

Facebook and MySpace: Complement or Substitute for Face-to-Face Interaction?

Carlyne L. Kujath, B.S.

Introduction

USE OF THE INTERNET FOR COMMUNICATION PURPOSES has proliferated so widely that it has coined its own term, "computer-mediated communication" (CMC). In their review of the literature, Bargh and McKenna¹ found the maintenance of interpersonal relationships to be the primary reason for CMC. Research that has examined the effects of CMC on interpersonal relationships has yet to come to a conclusion in terms of its negative or positive effects. One of the first and most significant studies was the HomeNet Project.² Using longitudinal data, Kraut et al. found that, when used primarily for communication purposes, extensive use of the Internet was associated with decreased communication among family members within a household, a reduction in the size of one's social circle, and increases in depression and loneliness. They attributed these negative effects to the substitution of online relationships for stronger offline relationships.

According to Bargh and McKenna,¹ a number of studies that followed suggested that rather than being a negative, isolating, and deindividuating activity, CMC not only helps to maintain close interpersonal relationships, but also, if the individual is inclined, facilitates the formation of close and meaningful new relationships. In a follow-up study using the same group of participants, Kraut et al.³ found that more frequent Internet use (specifically e-mail) was associated with increased contact with local and distant social partners. Furthermore, Kraut et al. found that frequent use among adults was associated with more face-to-face communication

with family, and closer feelings toward extended family and friends.¹

These conflicting findings have led to controversy over the effects of CMC on interpersonal relationships. Several studies have suggested that these effects are largely dependent on the goals of communicating via CMC. When used as a substitute, the effects of CMC on interpersonal relationships are negative and lead to a deindividuating experience, but when used as a complement to face-to-face interaction, CMC facilitates the maintenance of interpersonal relationships.^{2,3}

The trend that has come to dominate CMC is the use of social-networking sites, specifically, Facebook (<http://facebook.com>) and MySpace (<http://myspace.com>). MySpace was made public in 2003. At its peak, it was growing at a rate of 230,000 pages per day⁴. Facebook followed in 2004 and is currently almost twice the size of MySpace.⁵ As of January 2009, Facebook had over 200 million active users worldwide.⁶ Dwyer⁷ found that 79% of MySpace users reported using the site at least once a week, and Hass⁸ found that the average Facebook user signs on about six times per day. Such research on the use of specific social-networking sites such as Facebook and MySpace is in its infancy.

When compared to previous studies examining the effects of CMC on interpersonal relationships, the unique dynamics of social-networking sites such as Facebook and MySpace make it difficult to anticipate the deindividuating experience that has been suggested by some researchers. Social-networking sites such as Facebook and MySpace differ strikingly from previous CMC mediums in two major ways. First, anonymity is often lacking with social-networking sites

compared with other types of CMC. The ability to identify a person and corroborate that identity in real life makes social-networking sites more reliable than CMC for that purpose. A key characteristic of Facebook and MySpace is that a person's name and other demographic information (age, sex, marital status, etc.) is available on these sites. In order for an online friendship to exist, individuals must explicitly agree to be friends with each other.⁹ In addition, their friendship links are made public to other users. These public displays of friendship verify a reliable and secure identity to others, making it more difficult for someone to provide a fraudulent identity.⁹ Second, many of the interpersonal relationships that exist via Facebook or MySpace have an offline component. Ellison et al.¹⁰ found that the most commonly included information on a user's profile was likely to be relevant for being found by existing acquaintances. As a complement to face-to-face interaction, social-networking sites add an online component to face-to-face relationships.

This suggests that prior face-to-face interpersonal relationships are being maintained on Facebook and MySpace. It is very unusual for a friendship to exist on Facebook and MySpace that has no real-life component.¹¹ In their study, Lampe et al.¹² found that college students, for example, are highly unlikely to use Facebook to initiate new relationships, but more likely to use social-networking sites as a search tool to investigate people that they have met offline.

