









environment favoring intimate exchanges (Hu et al., 2004). Their results suggest that a positive relationship exists between the frequency of IM use and intimacy, demonstrating that participants feel closer to their Internet partner as time progresses through this CMC modality.

Similarly, Underwood and Findlay (2004) studied the effect of Internet relationships on primary, specifically non-Internet relationships and the perceived intimacy of both. In this study, self-disclosure, or intimacy, was measured in terms of shared secrets through the discussion of personal problems. Participants reported a significantly higher level of self-disclosure in their Internet relationship as compared to their primary relationship. In contrast, the participants' primary relationships were reported as highly self-disclosed in the past, but the current level of disclosure was perceived to be lower (Underwood & Findlay, 2004). This result suggests participants turned to the Internet in order to fulfill the need for intimacy in their lives.

In further support of this finding, Tidwell and Walther (2002) hypothesized CMC participants employ deeper self-disclosures than FtF participants in order to overcome the limitations of CMC, e.g., the reliance on nonverbal cues. It was found that CMC partners engaged in more frequent intimate questions and disclosures than FtF partners in order to overcome the barriers of CMC. In their 2002 study, Tidwell and Walther measured the perception of a relationship's intimacy by the partner of each participant in both the CMC and FtF conditions. The researchers found that the participants' partners stated their CMC partner was more effective in employing more intimate exchanges than their FtF

partner, and both participants and their partners rated their CMC relationship as more intimate than their FtF relationship.

**Discussion**



A Level 1 heading should be centered, bolded, and uppercase and lower case (also referred to as *title case*).

In 2002, Cummings et al. stated that the evidence from their research conflicted with other data examining the effectiveness of online social relationships. This statement is supported by the aforementioned discussion of other research. There may be a few possible theoretical explanations for these discrepancies.

**Limitations of These Studies**



A Level 2 heading should be flush with the left margin, bolded, and title case.

The discrepancies identified may result from a number of limitations found in the materials reviewed by Cummings et al. These limitations can result from technological constraints, demographic factors, or issues of modality. Each of these limitations will be examined in further detail below.

Because all research has its limitations, it is important to discuss the limitations of articles under examination .

**Technological limitations.** First, one reviewed study by Cummings et al. (2002)



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examined only email correspondence for their CMC modality. Therefore, the study is limited to only one mode of communication among other alternatives, e.g., IM as studied by Hu et al. (2004). Because of its many personalized features, IM provides more personal CMC. For example, it is in real time without delay, voice-chat and video features are available for many IM programs, and text boxes can be personalized with the user's picture, favorite colors and text, and a wide variety of emoticons, e.g., :). These options allow for both an increase in self-expression and the ability to overcompensate for the barriers of CMC through customizable features, as stated in Tidwell and Walther

(2002). Self-disclosure and intimacy may result from IM's individualized features, which are not as personalized in email correspondence.

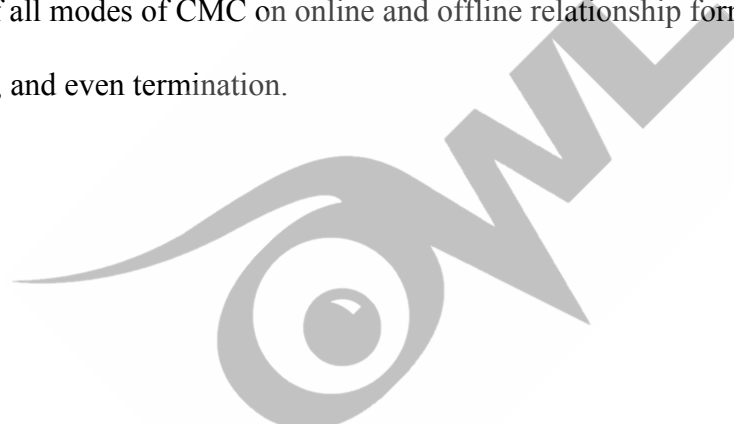
**Demographic limitations.** In addition to the limitations of email, Cummings et al. (2002) reviewed studies that focused on international bank employees and college students (see Appendix B for demographic information). It is possible the participants' CMC through email was used primarily for business, professional, and school matters and not for relationship creation or maintenance. In this case, personal self-disclosure and intimacy levels are expected to be lower for non-relationship interactions, as this communication is primarily between boss and employee or student and professor. Intimacy is not required, or even desired, for these professional relationships.

