When I began studying computer-mediated communication (CMC) in 1991, it was a novel topic of research in most academic disciplines and by no means generally recognized as legitimate. CMC back then consisted mainly of email and asynchronous discussion groups – newsgroups, mailing lists and privately hosted bulletin board systems. Internet relay chat (IRC), invented a few years before, had not yet attracted much attention; there was no World Wide Web; and blogs, wikis, instant messaging, text messaging, virtual worlds, social network sites and audio and video chat had yet to be introduced. Impoverished as this state of affairs may seem to present generations of digital media users, to early adopters and researchers CMC appeared rich with possibilities. In attempting to come to grips with a profoundly new set of technologies, some of my contemporaries focused on the positive and others on the negative aspects, but few of us remained unmoved. The potential of CMC to bring about social, organizational and linguistic change attracted passionate speculation and debate and stimulated empirical studies across the disciplinary spectrum.

My generation was not the first. In 1978, Roxanne Hiltz and Murray Turoff published The Network Nation [1], in which they made foundational observations about communication in an experimental computer network, back when the Internet was the ARPAnet. Their book, along with a 1984 article by Sara Kiesler and her colleagues, "Social Psychological Aspects of Computer-Mediated Communication," [2] were my earliest sources of...
inspiration when I began investigating gender differences in CMC in 1991. Later, after I had made the decision to make CMC my main research focus, I undertook to read everything that had ever been published about CMC (a near-impossibility back then). I came to know a number of other pioneering studies from the 1980s, including communication research by Ronald Rice, linguistic studies by Denise Murray and applications to teaching composition by Gail Hawisher and Cynthia Selfe. These scholars were the real pioneers. Yet my generation had something in common with them, which was that we worked outside the mainstream in our respective disciplines; CMC was still a novelty in the early 1990s.

That condition started to change in the mid-1990s, with the impact of the World Wide Web and the rise in popularity and diversification of CMC systems. Researchers rushed to characterize and analyze the latest developments, which included virtual communities, virtual teams, e-commerce and online relationship formation, along with less desirable developments such as deception, trolling, cyberstalking and spam. In the process, they published more of their work online, where it would reach audiences faster. The *Journal of Computer-Mediated Communication* was created in 1995 to publish CMC research in an online format. I had the honor of editing *JCMC* a decade later. Yet while many CMC researchers found appreciative audiences and were sought out for interviews by the mass media, they sometimes still encountered difficulties in getting their work taken seriously by university tenure and promotion committees. Ultimately, however, the momentum proved irresistible: by the turn of the millennium, only the most conservative holdouts could deny that a new digital era was at hand and that the Internet and other new digital media had significantly affected communication, publication and many other personal and professional occupations.

Today, it has become imperative to understand and manage these effects; no one questions the legitimacy of conducting research on CMC anymore. Moreover, the body of research that CMC researchers have produced has grown so large that no one could read all of it. True to its origins, this research is broadly interdisciplinary and encompasses theoretical, empirical and applied perspectives. The definition of CMC itself has changed over the years, as well, from the exchange of textual messages between individuals typing on the keyboards and reading the screens of networked computers, to any digitally mediated communication. For example, although HTML documents were often considered a separate phenomenon in the past, in contrast to reciprocally interactive forms of online communication, there is no longer any question that web communication is CMC. Wikis, blogs, microblogs and social network sites have blurred the boundary, together with the ongoing tendency for older CMC modes such as email and chat to be integrated into web browser interfaces, a phenomenon known as *convergence* in media studies. Mobile telephony has also come to be included in the definition of CMC, largely because of the resemblances between text messaging on mobile phones and traditional modes of CMC such as IRC and instant messaging.

One side effect of these developments has been a proliferation of computer-mediated data. Such data are easy to collect, given the persistent and self-archiving nature of CMC, and they are a potentially rich source of insight into human behavior. Yet for all their ready availability, the cognitive, cultural, expressive, political and social meanings of online data are not transparent: structured methods and theoretical frameworks are necessary in order to analyze them.

When I first became interested in researching CMC, I turned to discourse analysis for methodological inspiration. As a linguist trained in discourse analysis techniques, I knew that the study of discourse – the “microprocesses of human communication” [3] – offered tried and true methods for analyzing spoken and written communication, with specialized paradigms for the analysis of spontaneous conversation, institutional discourse, therapeutic interviews, storytelling, scientific writing and the like. It seemed only natural to extend this approach to discourse on the Internet. Thus, in the mid-1990s I began adapting discourse analysis methods to the study of computer-mediated interaction. The resulting paradigm, computer-mediated discourse analysis (CMDA), is a language-focused specialization within the broader interdisciplinary study of CMC [4]. CMDA differs from other forms of discourse analysis in that its descriptive and interpretive apparatus crucially takes into account the technological affordances of CMC systems. Moreover,
its methodological toolkit is customized to address common phenomena in CMC, and its analyses are socially, culturally and historically situated in the larger digital media context. At the same time, CMDA shares with other forms of discourse analysis the theoretical premise that choice of word and expression is potentially significant, beyond the requirements of lexicon and grammar. It seeks to identify patterns in language structure and use that may have been produced unconsciously, yet shed light on broader phenomena such as decision making, gender ideology, cultural identity and the social construction of knowledge.

CMDA is a bottom-up approach, in contrast to top-down approaches that are currently popular for analyzing big data mined from the Internet. In fact, these two approaches are complementary. Of special interest to me is where they meet – where patterns can be identified in large datasets, leveraging the power of computational analysis, that are interpretable in terms of medium and situational (social, contextual) variables such as those I have identified as influencing computer-mediated discourse [5]. Towards this end, I envisage an important future role for computational approaches to social-media analysis that are informed by discourse analysis and other linguistic approaches.

My students sometimes ask me where CMC research and CMDA fit in relation to information science. I see both paradigms as overlapping with the intersection of HCI and social informatics, but with connections to computational approaches on one side, and to the social sciences and philosophy of science on the other side. CMC also plays an important role in many professional contexts, including distance education, virtual organizations, library reference services, online psychotherapy and the mass media, and, as such, has connections to applied disciplines. Some of these relationships are depicted in Figure 1.

The future will see even more widespread use of CMC. What started in the United States as the ARPAnet in the 1960s has today become a truly global Internet, with human communication as its primary use. More studies along the lines of those collected in [6] are needed to correct the bias in the existing literature towards English-speaking users in North American contexts. Digital media have also become increasingly multimodal, calling for the addition of new methods of analysis to the CMDA paradigm (see, for example, Herring 2013 [7]). Finally, communicators in virtual worlds can be embodied in graphical avatars that have the ability to navigate in three dimensions. Recently I have become interested in communication mediated by telepresence robots, a phenomenon that extends avatar-mediated communication into physical space and adds to mobile devices the affordance of remote navigability. CMC has indeed come a long way in a few short decades.

Acknowledgment

Resources Mentioned in the Article


