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Gender and Democracy in Computer-Mediated Communication*

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The Democratization Claim

Despite a substantial body of research demonstrating sex differences in face-to-face communication (see, e.g., Coates, 1986), the question of sex differences in computer-mediated communication has only recently begun to be raised. The lag is due in large part to a climate of general optimism surrounding the new technology: specifically, the belief that computer-mediated communication (hereafter, CMC) is inherently more democratic than other communication media. Thus philosophers and social theorists see in CMC a more equal access to information, empowering those who might otherwise be denied such information, and leading ultimately to a greater democratization of society (Ess, 1994; Landow, 1992; Nelson, 1974). Educators evoke the potential of computer networks to foster creativity and cooperation among students, and to help break down traditional barriers to communication between students and instructors (Kahn and Brookshire, 1991; Kiesler, Siegel, and McGuire, 1984; McCormick and McCormick, 1992). Even feminists are encouraged by evidence of more equal communication between women and men in the absence of status- and gender-marked cues (Graddol and Swann, 1989), and by the opportunities for women to establish grass roots electronic communication networks of their own (Smith and Balka, 1991).

The notion of democracy as it emerges through these claims has two essential components: access to a means of communication, and the right

to communicate equally, free from status constraints. These components are inherent in the formal "rules of reason" proposed by the German philosopher Habermas (1983, p. 89; discussed in Ess, 1994) as criteria that must be observed in order for a discourse to be truly democratic:

1. Every subject with the competence to speak and act is allowed to take part in the discourse.
2a. Everyone is allowed to question any assertion whatever.
2b. Everyone is allowed to introduce any assertion whatever into the discourse.
2c. Everyone is allowed to express his [*sic*] attitudes, desires, and needs.
3. No speaker may be prevented, by internal or external coercion, from exercising his [*sic*] rights as laid down in (1) and (2).

Habermas's third rule provides for an important social dimension: in a truly democratic discourse, there can be no censorship. To the extent that computer technology facilitates open, egalitarian communication of this sort, it is held to be democratizing (Ess, 1994).

A number of specific characteristics of CMC have been claimed by researchers and users to facilitate communication that is democratic in nature. The first of these is *accessibility*. Through universities and other institutions, increasing numbers of people are able to gain access to computer networks at little or no cost. This access in turn makes available to them a variety of benefits, the most widely touted of which is information, in the form of on-line library catalogs, public domain databases, and the like. Less commonly mentioned, but equally if not more important, are the opportunities provided by electronic networks to connect and communicate, to express one's views and be recognized in a public forum, potentially even by large numbers of people (including, now that President Clinton has a public access e-mail address, highly influential people) around the world. In theory, anyone with access to a network can take equal advantage of these opportunities.

A second potentially democratizing characteristic of CMC is its *social decontextualization*. As noted by Graddol and Swann (1989) and Kiesler *et al.* (1984), the identity of contributors need not be revealed, especially given login "names" and return addresses that bear no transparent relationship to a person's actual name, sex, or geographical location.[1] Further, CMC neutralizes social status cues (accent, handwriting/voice quality, sex, appearance, etc.) that might otherwise be transmitted by the form of the message. Although on one hand these characteristics render the medium

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[1] Examples of opaque electronic addresses drawn from the data reported on in this study include 'f24030@barilvm,' 'T52@dhdurz1,' 'SNU00169@krsnucc1,' and the like.

less personal, they also provide for the possibility that traditionally lower-status individuals can participate on the same terms as others—that is, more or less anonymously, with the emphasis being on the content, rather than on the form of the message or the identity of the sender. As one member of an academic discussion list wrote in a recent posting to another:

> "One of the greatest strengths of e[lectronic]-mail is its ability to break down socio-economic, racial, and other traditional barriers to the sharing and production of knowledge. You, for example, have no way of knowing if I am a janitor or a university president or an illegal alien—we can simply communicate on the basis of our ideas, not on any preconceived notions of what should be expected (or not expected) from one another."

Although one might question the assumption that the posts of anonymous janitors, university presidents, and illegal aliens would not reveal their status (via differences in, e.g., grammatical usage, stylistic register, and familiarity with conventions of CMC and academic discourse), the idealism expressed by this writer is typical of that of many network users.

