ELECTRONIC CONFERENCING-- ITS FORM, FUNCTION AND POTENTIAL FOR TECHNICAL WRITING INSTRUCTION

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INTRODUCTION

The burgeoning of electronic conferencing and its related modes, video conferencing, videotex, audio conferencing, bulletin boards and electronic mail in the 1960s and 1970s was a result of a variety of factors, not the least of which was a need to exploit the advances of technology to overcome the limitations of traditional modes of communication. Admittedly, the potential of teleconferencing is immense, and predictions have been made about its possible influence in various spheres. Referring specifically to electronic conferencing, R.A. Flavin claims that

> computer conferencing technology is one we can anticipate to have a very quick, significant, and perhaps moving effect on, first, the business world and then, our personal lives. [1. p. 41]

Electronic conferencing has lived up to its expectations by becoming an essential channel of communication in organizations that rely heavily on computers to communicate with their staff and clients. Government agencies, universities, companies, and schools have been quick to recognize the advantages of having access to a conferencing mode to facilitate quick, accurate and easy communication. Flavin characterizes electronic conferencing as a "vital function" and adds that "both professionally and academically ... its use is increasing rapidly." [1, p. 41] Dozens of programs, which include EIES, CONFER, PLANET and COM now exist in North America, and they serve a wide range of organizations. This paper draws specific attention to a program called Forum, which runs under the Michigan Terminal System, and is used in eight installations in North America.

While the availability of the technology, the ease of use and the ever-increasing need for rapid communication have ensured the growth of electronic conferencing, the mode itself, from a stylistic and rhetorical point

of view, has remained somewhat enigmatic and unexplored. Perhaps the reluctance to look at the communicative aspects of the mode is linked to the close relation between the computer and the message. Inevitably, most critical works stress the technical features of conferencing and deemphasize the stylistic ones. Robert Johansen draws attention to the dichotomy when he says that

> computer conferencing is a hybrid medium, which borrows its terminology from computer science even though its purpose, culture and evaluation strategies all come from the field of communication. [2, p. 9]

The dichotomy is interesting, for the interface is so friendly and the link so seamless that in practice users often forget the technology and foreground the message. From a critical standpoint, it is equally interesting that the mode generates varied and contradictory impulses among people. If it evokes confidence, exuberance and prolixity in some, it also causes reticence, mistrust and withdrawal in others. Michael Spitzer refers to "flaming" and "fizzling" as two observable poles and goes on to refer to a third category called "lurking," which he defines as a "high-tech voyeurism" [3, p. 20] generated by this facility. Total disregard for grammar, syntax and spelling coexists with extreme precision and carefully constructed prose. While some participants hardly ever enter a response, others insist on sharing even the most mundane thought that crosses their minds.

Despite the ostensible complexities of electronic conferencing, it clearly needs to be seen in the context of scientific communication and technical writing. In practice, the relation between traditional forms of communication, such as the letter and the memo, and computer conferencing is symbiotic. On occasion, the latter usurps the place of the former, which only intensifies the need for technical writing instruction to pay closer attention to this medium. For the most part, electronic conferencing has not and cannot totally replace traditional forms. The letter, memo, and face-to-face conference are as much in vogue today as they were two decades ago. Jon Nightingale points out that

> computer conferences will never replace traditional forms of communication. There are still things that are better handled by telephone, correspondence, or face-to-face meetings. [4, p. T-54]

The issue, then, is not of electronic conferencing as an alternative mode so much as a complementary mode that enhances and feeds into traditional forms. It is not unusual for an electronic discussion to evolve into a formal, written report or research article. Both as a complement to other forms of writing and as a forum for discussion on a variety of topics, computer conferencing has become a special mode, worthy of serious attention.

The "special" quality is more easily recognized than satisfactorily explained. In words that create a halo of mystery, Michael Spitzer explains that while words on paper create the impression of permanence, text on the screen creates the feeling of transience. He adds:

> Even when the terminal remains on, computer conferencing text is ephemeral. The little dots of light scroll off the screen and return to the zone from whence they so mysteriously came. [3, p. 19]

In a more pragmatic vein, Robert Johansen refers to conferencing as a "craft" which "cannot be taught mechanistically." [2, p. 138] Perhaps a useful approach would be to look at the salient features of a specific program, not as software but as a tool for communication.