Social-networking sites have become a popular medium for interpersonal communication, particularly among college students. In one study, only one out of 1,060 college students was unaware of any of the six social-networking sites.¹¹ Facebook was their most popular social-networking site, with 80% of college students using it.¹¹ Facebook was also the number-one site accessed by 18–24 year olds.¹³ A total of 54% of college students were MySpace users.¹¹

The objective of this study was to determine whether previously found effects of CMC on interpersonal relationships generalize specifically to the social-networking sites, Facebook and MySpace. To understand the extent to which Facebook and MySpace are used to create new relationships rather than to maintain prior existing face-to-face relationships (if at all), the current research determined the number of relationships that were novel to users in these media. Based on previous studies by Lampe et al.,¹² these types of relationships should be minimal, reiterating the importance of these sites in maintaining, not forming, relationships. Furthermore, this study examined the extent to which some users depend more on Facebook and MySpace as a substitute for face-to-face interaction.

Method

A non-random sample of 183 college students identifying themselves as Facebook and/or MySpace users participated in this study. A survey instrument was distributed to respondents anonymously. To measure how these sites are utilized for maintenance of interpersonal relationships, respondents were asked to estimate the number of friends on either of these sites whom they had never met in person. They were also asked to identify how frequently they use Facebook and/or MySpace to meet new people they have never met before and how frequently they use these sites to keep in touch with people they already know. To assess further the

extent of their online and offline relationships, respondents were asked to indicate how frequently they use Facebook and/or MySpace to communicate with their friends online more than they do in person, and whether they view profiles of people that they do not know. These questions were measured categorically as "never," "seldom," "sometimes," or "frequently."

Respondents were asked to identify the number of times they use Facebook and MySpace per day, per week, or per month. They were also asked to indicate the amount of time they spend on these sites each time they are on them in hours and/or minutes.

Results

The sample consisted of 183 Facebook and/or MySpace users (see Table 1). Distribution of the sexes was fairly even: 46% male ($n = 85$) and 54% female ($n = 98$). Age ranged from 16 to 32 years, with a mean of 21.3 years ($Mdn = 21$, $SD = 2.2$). The majority of respondents (91%) were undergraduates, 64% ($n = 116$) of which were upper classmen. Approximately 9% were post-baccalaureate ($n = 5$) and graduate students ($n = 11$). No significant differences were found for gender, age, or class standing with regard to the research questions addressed in this study.

A total of 76% of respondents ($n = 140$) identified themselves as Facebook users, and 78% ($n = 143$) indicated that they used MySpace. This proportion exceeds 100% because 52% ($n = 96$) used both Facebook and MySpace.

Respondents' time and effort invested in Facebook and MySpace is summarized in Table 2. Length of membership for Facebook users ranged from 1 month to 53 months, with a mean membership length of 21.9 months ($Mdn = 24.0$, $SD = 13.4$). Respondents reported using Facebook an average of 1.2 times per day ($Mdn = 1.0$, $SD = 1.3$) and spending an average of 31.5 minutes ($Mdn = 17.5$, $SD = 58.8$) each time they use it. The length of membership for MySpace users ranged from 0.5 months to 60 months, with a mean membership length of 28.2 ($Mdn = 24.0$, $SD = 15.5$). MySpace users reported an average usage of 1.6 times per day ($Mdn = 1.0$, $SD = 1.5$), spending an average of 38.8 minutes ($Mdn = 30.0$, $SD = 57.1$) for each use.

A total of 40% ($n = 74$) of the respondents reported having no friends on Facebook and/or MySpace that they had never met in person. The 100 respondents who did report

TABLE 1. CHARACTERISTICS OF RESPONDENTS

	Percent
Sex	
Male	46.4 ($n = 85$)
Female	53.6 ($n = 98$)
Total	100.0 ($N = 183$)
Class standing	
Freshmen	10.9 ($n = 20$)
Sophomore	15.9 ($n = 29$)
Junior	26.2 ($n = 48$)
Senior	37.2 ($n = 68$)
Post-Baccalaureate	2.7 ($n = 5$)
Graduate	6.0 ($n = 11$)
No Response	1.1 ($n = 2$)
Total	100.00 ($N = 183$)

