

Running Head: GENDER DIFFERENCES IN TEXT MESSAGE CONTENT

Gender Differences in Text Message Content  
Jenna Langer, Vanessa Jones, Megan McNabb  
California State University, Sacramento

## Literature Review

Text messaging is a form of computer-mediated communication where messages are sent via mobile phones. According to a study by Neilsen Mobile, text messaging has increased by 450% in the last two years, with the average mobile subscriber sending 357 messages per month. In 2008 18-24 year old mobile phone users sent an average of 790 text messages per month (4). Due to the convenience of text messaging, 37% of young people are sending 5 or more messages a day. Most text messages are regarding personal matters and are often informal in language (2).

Computer-mediated communication, including e-mail and text messaging, promotes self-disclosure and “can be used to relieve tension in interpersonal communication, and satisfies affiliation motivation” (2). Although computer-mediated communication promotes self-disclosure, this study will examine the differences in the way men and women use text messaging as a means of communication. A study conducted by the University of Washington found that at least two thirds of text messages sent by teens were relational based, meaning the topic was social arrangements, salutations, friendship maintenance, romance, etc. It is important to note that the sample was 75% women and 25% men (3).

In general, women are more expressive and socially oriented than men and women rely heavily on nonverbal cues. Women are more likely to have an in-depth conversation where as men tend to make general statements making the conversation more task oriented (1). “Women tend to engage in intimate conversation with their good friends, whereas men tend to spend time in common activities with theirs” (2). Men prefer to use communication to gain social status and use their social networks in a task-oriented manner (2). Face-to-face communication differences between genders and has been shown to cross over into e-mail and computer-mediated communication makes women communicate more thoroughly because of the lack of nonverbal cues (1).

## Hypothesis

Past research has shown that when men communicate they are more task-oriented and women are more social and expressive. This has been seen in face-to-face communication, telephone conversations, and in e-mail. Preliminary research has investigated gender differences in text messaging, but none have analyzed the content of the messages and whether or not they are task or social based (2). We hypothesize that when communicating through text messaging, women will send more social messages where as men will send more task-oriented messages.

## Methods

An e-mail will be sent to all students at Sacramento State University asking if they would like to participate in our research experiment. We will provide an incentive of a free mobile phone and free mobile phone service for six months for partaking in our study. They will be asked to fill out a simple questionnaire to determine if they are qualified. Students will be asked their gender, age, and how often then send text messages. Qualified participants will be 18 – 30 years old, send at least 5 text messages a day, and be willing to use the provided mobile phone for six months. From the qualified respondents we will randomly select 50 women and 50 men to continue with the study.

Funding provided by a National Science Foundation grant will allow us distribute 100 mobile phones to the participants and pay for text messaging services for six months. After they receive the phone participants will need to agree to always send text message through the provided phone and consent to uploading their text messages from the sixth month. All messages will be confidential and the participants name will not be associated with the messages they send. The six-month time period was determined to allow participants to become acclimated with the phone and to reconnect with their social network.

During the sixth month, messages will be aggregated and stored in a database. A contract has been set up with our mobile service provider that allows us to collect messages as they are sent. The messages will then be evaluated to disregard messages that cannot be categorized due to ambiguity. Next, a simple random sample will be taken from the remaining text messages providing content from 500 messages from women and 500 messages from men to further analyze through content analysis.

There will be three coders interpret the content of the messages to determine if they are task-oriented or social. The coders will be blind to the research questions and will not know the gender of the sender. They will all have a reference guide informing them of text message acronyms such as “lol” (laugh out loud) and “ttyl” (talk to you later). Appendix A lists commonly used acronyms and text messaging lingo. Each coder will analyze all of the messages and their results will be compared. The messages that cannot be categorized as task or social will be discarded, as well as messages that the coders do not agree on.

Task-oriented messages are sent to provide or ask for information and are usually not emotionally driven. Examples of these types of messages would asking for directions, getting information about an event or place, making appointments, and due dates of assignments. Social messages are more expressive, emotional, and open-ended. They are more personal and reflective and require a thoughtful response. Examples of social messages are asking how someone is feeling, relationship advice, jokes, and expressing one’s feelings on a topic (See appendix B for more examples). Messages will be split into task-oriented or social messages depending on what category they fall into according to the classification used in a study of young people’s text messages by Crispin Thurlow (see Appendix C). Task-oriented messages will be an accumulation of messages that have an informational-practical orientation, informational-relational orientation, practical arrangement orientation, and social arrangement orientation. Social messages will be an accumulation of salutary orientation, friendship maintenance orientation, romantic orientation, sexual orientation, and chain messages (3). Messages that don’t fall under any of the stated categories will be discarded.