FORUM AT UBC

The program Forum was written approximately nine years ago at the University of British Columbia and made available to all the installations that ran the Michigan Terminal System. Despite the restriction that access was possible only to those with mainframe accounts, its popularity has increased steadily over the years. Figure 1 illustrates the substantial increase in the number of discussions and participants in the last several years. At present the program is used by faculty, staff and graduate students, in addition to several teachers in the lower mainland, and others in North America who have access to the mainframe at the University of B.C.

For a new user, becoming an active participant is relatively easy. Both hardcopy documentation and on-line help are available for the neophyte, but since several of the commands are intuitive and simple, acquiring a working knowledge is a painless process. The user calls up the program by typing "Run *Forum" and the program, after asking for some details, provides a synopsis of the conferences that are current. The user

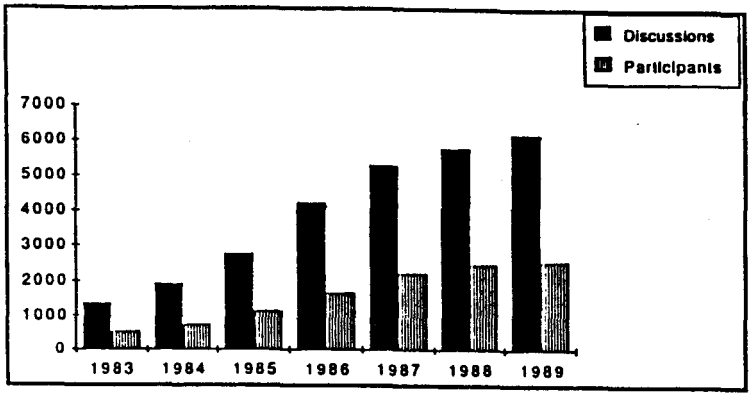

Fig. 1 Discussions and Participants in Forum

then has the option of scanning all the conferences and discussions that are available and joining ones of interest. Some conferences are restricted, in which case it may be possible for the user to be an observer and not a participant. On the other hand, ones that deal with sensitive or controversial issues may deny access. The more popular and heavily-used ones, like "World-Forum" and "User-Forum," are open to all.

Subsequently, each time the user runs the program, the system informs him or her of any new discussions (see Figure 2). The user has the option of reading, responding, excluding or getting a hardcopy of them. If the user responds, the response is made available to all members of the conference, who may in turn reply. Typically, if the topic is non-trivial, the user prints a response on a file, then uses keywords to look at previous discussions on similar topics, and enters an informed response a few days later. If the topic or the reply are controversial, the user may decide to use a pseudonym.

On the other hand, the participant has the option of starting a conference, in which case he or she has editorial authority over the various responses of others. Since beginning a conference also involves using up one's own file space, it is more likely that participants would begin new discussions rather than conferences. At present Forum has 240 conferences and 2600 discussions. For the sophisticated user, Forum provides various features. It is possible, for instance, to specify expiry times for discussions,

```
#Run *Forum
#Execution begins          09:31:37
FORUM Version 2.73

USER-FORUM:     3 discussions with new responses;
                1 new discussion
STAFF-FORUM     2 discussions with new responses
WORLD-FORUM     5 discussions with new responses
NETMAIL         2 discussions with new responses
FRIVOLITY       1 new discussion

Command: Next
Switching to conference User-Forum
8500. Lost and Found
Colby Hughes                11:35 Tue Mar 23/87 (revised)

8500/2 David Parker         12:45 May 12/89 4 lines

I seem to have misplaced the manual that describes
how to program my phone.  If anyone spots the wayward
manual, please return it to Rm 416.

Command: Stop
Execution terminated.       09:35:36
```

Fig. 2 Sample Run of Forum

delete entries, lock conferences, display names of participants, and so forth. For most people, however, Forum is an electronic meeting place, one which provides the facilities to discuss a range of topics, clarify problems and solicit expert opinion.

Since a very eclectic group of people participate in Forum, the discussion topics cover a broad spectrum. For instance, the conference on Network Mail deals primarily with technical matters pertaining to electronic mail, while World Forum, as the name implies, deals with matters that have both national and international significance.