TABLE 2. FACEBOOK AND MYSPACE UTILIZATION

	Facebook			MySpace		
	<i>Mn</i>	<i>Mdn</i>	<i>SD</i>	<i>Mn</i>	<i>Mdn</i>	<i>SD</i>
Membership months	21.9	24.0	13.4	28.2	24.0	15.5
Times used per day	1.2	1.0	1.3	1.6	1.0	1.5
Minutes spent per use	31.5	17.5	58.8	38.8	30.0	57.1
Total minutes per day	39.1	15.0	77.0	67.4	30.0	112.7

having friends on Facebook and/or MySpace whom they had never met in person reported having an average of 7.2 such friends (*Mdn* = 3.0, *SD* = 12.4).^a Respondents' usage of Facebook and MySpace to form and maintain relationships is summarized in Table 3. A total of 8% (*n* = 14) of the respondents reported having frequently used Facebook and/or MySpace to meet new people that they have never met before, while 75% (*n* = 132) reported frequently using it to keep in touch with people whom they already knew. To the extent to which respondents communicated with their Facebook and/or MySpace friends online more often than in person, 45% (*n* = 81) tended to do so never or seldom, while the remaining 55% (*n* = 97) tended to do so sometimes or frequently (see Table 4).

Discussion

This study utilized a small, non-random sample of college students. Therefore, this study limitation should be considered when assessing the conclusions drawn from the following discussion. In addition, some respondents reported having an extremely high number of friends, and were thus excluded from calculations. This suggests that respondents may not have reported their Facebook and/or MySpace use accurately. Aside from inaccurate reporting on behalf of the respondent, there may be alternative explanations for these outliers. Interactive game applications are becoming increasingly popular on Facebook, thus expanding a user's number of friends somewhat exponentially. Therefore, the large number of friends might be due to these users engaging in Facebook game applications. However, given the presence of outliers, it appears that the majority of users do not employ this particular type of goal-oriented transaction. Furthermore, it would be interesting to see whether users are interacting through these game applications with people they know or people they have not met in person.

Also becoming increasingly popular on Facebook is the presence of celebrities and public figures, and the ability to "friend" them. Perhaps these outliers were referring to friends such as these when estimating the number of friends they did not know in person. However, these outliers, by their very nature, appear to be the exception and not the rule.

Respondents tended to use Facebook and MySpace to keep in touch with people that they already knew, as well as to meet new people that they have never met before. However, using Facebook and MySpace to keep in touch with people that they already knew tended to outweigh the use of these sites to meet new people.

Respondents who had friends on Facebook and/or MySpace that they had never met in person reported a median of three such friends. This supports studies by Lampe et al.,¹² who suggest that the small number of relationships novel to the CMC environment reiterates the importance of relationship maintenance rather than formation. While data from the present study imply that they are doing *both*, the number of relationships novel to the CMC environment is relatively small. Moreover, 53% of respondents reported having never used Facebook and/or MySpace to meet new people, whereas 72% of respondents reported using it frequently to communicate with people that they already knew. These results are consistent with studies by Bargh and McKenna¹ who found maintenance of interpersonal relationships as the primary reason for CMC.

Using Facebook and MySpace as an extension of face-to-face interaction to maintain interpersonal relationships may enable users to broaden connections that they otherwise may not have and to strengthen existing friendships. It seems as if the use of Facebook or MySpace could potentially lead to a stronger or larger social circle, depending on the goals of their use. However, this study did not examine the current quality or size of a participant's existing social circle. It is suggested that future studies examine potential reasons for why some

TABLE 3. RESPONDENTS FREQUENCY OF USING FACEBOOK AND/OR MYSPACE TO FORM AND MAINTAIN RELATIONSHIPS

	<i>Used to meet new people (%)</i>	<i>Used to keep in touch with known people (%)</i>
Never	53.0 (<i>n</i> = 97)	0.5 (<i>n</i> = 1)
Seldom	23.5 (<i>n</i> = 43)	3.8 (<i>n</i> = 7)
Sometimes	13.1 (<i>n</i> = 24)	19.7 (<i>n</i> = 36)
Frequently	7.7 (<i>n</i> = 14)	72.2 (<i>n</i> = 132)
No response	2.7 (<i>n</i> = 5)	3.8 (<i>n</i> = 7)
Total	100.0 (<i>N</i> = 183)	100.0 (<i>N</i> = 183)