**Modality limitations.** Instead of professional correspondence, however, Cummings et al.'s (2002) review of the HomeNet project focused on already established relationships and CMC's effect on relationship maintenance. The HomeNet researchers' sole dependence on email communication as CMC may have contributed to the lower levels of intimacy and closeness among Internet relationships as compared to non-Internet relationships (as cited in Cummings et al., 2002). The barriers of non-personal communication in email could be a factor in this project, and this could lead to less intimacy among these Internet partners. If alternate modalities of CMC were studied in both already established and professional relationships, perhaps these results would have resembled those of the previously mentioned research.

### Conclusions and Future Study

In order to gain a complete understanding of CMC's true effect on both online and offline relationships, it is necessary to conduct a study that examines all aspects of CMC. This includes, but is not limited to, email, IM, voice-chat, video-chat, online journals and diaries, online social groups with message boards, and chat rooms. The effects on relationships of each modality may be different, and this is demonstrated by the discrepancies in intimacy between email and IM correspondence. As each mode of communication becomes more prevalent in individuals' lives, it is important to examine the impact of all modes of CMC on online and offline relationship formation, maintenance, and even termination.

The conclusion restates the problem the paper addresses and can offer areas for further research. See the OWL resource on conclusions: <http://owl.english.purdue.edu/owl/resource/724/04/>





## References

- Cummings, J. N., Butler, B., & Kraut, R. (2002). The quality of online social relationships. *Communications of the ACM*, *45*(7), 103-108.
- Hu, Y., Wood, J. F., Smith, V., & Westbrook, N. (2004). Friendships through IM: Examining the relationship between instant messaging and intimacy. *Journal of Computer-Mediated Communication*, *10*, 38-48.
- Tidwell, L. C., & Walther, J. B. (2002). Computer-mediated communication effects on disclosure, impressions, and interpersonal evaluations: Getting to know one another a bit at a time. *Human Communication Research*, *28*, 317-348.
- Underwood, H., & Findlay, B. (2004). Internet relationships and their impact on primary relationships. *Behaviour Change*, *21*(2), 127-140.

Start the reference list on a new page, center the title "References," and alphabetize the entries. Do not underline or italicize the title. Double-space all entries. Every source mentioned in the paper should have an entry.

Appendix A

The HomeNet Project

Started at Carnegie Mellon University in 1995, the HomeNet research project has involved a number of studies intended to look at home Internet usage. Researchers began this project because the Internet was originally designed as a tool for scientific and corporate use. Home usage of the Internet was an unexpected phenomenon worthy of extended study.

Each of HomeNet’s studies has explored a different facet of home Internet usage, such as chatting, playing games, or reading the news. Within the past few years, the explosion of social networking has also proven to be an area deserving of additional research. Refer to Table A1 for a more detailed description of HomeNet studies.

Table A1

Description of HomeNet Studies by Year

<u>Year of Study</u>	<u>Contents of Study</u>
1995-1996	93 families in Pittsburgh involved in school or community organizations
1997-1999	25 families with home businesses
1998-1999	151 Pittsburgh households
2000-2002	National survey

The first paragraph of the appendix should flush with the left margin. Additional paragraphs should be indented.

Begin each appendix on a new page., with the word appendix in the top center. Use an identifying capital letter (e.g., Appendix A, Appendix B, etc.) if you have more than one appendix. If you are referring to more than one appendix in your text, use the plural *appendices* (APA only).

Label tables and figures in the appendix as you would in the text of your manuscript, using the letter A before the number to clarify that the table or figure belongs to the appendix.

Appendix B  
Demographic Information for Cummings et al. (2002)'s Review

If an appendix consists entirely of a table or figure, the title of the table or figure should serve as the title of the appendix.