ADVANTAGES

The most conspicuous advantage of this mode is that it is both interactive and asynchronous. Depending on time constraints, the urgency of the topic and the quality of the discussion, conferencers may respond instantly or after a lapse of time. Quite often, topics which do not require careful thought evoke quick responses, while those that demand careful consideration necessitate asynchronous communication. From the initiator's point of view, the "flexibility of participation" circumvents all the problems of scheduling. From the participant's point of view, the possibility of delayed response is reassuring. Tom Featheringham says that a

> definite advantage of computerized conferencing is its lack of synchronous demands on behalf of participants. Users need not be available (on the system) at the same time as they must be when attending a meeting or conferencing face-to-face or on the telephone. [5, p. 207]

A salutory consequence of this flexibility is the possibility of studied response. Freed from the pressures of face-to-face meetings, conferencers often carefully compose and edit their responses on a word processor before entering their response. As Johansen points out, "since computer conferencing allows more time for deliberate, reflective response, the quality of information exchange is likely to improve." [2, p. 81]

Since time is less important as a determining factor, accessing the input of people in widely dispersed geographic locations becomes less cumbersome. Although the process of sending the message is usually quick, the difference in time zones causes an inevitable delay. As Nightingale mentions, "participants may have greatly different schedules or may even be in different time zones." [4, p. T-51] Electronic conferencing implicitly acknowledges these differences and trades time for expert opinion.

Computer conferencing ensures privacy and is "non-interruptive"; the receiver may attend to them when time permits. Upon being informed of a conference discussion waiting to be retrieved, the participant has the option of reading it, archiving it or even trashing it. The context, by giving the authority to the user, becomes less intimidating. As Johansen mentions, this mode "has no equivalent of a ringing telephone, no gavel to bang to call the groups to order." [2, p. 81] Typically, participants view messages several

times a day and either respond immediately, decide against responding or archive them for further thought and eventual reply.

The privacy of the office and the impersonality of the conferencing mode lead to an egalitarianism which has often been commented on as a salient feature. The identifying information that appears with conference entries excludes social position, official designation, race, nationality, sexual orientation, and so forth. Both in written and face-to-face communication the significance of an opinion is often determined by subjective factors. Electronic conferencing cuts across most of these barriers, although participants could draw attention to their positions through peripheral comments. On the whole, as Murray Turoff comments, "a much more heightened feeling of individual participation" [6, p. 170] is generated.

Looking at the social and psychological aspects, Bryan Pfaffenberger points out that

> in a computer medium, everyone's message is presented in a setting of equal authority; what is more, social indicators such as dress or mannerisms are absent. The transmission of social information is sharply reduced, and participants consider contributions that might otherwise have been dismissed on social grounds. [7, p. 32]

In a more restricted setting, particularly in closed conferences, egalitarianism is more limited. Often "reading/writing" between the lines reveals social positions of the participants. In such situations, the possibility of anonymity rescues the reticent conferencer. It is not unusual for individual conferencers to use several pseudonyms within a single discussion to project or even test out different points of view and promote a lively and productive discussion. More typically, as Featheringham points out, "the 'pen-name' and 'anonymous' features counter the inhibitions which can prevail in face-to-face group discussions." [5, p. 207]

Equally important for the conferencer is the awareness that conferencing is a collective process, more so than other forms of traditional communication, or even face-to-face conferences. Since the medium is asynchronous and the possibility of informed responses high, conferences take on a pyramidal structure. This feature is most apparent in problem-oriented discussions where each "expert" voices an opinion until the problem is resolved to the satisfaction of the initiator. The facility for scrolling

through past messages and searching for specific items through keywords makes possible this incremental method.

Finally, a factor that is often inadequately known is the ease of participating in computer conferences. Through a process of association, those who fear computers make the assumption that anything to do with them is equally formidable, best left to programmers and sophisticated users. The truth is that conferencing programs are usually straightforward and menu driven, making the learning process exciting and painless. In fact Elaine Kerr rightly claims that "computer conferencing is easy to learn and does not require prior knowledge of computers." [8, p. 13]

DISADVANTAGES

In the process of overcoming several of the limitations of traditional forms of communication, electronic conferencing also denies itself some of the advantages of older forms. For instance, a focussed letter or memo could provide quick feedback, while a conference entry could take time. The sense of frustration that often results is referred to by Johansen who says that "the group may feel frustrated by the lack of immediate feedback, which can give computer conferencing an impersonal quality." [2, p. 81] It is not uncommon for users to feel exasperated or anxious when discussions get sidetracked, lose focus and concern themselves with irrelevant details. Features for averting these situations do exist, but are not always used.