Third, as a relatively new discourse type, CMC lacks a set of consensually agreed-upon and established *conventions of use* (Ferrara, Brunner, and Whittemore, 1991; Kiesler *et al.*, 1984). As a result, users may be less inhibited, leading to "flaming" and outrageous behavior on one hand, and to greater openness on the other. This feature has led hypertext theorists such as Bolter (1991), Landow (1992), and Nelson (1974) to characterize CMC as "anarchic" as well as "democratic," with the potential to contribute to the breakdown of traditional hierarchical patterns of communication.

Finally, overt *censorship* on the electronic networks is as yet rare; what censorship exists is typically more concerned with selectively blocking the use of vulgar language than with blocking message content.[2] Even moderated discussion lists tend to accept virtually all contributions and post them in the order in which they are received. Thus each and every contributor to a discussion theoretically has the same opportunity to have his or her messages read and responded to by other members of the group (Habermas's third "rule of reason").

Taken together, these four characteristics would appear to constitute a strong a priori case for the democratic nature of CMC. But how democratic is the communication that is actually taking place currently via electronic networks? Specifically, does it show evidence of increased gender equality, as Graddol and Swann (1989) claim?

[2] An example of such censorship is the Defense Communications Agency's periodic screening of messages on the government-sponsored network ARPANET "to weed out those deemed in bad taste" (Kiesler *et al.*, 1984, p. 1130).

Summary of Investigative Results

The research reported on in this article is based primarily on investigations carried out over the past year on male and female participation in two academic electronic lists (also known as "bulletin boards" or "discussion groups"): LINGUIST, devoted to the discussion of linguistics-related issues; and Megabyte University (MBU), informally organized around the discussion of computers and writing. What follows is a summary of findings analyzed in detail in three recent articles (Herring, 1992; Herring, 1993; Herring, Johnson, and DiBenedetto, 1992); much of the data and analysis on which the earlier studies were based has of necessity been omitted here.

Three types of methods were employed in investigating participation on LINGUIST and MBU. The first was *ethnographic observation* of discussions as they occurred: I subscribed to and saved contributions to both lists over a period of one year, in the process assimilating information about contributors, current issues in the field, and other relevant background information. (CMC is especially amenable to data collection of this type, in that observers can easily remain invisible, thus avoiding the "observer's paradox" of altering by their presence the nature of the phenomenon they seek to observe.) Second, I subjected the texts of two extended discussions from each list to a *discourse analysis* in which patterns of grammatical and stylistic usage were identified. Observed patterns of usage were then correlated with participant sex, which was determined either from contributors' names when available (i.e., because they signed their message, or their mailer program included it in tracing the path of the message), or else by matching electronic addresses to names from a publicly available list of subscribers to each list.[3] Finally, I prepared and distributed two electronic surveys, one each for LINGUIST and MBU, in which I asked for participants' reactions to a particular discussion that had taken place on the list to which they subscribed, and solicited background information regarding their sex, professional status, and familiarity/competence with computers. The data collected by these three methods were subjected to quantitative as well as qualitative analysis. The combined results reveal significant differences between male and female participants. The principal differences are discussed below.

[3] With sex-neutral first names such as Chris or Robin, or with foreign names that I did not recognize, I contacted individuals by e-mail, identified the nature of my research, and asked whether they were male or female. By employing a combination of methods, I was able to determine with a reasonable degree of certainty the sex of approximately 95% of contributors on both lists.

Amount of Participation

The most striking sex-based disparity in academic CMC is the extent to which men participate more than women. Women constitute 36% of LINGUIST and 42% of MBU subscribers.[4] However, they participate at a rate that is significantly lower than that corresponding to their numerical representation. Two extended discussions were analyzed from each list, one in which sexism was an issue, and the other on a broadly theoretical topic. Although the "sexism" discussions were more popular with women than discussions on other topics, women constituted only 30% of the participants in these discussions on both lists; in the "theoretical" discussions, only 16% of the participants were women. Furthermore, the messages contributed by women are shorter, averaging a single screen or less, while those of men average one and a half times longer in the sexism discussions, and twice as long in the theoretical discussions, with some messages ten screens or more in length. Thus, although a short message does not necessarily indicate the sex of the sender, a very long message invariably indicates that the sender is male.

