Do we visit, call, or email? Media matter in close relationships

Jonathon N. Cummings

Carnegie Mellon University
Department of Social and Decision Sciences
Pittsburgh, PA 15213 USA
+1 412 665 0528
inc@andrew.cmu.edu

ABSTRACT

People use a variety of media to communicate with family and friends, though the evidence is sparse regarding whether differences in the quality of social relationships can be explained, in part, by differences in the media they use. Participants (N=446) in a longitudinal study of household technology use were asked to generate the names of up to 5 family or friends who lived nearby and up to 5 family and friends who lived far away. For each relationship at three points during the course of one year, respondents reported the frequency of face-to-face, phone, and email communication as well as how close they felt toward them. Analyses indicated that an increase in phone communication was most strongly associated with an increase in feelings of closeness, regardless of whether family and friends were nearby or far away.

Keywords

Email, telephone, face-to-face, social impact of the Internet, close relationships, geographic distance, communication

INTRODUCTION

The Internet has pervaded our social lives more than any other technology since the introduction of the telephone. People increasingly use the Internet to participate in on-line communities, to meet people through the World Wide Web, and of course, to send email to family and friends [2,4]. Previous investigations suggest a mixed bag of consequences for relying on the Internet to communicate with others, ranging from enhanced feelings of identity for stigmatized group members to a decrease in psychological well-being for Internet users [3,5]. At the heart of the controversy is whether the Internet supports or detracts from the development of meaningful relationships. To date, there has been surprisingly little research on the link between the use of different communication media over time and the ensuing quality of social relationships.

Robert Kraut, Sara Kiesler

Carnegie Mellon University
Human Computer Interaction Institute
Pittsburgh, PA 15213 USA
+1 412 268 7694
kraut, kiesler@cs.cmu.edu

What we do know about the use of email to maintain personal relationships comes from several cross-sectional studies comparing relations people have primarily on-line or off-line. For example, Parks and Roberts [6] surveyed 155 participants of an electronic group about their level of relational development with another electronic group member as well as with a similar type of person in their social network who was outside of the electronic group. The authors found that participants spent more time, were more interdependent, and were more committed to the off-line relationship compared to the on-line relationship.

In a field study of Internet users at home, Cummings, Butler, and Kraut [1] asked respondents to indicate how close they felt toward two different people outside of the household. The first person was someone to whom they communicated most often by any media ("communication partner" – name generated through an earlier questionnaire) and the second person was someone to whom they communicated most often by email ("Internet partner" – name generated through an email logging program). The 99 Internet users who answered questions about two different people reported feeling significantly closer to the communication partner compared to the Internet partner.

The purpose of this short paper is to empirically investigate the link between changes in the use of three different communication media (face-to-face, phone, and email) over a 1-year period of time and changes in feelings of closeness toward the other person. The research questions addressed are these: Do changes in the use of some media matter more than others in developing close relationships? and Does the association between media use and relationship closeness depend on geographic distance?

METHOD

The data reported here come from HomeNet 2, a field study of 446 household Internet users. New computer purchasers (N=321) and new TV purchasers (N=125) were recruited to participate in a research project on the use of technology in the home. Half of the new computer purchasers were given free Internet access, and the remaining new computer and TV purchasers were paid \$75 for completing three questionnaires (May 1998; January 1999; June 1999).

[©] Copyright on this material is held by the Author(s).

In addition to answering questions about technology use, participants were asked to name up to 10 non-household family or friends nearest to them in age (m=8.31,sd=2.35). They listed up to 5 people (m=4.88,sd=1.42) living nearby and up to 5 people (m=3.43,sd=1.93) living far away. For each of these relationships, participants indicated their age (Adult_-90%), sex (Male_-43%), relationship (Family-40%, Friend-54%), distance away in miles (Distance: nearby-m=9.90,sd=11.13; far away-m=679.95,sd=935.13; combined-m=314.71,sd=718.90), frequency of face-toface (Ftf-1:never;5:daily; m=2.95,sd=1.13), phone (Phone-1:never;5:daily; m=2.99,sd=1.12), and email (Email-1:never;5:daily; m=1.51,sd=1.04), and feelings of closeness (Close-1:not close; 5:very close; m=3.62,sd=1.16). Participants were also asked for their own age (Adult-88%) and sex (Male-46%). Three additional control variables were used: sample (Tvsample-27%), number (Number-1-5 name generation order) and wave (Wave-1-3 time period).

