Gender differences in mediated communication: Women connect more than do men

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A B S T R A C T

Past research in gender differences in the overall Internet use has been contradictory. Some asserted men used it more than women, while others asserted there were no gender difference. Both camps concluded that men and women differed in their motivation and utilization of time spent online. The purpose of the present research was to take a contemporary look at these gender differences. Using an online survey, we asked participants about their experiences with multiple forms of mediated communication: social networking sites, e-mail, video calls, instant messaging, texting, and phone calls. Our results indicated that women, compared to men, are generally more frequent mediated communication users. Compared to men, women prefer and more frequently use text messaging, social media, and online video calls. These results suggest that the nature of mediated social interaction is changing.

1. Introduction

Previous research has shown that men use the Internet more than do women, and that men and women use it for different things. For instance, Weiser (2000, 2001) reported that men, compared to women, are more likely to use the Internet to search for dates, read the news, look for job leads, get sports and financial information, read politics, and to play games; whereas women, compared to men, are more likely to use it for interpersonal communication (email, chatting, etc.). Additionally, a report from Georgia Tech University in 1994, indicated that approximately 95% of all Internet users were men, and suggested that this demographic homogeneity was something that researchers should recognize and consider while conducting future research on the Internet (Graphics, Visualization, and Usability Center [CVU], 1994). Until the middle of the last decade the Internet was mostly regarded as a technological “boy’s toy.” It was an information pathway created for men by men (Weiser, 2000).

Guadagno and Cialdini (2002) postulated that these early gender differences were based on gender role based differences in communication styles. Text-based computer-mediated communications (CMCs), such as email and instant messaging, were highly socially constrained in the first part of the 21st century; restricted for the most part to text-based, impersonal forms of interaction. In line with Social Role Theory (Eagly, 1987), this text-based style of communication fit well with the male gender role, which expects men to be agentic, (i.e., to achieve independence and be task focused). Women, on the other hand, are expected by Social Role Theory to be more communal (i.e., focused on establishing bonds within social interactions). This is harder to accomplish over strictly text-based modalities as compared to more traditional ones (e.g., face-to-face or telephone). Thus, in the early days of the Internet, when text was the primary means of communication, the modality was inconsistent with feminine gender roles. This may explain why, early on, men dominated the Internet. The present investigation provides a contemporary look at gender differences in online behavior. As the Internet, and more broadly mediated communication (i.e., any type of interpersonal communication that requires technology to facilitate it), has changed over time, have gender differences in its use changed as well?

2. Gender differences in mediated communication

Women are often socialized away from technology-related academic pursuits, such as science, technology, engineering, and math (STEM) fields (American Association of University Women [AAUW], 1992). Weiser (2000) hypothesized that because women were often encouraged away from these pursuits, they may have less accessibility or need for computers as relative to men. She further hypothesized that women were less likely to select careers for which the use of technology was important. Weiser’s initial research on the question of women and technology use supported these notions. More recently, Fallows (2005) reported that there
were no longer gender differences in the overall amount of Internet use, but rather there were differences in motivation and utilization of time spent online. For example, women used the Internet more for social interaction and relationship maintenance; while men were more likely to spend their time online engaging in more task-focused activities (e.g., reading the news and getting financial information). These results suggest that over the course of a few years, women had developed communication styles for text-based interactions and were even using e-mail more than men—and in a more engaging way than men. Specifically, women were more likely to use e-mail as a way to maintain relationships, spending most of their online time e-mailing friends and family. Women and men were both equally likely to value e-mail for its efficiencies and convenience, but women reported feeling more satisfied with the role e-mail played in their life. Furthermore, women said that e-mail played a more significant role in their life than men. Thus, over time women adopted various kinds of mediated communication for interacting with people they already knew (Guadagno & Cialdini, 2002; Guadagno, Muscanell, Oldie, Burke, & Ward, 2011; Muscanell & Guadagno, 2012).

Men, however, were still more intense Internet users than women (Fallow, 2005). The data indicated that men logged on more often and were more likely to have high-speed Internet access at home. Furthermore, men were more likely to use the Internet and e-mail messages as a source for facts and information. These results follow the pattern established by Social Role Theory (Eagly, 1987) that men use the Internet and other forms of mediated communication to achieve agentic goals.

3. Another form of mediated communication: social networking

As Fallows (2005) reported above, women adapted text-based messaging for relationship maintenance as the options for mediated communication matured and changed. It should come as no surprise then that when social networking burst onto the Internet scene, women as well as men were quick to adopt the new type of mediated communication (Mazman & Usluel, 2011). People use social networks for a variety of reasons ranging from establishing and maintaining social contacts, supporting informal learning practices, reflecting on daily life, and sharing and discussing the continuously increasing body of information available over the Internet (Muscanell & Guadagno, 2012).

