

## **Who's Got the Floor in Computer-Mediated Conversation? Edelsky's Gender Patterns Revisited**

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### **Abstract**

Edelsky's (1981) proposal that floor in face-to-face conversation is constructed jointly over a series of turns is adapted in this study to analyze three extended threads from academic discussion lists on the Internet. Paralleling Edelsky's study, which found that F1 (linear, hierarchical) floors had mostly male participants, while F2 (collaborative, egalitarian) floors were participated in by women and men equally, gender is examined as a variable in relation to patterns of participation. The results partially support the existence of distinct floor types in the academic discussion lists that resemble the two types identified by Edelsky and that are associated with the gender composition of a discussion. Male-predominant discussions exhibit the features of the F1 floor type; however, female-predominant discussions exhibit a mixed floor type combining features of F2, F1 (male predominant) and F1 (predominant) floors. An integrated account of these findings based on the conventional mapping of gender and floor onto power relations is proposed and invoked to explain phenomena that appear anomalous under a simple floor- or gender-based view, including the greater likelihood that messages posted by certain participants will receive responses. The concluding sections consider the implications of this account for the notion of floor in CMC and for floor-based accounts of participation and response patterns in conversational interaction more generally.

### **Introduction**

Group discussion on the Internet is a phenomenon participated in and observed by millions of people around the world. The 1990s, in particular, saw a dramatic increase in multiparticipant textual interactions on electronic mailing lists, Usenet newsgroups, and Bulletin Board Systems (BBS), giving rise to what Sack (2000) dubbed "very large-scale conversations." Today, mailing lists are still popular, especially in academic contexts, and large-scale public discussions on all topics take place in web forums, weblogs, and newssites.

To have the 'floor' in a public online forum is potentially to have the attention of an audience much larger than any that is possible in face-to-face (F2F) interaction. This possibility may appeal to many people, including members of groups who have traditionally lacked a public 'voice,' such as women (Balka, 1993) and young people (Stern, 2007). At the same time, research has shown that the transmission and reception of messages via computer-mediated communication (CMC) systems constrains human

interaction in systematic ways (e.g., Anderson, Beard, & Walther, this issue; Cherny, 1999; Herring, 1999). A general question that arises, then is: What exactly does it mean to 'have the floor' in a computer-mediated discussion, and how does one achieve this presumably desirable goal?

A trivial answer that is sometimes proposed is to post a message. It is an allegedly democratizing feature of CMC that anyone can gain the floor in a discussion simply by posting their contribution to the forum in which the discussion is taking place; the message is then distributed by the network software in the order in which it was received, and the person who posted it holds the floor, presumably, for the duration of the time it takes other participants to read the message. As Flores (1990:112) puts it, "[t]he computer conference (...) model[s] a more egalitarian mode of dialogue. (...) Each [person] can hold the floor for as long as he or she chooses and cannot be interrupted." However, not everyone has the ability or the right to post to every forum; some forums are in languages that the potential poster does not know, some may impose restrictions on access, and a moderator's decisions can determine which submitted messages are posted. Moreover, not every message posted to an online discussion forum has the floor for all recipients; many postings are deleted unread, or are only read part-way through. Finally, not all messages have the floor to the same degree. Some messages have a more central status than others; they garner more responses, and may even provide the theme for an extended 'thread' which involves dozens of participants in discussion over a period of weeks or months. In contrast, some messages receive no response at all.

These observations suggest that more than just posting a message (the rough equivalent of 'taking a turn' in speech) is involved in getting the floor in CMC: As in F2F conversation, one must have the attention of the audience as well (Yngve 1970; Philips 1976; Wardhaugh 1985); that is, one's turn must be ratified by other participants. However, whereas in F2F conversation, active listenership can be indicated simultaneous with the speaker's turn through a variety of verbal and non-verbal cues (Duncan 1972), non-verbal responses are precluded in text-based CMC, and verbal responses can only be delivered after the fact in most CMC systems, in a strictly linear fashion (Herring, 1999). It follows that the only way to know that one's message has held the floor is if other messages subsequently reference its content (or if feedback from a recipient is otherwise received). Thus an analysis of 'floor' in CMC should take into account not only individual messages, but patterns of participation and response across messages.

One approach to floor that adopts such a view is that of Carol Edelsky (1981). Based on analysis of F2F university committee meetings, Edelsky argued that rather than residing in a single turn, floors are constructed jointly over a series of turns and have a distinctive "feel" that enables participants to recognize different floor types. She identified two types: singly-developed floors (F1), characterized by one speaker at a time, and collaborative floors (F2), "where several people seemed to be either operating on the same wavelength or engaging in a free-for-all" (p. 383). In this study, I adapt and employ Edelsky's notion of floor types to analyze three extended threads from public academic discussion forums on the Internet. Paralleling Edelsky's original study, which found that

F1 floors had mostly male participants, whereas F2 floors were participated in by women and men equally, gender is examined as a variable in relation to patterns of establishing and participating in computer-mediated floors. Two research questions guide the study. Are there different floor types in CMC, and if so, how do they compare with the types identified by Edelsky for face-to-face conversation? Is there a relationship between online floor patterns and participant gender?

The results show that despite differences in turn taking between CMC and speech caused by system and production constraints, computer-mediated floors resembling the two types identified by Edelsky are evident to a considerable extent in asynchronous academic discussion lists. Moreover, differences in floor types are associated with the gender that is predominant among the active participants in a discussion at any time. Male-predominant samples exhibit the features of Edelsky's F1 floor type. However, the female-predominant samples do not fit neatly into Edelsky's F2 type; instead, they exhibit a mixed floor type combining features of F2, F1 (male predominant) and F1 (female predominant). To integrate and account for these findings, I propose that floor types are inherently power-based, and that they map conventionally onto gender in ways that associate more powerful discourse management strategies with male communicators. This account helps explain why men tend to post longer messages and receive more responses to their messages than women do, regardless of context, and under what conditions women are empowered to employ F1 strategies, as well as receiving more responses. It also sheds light on the strategic use of F1 practices by both genders to attempt to assert power when control of the floor is contested.

## **Background**

### ***Floor in Spoken Conversation***

'Floor' is frequently invoked in the colloquial sense of getting a turn at speech; the floor is bid for, taken, held, negotiated, controlled, managed, vied for, turned over to someone else, etc. This sense derives from an earlier meaning of the word 'floor' to refer to 'the part of a legislative chamber or meeting hall where members are seated and from which they speak';<sup>1</sup> 'taking the floor' then came to mean 'to rise (as in a meeting or a legislative assembly) to make a formal address.'<sup>2</sup> Linguistic study of floor is often traced back to Sacks, Schegloff, and Jefferson (1974), who developed a model for how transfer of speakership occurs in spoken conversation. According to their model, speakers employ turn allocation strategies and orient to transition relevance places (TRPs) in order to "minimise gap and overlap" between turns (p. 704), in keeping with an ideal of one speaker at a time. Thus, a speaker holds the floor for the duration of his or her turn, and the floor changes with each speaker change. This is sometimes referred to in the literature as the 'one-speaker-at-a-time' floor type.

Later sociolinguistic research challenged the notion that floor can meaningfully be analyzed at the level of the individual turn, however. Based on an analysis of five mixed-

sex, face-to-face faculty committee meetings in a United States university, Edelsky (1981) identified two alternative means for organizing multi-participant exchanges, according to (among other things) the topic and purpose of the interaction. She described these as two types of floor: a ‘linear’ F1 type, in which participants speak relatively formally in an orderly one-speaker-at-a-time fashion, as described by Sacks et al. (1974), and a ‘collaborative’ F2 type characterized by informal, overlapping speech. Turns in F1 floors in her data were longer and distributed over a small number of participants who controlled the interaction hierarchically, whereas F2 turns tended to be shorter and distributed democratically over a wider range of participants. The set of features associated with each type of floor can be summarized as in Table 1.