RESINTS

Table 1 shows the analyses predicting change in feelings of closeness from change in frequency of face-to-face, phone, and email communication over three time periods for nearby (Model 1), far away (Model 2), and combined (Model 3) relationships. The results clearly indicate that some media matter more than others for developing close relationships. Increases in all communication media were significantly related to an increase in closeness (Model 3), though the association for phone communication (B=310) was much stronger than for face-to-face (B=.213), and face-to-face communication was much stronger than for email (B=.085), regardless of whether family and friends were nearby or far away (Model 1 and Model 2).

Model	1 (Δ CLOSE)	2 (ΔCLOSE)	3 (ΔCLOSE)
(DV)	Nearby	Far Away	Combined
IV	B	B	B
(scale)	(Std. Error)	(Std. Error)	(Std. Error)
Constant	1.910	2.037	2.012
	(0.063)	(0.072)	(0.049)
Tvsample (0-1)	-0.024	0.064	-0.025
	(0.061)	(0.085)	(0.058)
Adult	0.216*	0.433***	0.343*** (0.081)
(0-1)	(0.084)	(0.112)	
Male	-0.155**	-0.125'	-0.161**
(0–1)	(0.055)	(0.072)	(0.052)
Adult_	-0.243*	0.030	-0.274**
(0-1)	(0.121)	(0.123)	(0.083)
Male_	-0.101**	-0.133***	-0.123***
(0-1)	(0.037)	(0.040)	(0.028)
Family	0.644***	0.586***	0.679***
(0-1)	(0.067)	(0.112)	(0.059)

Friend	0.343***	0.328**	0.364***
(0-1)	(0.064)	(0.113)	(0.057)
Number	-0.090***	-0.077***	-0.069***
(1–5)	(0.009)	(0.012)	(0.007)
Wave	-0.033**	-0.057***	-0.045***
(1-3)	(0.011)	(0.012)	(0.008)
Distance	0.110***	0.067***	0.064***
	(0.020)	(0.020)	(0.007)
ΔFtf	0.232***	0.201***	0.213***
(1=5)	(0.013)	.(0.023)	(0.011)
△ Phone	0.289***	. 0.373***	0310***
(1–5)	(0.012)	(0.018)	(0.010) {
Δ Email	0.034**	0.126***	0.085
(1–5)	(0.013)	(0.014).	(0.009)
X²	1770.307	1780.501	2206.020

*** p < .001, ** p < .01, * p < .05, 'p < .10

Table 1. Maximum likelihood estimates for nearby (Model 1, df=5,821), far away (Model 2, df=4,384), and combined (Model 3, df=10,220) relationships. Note: Because observations are not independent, Hierarchical Linear Modeling software was used to take into account the unique variance associated with the reported relationships.

ACKNOWLEDGMENTS

This research was supported by a grant from the National Science Foundation (IRI-9408271). We are grateful to Sandy Slaughter for statistical assistance.

REFERENCES

- 1. Cummings, J., Butler, B., & Kraut, R. The quality of online social relationships. *Communications of the ACM*, (in press).
- Katz, J., & Aspden, P. A nation of strangers? Communications of the ACM, 40(12), (1997), 81-86.
- Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukophadhyay, T., and Scherlis, W. Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist*, 53(9), (1998), 1017-1031.
- Kraut, R., Mukhopadhyay, T., Szczpula, J., Kiesler, S., & Scherlis, W. Communication and information: Alternative uses of the Internet in households. Information Systems Research, 10(4), (1999), 287-303.
- McKenna, K., & Bargh, J. Coming out in the age of the Internet: "Demarginalization" through virtual group participation. *Journal of Personality and Social* Psychology, 75(3), (1998), 681-694.
- Parks, M., & Roberts, L. Making MOOsic: The development of personal relationships on line and a comparison to their off-line counterparts. *Journal of* Social and Personal Relationships, 15(4), (1998), 517– 537.