There has been a large body of research dedicated to determining motivations for adoption and use of social networking sites (see Wilson, Gosling, and Graham (2012) for a review). Some studies have focused more on the communal aspects of this technology. For instance, Stutzman (2006) stated that social networks could be used for passing time, learning about other people, maintaining social relationships, or staying up to date on current information. Others have focused on the more agentic purposes social networking sites could serve. For instance, Ellison, Steinfield, and Lampe (2007) expand this research by portraying social networks as oriented towards work-related interaction, establishing new relationships, or reaching those with shared interests.

Joinson (2008) explored how social networking sites were used in 2008. He grouped social networking activities into these eight categories: keeping in touch, passive contact or social surveillance, reacquiring lost contacts, communication, photographs, design related uses, perpetual contacts, and making new contacts. Joinson found that maintaining social relationships and social surveillance were among the leading purposes of users in this study. These findings support the notion that social networks facilitate more communal social interaction motivations, although these sites do have the capability to be used for agentic means. For example, Fallows (2005) and Muscanell and Guadagno (2012) found that women use Facebook more for maintaining existing relationships, while men follow an agentic pattern and use the sites more for making new relationships and finding job leads.

A study by Hargittai (2008) found that equal amounts of men and women were Facebook users. However, by 2009, 57% of Facebook users were women and 43% were men (Taylor, 2009). This change could be due to the rapid growth experienced between 2007 and 2009 (from 50 million to 300 million users), during this, period women 40+ were the largest growing demographic on social networking sites (Muscanell & Guadagno, 2012). In late 2009, Facebook was growing at over 700,000 active users daily (Smith, 2009). The Internet finally had a place for communal technology mediated social interaction, and women were at the forefront of this technology (Taylor, 2009).

Gender differences observed using social networking sites are also found in other online environments. Guadagno et al. (2011) showed that in Second Life, a virtual online community, people behaved according to traditional gender role expectations. Specifically, their results indicated that, women reported in engaging in more communal activities such as meeting people and shopping, relative to men who reported in engaging in more agentic activities such as building things and owning property. Taken together, the research reviewed above suggests an important and interesting notion: Even when men and women have the freedom to behave in any way they want; for instance, they could choose to be inconsistent with social role expectations; men and women still choose to behave in a way that is consistent with social role expectations.

4. The present study

The purpose of this study was to conduct a contemporary examination of gender differences in mediated communication use. We asked participants about their experiences with several forms of mediated communication. We wanted to gain an overall impression about how these technologies are being used and some of the motivations behind their use. Based on the literature reviewed above, we predicted that, in accordance with Social Role Theory (Eagly, 1987), women would report using technology for more social connectivity, relative to men.

5. Method

5.1. Participants

Participants were 381 undergraduate students (267 women, 112 men, 2 unreported) from a large Southeastern University. They reported the following demographics: 84.9% were Caucasian and the mean age was 19 (SD = 1.39). Participants from this university were either recruited using the Psychology 101 subject pool website in order to partially fulfill a course requirement or completed the survey as volunteers in response to a Facebook event invitation. Because of the means of recruitment, these students could be from any major on campus but demographics revealed they were largely homogeneous in background. Owing to the nature of our confidentiality mechanism, we do not have a way to differentiate the participants recruited via Facebook from those recruited through the subject pool. We do not consider this a significant issue as the literature indicates that young men and women from this age group are quite similar in their technology use regardless of their background (see Guadagno, Muscanell, & Pollio, 2012).

5.2. Procedure

Participants filled out a 26-item survey online at a computer of their choice assessing demographic information and mediated
communication use. Items assessed frequency of use and preference for each technology medium. Example questions included (How often do you use each technology? How many hours a day do you spend engaging in each activity? What time of day do you use each medium? Who do you normally contact with each method and why?). Both frequency of use and preference for the mediated communication were assessed. We used a 7-point scale for each where 7 represented the greatest use or preference and 1 represented the least use or preference. Additionally, the survey contained a number of free response questions. See the Appendix for the complete survey.

6. Results

We conducted a series of independent-samples t-tests to examine gender differences in technology use and preferences. Our results indicate that women, compared to men, are more frequent mediated technology users and displayed a greater preference for mediated communication. Specifically, compared to men, women preferred text messaging, t(352) = 2.97, p = .003, d = 0.14; social networking, t(351) = 2.57, p = .01, d = 0.30; and video chat, t(352) = 3.11, p = .002, d = 0.37. Women also reported more frequent use of phone calls, t(355) = 2.8, p = .005, d = 0.33; text messaging, t(355) = 4.06, p < .001, d = 0.44; social networking, t(355) = 2.61, p = .009, d = 0.30; and video calls t(355) = 2.71, p = .007, d = 0.31. Finally, there was a significant difference in the number of hours spent video chatting with women spending more time video chatting, t(352) = 2.38, p = .02, d = 0.30; No other items were significant. See Table 1 for means and standard deviations.