Table 1. Two types of floor (adapted from Edelsky 1981)

F1	F2
one speaker at a time longer turns extended overall duration small number of central participants single thematic focus argumentative hierarchical formal “orderly”	overlapping speech shorter turns short overall duration widely distributed participation may have multiple themes collaborative egalitarian informal a “free-for-all”

In Edelsky’s data, most participants in F1 floors were male, while F2 floors were participated in equally by males and females. Moreover, “men took more and longer turns and did more of the joking, arguing, directing, and soliciting of responses in F1’s (p. 383), while women “outstripped men in the increase of certain language functions in F2’s (joking, arguing, suggesting, soliciting responses, validating, directing) and thus [were] more proactive and on center stage in F2’s and reactive and on the sidelines in F1” (p. 415).

Edelsky’s observations about floor type and gender were later reinforced and expanded by Coates (1993, 1997a, 1997b). In her 12 years of research into same-sex F2F conversations among friends in the UK, Coates found that in all-female groups, the talk was produced collaboratively: Utterances were sometimes jointly produced, and turns tended to overlap. The all-male friendship groups, in contrast, preferred a one-at-a-time pattern of talking, with one speaker holding the floor (“being the expert”) at any one time. Similar differences were observed between all-female and all-male deaf friend groups, despite the fact that deaf interactions were previously believed to require linear, one-at-a-time turn taking, because of the need for interlocutors to focus visually on one person signing at a time (Coates & Sutton-Spence, 2001). Coates concluded that linear, hierarchical interaction (Edelsky’s F1 floor) is a male style, whereas overlapping, collaborative interaction (Edelsky’s F2 floor) is a female style—and that these floor

styles, along with other gender-preferential linguistic and interactional usage, are part of how people perform gender identities in group settings.

Other researchers have proposed that more than two floor types exist. Schultz, Florio, and Erickson (1982) identified four types of floor at family dinners. Hiyashi (1991) created a taxonomy of eight floor types based on analysis of conversations among native Japanese and among native English speakers, including “prime-time-at-a-time” floors such as lectures, “speaker and supporter” floors, and “non-propositional” floors, or self-centered floors of speakers entirely preoccupied with their own thoughts, all under the broad heading of “single-speaker” floors. These were contrasted with “collaborative” floors, including “ensembles,” “joint floors,” and “multiple floors.” Similarly, Jones and Thornborrow (2004) argue for the existence of multiple flexible and locally-negotiated floors in classroom discourse, ranging from “tight” or “constrained” floors, such as when the teacher calls the roll, to “loose” floors, such as when the teacher and a group of students are walking along a street, conducting an outdoor activity. The authors also identify “incipient” floors, in which silence is the main activity but some talking occurs, and “multiple floors,” in which multiple activities are taking place in a single setting, each with their own floor organization, “and with some fluidity among conversational groups” (p. 413). None of these studies considered gender as a variable in relation to floor type, however.

### ***Floor in CMC***

In early discussions of CMC, gaining the floor was often casually equated with posting a message, on the argument that a text-based computer-mediated message, once posted, cannot be interrupted (Flores, 1990). Friermuth (2001) argued for the democratic nature of turn taking in CMC; in his study of four-person groups made up of two native and two nonnative speakers conversing F2F and via text chat, he found that the nonnative speakers contributed more and longer turns via chat than via speech. The interpretation that posting a turn equals holding the floor, and is therefore empowering, is consistent with the characterization of floor as a speaking turn (cf. Sacks et al., 1974). The “empowering” effect is based on the fact that interruption and overlap are technically impossible in most CMC systems, in which messages are transmitted as wholes, without the addressees being able to see them as they are typed. Cherny (1999) terms these ‘1-way transmission systems;’ public forums are 1-way systems in which each message received is displayed one at a time in its entirety, in the order in which it was received by the system (Herring, 1999).

These technical properties of 1-way CMC systems would seem to predetermine that turn taking would be one at a time, since overlap and interruption are technically impossible, and therefore that F1 floors would prevail in online interactions. However, because users are constantly joining and leaving public online forums; because the number of participants is often large; and because they cannot see what others are typing until their messages are posted,

one user can start discussion on one topic while at the same time another user starts a discussion on a different topic, and a third user starts a third unrelated topic. These three discussions can become intertwined, so that rather than focusing on one topic at a time, the discussion interleaves messages. [...] (Erickson et al. 2002; Herring 1999, 2003; Simpson 2005). (Dennis, Fuller, & Valacich, 2008, p. 585)

This “parallelism,” or intertwining of conversational threads, “impairs the ability of users to develop a shared focus,” according to Dennis et al. (2008, p. 585).

Alternatively, it can be viewed as creating multiple floors. Cherny (1999), in her analysis of text chat in a social MOO, observes that MOO conversations exhibit “a spontaneous mix of multiple threads” (p. 182), which often seems chaotic to new users. Following Hiyashi (1991), she also identifies “speaker-and-supporter” floors, “non-propositional” floors, and “collaborative” floors as common in the MOO. Cherny concludes that floors in MUDs and MOOs are very different from floors in F2F speech. At the same time, she quotes an anonymous person who read the logs of a group of teachers using a MOO to discuss teaching on MOOs, and who afterwards commented:

It’s been my most chillingly RL[real-life]-like experience on a MOO so far, watching the meeting dynamics and seeing what was said ... My overwhelming feeling was of being in a stuffy room in some vaguely uncomfortable sort of chair with a bunch of very stuffy people, the women having to get their comments in edgewise while a man felt it necessary to be a very hands-on moderator and two other men argued ubiquitously about their pet point long after the others seemed to want to move on. (quoted in Cherny, 1999, p. 181)

This observation suggests the existence of gender differences in conversational floors in MOO chat; Cherny does not comment on this, however.

In one of the few studies that focus exclusively on floor in CMC, Simpson (2005) describes conversational floor as an organizing principle that emerges in preference to models based on turn taking in CMC, which he argues do not fit CMC well due to the technical limits on turn taking in CMC systems noted in by Herring (1999) and others. As such, floor plays a crucial role in conversation management; along with topic, it helps participants ascribe coherence to conversation. In his analysis of a chat forum for learners and teachers of English as a second language, Simpson (2005) identifies three main floor types: the speaker-and-supporter floor, the collaborative floor, and the multiple conversational floor. These are similar to the floor types identified most commonly in research on F2F conversation. Like previous researchers, he further suggests that the development of particular floors is dependent on variables such as participant role relations, topic, and activity, although he does not relate his findings to participant gender.

### *Gender and Participation in CMC*

No previous research on floor in CMC has explicitly focused on gender. However, a number of studies have analyzed gender and participation in CMC. Selfe and Meyer (1990) found that men and “high-status” participants (e.g., senior faculty) in an academic discussion list tended to dominate the discourse of the list both rhetorically and in number of messages posted, even when the list experimented for two weeks with anonymous posting. In several mixed-sex academic discussion forums, Herring (1993, 1996b) found that men posted longer messages than women. Messages posted by men also received more responses, on average, than messages posted by women, including responses from women. These results led Herring (1993) to argue that despite its theoretical potential to give the floor to anyone with access to a computer and the Internet, computer-mediated discourse was not democratic, because gendered patterns of interaction that favored men over women were carried over from F2F communication. Similar patterns have been reported in online contexts as diverse as Usenet newsgroups (e.g., Sutton, 1994), a science and technology studies discussion list (Hert, 1997), and a discussion list for academic librarians (Sierpe, 2000).

