

Know What I Mean? Perception of Emotional Content in Email, Notes, and Text Messages

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Abstract

Technological innovations have promoted new modes of communication that have many benefits (e.g., speed), but also some potential costs. For example, research suggests that emotional connotation can be affected by mode of communication. In this study participants read positive, negative, and neutral messages that were presented as text messages, emails, and handwritten notes. They were asked to reply to the message and then rate their emotional experience of the message as well as the appropriateness of the mode of communication. Results from this study will help reveal and define emotional costs associated with electronically-mediated communication.

Introduction

Modern Communication

Technology has become a necessity in our daily lives leading to increased use of computer-mediated communication (CMC). CMC can take many forms – text-messaging, chat rooms, blogs, and e-mail – each of which has different constraints (e.g., character and technological limitations). These constraints may affect the message.

Communicating Emotion

In written communication there are indicators of emotion. For example, negative emotions are often communicated by higher levels of disagreement between the sender and receiver and the use of negative emotion words (Hancock, Landrigan, & Silver, 2007). In contrast, positive emotions can be communicated by increased use of punctuation (particularly exclamation points) and faster responses with more content. When these characteristics appeared in messages, both the sender and receiver had high agreement on the emotion intended in the message. Harris and Paradice (2007) obtained similar results when they examined the strategies receivers use to detect emotion. The ability or inability to use these emotion cues due to format constraints (e.g., character limitations) could influence message effectiveness.

Emotion in Computer-Mediated-Communication

There has been no research examining detection of emotion in CMC and other forms of written communication. The closest study examined differences in electronic and physical forms (pen and paper) of written communication. Naquin, Belkin, and Kurtzberg (2010) found people feel less attached to their words in electronic mediums even though the messages are harder to get rid of once sent. This absence of attachment may have to do with the permanence of the words; for example, it is easier to delete words from your electronic document than to remove words from a physical message. This can lead to the writer not feeling ownership of their electronic words. It is possible that reduced feelings of ownership in an electronic medium could affect the receivers' interpretation of the emotional content of the message.

The purpose of this study is to determine if the mode of presentation (text-messages, e-mail, and notes) has any effect on emotion perception. We will also investigate preferences regarding these mediums.

Method

Participants

- 20 MWSU students (17 female; average age 21 years) participated in the experiment.
- All participants reported having a cell phone; 95% have unlimited texting.
- 60% check their cell phones hourly for text messages.
- 65% check their email daily and 45% said they do not like writing notes.

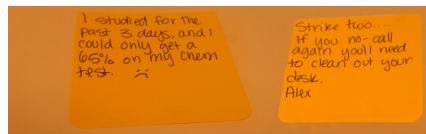
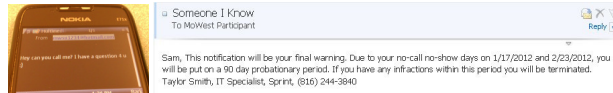
Materials

Survey

A demographic survey was used to obtain information about participants' text-messaging, e-mail, and note usage as well as their perceptions of text-messaging, e-mail, and note usage.

Messages

- 39 message topics were selected (12 positive, 12 negative, and 15 neutral) and an email, note, and text-message were created for each.
- Presentation of a message as a text (via a cell phone), email (on a desktop computer) or note (sticky notes on blank pages in a binder) was counterbalanced across participants, so no participant saw the same message more than once.



Scales - Likert-like scales were used to test the intensity of emotion and appropriateness of the medium:

1. How do you feel, emotionally, about this message?

Generally Positive Generally Neutral Generally Negative

2. On the scale below, rate the intensity of the emotion the message made you feel.

1 – Little to None 2 – Slight 3 – Moderate 4 – Strong

3. On the scale below, how appropriate was it to receive this message in the form it was sent to you?

1 – Not at all 2 – Slightly 3 – Moderately 4 – Very

Procedure

- 39 messages (13 e-mail, 13 text messages, and 13 notes) that had positive-, negative- and neutral-valances were presented to each participant.
- Presentation order for messages of each medium was counterbalanced across participants: E-mail, Note, Text; Note, Text, E-mail; Text, E-mail, Note.
- Participants were presented with messages, one at a time, and were asked to first respond to the message using the same medium. Then they were asked to rate it on emotional content and appropriateness.