7. Discussion

These results indicate that even when men and women have the freedom to act, however, they want – something the mediated communication oftentimes uniquely provides – they still act in accordance with gender role expectations. Thus, women have not only adopted mediated technology such as social networking as a means to maintain relationships, but have also increased the integration of text-based communication more than previously thought. Our results indicate that women, relative to men, are connecting more and using mediated technology more. These results support previous research that women are using social networking sites at higher rates than men (e.g., Muscanell & Guadagno, 2012). Unlike previous research findings, women report greater usage of mediated communication compared to men, and they show higher preference rates of this type of communication. As social networking sites and other forms of mediated communication continue to become even more popular and, as the industry behind them seeks to become the primary infrastructure upon which information is transmitted, we may see an even higher increase in women online (Kirkpatrick, 2010).

These results also show that women have surpassed men in using text-based communication. This contradicts previous research that men are more adept at communicating via text-oriented interactions. Our results suggest that, over the past decade, women have adapted these forms of communication. Based on previous research by Guadagno et al. (2011), future research should question whether women are using these mediated communication technologies in ways that are consistent with gender roles.

Additionally, we found that women show a greater use of online video calls. This provides further support for our contention that women use technology for connectivity purposes, as opposed to men who use it for more agentic means. It is possible that when the option to interact in person is not available, women turn to the mediated technology that best simulates a face-to-face interaction. Future research should further explore this question.

As social networking sites and other technology-mediated communications become more popular, we expect that more and more women will start using mediated communication. Social networking sites have quickly become the Internet’s leading infrastructure. They are where connections are made and information is shared (Kirkpatrick, 2010). If women continue to be the leading force on these sites we may see them displaying more agentic traits online in the future or we may see the Internet become more communal. One striking finding is that women used all types of mediated communication more than did men but they did not always report preferring the mediated communication more (e.g., phone calls). This difference should be addressed in future research.

7.1. Limitations and future research

One limitation of this study was that we did not assess potential moderators such as participant’s technical expertise. Previous research demonstrates that both of these factors technical expertise, or CMC competency as defined by Ross et al. (2009), influence how much people use social networking sites. Additionally, this sample primarily consisted of college students between the ages of 18 and 21. Future research should examine all age ranges as recent research suggests that the fastest growing population of Facebook is older adults, ages 55 and up (Smith, 2009). However, in this population, it seems that women are the fastest growing demographic (Hoffman, 2008), though data on preference and frequency of use is limited within this population. Finally, although we interpret these results in terms of Social Role Theory (Eagly, 1987), future research should examine why these trends are changing.

Appendix A. Technology and social interactions survey

Table 1
Significant means and standard deviations by gender across mediated communication preference and use.

<table>
<thead>
<tr>
<th></th>
<th>Men M</th>
<th></th>
<th>SD</th>
<th>Women M</th>
<th></th>
<th>SD</th>
<th>t (352)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefer text messaging</td>
<td>5.31</td>
<td>1.59</td>
<td></td>
<td>5.54</td>
<td>1.59</td>
<td></td>
<td>2.97</td>
<td>.003</td>
</tr>
<tr>
<td>Prefer social networking</td>
<td>4.38</td>
<td>1.63</td>
<td></td>
<td>4.86</td>
<td>1.57</td>
<td></td>
<td>2.57</td>
<td>.01</td>
</tr>
<tr>
<td>Prefer video calls</td>
<td>2.55</td>
<td>1.79</td>
<td></td>
<td>3.25</td>
<td>1.96</td>
<td></td>
<td>3.11</td>
<td>.002</td>
</tr>
<tr>
<td>Use - phone calls</td>
<td>4.76</td>
<td>1.58</td>
<td></td>
<td>5.26</td>
<td>1.49</td>
<td></td>
<td>2.80</td>
<td>.005</td>
</tr>
<tr>
<td>Use - text messaging</td>
<td>6.09</td>
<td>1.28</td>
<td></td>
<td>6.59</td>
<td>0.96</td>
<td></td>
<td>4.06</td>
<td>.000</td>
</tr>
<tr>
<td>Use - social networking</td>
<td>5.62</td>
<td>1.51</td>
<td></td>
<td>6.05</td>
<td>1.34</td>
<td></td>
<td>2.61</td>
<td>.009</td>
</tr>
<tr>
<td>Use - video calls</td>
<td>2.5</td>
<td>1.87</td>
<td></td>
<td>3.1</td>
<td>1.92</td>
<td></td>
<td>2.71</td>
<td>.007</td>
</tr>
<tr>
<td>Hours - video calls</td>
<td>.65</td>
<td>.98</td>
<td></td>
<td>.98</td>
<td>1.21</td>
<td></td>
<td>2.38</td>
<td>.02</td>
</tr>
</tbody>
</table>

Note: All preference and often measures were taken on a 1–7 scale where a selection of 1 indicated the least preference or use and 7 indicated the greatest preference or use. Hours was taken as a free response question.