What accounts for this disparity? It does not appear on the surface as though men are preventing women from participating—at least, on one of the lists (MBU), male participants actively encourage more women to contribute. There is evidence to suggest, however, that women are discouraged from participating or intimidated on the basis of the reactions with which their posts are met when they do contribute. In a medium that permits multiple contributors to post messages more or less simultaneously to the group, gaining the focus of the group's attention or the "conversational floor" depends entirely on the extent to which other participants acknowledge and respond to one's postings. In the CMC analyzed here, messages posted by women consistently received fewer average responses than those posted by men. In the MBU sexism discussion, 89% of male postings received an explicit response, as compared with only 70% of those by women; on LINGUIST, the disparity is even greater. Of interest is the fact that it is not only men who respond more often to men, but women as well; postings from women acknowledging the postings of other women constitute the smallest portion of total responses, an implicit recognition, perhaps, of the more powerful status of men in the groups. In keeping with the unequal rate of response, topics initiated by women are less often taken up as topics of discussion by the group as a whole, and thus women may experience difficulty and frustration in getting the group to talk about topics that are of interest to them.

On those rare occasions when, out of special interest or a strong commitment to a particular point of view, women persist in posting on a given

[4] These percentages were calculated from lists of subscribers as of September 1992, on the basis of names from which sex could reliably be inferred.

topic despite relative lack of response, the outcome may be even more discouraging. During the period of this investigation, women participated actively three times: once during the MBU sexism debate, in which men and women became polarized regarding the legitimacy of offering a special course on "Men's Literature," and twice on LINGUIST, the first in a discussion of the interpretation of Sister Souljah's remarks on the Rodney King beating, and the second in a sexism discussion on the question of whether the label "dog" refers primarily to women, or to unattractive persons of either sex. In all three discussions, women's rate of posting increased gradually to where it equaled 50% of the contributions for a period of one or two days. The reaction to this increase was virtually identical in all three cases: a handful of men wrote in to decry the discussion, and several threatened to cancel their subscription to the list. Various reasons were given, none of them citing women's participation directly: in the MBU discussion, the tone was too "vituperative";[5] in the LINGUIST discussions, the topics were "inappropriate." Although the LINGUIST list moderators (one male, one female) intervened to defend the appropriateness of the Sister Souljah thread, the discussion died out almost immediately thereafter, as did the others. Of course, the possibility cannot be ruled out that the men who protested were responding to the content rather than (or in addition) to the frequency of women's posts. Nevertheless, the coincidence is striking, since at no other time during the period of observation did women participate as much as men, and at no other time did any subscriber, male or female, threaten publicly to unsubscribe from either list. Reactions such as these are consistent with Spender's (1979) claim that women cannot contribute half of the talk in a discussion without making men feel uncomfortable or threatened. She found that men (and to a lesser degree, women) perceive women as talking more than men when women talk only 30% of the time. This phenomenon is not limited to Spender's academic seminar data or to CMC, but rather is a feature of mixed-sex conversation in public settings more generally (Holmes, 1992).

This interpretation is further supported by the results of a survey conducted on MBU several months after the Men's Literature discussion. All available external evidence points to the conclusion that, despite the temporary increase in women's participation, men were more successful than women overall in the Men's Literature debate—men posted more, were responded to more, and introduced more successful topics in the discussion; further, the real-world course of action they advocated was ultimately followed (that is, a Men's Literature course was offered). However, when

[5] Although it is difficult to evaluate objectively what might count as evidence of a "vituperative" tone, the only postings to contain personal criticism of other participants (excluding the messages of protest) were those contributed by the man who originally proposed the "Men's Literature" course.

MBU subscribers were surveyed later regarding their reactions to the discussion, male respondents indicated a higher degree of dissatisfaction than women, and were more likely to say that women had "won" the debate; women, in contrast, were more likely to say that neither side had won (Herring, Johnson, and DiBenedetto, 1992). When women's attempts at equal participation are the cause of (male) dissatisfaction—even if voiced publicly by only a few—and disruption of list functioning, a message is communicated to the effect that it is more appropriate for women to participate less. And so they do: the day after the MBU protests, women's contributions dropped back to 15% of the total, and the discussion continued apace. The rather depressing conclusion to be drawn from this is that it is "normal" for women to participate less than men, such that an increase in the direction of true equality is perceived as deviant, even in liberal, academic settings.

Topic

The above observations indicate that although women contribute less than men overall, they contribute relatively more on certain topics of discussion, specifically those that involve real-world consequences as opposed to abstract theorizing. Herring (1993) describes a ranking of preferences based on participation in different topic types during a random two-week period on LINGUIST. Men were found to contribute most often to discussions of issues, followed by information postings (i.e., where they provided information, solicited or otherwise), followed by queries and personal discussions. Women, on the other hand, contributed most to personal discussions (talk about linguists, as opposed to talk about linguistics), followed by queries soliciting advice or information from others, with issues and information postings least frequent. The ranking of preferred topic types is represented schematically below:

MEN: issues > information > queries > personal
WOMEN: personal > queries > issues > information

A tendency for women to contribute less to discussions of theoretical issues than to other types of exchanges is evident on MBU as well.