A related, and perhaps more important, factor is the absence of a social or personal context and other significant non-verbal cues. The effect of distancing places a greater responsibility on the conferencer, who has only the text on the screen to work with. Andrew Feenberg points out that

> A living room, a doctor's office, a form of salutation--each of these environmental or tacit cues evokes in us an elaborate set of codes in terms of which our expectations and communicative actions are shaped. [9, p. 3]

Interestingly enough, these cues are absent in other forms of written communication as well. Letters and reports have identifying information, but they too lack the non-verbal communication that occurs in face-to-face discussions. Yet users seem more adept at discovering subtext on printed paper than on the terminal, a factor which has led to the creation of certain conventions which are referred to later in this paper. The uniqueness of this

medium probably explains why discussions on scientific topics are less prone to controversy and vituperative outbursts than others.

A strong sense of the audience is an essential aspect of this mode. It is all too easy to ignore the audience, for most participants do not know or seldom meet fellow conferencers. In fact it has been suggested in the past that it would be beneficial to arrange a face-to-face meeting prior to the conference, but that is hardly possible with a wide distribution of participants. Understanding the audience is problematic because of the large number of peripheral participants who are marginally interested, but who scan the responses as a matter of habit. And this diverse group holds different beliefs, conforms to varying standards and lifestyles and has strong views on controversial or topical issues. The participant who lacks an intuitive sense of the audience runs the risk of inadvertently offending someone and inviting emotionally-charged and potentially disruptive and digressive comments. As Robert Cowan maintains, "it is too easy to hit a nerve and unleash more response than expected." [10, p. 237]

A related feature is the presence of the "silent majority," a feature common to electronic conferencing. Often discussions seem to involve a small group of people whose views become evident enough, and one forgets the large number of users who do not comment or who have joined the conference late and are still not sure about the critical issues and the history of the conference. As Nightingale points out, "for the most part the active contributors to discussions are a relatively small group." [4, p. T-53] To assume the silent majority to be unimportant is to undermine the full potential of the conference. A false sense of security created by the apparent absence of communication could lead to embarrassing situations.

Another aspect of computer conferencing, as against traditional group meetings, is the multiplicity of focus. Typically, electronic conferencers participate in a variety of conferences, which, in effect, means that when they run the program they would be told of new responses in various conferences (see Figure 2). From the viewer's point of view this involves a need to move quickly from one topic to another, to be able to remember the current state of several discussions. On the other hand, the person who enters a response needs to be aware that the receiver will see it along with several others. This multiplicity, along with other factors, has implications for writing, which is in some ways the meeting point between electronic conferencing and technical writing instruction.

CONVENTIONS AND STRATEGIES

It is difficult to be categoric about writing styles and strategies for a medium that is both diverse and evolving. However, critical literature does point to common problems and possible solutions which users need to be aware of. A common feature often alluded to is ambiguity and resultant misunderstanding. The medium creates the illusion of privacy, which in turn leads to prolixity and consequent carelessness. Elaine Kerr cautions the user to "be wary of humor and sarcasm which are easily misunderstood." [8, p. 17] Figure 3 shows a somewhat casual exchange which illustrates the temptation and possible consequences of spontaneity. Clarity and control of tone are crucial, partly because of the absence of other cues and partly because of the nature of the audience.

Researchers on the interpersonal aspects of conferencing have often noted that reading text on the screen tends to impede shades of meaning. The distinction is both a subtle and controversial one, but evidently reading a hardcopy permits the absorption of nuances in a manner that reading on the terminal does not. And this has led, over time, to the creation of symbols and conventions to supplement the text. Featheringham says:

> Users have come up with various schemes of word capitalization and word repetition for thought emphasis... Contempt or cynicism can be shown by enclosing the receiver's own words in quotation marks. Humor has been expressed by parenthetically adding phrases like "Ha, Ha" or "Chuckle" after a statement. [5, p. 212]

Spitzer remarks that "users can employ a combination of graphic characters to show anger, stress or profanity, the way comic book authors do." [3, p. 21]

8403/15 William Lee 15:38 Thu Nov 10/88 2 lines

I seem to have misplaced my Microsoft/High-Performance mug. Has anyone seen it lately?

8403/16 Les Ferch 15:55 Thu Nov 10/88 2 lines

There is one in our office that does not belong to me.
It may belong to Charles, but he has lots of mugs, so take it.

8403/19 Charles Tremewen 19:43 Thu Nov 10/88 2 lines

If anyone wants a computer, there is one on Les Ferch's desk.
He has one at home so he won't need it.