Appendix A. Technology and social interactions survey

<table>
<thead>
<tr>
<th>Age:</th>
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<tbody>
<tr>
<td>Year in School:</td>
</tr>
<tr>
<td>Major:</td>
</tr>
<tr>
<td>Minor:</td>
</tr>
<tr>
<td>Ethnicity:</td>
</tr>
<tr>
<td>Sex:</td>
</tr>
</tbody>
</table>

1. Rate (1–6) how often you use each technology (1 = least, 7 = greatest)
2. How many hours a day do you usually spend engaging in each activity?

- Phone Calls
  - 1 2 3 4 5 6 7
- Text Messages
  - 1 2 3 4 5 6 7
- E-mail
  - 1 2 3 4 5 6 7
- Social Networking Sites
  - 1 2 3 4 5 6 7
- Video Calls
  - 1 2 3 4 5 6 7
- Instant Message
  - 1 2 3 4 5 6 7

3. What time of day, if any, are you more likely to use each medium?

- 7 am–11 am
- 11 am–2 pm
- 2 pm–5 pm
- 5 pm–8 pm
- 8 pm–12 am
- 12 am–4 am
- 4 am–7 am

Phone Calls
Text Messaging
E-mail
Social Networking Sites
Video Calls
Instant Message

4. Who do you normally contact with each method?

Phone Calls
Text Messaging
E-mail
Social Networking Sites
Video Calls
Instant Message

5. Why do you normally contact those people with each method?

Phone Calls
Text Messaging
E-mail
Social Networking Sites
Video Calls
Instant Message

6. Rate (1–7) your preferred media of communication

(1 = least preferred, 7 = most preferred).

- Phone Calls
  - 1 2 3 4 5 6 7
- Text Messages
  - 1 2 3 4 5 6 7
- E-mail
  - 1 2 3 4 5 6 7
- Social Networking Sites
  - 1 2 3 4 5 6 7
- Video Calls
  - 1 2 3 4 5 6 7
- Instant Message
  - 1 2 3 4 5 6 7

7. Rate (1–7) how much control you feel each communication media gives you over your interaction

(1 = least control, 7 = most control).

- Phone Calls
  - 1 2 3 4 5 6 7
- Text Messages
  - 1 2 3 4 5 6 7
- E-mail
  - 1 2 3 4 5 6 7
- Social Networking Sites
  - 1 2 3 4 5 6 7
- Video Calls
  - 1 2 3 4 5 6 7
- Instant Message
  - 1 2 3 4 5 6 7

8. Rate (1–7) how much creativity you feel you use in each of the following media (1 = least creativity, 7 = most creativity).

- Phone Calls
  - 1 2 3 4 5 6 7
- Text Messages
  - 1 2 3 4 5 6 7
- E-mail
  - 1 2 3 4 5 6 7
- Social Networking Sites
  - 1 2 3 4 5 6 7
- Video Calls
  - 1 2 3 4 5 6 7
- Instant Message
  - 1 2 3 4 5 6 7

9. On the average day...

a. How many phone calls do you make?
b. How many text messages do you send?
c. How many e-mail messages do you send?
d. How many times do you sign onto a social networking site?
e. How many times do you make a video call?
f. How many instant messages do you send?

10. How many social networking sites do you currently hold an account on?

Which sites?
How many do you use regularly? Which ones?

11. How many e-mail accounts do you currently have?

Which domains (e.g., Gmail, hotmail, AOL, Yahoo, Crimson)?
Which do you use regularly?

12. How many instant message accounts do you currently have?

Which ones?
Which ones do you use regularly?

13. How do you feel technology influences your stress level?

Reduces
No effect
Increases

1 2 3 4 5 6 7 8 9 10

Can you please explain why you selected the value you did?

14. How do you feel stress influences your creativity?

Reduces
No effect
Increases

1 2 3 4 5 6 7 8 9 10

Can you please explain why you selected the value

(continued on next page)
you did?

15. What positive affects do you think technology has on your life?
   What negative affects do you think technology has on your life?

16. What positive affects do you think technology is having on your generation?
   What negative affects do you think technology is having on your generation?

17. Do you consider yourself creative?
   Yes  No

18. In what ways do you feel you are creative?

19. How do you feel that having a sense of control over your environment or interactions affects your creativity?

20. Do you feel that creativity can be used in modern technologically based communication?
   Yes  No

If yes, please give examples of how you imagine creativity may be used?

References