TABLE 4. RESPONDENTS TENDENCY TO COMMUNICATE WITH THEIR FRIENDS ONLINE MORE THAN IN PERSON

	<i>Percent</i>
Never	11.5 (<i>n</i> = 21)
Seldom	32.8 (<i>n</i> = 60)
Sometimes	35.0 (<i>n</i> = 64)
Frequently	18.0 (<i>n</i> = 33)
Total	97.3 (<i>N</i> = 178)
No response	2.7 (<i>n</i> = 5)
Total	100 (<i>N</i> = 183)

users tend to stick with the circle of friends with which they are familiar and why others tend to branch out into the unknown. It is also suggested that future studies examine the quality of interpersonal relationships that users have outside of Facebook and MySpace in order to determine how these relationships are affected by CMC.

Notes

- a. Some respondents reported having 120, 206, and 1,000 friends whom they had never met in person. These outliers were excluded from calculations.

Acknowledgments

An earlier version of this study was presented at the Annual Conference of the Pacific Sociological Association in Portland, Oregon, in April 2008. I would like to dedicate this article to the memory of John R. "Jack" Dugan, Ph.D., for his extensive reviews of this paper and for the most wonderful mentorship I have received in my career thus far.

Disclosure Statement

No competing financial interests exist.

References

1. Bargh JA, McKenna KYA. The Internet and social life. *Annual Review of Psychology* 2004; 55:573–90.
2. Kraut R, Patterson M, Lundmark V, et al. Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist* 1998; 53:1017–31.
3. Kraut R, Kiesler S, Boneva B, et al. Internet paradox revisited. *Journal of Social Issues* 2002; 58:49–74.
4. Lenhart A, Madden M. How teens manage their online identities and personal information in the age of MySpace. www.pewinternet.org/pdfs/PIP_Teens_Privacy_SNS_Report_Final.pdf (accessed Feb. 4, 2008).
5. Arrington M. Facebook now nearly twice the size of MySpace worldwide. *TechCrunch*, Jan. 22, 2009. www.techcrunch.com/2009/01/22/facebook-now-nearly-twice-the-size-of-myspace-worldwide/ (accessed Apr. 28, 2009).
6. Facebook.com. Facebook statistics. www.facebook.com/press/info.php?statistics (accessed Apr. 28, 2009).
7. Dwyer C. (2007) Digital relationships in the 'MySpace' generation: Results from a qualitative study. In *Proceedings of the 40th Hawaii International Conference on System Sciences*. Computer Society Press, Washington D.C.
8. Hass N. In your Facebook.com. *The New York Times*, Jan. 8, 2006, pp. 4A, 30.
9. Donath J, Boyd D. Public displays of connection. *BT Technology Journal*, 2004; 22:71–82.
10. Ellison NB, Steinfield C, Lampe C. The benefits of Facebook "friends": Social capital and college students? Use of online social network sites. *Journal of Computer-Mediated Communication* 2007; 12. jcmc.indiana.edu/vol12/issue4/ellison.html (accessed Aug. 1, 2007).
11. Northwestern University. Student Facebook, MySpace use predicted by race, ethnicity, education. *ScienceDaily*, Nov. 22, 2007 www.sciencedaily.com/releases/2007/11/071119170137.htm (accessed Mar. 1, 2008).
12. Lampe C, Ellison N, Steinfield C. A Facebook in the crowd: Social searching vs. social browsing. In *Proceedings from CSCW'06*, Alberta, Canada: ACM.
13. Green EW. The web of social networking. *U.S. News and World Report* Nov. 14, 2005, Vol. 139, p 58.

Address correspondence to:

Carlyne L. Kujath

Washington State Department of Corrections

P.O. Box 41108

MS 41108

Olympia, WA 98504

E-mail: clkujath@doc1.wa.gov

Copyright of CyberPsychology, Behavior & Social Networking is the property of Mary Ann Liebert, Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.