Independent support for these observations comes from the Women's Studies List (WMST), devoted to issues involved in the organization and administration of women's studies programs. WMST, which is owned by a woman and has a subscribership that is currently 88% female, constitutes a context in which women post almost exclusively for and among themselves. Personal discussions are avoided on WMST, presumably in the interest of greater academic professionalism. Instead, the overwhelming majority of messages posted to WMST are queries for advice and/or information. Answers to queries, however, are required (according to posted list protocol) to be sent privately to the asker—although summaries of

answers thus collected may be publicly posted—and issues discussions are explicitly prohibited by the list owner, who sees the list as "serving as a source of information" rather than "as a place to hold discussions about that information." Although on one hand participants might simply be following WMST protocol in formulating their contributions as queries rather than as messages of other types, as an active list with a steadily increasing membership (currently approaching 2000 members), WMST is proof that many women are comfortable with CMC that consists primarily in asking advice and information of others.

At the same time, there are indications that women do not avoid discussion of issues entirely by choice. Issues discussions arise periodically on WMST, only to be cut short by reminders from the list owner and other self-appointed list vigilantes; more than a few subscribers have written in to complain that the most interesting threads are invariably censored. The list owner feels, however, that it is important to avoid such exchanges in the interests of limiting message volume, and out of a fear that "discussion about highly-charged societal issues . . . would attract all sorts of unpleasant, acrimonious people who are just looking for a fight."[6] As the following section shows, this fear is not entirely unfounded.

Manner of Participation

The stylistic register of all of the CMC analyzed here is that of academic discourse. Nevertheless, there are significant sex-based differences to be noted, such that it is often possible to tell whether a given message was written by a man or a woman, solely on the basis of the rhetorical and linguistic strategies employed.[7]

In Herring (1992), I identify a set of features hypothesized to characterize a stylistic variety conventionally recognizable as "women's language" as opposed to "men's language" on the LINGUIST list. These features are summarized in Table 1.

The examples below, taken from messages posted during the LINGUIST "issues" discussion, illustrate some of the features of each style.

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[6] Korenman, Joan (KORENMAN@UMBC.BITNET), Women's Studies List, June 9 11:08 PDT, 1992. In the only instance I observed where an issues discussion on WMST was allowed to take place, the discussion—concerned with media bias in reporting research on sex differences in the brain—was one in which all participants were essentially in agreement. (See Herring, in press.)

[7] There are also differences in character between the two lists. The overall level of formality is higher, and differences in sex-based styles greater, for LINGUIST than for MBU. Perhaps because of the rhetorical practices that currently characterize the two fields (formal argumentation in linguistics vs. creative collaboration in composition), discourse in the former tends to be more adversarial, or "masculine," while discourse in the latter is more personal, or "feminine." (For example, both men and women reveal information about their feelings and their nonacademic lives on MBU, whereas postings of this sort are virtually nonexistent on LINGUIST.)

Table 1. Features of Women's and Men's Language

Women's language	Men's language
Attenuated assertions	Strong assertions
Apologies	Self-promotion
Explicit justifications	Presuppositions
Questions	Rhetorical questions
Personal orientation	Authoritative orientation
Supports others	Challenges others
	Humor/sarcasm

[female contributor]
I am intrigued by your comment that work such as that represented in WFDT may not be as widely represented in LSA as other work because its argumentation style doesn't lend itself to falsification à la Popper. Could you say a bit more about what you mean here? I am interested because I think similar mismatches in argumentation are at stake in other areas of cognitive science, as well as because I study argumentation as a key (social and cognitive) tool for human knowledge construction.
[personal orientation, attenuation, questions, justification]

[male contributor]
It is obvious that there are two (and only two) paradigms for the conduct of scientific inquiry into an issue on which there is no consensus. One is [. . .]. But, deplorable as that may be, note that either paradigm (if pursued honestly) will lead to truth anyway. That is, whichever side is wrong will sooner or later discover that fact on its own. If, God forbid, autonomy and/or modularity should turn out to be His truth, then those who have other ideas will sooner or later find this out.
[authoritative orientation, strong assertions, sarcasm]