## **Data Analysis/Results**

To analyze our results, we will find the chi square of our data to determine if our data is statistically significant. This will help decide if the results are due to sampling error (null hypothesis) or the results proven to be accurate and usable (alternate hypothesis).

The data will be divided by male and female, and task-oriented and social. The frequency observed categories will be task-oriented messages from women, task-oriented messages from men, social messages from women, and social messages from men. The frequency expected will be determined by the percentage of total task-oriented messages and percentage of total social messages. This percentage will be used in conjunction with the total number of messages sent by each women and men. We will find the frequency expected of each category by taking the

percentage of the total message type and multiplying it by the total number of messages evaluated for women and men. The data from this table will be used to calculate the chi square with the formula  $\Sigma [(FO-FE)^2/FE]$ . If this value is more than 5.99 (*the critical value for rejecting the null hypothesis 95% of the time*) then we can reject the null hypothesis and assume our study returned significant results. (See Appendix D for reference).

## Discussion

The completion of this study could result in multiple possible outcomes. If our hypothesis is correct, women will have sent more social messages compared to men. This occurred because research has previously shown that women are more relational and expressive when they communicate compared to men. These results would be proven through statistical analysis using the chi square method. For example, if we evaluate the theoretical data from Appendix D, the chi-square equals 33.3. This allows us to cross the critical value proving our hypothesis is correct, thus rejecting the null.

If our hypothesis is incorrect and there is no correlation between gender and message type, there could be several reasons for the unexpected results. First, the skewed results could be due to sampling error. We only sampled 100 people that text message, not the entire population of mobile phone users. Second, our sample was taken from a university in Sacramento of ages 18-30. This sample doesn't account for other regions of the United States or the world, and only studies college-educated individuals in a small age range. Third, it is possible that participants in the study are using another phone for communication, which doesn't allow for a complete data set to interpret. Finally, coding errors could contribute to inaccurate categorization and results.

If our results show that both genders send more social text messages, we can assume it is because of the nature of the medium. Communication through text messages generally takes place between existing friends (2). This allows for more personal messages rather than task. In contrast, if the data shows both genders sending more task-oriented messages we can assume it is due to the short nature of the medium. Text messages must be no more than 160 characters in length, which may lead to direct and instrumental messages.

After reviewing this research as well as possible conclusions we have found several other possible research opportunities evaluating the content and metadata of text messages. Further investigation of gender differences in text messaging can examine the type of people users are sending messages to, location from which the messages are sent, times they are sending messages, and evaluating individual dialogues via text messages. Our data can be further analyzed and new data can be collected to extend our understanding of gender differences and how we communicate through mobile technologies.

Anything	<b>NTHING</b>	Are you OK	<b>RUOK?</b>
Are	<b>R</b>	Ate	<b>8</b>
Be	<b>B</b>	Before	<b>B4</b>
Be seeing you	<b>BCNU</b>	Cutie	<b>QT</b>
Date	<b>D8</b>	Dinner	<b>DNR</b>
Easy	<b>EZ</b>	Eh?	<b>A?</b>
Excellent	<b>XLNT</b>	Fate	<b>F8</b>
For	<b>4</b>	For your information	<b>FYI</b>
Great	<b>GR8</b>	Late	<b>L8</b>
Later	<b>L8R</b>	Love	<b>LUV</b>
Mate	<b>M8</b>	Please	<b>PLS</b>
Please call me	<b>PCM</b>	Queue/cue	<b>Q</b>
Rate	<b>R8</b>	See/sea	<b>C</b>
See you later	<b>CU L8R</b>	Speak	<b>SPK</b>
Tea	<b>T</b>	Thanks	<b>THX</b>
Thank you	<b>THNQ</b>	To/too	<b>2</b>
To be	<b>2B</b>	Today	<b>2DAY</b>
Tomorrow	<b>2MORO</b>	Want to	<b>WAN2</b>
What	<b>WOT</b>	Work	<b>WRK</b>
Why	<b>Y</b>	You	<b>U</b>