One obstacle to women’s participation in public online forums is the perception that public speaking is a masculine domain (Spender, 1980). On MBU-L, a mixed-sex discussion list on the theme of computers and writing, both men and women perceived women to be dominating when women “held the conversational floor” by posting more than one-third of the messages in one extended thread (Herring, Johnson, & DiBenedetto, 1998). However, in women-centered forums such as WMST-L (Korenman & Wyatt, 1996), women typically contribute a majority of the messages, and this is seen as normal. More generally, Herring (1996b) found that the numerically-predominant gender in an online discussion forum determines not only the amount of participation but the discourse style used by both genders: Men tend to communicate in a more feminine (more supportive, more hedged) style in female-predominant forums, and women tend to use a more masculine (more contentious and assertive) style in male-predominant forums.

In summary, previous linguistic scholarship on floor types tends to agree on the identification of a linear, one-at-a-time type; a collaboratively developed type; and simultaneous multiple floors, although it appears that these manifest somewhat differently in CMC than in F2F conversation. Most of the small number of studies that address floor in CMC have been of synchronous chat, however; studies of floor in asynchronous discussions are lacking in comparison. Moreover, gender differences in relation to floor type have been reported in some research on F2F conversation, as have gender differences in participation in multiparticipant CMC, but as yet no study has systematically addressed whether—and if so, what kind of—a relationship exists between gender and floor type in computer-mediated interaction. The present study contributes to addressing these gaps.

Edelsky (1981) predicted that F1 and F2 floors would be found not just in F2F meetings, but also in other interactional contexts. Her model provides a useful framework for

analyzing floor types in CMC: It suggests specific discourse features (such as turn length and number of themes of discussion) that can be measured empirically, and provides models for interpretation. It also identifies floor patterns in relation to gender that have been supported by years of subsequent research (Coates 1997a, 1997b); thus the model is especially appropriate for addressing the question of whether gendered conversational floor types carry over into CMC. In this study, I compare Edelsky's findings from university committee meetings with an analysis of extended discussions on asynchronous academic discussion lists, taking the gender composition of the lists into account.

## **Methodology**

### ***Data***

The data for this study are extended discussions from three academic electronic mailing lists that were active in the early 1990s, the period when online discussion forums were first becoming popular for use in scholarly communication.<sup>3</sup> The three lists are: the LINGUIST list, devoted to the discussion of issues of interest to academic linguists; MBU-L (Megabyte University), devoted to the discussion of computers and writing; and WMST-L (the Women's Studies list), devoted to the exchange of information concerning women's studies teaching and program administration. Academic mailing lists were selected to make the data as comparable as possible to Edelsky's face-to-face academic meeting data. All are asynchronous, email-based lists with a policy of open subscription to interested parties. The membership of all three was comprised mainly of faculty, staff, and graduate students at academic institutions in the United States. At the time of my data collection, two of the lists (LINGUIST and WMST) were moderated by the list owners, while the other (MBU) was unmoderated.

These three lists were also chosen because they differed in the gender make-up of participants. On LINGUIST, men made up 64% of subscribers at the time, and they regularly contributed over 85% of the words (Herring, 1992, 1993); thus this list was considered male-predominant. Conversely, WMST was female-predominant: Women comprised about 90% of the subscribers, and they contributed at a rate that was proportional to their numerical representation (Herring, 1996b; Korenman & Wyatt, 1996). MBU was a mixed-sex list, with 58% male and 42% female subscribers at the time the data for this study were collected. Although males participated more than females (Herring, Johnson & DiBenedetto, 1995, 1998; Selfe & Meyer, 1991), the focus of the list (teaching writing) is a profession in which women predominate; the combination of these two factors gave rise to a relatively gender-balanced "feel" on the list overall.

In order to compare with Edelsky's findings, which were based on closed meetings in which all participants were (mostly) orienting to a single floor, a single, thematically-unified discussion (or 'thread') was selected for analysis from each list. The LINGUIST discussion is a debate about the co-optation of the term "cognitive linguistics" by competing theoretical approaches within the linguistics discipline. The WMST discussion



concerns the media’s representations of physiological differences between the brains of women and men, posted under the subject line “brain sex.” The MBU discussion is a debate on the legitimacy of offering a university course on “men’s literature.” Each of the discussions had been analyzed in previous research (Herring 1992, 1993, 1996b; Herring, Johnson & DiBenedetto 1995, 1998) for gender-based discourse patterns, albeit not in relation to floor.

The criteria used in selecting the discussions were length—threads that were among the longest from each list were selected, in order to have a substantial body of data to analyze—and degree of involvement of the list as a whole. Each of the discussions was the main activity “going on” on the list at the time; thus my working assumption was that a majority of the active participants were sharing a common floor for the duration of the discussion.<sup>4</sup> Summary information about each of the three discussions, including participation by gender, is presented in Table 2. The total corpus consists of 313 messages posted by 118 different participants, roughly half male and half female, for a total of 68,754 words.

Table 2. Summary data for the three discussions

<i>Discussion Name (LIST)</i>	<i>Participants</i>			<i>Messages</i>			<i>Words</i>			<i>Duration</i>
	M	F	All	M	F	All	M	F	All	
cog ling (LINGUIST)	30 86%	5 14%	35	53 75%	18 25%	71	20,950 86%	3,495 14%	24,445	1/31/91-5/17/91 (107 days)
men’s lit (MBU)	34 68%	15 30%	50 <sup>5</sup>	102 62%	61 37%	164	21,479 67%	10,346 32%	31,947	11/7/91-11/26/91 (20 days)
brain sex (WMST)	3 9%	30 91%	33	3 4%	75 96%	78	572 5%	11,790 95%	12,362	9/14/92-9/21/92 (7 days)
Total	67 57%	50 42%	118 100%	158 50%	154 49%	313 100%	43,001 63%	25,631 37%	68,754 100%	(134 days)

### ***Analytical Methods***

Following Edelsky (1981), I first identified floor episodes in the data, as bounded by changes in floor type, according to my participant sense<sup>6</sup> of “what was going on” in the discussions. Applied conservatively, this method led me to identify only one change in floor type within a discussion, about half-way through the “men’s lit” discussion. In this discussion, a struggle takes place between participants (mostly male) who want to discuss which books to include in a course on men’s literature, and other participants (mostly female) who challenge the legitimacy of such a course. At a certain point, the latter group prevails and takes control of the discussion. Not only does the focus change at this point, but patterns of interaction also change.<sup>7</sup> Whereas in the first part of the discussion, most messages are responses to a single message introducing the idea of a “men’s literature” course, in the second part, a number of discourse activities take place simultaneously. These include, in addition to discussion of the men’s literature course, discussion of male

hegemony in English departments, threats of several male subscribers to unsubscribe from the list and reactions to them, and metadiscourse about the discussion itself. During this period, the number of messages posted by women more than doubled, while the number of men's messages decreased. Table 3 gives the breakdown for participation by gender in each part of the "men's literature" discussion.