In order to quantify the distribution of these features according to sex, I then analyzed 261 messages in two extended LINGUIST discussions, coding each message for the occurrence or nonoccurrence of each of the features in Table 1. The results show that women's language features are indeed used more often by women, and men's language features more often by men. Sixty-eight percent of the messages produced by women contained one or more features of women's language, as compared with only 31% of those produced by men. In contrast, 48% of the messages produced by men contained features of only men's language, as compared with 18% of women's messages. Although the majority of women's messages (46%) combined a mixture of male and female rhetorical features, the fewest men's messages (14%) combined features. This finding supports the view that it is easier for men to maintain a distinct style (masculine, feminine, or neutral) than it is for women, who must employ some features of men's language in order to be taken seriously as academics, and some features of women's language in order not to be considered unpleasant or aggressive.

These observations on gender-marked styles lead to a second finding regarding manner of participation. Discussion on each of the lists investigated tends to be dominated by a small minority of participants who abuse features of men's language to focus attention on themselves, often at the expense of others. Such abuse, which I term "adversarial" rhetoric, ranges from gratuitous displays of knowledge to forceful assertions of one's views to elaborate put-downs of others with whom one disagrees. In the two LINGUIST discussions analyzed, 4% and 6% of the participants, respectively (all but one of them male), were responsible for the majority of adversarial rhetoric. This same 4% and 6% also posted the most words (33% and 53% of the total, respectively, or more than eight times the participant average), and thus dominated in amount as well as in manner of participation.[8]

A similar pattern is found in a different kind of CMC—electronic mail exchanges between undergraduates (75% male) on a local network, as investigated by McCormick and McCormick (1992). The authors report that 4.7% of the undergraduates used the network "a great deal," and "may have been responsible for generating most of the electronic mail." Although the content and purpose of communication in this setting is quite different from that on professional academic discussion lists, the minority also seems to have imposed its style on the discourse overall, turning the computer lab into "an adolescent subculture" complete with crude jokes, threats, and put-downs.

The extent to which other participants are negatively affected by the behavior of a dominant minority may depend, at least partly, on their sex. A survey of LINGUIST subscribers distributed after the "issue" discussion took place revealed that 73% of respondents of both sexes felt intimidated and/or irritated by the adversarial tone of the discussion (Herring, 1992). Men and women appear to behave differently on the basis of this reaction, however. Male respondents indicated that they take it in stride as part of academic interaction; as one man remarked: "Actually, the barbs and arrows were entertaining, because of course they weren't aimed at me." Many women, in contrast, expressed a deep aversion and a concern to avoid interactions of this type. Comments included: "I was terribly turned off by this exchange, which went on and on forever. I nearly dropped myself from the list of subscribers," and "I was disgusted. It's the same old arguments, the same old intentions of defending theoretical territory, the same old inabilities of open and creative thinking, all of which make me ambivalent about academics in general." The concern expressed by the

[8] The tendency for a small minority to dominate the discourse is evident on MBU as well. Eight percent of participants (all but one of them male) produced 35% of the words in the sexism discussion. This minority dominated rhetorically by posting long-winded and often obscure postings, on MBU an abuse more common than overt adversarial attacks.

owner of the WMST list to avoid acrimonious exchanges is fully consistent with the comments of the female LINGUIST survey respondents. Why do women react with greater aversion than men to adversarial exchanges? Sheldon (1992) suggests that this aversion can be traced to cultural norms of sex-appropriate behavior with which children are indoctrinated from an early age: while boys are encouraged to compete and engage in direct confrontation, girls are taught to "be nice" and to appease others, a distinction internalized in the play behavior of children as young as three years of age. As a consequence, verbal aggressiveness comes to have a different significance for women than for men; as Coates (1986) observes, women are apt to take personal offense at what men may view as part of the conventional structure of conversation.

Discussion of Results

The results of this research can be summarized as follows. Despite the democratizing potential described in the first section of this article, male and female academic professionals do not participate equally in academic CMC. Rather, a small male minority dominates the discourse both in terms of amount of talk, and rhetorically, through self-promotional and adversarial strategies. Moreover, when women do attempt to participate on a more equal basis, they risk being actively censored by the reactions of men who either ignore them or attempt to delegitimize their contributions. Because of social conditioning that makes women uncomfortable with direct conflict, women tend to be more intimidated by these practices and to avoid participating as a result. Thus Habermas's conditions for a democratic discourse are not met: although the medium theoretically allows for everyone with access to a network to take part and to express their concerns and desires equally, a very large community of potential participants is effectively prevented by censorship, both overt and covert, from availing itself of this possibility. Rather than being democratic, academic CMC is power-based and hierarchical. This state of affairs cannot, however, be attributed to the influence of computer communication technology; rather, it continues preexisting patterns of hierarchy and male dominance in academia more generally, and in society as a whole.