References

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- Harris, R.B. & Paradice, D. (2007). An investigation of the computer-mediated communication of emotions. *Journal of Applied Sciences Research*, 3, 2081-2090.
- Naquin, C. E., Belkin, L. Y., & Kurtzberg, T. R. (2010). The finer points of lying online: E-mail versus pen and paper. *Journal of Applied Psychology*, 95, 987-994.



Results

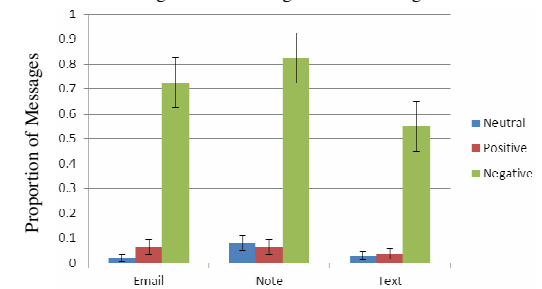
Question 1: How do you feel, emotionally, about this message?

Somewhat Positive – Main effect of emotion, $F(2, 18) = 44.8, p < .001$. Positive messages were most likely to be rated as positive ($M = .60$) followed by neutral messages ($M = .33$), followed by negative messages ($M = .033$).

Somewhat Neutral – Main effect of format, $F(2, 18) = 4.8, p = .021$. Text messages ($M = .48$) were more likely to be rated as neutral than notes ($M = .34$). Main effect of emotion, $F(2, 18) = 33.9, p < .001$. Neutral messages were most likely to be rated as neutral ($M = .63$) followed by positive messages ($M = .346$) followed by negative messages ($M = .267$).

Somewhat Negative – Main effect of format, $F(2, 18) = 5.9, p = .011$. Text messages ($M = .21$) were rated as negative less often than email ($M = .27$) or notes ($M = .32$). Main effect of emotion, $F(2, 18) = 69.5, p < .001$. Negative messages were rated as negative more often ($M = .70$) than were positive ($M = .054$) or neutral messages ($M = .043$). An interaction was also obtained, $F(4, 16) = 5.2, p = .007$.

Messages rated as being "Somewhat Negative"

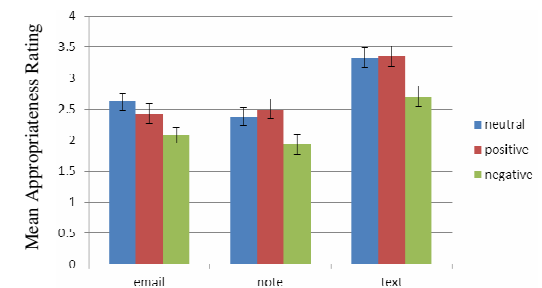


Question 2: Emotional Intensity

Main effect of emotion, $F(2, 18) = 45.0, p < .001$. Negative messages were rated as being most intense ($M = 2.9$), followed by positive messages ($M = 2.4$), followed by neutral messages ($M = 2.4$).

Question 3: Appropriateness Rating

Main effect of format, $F(2, 18) = 16.3, p < .001$. Text messages were rated as more appropriate ($M = 3.1$) than e-mail ($M = 2.4$) or notes ($M = 2.3$). Main effect of emotion, $F(2, 18) = 10.8, p = .001$. Negative messages ($M = 2.2$) were rated as being less appropriate than neutral ($M = 2.8$) or positive ($M = 2.8$) messages.



Conclusions

- Negative messages are seen as less appropriate perhaps because they are elicit greater emotional intensity.
- Text messages are seen as more appropriate than e-mails or notes.
- Neutral texts are more often rated as neutral than e-mails or notes.
- Negative texts are interpreted as being less negative than a note or e-mail would be.
- Emotional content can be compromised in CMC.

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