Table 3. Summary data for the two parts of the "men's literature" (MBU) discussion

<i>Discussion Name</i>	<i>Participants</i>			<i>Messages</i>			<i>Words</i>			<i>Duration</i>
	M	F	Both	M	F	Both	M	F	Both	
men's lit1	22 69%	9 28%	32	57 73%	20 26%	78	9,537 78%	2,584 21%	12,243	11/7/91-11/21/91 (15 days)
men's lit2	24 67%	12 33%	36	45 52%	41 48%	86	11,942 61%	7,762 39%	19,704	11/21/91-11/26/91 (5 days)
Total	34 68%	15 30%	50 <sup>8</sup> 100%	102 62%	61 37%	164 100%	21,479 67%	10,346 32%	31,947 100%	11/7/91-11/26/91 (20 days)

No changes in floor were noted in the other two discussions; their patterns of interaction remained relatively consistent throughout. Thus the results of this initial procedure produced four floor episodes, each comprised of a roughly equal number of messages, two of them ("cog ling;" "men's lit1") with a predominance of male participants, and two of them ("brain sex;" "men's lit2") in which female participants predominated numerically and/or rhetorically.<sup>9</sup>

If the organization of conversational floor in CMC varies according to the gender of participants, as Edelsky found in face-to-face group interaction, then we would expect that the male-predominant samples would pattern together as distinct from the female-predominant samples, and that a minimum of two floor types would be found. If, however, there is no correlation between gender and floor in these academic discussion lists, no clustering should be found on the basis of gender, and the number of different floor types represented in the data corpus as a whole could in principle be any number between one and four.

In order to compare the different samples, each message in the corpus was coded for six categories of features posited to characterize conversational floor. These features were extrapolated from Edelsky's qualitative descriptions of F1 and F2 floor types (see Table 1) and operationalized so as to be quantifiable.<sup>10</sup> The six feature sets are presented in Table 4:

Table 4. Operationalization of categories for floor analysis

<i>Category</i>	<i>Features</i>
duration	length (in days) of episode; average length (in words) of individual messages
density	number of participants contributing per day; messages posted per day
thematic focus	percentage of messages on main theme; number of sub-themes (as determined by subject line)
interpersonal stance	number of disagreeing and agreeing exchanges
participation	distribution of number of messages posted across participants; distribution of new topic initiations across participants
response	distribution of number of responses received (per message posted) across participants

In terms of these features, F1 floors are of long duration and contain longer messages; are interactionally “sparse;” have a single thematic focus; tend to be contentious; and are hierarchically dominated by a minority of individuals who participate and are responded to disproportionately more often than others. In contrast, F2 floors are of shorter duration and contain shorter messages; are interactionally “dense;” have multiple thematic foci; tend to be supportive and collaborative; and are egalitarian in that participation and responses are distributed more evenly across participants. The categories also allow for the identification of intermediate floor types, in that the measures are inherently scalar; and for multiple and mixed floor types, in that the measures are logically independent of one another.

As regards gender, in keeping with the findings of Edelsky (1981) and Coates (1997a, 1997b), ‘hierarchical’ (F1) floors are predicted to be dominated by male participants, whereas female-predominant floors are predicted to be ‘egalitarian’ (F2). In mixed sex ‘egalitarian’ F2 floors, gender is predicted to be irrelevant (that is, men and women should behave the same).

## **Results**

The results are presented separately for each feature below and summarized at the end of this section.

### ***Duration (length of episode)***

The male-predominant episodes took place over a longer average period of time than the female-predominant episodes. This result is summarized in Table 5.

Table 5. Duration results

	cog ling	men's lit1	M-pre. avg.	brain sex	men's lit2	F-pre. avg.
no. of days	107 (40)	15	<b>61 (28)</b>	7	5	<b>6</b>

The “cog ling” discussion is much longer than the other three episodes, in part because of the moderated nature of LINGUIST. The moderators collected contributions and redistributed them in packages of topically and/or functionally-related messages. As a result, there was often a delay of several days between when a message was received by the moderators and when it was redistributed to the list. If only the days on which messages were distributed are counted, the total number of days taken up by the discussion is reduced from 107 to 40, as indicated in parentheses in Table 5. However, this still makes the male-predominant episodes over four times as long, on average, as the female-predominant episodes.

### *Density*

The female-predominant episodes have a higher density of activity than the male-predominant episodes, both in terms of the number of individuals who participate and the number of messages they posted per day. These results are summarized in Table 6.

Table 6. Density results

	cog ling	men's lit1	M-pre. avg.	brain sex	men's lit2	F-pre. avg.
participants/day	.9	2.1	<b>1.2</b>	4.7	7.2	<b>5.8</b>
messages/day	1.8	5.1	<b>2.7</b>	11.1	17.2	<b>13.7</b>

Note: The “cog ling” measures assume the more conservative adjusted figure of 40 days (see Table 5) as the length of the discussion.

The overall differences are again very strong, with the female-predominant samples exceeding the male samples by an average factor of five for both measures.

### *Thematic Focus*

All three discussions show some ‘topic decay,’ such that contributions are more likely to focus on a single topic at the beginning, and on multiple parallel topics near the end (Herring, 1999; Lambiase, this issue). This overall trend notwithstanding, male-predominant floors have a higher percentage of messages whose subject lines repeat or paraphrase the main theme of the discussion than do the female-predominant floors. Moreover, male floors have fewer and less frequent subthemes (operationally defined as the same subject line repeated a minimum of three times). See Table 7.

Table 7. Thematic focus results (% messages, based on subject line)

	cog ling	men's lit1	M-pre. avg.	brain sex	men's lit2	F-pre. avg.
main theme	66%	64%	<b>65%</b>	54%	21%	<b>37%</b>
most frequent subtheme	4%	5%	<b>5%</b>	9%	17%	<b>13%</b>
# subthemes	2	2	<b>2</b>	3	5	<b>4</b>

The majority (65%) of messages posted in male-predominant floors are contributions to a single theme, generally the theme for which the discussion is named (“cognitive linguistics” and “men’s literature”).<sup>11</sup> Each male floor has only two subthemes, the most frequently discussed of which accounts for only 5% of the subject lines. In contrast, only 37% of messages in the female-predominant floors are on the main theme (“brain sex” and “male hegemony in English departments”<sup>12</sup>), and subthemes are both more frequent and more important. The tendency toward multiple themes is especially pronounced in the “men’s lit2” sample, where women had to struggle to change the discourse topic from “men’s literature” to “male hegemony” and were only partially successful (Herring, Johnson, & DiBenedetto, 1995, 1998).

Duration, density, and thematic focus all point to the same result: Male-predominant listserv floors pattern like Edelsky’s F1 type, and female-predominant floors pattern like Edelsky’s F2 type and/or exhibit multiple floors. That is, the former are long-winded, slow-paced and relatively single-focused, while the latter are briefer, intensely interactive, and multiply focused.

The next set of results involves features for which male and female participants pattern separately, regardless of which floor sample they belong to.

### *Duration (message length)*

Males in all four floor episodes post longer messages than females in the same episodes. This is shown in Table 8.

Table 8. Message length results (average number of words)

	cog ling	men's lit1	M-pre. avg.	brain sex	men's lit2	F-pre. avg.
M messages	403	167	<b>281</b>	191	265	<b>261</b>
F messages	194	129	<b>160</b>	157	189	<b>168</b>
Total	344	157	<b>250</b>	158	229	<b>198</b>

The discrepancy in message length is greatest in the “cog ling” sample, which contains the most male participants, and least evident in the “brain sex” sample, which contains the most female participants—an observation which could be taken as weak support for the notion that male-predominant floors are more hierarchical and female predominant floors are more egalitarian. Moreover, message length gives a ‘floor-based’ result overall,

as can be seen by comparing the male-predominant and female-predominant combined total averages. However, these effects are weaker than the effect of gender. This finding is consistent with much previous research on gender and message length in CMC (Herring, 1993, 1996b, 2003; Herring, Johnson & DiBenedetto, 1995, 1998; Hert, 1997; Selfe & Meyer, 1991; Sutton, 1994). Men in asynchronous public discussion forums consistently produce longer messages than women on average—in the case of the present sample, more than one and a half times as long.