How can we reconcile these findings with the more encouraging reports of democratization based on earlier research? The claim of status-free communication hinges in large part on the condition of anonymity (Graddol and Swann, 1989; Kiesler *et al.*, 1984), a condition that is not met in the discourse analyzed here, since most messages were signed, or else the sender's identity is transparently derivable from his or her electronic

address.[9] In a very few cases could there have been any doubt upon receipt of a message as to the sex of the sender, and thus sex-based discrimination could freely apply. However, given the existence of "genderlects" of the sort identified here, it is doubtful that such discrimination would disappear even if everyone were to contribute anonymously. Just as a university president or a janitor's social status is communicated through their unconscious choices of style and diction, CMC contains subtle indications of participants' gender.

Second, CMC is claimed to be more uninhibited (disorganized, anarchic), because of lack of established conventions of use (Kiesler *et al.*, 1984; Nelson, 1974). It is important, however, to distinguish between the adversarial behavior observed on academic lists and "flaming," which is defined as "excessive informality, insensitivity, the expression of extreme or opinionated views, and vulgar behavior (including swearing, insults, name calling, and hostile comments)" by McCormick and McCormick (1992, p. 381). While flaming may well result from spontaneously venting one's emotion, adversariality is a conventionalized and accepted (indeed, rewarded) pattern of behavior in academic discourse, and characterizes postings that otherwise show evidence of careful planning and preparation. Rather than being at a loss for a set of discourse conventions, the members of these lists appear to have simply transferred the conventions of academic discourse, as they might be observed, for example, in face-to-face interaction at a professional conference, to the electronic medium, with some modifications for the written nature of the message.

Another factor claimed to lead to decreased inhibition is the supposedly depersonalized nature of CMC. However, this assumption too can be challenged. From my observations, academic list subscribers do not view the activity of posting as targeted at disembodied strangers. Their addresses are people with whom they either have a professional relationship, or could potentially develop such a relationship in the future. This is likely to increase (rather than decrease) inhibition, since one's professional reputation is at stake. In this respect, the CMC discussed here differs from the experimental CMC described by Kiesler *et al.*, where subjects risked nothing beyond the confines of the experimental setting. Three factors in Kiesler *et al.*'s (1984, p. 1129) experimental design were found to correlate with less inhibited verbal behavior: anonymity, simultaneity (as opposed to linear sequencing of messages), and simultaneous computer conferencing (as opposed to electronic mail). None of these conditions obtained in the

[9] As far as I was able to ascertain, surprisingly few participants took advantage of the anonymity potential of the medium. Fewer than 2% of contributors attempted to disguise their identity, and when they did so, it was for humorous effect.

CMC investigated in this study, since discussion lists, in addition to not meeting the anonymity condition, present postings linearly, and typically after some delay.

In concluding, we return to the question of censorship, freedom from which is an essential condition for democracy. Although it is true that no external censorship was exercised by the moderators or owners of LINGUIST or MBU, women participating in CMC are nevertheless constrained by censorship both external and internal. Externally, they are censored by male participants who dominate and control the discourse through intimidation tactics, and who ignore or undermine women's contributions when they attempt to participate on a more equal basis. To a lesser extent, nonadversarial men suffer the same treatment, and in and of itself, it need not prevent anyone who is determined to participate from doing so. Where adversariality becomes a devastating form of censorship, however, is in conjunction with the internalized cultural expectations that we bring to the formula: that women will talk less, on less controversial topics, and in a less assertive manner. Finally, although it was not a focus of the present investigation, women are further discouraged from participating in CMC by the expectation—effectively internalized as well—that computer technology is primarily a male domain (McCormick and McCormick, 1991; Turkle, 1991). This expectation is reflected in the responses of female survey respondents on both LINGUIST and MBU to the question: "How comfortable/competent do you feel with computer technology?" Female respondents overwhelmingly indicated less confidence in their ability to use computers, despite the fact that they had had the same number of years of computer experience as male respondents.[10] Internalized censorship of this sort reflects deeper social ills, and it is naive to expect that technology alone will heal them.

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