8403/20 Les Ferch 14:14 Fri Nov 11/88 1 line

Ha Ha. Don't worry. Your mug is still here.

8403/21 Charles Tremewen 22:49 Fri Nov 11/88 1 line

My faith is renewed. Whew!

Fig. 3 A Sample Discussion

Uses such as <Flame=On> and <Flame=Off> commonly precede and follow text to express subjective statements. No formal list of conventions has been made, but symbols have appeared over time. Cowan mentions that Murray Turoff of the New Jersey Institute of Technology has suggested several methods of adding subtle qualities to text information. [10, p. 230] Forum users at UBC have suggested and continually tried out various symbols, some of which are given in Figure 4.

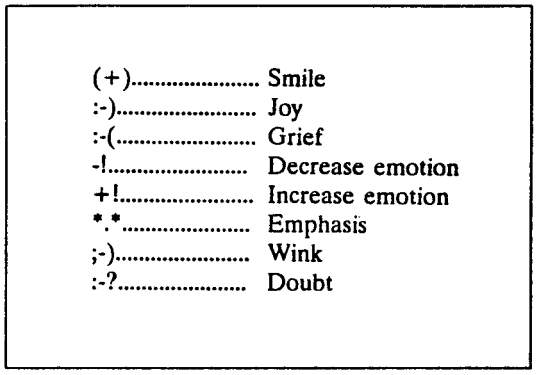

Fig. 4 Conventions

Such symbols are crutches that help in composing messages. That still does not free the user from the responsibility of carefully constructed prose. Here again there is no consensus available mainly because style is determined by the audience and the topic. Users who respond to specialized topics have a stronger sense of their audience than those who provide opinions on topics of general interest. Despite the unknown factors, the issue of language has been hotly debated, particularly among Forum users at UBC, and although no specific rules have emerged, there is general agreement that users need to address the challenge of not composing too fast so as to distort meaning and not composing too slowly so as to lose relevance. There is a general preference for active voice, minimal use of abbreviations and acronyms, careful attention to rules of syntax and grammar. Mechanical errors, such as spelling and punctuation are often distracting and draw mild rebukes. Careful proofing, everyone agrees, is crucial.

Clarity and clear communication are also dependent on being aware of the peculiarities of the medium. Often, when a person composes a reply to a discussion, the context is clear and the temptation is to write in a manner that simulates a response in a face-to-face discussion. However, when the receiver actually reads it, it is conceivable that he or she would have seen several other responses and would have forgotten the context in which the earlier response should be seen. True, some identifying information is present, but that does not provide a sense of continuum.

Thus it is important for the conferencer to ensure that adequate identifying information is included in the response to provide an unambiguous sense of context.

Unlike written communication, conference entries are often read line at a time or screenful at a time. Either way the process of comprehending a message is unlike written communication. Hence brevity becomes an important consideration. Circumlocutory language and long-winded explanations breed impatience in the receiver who needs to look at several other discussions as well. And since the communication is either line by line or screenful, repetition of key items, motifs or themes often helps the reader. If the entry must, inevitably, be lengthy, as in the case when the minutes of a meeting or a conference report is entered, a clear numbering scheme, proper headings and adequate space between paragraphs and a reasonable column width facilitate easy comprehension. As Spitzer points out, users "will have to use language with skill [and] the keyboard with imagination and ingenuity." He also adds on a biblical note, that "the articulate will inherit the world." [3, p. 20]

Since one of the underlying principles of computer conferencing is fast communication, it is essential that writing be geared to that end. In short, the approach should be climactic rather than anti-climactic, more like an executive summary than a descriptive one. Presenting the information in descending order of importance ensures that at least the most important information is communicated to the receiver.

SELF-REFLEXIVITY

The stylistic and rhetorical aspects of computer conferencing have not been researched as thoroughly as the technical and communicative aspects. Hence researchers and users have been preoccupied more with subject matter and less with style. Kerr mentions the need "to encourage the discussion of meta issues about the communication process itself." [8, p. 16] What is available at present are general views about conduct, etiquette, issues of copyright, and so forth. Admittedly, they provide a useful starting point. However, one would hope that as computer conferencing becomes increasingly popular in work places and institutions of learning, and as technical writing courses pay greater attention to the distinctive features of writing for electronic communication, more self-reflexive discussions will emerge, more definite standards will appear, making computer conferencing an efficient, productive and pleasurable means of communication.

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