### *Responses*

A similar pattern is evident in the distribution of responses. Responses are important in that they indicate who is acknowledged by others to have the floor. Males in three out of the four floor episodes receive proportionately more responses per message posted than females do. This is shown in Table 9.

Table 9. Response rate results (number of responses per message posted)

	cog ling	men's lit1	M-pre. avg.	brain sex	men's lit2	F-pre. avg.
M messages	1.53	1.12	<b>1.31</b>	2.00	1.33	<b>1.38</b>
F messages	1.11	1.35	<b>1.24</b>	1.00	0.73	<b>.95</b>
Total	1.42	1.18	<b>1.30</b>	1.02	1.05	<b>1.03</b>

In “men’s lit1,” the pattern is reversed, primarily because a single message posted by a woman received a large number of responses.<sup>13</sup> However, male messages still receive slightly more responses in the male-predominant samples overall. Males also receive more responses than females in the female-predominant floors; indeed, the gender discrepancy is more pronounced there for both samples. This result is incompatible with the view that female-predominant floors are “egalitarian.” Rather, male contributions appear to be accorded greater importance than female contributions, insofar as they more often garner a response.

### *Interpersonal Stance*

Another gender-based result has to do with the stance that participants take towards other participants in the interaction, whether oppositional or aligned. In these data, male participants are more likely than female participants to initiate disagreement, especially in male-predominant contexts. Conversely, females are more likely to initiate agreement, especially in female-predominant contexts, although this result is not as strong as the association between males and disagreement (for examples and analysis of agreeing and disagreeing messages in the “cog ling” and “brain sex” threads, see Herring, 1996b). Table 10 summarizes the results for disagreements and agreements initiated within ‘exchanges,’ operationally defined as three or more turns that respond to each other in linear sequence (cf. Sinclair & Coulthard, 1975).<sup>14</sup> The ‘disagreement’ or ‘agreement’ occurs as the second turn in the sequence.<sup>15</sup>

Table 10. Interpersonal stance results

	cog ling	men's lit1	M-pre. avg.	brain sex	men's lit2	F-pre. avg.
# exchanges	9	8	<b>8.5</b>	6	6	<b>6</b>
disagree	78%	50%	<b>65%</b>	17%	33%	<b>25%</b>
M-initiated	100%	75%	<b>91%</b>	100%	50%	<b>67%</b>
agree	11%	37%	<b>23%</b>	83%	50%	<b>67%</b>
M-initiated	0	67%	<b>50%</b>	0	67%	<b>25%</b>

The results in Table 10 are compatible with a floor effect: Male-predominant floors have a majority of disagreeing exchanges (65%), and female-predominant floors have a majority of agreeing exchanges (67%). However, the disagreements are initiated mostly or exclusively by men in three out of the four samples (“men’s lit2” shows an even split between male- and female-initiated disagreements), and women are responsible for most of the agreements (with the exception of the “men’s lit” episodes, in which 67% of the agreements are by men). Thus an alternative explanation is that a tendency towards agreement or disagreement in public discussion lists falls out as a consequence of participant gender. This is consistent with previous findings that men in Internet forums tend to be more adversarial and more likely to “flame” (i.e., direct hostile or insulting messages to) other participants, in contrast with women who are more likely to take an aligned or supportive stance vis-a-vis their addressees (Hall, 1996; Herring, 1994, 1996a, 1996b, 2003; Sutton, 1994).

The results for message length, responses received, and stance pattern more strongly according to participant gender than according to floor *per se*. Yet a third set of patterns is evident for topic initiation and participation and response involving dominant individuals.

### ***Topic Initiation***

Women initiate more new local topics within the global topic of the thread than men in female-predominant floors; conversely, men initiate more new topics than women in male-predominant floors.

Table 11. Topic initiation results

	cog ling	men's lit1	M-pre. avg.	brain sex	men's lit2	F-pre. avg.
new M topics	4	4	<b>4</b>	1	0	<b>0.5</b>
% responded to	25%	100%	<b>63%</b>	100%	--	<b>n/a</b>
new F topics	0	0	<b>0</b>	10	4	<b>7</b>
% responded to	--	--	<b>--</b>	90%	50%	<b>79%</b>

Table 11 shows that topic initiations are almost exclusively the domain of the majority gender—100% (8/8) of new topics in male-predominant floors are initiated by men, and

93% (14/15) of new topics in female-predominant floors are initiated by women. This is a surprising result; previous research on topic initiation in face-to-face conversation found that women in mixed-sex dyads initiated more new topics than men, although they received fewer responses (Fishman, 1983). In contrast, the present findings suggest that in group CMC, one must feel empowered by the context in order even to propose a new topic for discussion. Whether it is responded to or not depends on the list—all but one new topic received some response in “brain sex,” while only one (that which launched the main theme) was responded to in “cog ling.” Overall, female-initiated topics in female-predominant samples were responded to as much as (or more than) male-initiated topics in male-predominant samples.

***Messages Posted and Responses Received by Dominant Participants***

The majority gender in each floor episode tends to include a few individuals who dominate the discussion in number of messages posted and number of responses received. That is, participation and response is distributed unequally or ‘hierarchically’ across participants within the same gender. This is true for women in female-predominant contexts, as well as for men in male-predominant contexts. Table 12 shows the number of messages posted and responses received by dominant participants in comparison with the average number of messages posted and responses received by the group of participants as a whole for each sample. For the purposes of this table, ‘dominant participants/recipients’ were operationalized as those individuals whose average number of messages exceeds the average for the group as a whole by a factor of three or more.

Table 12. Dominance in relation to average number of messages posted and responses received per participant

	dominant participants	avg. msgs posted (dominant)	avg. msgs posted (group)	dominant recipients	avg. msgs received (dominant)	avg. msgs received (group)
cog ling						
M (N=30)	1	7	1.8	1	12	2.7
F (N=5)	1	13	3.6	1	16	4.0
men’s lit1						
M (N=22)	2	8	2.6	1	21	2.9
F (N=9)	--	--	2.2	--	--	3.0
men’s lit2						
M (N=24)	--	--	1.9	4	12.3	2.5
F (N=12)	3	8.3	3.4	1	10	2.5
brain sex						
M (N=3)	--	--	1.0	--	--	2.0
F (N=79)	1	18	2.5	2	13	2.5



As Table 12 shows, the only dominant participants in the female-predominant samples were female, and most of the dominant participants and recipients in the male-predominant samples were male. Two exceptions to this pattern are noteworthy. First, one female participant in the “cog ling” discussion participated and was responded to disproportionately often. This woman had a high professional status; she was a senior scholar, author of a leading textbook in her field, and past president of the discipline’s national organization. In keeping with her powerful status, she participated in ways similar to the “in-power” group, that is, she tended to dominate the discussion (Herring, 1992). The other exception is that four males dominated in number of responses received in “men’s lit2.” Power in this episode was actively contested; some male participants resisted the shift from a male- to a female-predominant floor in the “men’s literature” discussion by responding only to messages posted by men. The women in “men’s lit2” also responded more to men than to women, a reflection perhaps of the fact that women did not have a true majority and thus were not fully empowered in that context (Herring, Johnson & DiBenedetto, 1995, 1998). These are exceptions that prove the rule, in that they show that power, rather than gender *per se*, underlies who posts and is responded to most often.

Thus the results for topic initiation, along with messages posted and responses received by dominant participants, indicate that certain of what Edelsky considered floor-related F2F behaviors are associated with powerful participants in computer-mediated discussion lists, where ‘power’ is a function of being a member of the majority gender and/or of one’s individual status. On the one hand, proposing new topics for discussion and participating actively reflect a sense of entitlement to hold and control the conversational floor. It appears that women experienced this sense of entitlement in the female-predominant contexts studied here but not (with the exception of the single high-status female participant in the “cog ling” discussion) in male-predominant contexts. Conversely, men engaged in these empowered behaviors in the male-predominant contexts but not in the female-predominant contexts, despite the fact that they exhibited other F1 behaviors there (e.g., posting longer messages).

