceptions of personality; as these judgements were of universal responses given by a confederate and not a â€˜realâ€™ chat partner, accuracy could not be measured. Future studies using more naturalistic chat scenarios would help to clarify whether emoticons serve to supplement, and not just enhance, personality information communicated during online interaction.

Overall, findings indicate that impression formation can be influenced by emoticon use. This would suggest that emoticons can be used to improve the way in which an individual is perceived when communicating via the Internet. Although one could argue that itâ€™s always useful to make a good first impression, there may be specific online contexts that would benefit from â€˜positiveâ€™ emoticon use. For example, in an online dating scenario, it may be useful to use positive emoticons, particularly if this means coming across as more friendly and outgoing. The current study did not consider the implications of using negative emoticons and this might be an avenue for further exploration, as well as the impact they have upon the accuracy of judgements made online. In addition, sex differences in perceptions of emoticon users may reflect the supposed sex of the user and discrepant motivations for online communication amongst men and women. The fact that online communicators can be influenced so heavily by an individualâ€™s use of emoticons suggests that emoticon style is suggestive of personality type. Further research could address the possibility that different personality types use emoticons differently, as well as the context of the interaction and the nature of the verbal information being exchanged.

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