<b>: -)</b> Happy/Smiley	<b>: -  </b> Angry
<b>: -))</b> Very happy	<b>% -)</b> Confused
<b>; -)</b> Winking	<b>: -&amp;</b> Tongue tied
<b>: -(</b> Sad	<b>O :-)</b> Sainly
<b>: -D</b> Laughing	<b>: '-(</b> Crying
<b>: -O</b> Surprised/shocked	<b>: -@</b> Screaming
<b>: -*</b> Kiss	<b>: -P</b> Tongue in cheek
<b>: @)</b> Pig	<b>* :-)</b> Clown
<b>d :-)</b> Baseball cap man	<b>: O)</b> Big nose smiley

Appendix B: Examples of Types of Text-Messages

Task Oriented Messages	Social Messages	Discarded Messages
The crime brief is due on Monday.	How r u 2day?	Yes, no (one word messages)
Do you know where the party is?	Good morning	I don't know
My address is 4650 Elvas Ave.	Last night was soooo much fun	What do you mean
Want to meet at Starbucks?	She better not be there tonight	
What time should I be at the spa?	I think ur better off w/o him	

<http://www.mobileedge.co.uk/freesms/textexplained.htm>

## Appendix C

### Categories for Text Messages

#### Informational-Practical Orientation

Messages in this category dealt primarily with the exchange of practical details or straightforward requests for information.

M2: Where's sardinia? Answer me quick hun! xx

M3: Put money in ur account

#### Informational-Relational Orientation

Messages in this category dealt primarily with more solidary information exchanges or requests for personal favours.

M4: I Passed

M5: I'm not feeling v well can you get the lecture notes for me please

#### Practical Arrangement Orientation

While perhaps implicitly recreational, messages in this category dealt primarily with plans to meet or the coordination of shopping and other household expeditions.

M6: Where shall i meet you tonite? what time? See u soon love me x

M7: Wanna come to tesco?

#### Social Arrangement Orientation

Also about plans for meeting up, messages in this category were explicitly about recreational planning such as going out together for the evening, going to the cinema and other social arrangements.

M8: R WE DOIN LUNCH THIS WK? CHE

M9: Hello. Me and laura want 2go2jive2moro. Does u want us 2 buy tickets

### Salutory Orientation

Messages in this category were non-specific, usually very brief and often flippant; many of them were little more than simple, friendly greetings.

M10: Yo man whats de goss

M11: morning,how are you today? xxjtxx

### Friendship Maintenance Orientation

Messages in this category dealt primarily with 'friendship work' such as apologies, words of support and thanks.

M12: Happy Birthday, i hope you are having a good one,see you in a few days.Love Duncan x  
x x x

M13: Don't worry bout exam!Just had hair cut & look like a ginger medussa!Arrgh!

### Romantic Orientation

Usually more so than the Friendship Maintenance category, messages in this category dealt primarily with romantic expressions of love, intimacy and affection.

M14: R u bak already khevwine?!i am not comin 4 anuva 2 wks,but khevwine, u r the sexiest thing since sliced bread!c & sexia then sliced bread!oh my luv.I miss u so!x

M15: Each time ur name appears on my phone i smile like this :)

### Sexual Orientation

Messages in this category had explicit sexual overtones.

M16: Read ur email-thought waz gonna burst so horny xxxxxx

M17: Your wish is my command!I promise to be a better hostage next time.Sweet dreams princess.xxx

### Chain Messages

Typically, chain messages are comparatively longer epigrams, jokes or word-plays which are passed on from messenger to messenger.

M18: I believe friends are like quiet angels who lift our feet when our wings forget how to fly!send to 4 friends and dont send back and see what happens in 4 days

M19: sex is good,sex is fine,doggy style or 69,screwin 4 free or getting paid,everyone loves getting laid,so spread ur legs,lay on ur back,lick ur lips & text me back!

#### Appendix D

Type of Message	Women	Men	Total
Task-Oriented	20	60	80 (40%)
Social	80	40	120 (60%)
Total	100	100	200

#### Bibliography

gender differences in communication (pg 411-412, or pg 8-9)

E-mail, gender, and personal relationships