Responses, on the other hand, constitute an acknowledgment on the part of other participants that one holds the conversational floor, and—if the responses are numerous—that one is an especially influential “speaker.” In “men’s lit1,” the participant who received the most responses was male, and in “brain sex” the two participants who received the most responses were female. However, response patterns in the present corpus are not strictly dependent on the majority gender. As the two exceptions discussed above suggest, a more inclusive generalization is that responses are received more by powerful participants, and that floor-taking (posting) and floor-ratifying (responding) strategies can be used to claim power in situations where power is contested.

### ***Summary of Findings***

The results for duration, density, and thematic focus support previous floor research findings: The male-predominant mailing list floors pattern like Edelsky’s F1 type, and

female-predominant floors pattern like Edelsky’s F2 type and/or exhibit multiple floors. The results for message length, response rate, and interpersonal stance, however, agree with Edelsky’s findings only for male-predominant samples. Those samples have long messages, a higher response rate to men, and argumentativeness—all features of F1 floors. The results are inconsistent with the prediction that female-predominant mailing list floors will be egalitarian (F2), however, since instead of behaving in egalitarian ways in those samples, men manifest hierarchical F1 behaviors. These results suggest an alternative view, namely, that what the discourse of the samples illustrates is not floor type *per se*, but rather preferred gender styles of conversational interaction. According to this view, the computer-mediated F1 floors have the particular constellation of features they do because the majority of their participants—males—interact in those ways, and the F2 floors—to the extent that they are populated by a majority of females—reflect female interactional preferences (cf. Coates, 1997a, 1997b).

However, the final set of results problematizes this alternative view. The gender styles explanation should predict that there are commonalities in male behavior across samples and commonalities in female behavior across samples. In fact, each gender’s behavior varies as regards topic initiation and messages posted to/responses received by dominant participants, depending on whether they are in a male-predominant or a female-predominant context. In same-gender contexts, topics are initiated (and responded to, for the most part) by the numerically-predominant gender. A small number of active individuals of that gender also tends to post the most messages and receive the most responses. These results also probematize the floor type explanation, because they are inconsistent with an ‘egalitarian’ (F2) floor type, yet they are found across all the samples.

Overall, the results for the features of Edelsky’s two floor types fall into three distinct patterns for the asynchronous academic discussion forum data, as summarized in Table 13.

Table 13. Summary of results

<i>Pattern</i>	<i>Supported by</i>
Floor-based (F1 vs. F2)	Duration; density; thematic focus
Gender-based (male vs. female)	Message length; response rate; interpersonal stance
Power-based (powerful vs. less powerful)	Topic initiation; number of messages posted and responses received by dominant participants

## Discussion

### *Research Questions Revisited*

What can be concluded on the basis of these findings about the nature of floor in CMC? Viewed only from the perspective of male-predominant groups, the results appear to provide evidence that Edelsky's F1 floor type, as characterized by the cluster of features listed in Table 1, carries over into academic mailing list discourse. Relative to the female-predominant samples, the two male-predominant samples in the corpus are of longer duration, contain longer messages contributed at a slower pace on (mostly) a single theme, are more argumentative, and are hierarchically organized in that a minority of (male) participants dominates the discussion in terms of number of messages sent and responses received.

However, the similarity to Edelsky's findings breaks down when it comes to the female-predominant samples. Although the samples illustrate some F2 features, such as shorter duration and message length, dense interactivity, and multiple thematic foci, numerous hierarchical patterns are also evident, some perpetrated by men (e.g., long messages; argumentativeness), and others perpetrated by women (e.g., topic initiation; unequal distribution of messages and responses). Moreover, the two discussions that I have labeled female-predominant are different in nature, and neither is an ideal analog to the collaborative mixed-sex meeting talk that Edelsky took as the basis of her definition of F2: "Men's lit2" is contested rather than collaborative, and "brain sex" is almost exclusively female. Yet these two samples tend to pattern together in ways that set them apart from the male-predominant samples, and thus they constitute a phenomenon to be explained.

It is possible that the differences between the present study's findings and those of Edelsky are due to the difference in medium of communication: computer-mediated vs. F2F. The technological affordances of electronic mailing lists appear to support F1 floors better than F2 floors: They lend to computer-mediated interaction certain characteristics, such as the uninterruptibility of turns and a tendency for messages to appear in strict chronological order, that predispose mailing list discourse towards linear, one-at-a-time turn-taking. This technological predisposition might help explain why F1 patterns are found mixed with the F2 patterns in the female-predominant samples in this study. CMC technology might also explain why certain F2 features, such as multiple simultaneous threads (cf. Herring, 1999), are found in the data. However, it cannot explain why they are found mostly in female-predominant discussions, nor why other F2 features, such as agreement and short messages, are found in such discussions. Nor can CMC technology explain why the "majority" gender is associated with certain F1 behaviors and the "minority" gender with certain F2 behaviors (cf. Herring, 1996b), or why empowered individuals tend to exhibit those F1 behaviors, regardless of context. These findings call for an explanation in terms of social, rather than technological, factors.

In addition to floor type, two explanations were suggested in the previous section for the patterns observed in this study, both of which find support in the language and gender literature and shed light on the behavior of the female-predominant samples: gendered discourse styles and differences in power, both societal and contextually determined. On the one hand, the preferences in contexts where women are well represented (numerically or otherwise) for short messages and rapid, overlapping interactive exchanges, along with a tendency to agree rather than disagree, are consistent with female-preferential behaviors found in other studies of offline and online discourse (e.g., Coates, 1997a, 1997b; Herring, 1996b). These behaviors reflect norms of gender socialization, in that women in Western industrialized nations are traditionally socialized to speak less than men in public, be sociable, and avoid conflict (Coates, 1993; Lakoff, 1973). Traditional gender socialization also assigns a lower value to women's words (Spender, 1980), consistent with the finding that women's computer-mediated messages receive fewer responses on average than those of men.

On the other hand, the fact that some women “dominate” the conversational floor in participation and response rates when the context is predominantly female—and even sometimes when it is not, as in the case of the high-status woman in the “cog ling” discussion—suggests that power conditions some behaviors. Power can be exercised by both women and men. Edelsky (19981) herself noted that the women in her F2F meetings engaged in some powerful F1 behaviors, such as joking and requesting responses, during F2 floors (although she did not invoke power in interpreting this behavior). Power is conferred in part by context, as previous observations about critical mass indicate (cf. Herring, 1996b). It is women who control the topic and manner of discussion in women-centered and women-only online forums (Balka, 1993; Korenman & Wyatt, 1996); indeed, Herring, Johnson, and DiBenedetto (1995) speculated that such forums exist for the express purpose of creating environments that are discursively empowering to women, in contrast to the mostly-male dominated public Internet (Herring, 2003).

These two explanations are not incompatible. As Lakoff (1973) pointed out nearly 40 years ago, a power differential is inherent in gender styles. I suggest that it is also built into the F1 and F2 floor types that are based on those styles. Gender differences in floor management style favor men holding the floor for long stretches of time and being responded to; F1, the floor type favored by men, conventionalizes this privilege, whereas the ideal F2 floor conventionalizes women “sharing” the floor with others. That is, there is a conventional mapping of the first three components in the left-most column in Table 13—F1, male, and powerful—and a conventional mapping of their complementary aspects—F2, female, and less powerful. These associations, however, are not absolute; exceptions can be found in which power is the key variable. Thus in contexts where women hold power, as in the “brain sex” discussion on the women-centered WMST list, they exhibit more powerful floor management patterns—F1 features. F1 practices are also employed strategically by both women and men to attempt to gain or hold the floor when speaking rights are contested, as in the “men's lit2” sample. Conversely, F2 patterns, for example in distribution of responses, may indicate that participants have lost

(or are being denied) power over the floor. This interpretation reconciles the otherwise apparently inconsistent findings of the present study.

