

# PLZ Add LOL if U R JK: The Importance of Emotional Cues in Text Messaging

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## Abstract

This study was designed to determine whether or not text-messaging abbreviations convey the same emotion as the words/phrases they represent. Participant's skin conductance responses (SCRs) were measured as they rated (1=very unpleasant, 6=very pleasant) phrases containing emotional abbreviations (e.g., *LOL*) or their representative words/phrases (e.g., *laugh out loud*). Participants rated phrases containing positive abbreviations or words/phrases higher than neutral stimuli and phrases containing negative abbreviations or words/phrases lower than neutral stimuli. Therefore, participants report feeling some emotion when exposed to positive and negative abbreviations; however, there was no corresponding physiological effect as no differences were found in the SCRs.

## Introduction

### Purpose

When instant communication is at our fingertips, it is little wonder why we frequently use electronic communication. It is not certain, however, that text-based communication adequately conveys emotional content. The purpose of this study is to determine if using abbreviations and acronyms (a common occurrence in this medium) is appropriate for conveying emotion compared to emotion conveyed by the actual words they represent.

Previous studies indicate that acronyms are processed like words (e.g., Laszlo & Federmeier, 2007), but there is evidence that emotion may not be automatically accessed for acronyms as they do not produce an emotional Stroop (Belcher, Keuhn, Powell, & Sterzinger, 2010).

**BFF**

best friends forever

**BTW**

by the way

### Hypothesis

Acronyms will evoke less emotional response than if they had been spelled-out.

### Current Experiment

Emotional response was measured using a rating scale and skin conductance responses (SCR: sweat gland dilation). Having both provides participants' subjective experience are objective data. SCRs have shown to be sensitive to emotion in previous research using taboo words and phrases (e.g., Harris, Ayçiçeği, & Berko Gleason, 2003), but it has not been used to index emotional processing of acronyms.

## Method

### Participants

32 Missouri Western State University students (9 male)  
 •The majority was participated in exchange for course credit  
 •Average age was 25.5 yrs.

**75% communicated electronically on an unlimited basis**  
**25% use acronyms/abbreviations hourly**  
**41% use them daily.**

### Procedure and Materials

#### 1) Demographic Questionnaire

Electronic communication use and preferences survey

#### 2) Rate emotional content of phrases.

Fifty-one phrases containing positive, negative, or neutral abbreviations or the word(s) they represent. Stimulus type (abbreviation vs. words) was counterbalanced across participants

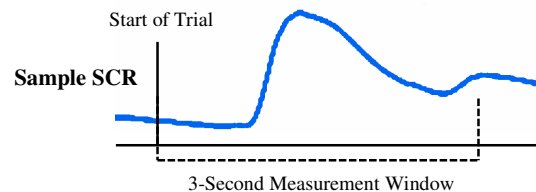
Emotion	Stimulus Type	
	Abbreviation	Phrase
Positive	I was JK.	I was just kidding.
Negative	IH8IT when it's my turn.	I hate it when it's my turn.
Neutral	Send me the MSG.	Send me the message.

### Rating Scale

1 2 3 4 5 6  
 very unpleasant      slightly      slightly      moderately      very pleasant

#### 3) Skin Conductance Response

SCRs were measured while participants completed the rating task. This was done using electrodes attached to the first and third fingers on the participant's left hand. The onset of each trial was marked in the recording so that SCRs for each trial could be measured off-line.



SCRs were measured by finding the average amplitude (in MicroOhms) of the skin response for three seconds following onset of each trial.

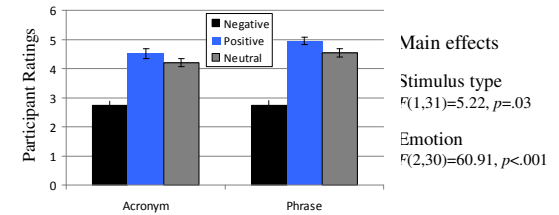
#### 4) Acronym/abbreviation questionnaire

After the rating task, participants were asked to write out the meaning of the acronyms used in the experiment.

## Results

### Ratings

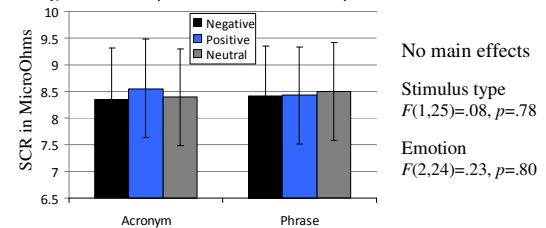
Figure 1: Participant ratings. Error bars represent standard error.



• Pairwise comparisons revealed significant differences between each of the three emotion conditions (all  $p$ s < .05).  
 • Interaction (Stimulus type x Emotion)  $F(2,30)=2.66, p=.09$

### Skin Conductance Response

Figure 2: Participant SCRs. Error bars represent standard error.



• Interaction (Stimulus type x Emotion)  $F(2,24)=4.63, p=.02$

## Discussion

### Rating scale

•No matter the stimulus type (phrase or acronym), participants rated positive items higher than neutral, and negative items lower than neutral.

### SCR

•No effect of emotion was obtained.  
 •Manipulation may have been too weak. Small sample size and subject variability may have caused the interaction.

### Conclusion

•Participants rated emotional phrases as being emotional; however there was no corresponding physiological effect.

## References

- Belcher, J., Keuhn, Y., Powell, A., Solomon, S., & Sterzinger, J. (2010). Idk how to feel about this txt msg: absence of emotion when processing acronyms. *National Undergraduate Research Clearinghouse, 13*. Available online at <http://www.webclearinghouse.net/volume/>.
- Harris, C. L., Ayçiçeği, A., & Berko Gleason, J. (2003). Taboo words and reprimands elicit greater autonomic reactivity in a first language than in a second language. *Applied Psycholinguistics, 24*, 561-579. doi: 10.1017/S0142716403000286
- Laszlo, S. & Federmeier, K. D. (2007). Better the DVL you know: Acronyms reveal the contribution of familiarity to single-word reading. *Psychological Science, 18*, 122-126.