***Determinants of Success in Gaining and Holding the Computer-Mediated Floor***

Research on small group communication (Hare, Borgatta & Bales, 1965) has shown that a minority of participants tends to dominate discussion in face-to-face settings. It may be that equally-distributed participation is an unrealistic ideal in any medium, given group dynamics in human communication. Regardless, the finding that participation and response rates cluster around a small number of individuals in all four samples raises the question of whether posting more messages leads to getting more responses and, more generally, what factors contribute to being responded to online—and thereby having one’s holding of the floor acknowledged and ratified.

In the present study, participant gender appears to influence success in gaining a response, in that the average response rate (number of responses received divided by number of messages posted) is higher for males than for females overall. Above I suggested that this is a reflection of socialized attitudes that accord higher status to males. In this section, I consider the question in greater detail, exploring several alternative explanations.

A closer look at participation patterns in the present corpus reveals that most people—54% of all participants—post only one message, as compared with 19% who post two messages, and 27% who post three messages or more. Most single messages (52%) receive no response. However, the likelihood of getting a response increases to 77% when a participant posts two messages in a discussion, and 100% of participants who posted three or more messages were responded to at least once. This raises the possibility that women received fewer responses because they did not post enough messages to clear the three-message threshold. However, this suggestion does not hold up under quantitative scrutiny. Women are proportionately no more likely than men to post only one or two messages, yet when they do so, they are less likely to receive a response, as shown in Table 14.

Table 14. Responses received to 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> messages posted by males and females

	1st msg. responded to	2 <sup>nd</sup> msg. responded to	3 <sup>rd</sup> msg. responded to	Participants who post > 3 msgs
Males	53%	86%	100%	53%
Females	39%	67%	100%	52%
Combined	48%	77%	100%	53%

Another possible explanation is that men employ more successful strategies for attracting responses than women. Highly successful floor holders—that is, individuals who succeed in gaining multiple responses—fall into two categories: those who post numerous messages, and those who post few but impactful messages. There is a statistically

significant correlation between number of messages posted and number of responses received for the corpus as a whole, especially at more active levels of participation.<sup>16</sup> Posting numerous messages is likely to garner as many responses; this is true for women as well as men. Moreover, some women participate very actively: More than half of the individuals who posted five messages or more in the corpus are women, and they contributed 1.7 times as many messages as did men who posted five messages or more. Thus it does not seem to be the most active participants who account for the gender difference in response rates reported in Tables 9 and 14.

The second category of successful floor holders is individuals who post only a small number of messages—typically one or two—but receive a disproportionate number of responses. It is here that the discrepancy between male and female response rates is greatest. Individual messages succeed in drawing response for various reasons. The highest rates of response were achieved by the individuals who posted the message that triggered the discussion as a whole; thus the man who first proposed the “men’s lit” course received 21 responses in “men’s lit1,” even though he only posted two messages. In addition, single messages that are humorous or clever in their presentation tend to receive high rates of response. For example, in “men’s lit1,” someone posted a message from a mythical address from “Iron John,” a character in a book by Robert Bly on the “men’s movement” that was popular at the time. This single message, a joke containing no substantive content, attracted four immediate responses, most speculating on how the message was sent. Another successful joke message was ostensibly posted to the “cog ling” discussion by “Fred,” the pet dog of one of the subscribers; this, too, received four responses. Finally, messages that are provocative (including offensive) or controversial in content tend to generate disproportionate response. When a male subscriber threatened to unsubscribe from MBU in protest over the “men’s literature” discussion, he received a flood of responses arguing with him and urging him not to unsubscribe. Similarly, a man who posted a message expressing inflammatory views in the “cog ling” discussion got back six times as many messages as he posted (12 to his two), all of them taking issue with his views. Men are responsible for most of the “joke” messages in the corpus, and they post more contentious messages than women do. These practices contribute to the extra attention received by male participants.<sup>17</sup>

Not all of the successful messages can be accounted for by the above explanations, however. Of the remaining messages, a number were posted by high-profile participants—that is, individuals who are well-established professionals in their academic field. Others were posted by male participants who were neither high status (as determined by their academic standing<sup>18</sup>) nor provocative, but who seem to have been favored for response simply by virtue of being male. This suggests that professional recognition and male gender confer different types of status, and that both favor success in gaining the floor in computer-mediated discussion forums (Selfe & Meyer, 1991). Maleness is neither a necessary nor a sufficient condition, but statistically it increases the likelihood that one will post messages and that they will be responded to. This built-in structural advantage is compounded by strategies of interaction used by male participants that draw attention to themselves, such as posting contentious or otherwise provocative

content. At the same time, the evidence suggests that persistence pays off—that anyone, male or female, can elicit a response by posting a large enough number of messages (three, in the present study).<sup>19</sup>

## **Conclusion**

This article analyzed floor in four public asynchronous computer-mediated discourse samples from three academic discussion lists. A feature-based coding scheme was employed that included both participation and response—thereby incorporating the insight that floor must be ratified by others in order to be held, especially in 1-way CMC—along with other features previously observed to characterize different styles of floor management in research on face-to-face conversation (Coates, 1997a, 1997b; Edelsky, 1981). Systematic differences were found between discourse samples participated in mostly by males and samples with a strong female presence; these resemble to some extent the F1 and F2 floor types found by Edelsky in face-to-face academic committee meetings, especially the male samples, which strongly resemble the F1 type. However, the female samples diverge from Edelsky’s F2 type in a number of respects, including exhibiting hierarchical behaviors by both men and women.

To integrate and account for these findings, I proposed that floor types are inherently power-based, and that they map conventionally onto gender in ways that associate more powerful discourse management strategies with men. The conventional association of maleness with the power to hold the conversational floor helps explain why male contributors receive more responses on average for each message they post, even when other factors (such as number of initiations and provocative message content) are taken into account. Moreover, unlike previous analyses of floor in relation to gender, this analysis can account for apparent exceptions to the conventional floor/gender mappings. For example, in the data analyzed here, F1 behaviors used by males and females in otherwise F2 contexts can be explained in terms of those individuals being empowered (or claiming power) in one way or another.

Although this study did not set out to critique Edelsky’s model but rather to explore its applicability to CMC, the explanation proposed here for the mailing list results implies that ‘floor type’ may not be as useful an overall explanatory construct in relation to gender as the notion that women and men are socialized to manage conversational interaction differently, with men conventionally being assigned greater power and privilege in public floors, but with certain powerful floor management practices available for use by empowered individuals of either gender. This analysis does not depend in any crucial way on the interaction taking place in a computer-mediated environment. Whereas the technical properties of text-based CMC systems (such as the mailing lists analyzed here) lend to computer-mediated interaction certain characteristics—such as the uninterruptibility of turns and a tendency towards multiple, interleaved exchanges—, they do not account for gender or power differences, which must be explained in terms of social factors that shape communication both online and offline. As such, the

interpretation proposed here could in principle be extended to face-to-face conversation, and it is not incompatible with the empirical observations of Edelsky (1981) and Coates (1997a, 1997b).

That said, the present data are not strictly comparable with those of previous studies of floor in F2F conversation: Mailing list communication is asynchronous, and participation on the discussion lists was open to anyone who wished to contribute, in contrast to the real-time, closed-membership groups studied by Edelsky and Coates. These differences potentially limit the generalizability of the study's results. Moreover, the samples (threads) were selected for their length and coherence; they are not representative of typical threads in asynchronous CMC, even on the same forums (although their gender dynamics appear to be typical of extended threads in such forums; see, e.g., Herring, 1996a, 2003). Randomly-sampled mailing list discourse would likely exhibit less coherence and more multiple floors (cf. Herring, 1999), consistent with the observations of Cherny (1999) and Simpson (2005) for synchronous group CMC. Finally, the age of the data raise the question of whether the dynamics of computer-mediated floors have changed in the intervening years, both as regards present-day academic mailing list interaction and newer CMC modes such as blogs. Further research is clearly needed to address this question. In the meantime, gendered participation patterns similar to those reported here were observed by Sierpe (2000) in the JESSE academic mailing list nearly 10 years after the discussions analyzed in the present study took place. There is also evidence that authoring and commenting on blogs is gendered in ways similar to other online communication (e.g., Herring, Kouper, Scheidt, & Wright, 2004; Pederson & Macaffee, 2007), despite the asymmetrical floor imposed by blogging software, in which the blog author has greater control over what is posted than commenters do (Herring, Scheidt, Bonus, & Wright, 2005).

The findings of this study have implications for the study of computer-mediated floors, as well as for floor as a theoretical construct. While the turn-based model of floor appears to be irrelevant for most text-based CMC, group floors exist and can be described in terms of features such as those analyzed here. The analysis suggests that duration, density, and thematic focus are good indicators of floor type in asynchronous CMC. In contrast, features such as message length appear to index gender, and new topic initiations appear to index participant power more than floor *per se*. The fact that the female-predominant floors exhibited a mixture of floor features further problematizes the notion of 'floor types' as monolithic concepts. One contribution of this study is thus that it teases out the features of 'floor' in one computer-mediated context and shows that different features reflect and are conditioned by different social forces.

Finally, the findings have implications for communicators seeking to gain and hold the conversational floor. Contributing one's own words and being ratified by others is a valuable commodity, something generally sought-after in conversation, and conversation on the Internet is no exception. The results of the present study demonstrate that gender is an important variable in this equation. Gender is implicated in amount of participation and success in attracting a response. Additionally, the gender constituency of a group can



be a source of empowerment or disempowerment for individuals—something that members of online women-only forums have long known. At the same time, the answer to the question “who’s got the floor?” in computer-mediated conversation may depend on power considerations, and floor management can be strategically manipulated to claim power. The finding that 100% of participants in the present study who posted three or more messages received some response also suggests one practical recommendation: If at first you don’t succeed in getting a response in an online forum, post, post again.

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## **Notes**

- <sup>1</sup> Retrieved December 31, 2010 from <http://dictionary.reference.com/browse/floor>.
- <sup>2</sup> Retrieved December 31, 2010 from <http://www.merriam-webster.com/dictionary/take>.
- <sup>3</sup> As noted in the introduction to the special issue on ‘Computer-Mediated Conversation’ (Herring, this issue), many of the studies reported in this issue were conducted in the mid-to-late 1990s. They are presented here for their historical value, as well as because the authors and journal editor believe that the analytical insights they contain are still relevant, even if the types of data analyzed are no longer in common use. In the case of the present article, academic discussion lists are still used, although scholarly interest in them has been eclipsed by interest in newer technologies such as weblogs and wikis. The most recent publication I was able to locate on gender and participation in an academic discussion list was Sierpe (2000), the findings of which are consistent with the findings of the present study.
- <sup>4</sup> This is not always the case in mailing list discussions: Threads are often interwoven with one another (Herring, 1999). The fact that the messages included in the present corpus were pre-selected to be relevant to a central theme means that the possibilities of discovering simultaneous multiple themes, as authorized in principle by the F2 floor type, are artificially restricted.
- <sup>5</sup> One message in the “men’s lit” discussion was posted from a made-up address by a “dog” named Bernard Chien Perro. Although it is likely that Bernard was the creation of a female participant, his gender is given as male. This post was excluded from the counts of male and female participants, messages, etc.
- <sup>6</sup> Although I did not post messages in any of the three discussions, I observed them as they took place in real time as a subscriber to the discussion lists.
- <sup>7</sup> For further discussion of the dynamics of the “men’s literature” debate, see Herring, Johnson, and DiBenedetto (1995, 1998).

- <sup>8</sup> The totals in the ‘participants’ column in Table 3 are not the sums of the participants in the two parts of the “men’s lit” discussion, in that some of the same people participated in both parts of the discussion.
- <sup>9</sup> I include “men’s lit2” in this category, even though women’s average participation was less than 50%, on the grounds that women’s participation increased strikingly in the second half as compared with the first half of the discussion. Participants themselves subjectively perceived women to have dominated the second half of the discussion, according to the results of a survey reported in Herring, Johnson, and DiBenedetto (1998).
- <sup>10</sup> I did not attempt to replicate Edelsky’s (1981) quantitative methods, in that many of her criteria assume that the object of study is spoken language (e.g., laughter, pauses, deep overlaps), while others (e.g., use of past tense) did not seem directly relevant to claims about F1 and F2 floor types. Nor does the list in Table 4 include all the features mentioned by Edelsky that are summarized in Table 1. For example, it is not possible to compare electronic mailing list samples along the dimension of “one-speaker-at-a-time” vs. “overlapping” messages, in that all turns are necessarily “one-at-a-time” (Herring, 1999). I also do not attempt to quantify “formality” in this study (but see Emigh & Herring, 2005 for a quantitative analysis of linguistic formality in online knowledge repositories, another asynchronous CMC environment).
- <sup>11</sup> The second half of the “cognitive linguistics” discussion was carried out under the subject line “functionalism and formalism.” These messages were included in the “cognitive linguistics” column. For further discussion of the dynamics of the “cognitive linguistics” discussion, see Herring (1992, 1993, 1996b).
- <sup>12</sup> While the “men’s literature” topic persists during “men’s lit2,” it is not the main topic of discussion.
- <sup>13</sup> The message said that the woman was hesitant to post because she was discouraged about attempts of women to communicate their concerns to men on the list. This message received five encouraging responses, two from women and three from men.
- <sup>14</sup> For example: 1) initiation, 2) response/initiation, 3) response/initiation, etc.
- <sup>15</sup> Not all second turns in the exchanges agreed or disagreed with the first turn; thus the percentages of ‘agree’ and ‘disagree’ turns in the table do not always add up to 100%.
- <sup>16</sup> The correlation score for the corpus as a whole is .78, on a scale of -1 to 1 where any value greater than .321 is significant at the .001 level.
- <sup>17</sup> A similar phenomenon was observed among children in school settings by Swann (1990). Boys get more attention from teachers by behaving uncooperatively or provocatively, leading the teachers to attend to them as ‘problems’ or to draw them out with questions in an attempt to get them to explain their provocative statements. Swann suggests that the boys’ behavior is strategic.
- <sup>18</sup> In these academic mailing lists at the time the data for this study were collected, it was common for participants to reveal their “real-life” status. Persons with official academic appointments would often indicate them in their signature files, and students would often indicate their status in their message content. For the purpose of

the observations made here, mid- or high-level administrators and tenured faculty at U.S. universities (or their equivalents in other countries) were considered 'high status,' and (untentured or non-tenure-track) lower-level administrators, untentured faculty, and students were considered 'low status' within the academic hierarchy.

- <sup>19</sup> See Lambiase (this issue) for a case study of a mailing list discussion that illustrates this phenomenon for both genders.

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