

# Strangers in a Strange Land

## Interaction Management on Internet Relay Chat

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*This article examines a set of interactions (logs) taken from the form of computer-mediated communication known as Internet Relay Chat (IRC). The authors were particularly concerned with the interaction management strategies adopted by the participants in the logs during the opening and closing phases of the interactions to develop interpersonal relationships and communicate socioemotional content, as illustrated by their attempts to initiate and/or close interactions with others using the medium. The article compares these strategies and their structure with those proposed for face-to-face (FTF) interactions and proposes an explanatory framework for the interaction management of opening and closing phases on IRC. It is suggested that interaction management in these phases of IRC logs is similar to that in casual group FTF interaction in terms of the general functions of the strategies used, but that the content, structure, and ordering of the strategies are subject to adaptation.*

**I**n the past 25 years, a great deal of patterning, routine, and convention-based behavior has been found in social interaction, across a range of media types. A useful umbrella term used here for such regulatory features is *interaction management*, although labels such as *discourse management* and *regulation of interaction* (Burgoon, Buller, & Woodall, 1995; Sacks, Schegloff, & Jefferson, 1974) also have been used. Taken as a whole, this body of research suggests that the management of interactions is an important aspect of interpersonal interaction and communication of socioemotional content generally. It is unclear, however, to what extent this holds true for the more recently developed medium of computer-mediated communication (CMC).

Early studies of CMC (e.g., Kiesler, Seigel, & McGuire, 1984) argued that text-only CMC systems (the ones considered here) filter out most

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social-context cues and therefore greatly limit the interaction management possible for this type of social and interpersonal communication. Later work, however, has criticized this view for not acknowledging the possibility that, given sufficient time, users may adapt the communication channels they have available (Reid, 1993; Walther, 1995). The present study aims to examine the interaction management strategies used in one interactive CMC medium: Internet Relay Chat (IRC). We focus on the openings and closings of public IRC interactions as being particularly important to the establishment and maintenance of interpersonal relationships and therefore interaction management, and we examine the extent to which these are similar to, or different from, casual group face-to-face (FTF) interactions. We then propose an explanatory framework for this type of interaction management.

## IRC

IRC is one of a group of electronic interaction media that combine orthographic form with the ephemerality of real-time, virtually synchronous transmission in an unregulated, global, multiuser environment. IRC is essentially a low-bandwidth medium, in that it is restricted in the quantity and quality of channels of communication available to participants. Because of such features, some early researchers (e.g., Baron, 1984; Kiesler & Sproull, 1986; Kiesler et al., 1984; Rice & Case, 1983) argued that CMC systems generally would lead to impersonal interaction. Other research during this time, however (e.g., Hiemstra, 1982; Rice & Love, 1987), and more recently (Reid, 1991, 1993; Walther, Anderson, & Park, 1994; Williams, Stover, & Grant, 1994), suggests that interactive CMC systems can satisfy interpersonal needs and support socioemotional content, and that given time, users will adapt language features to the available channels. Walther's (1992, 1995) Social Information Processing (SIP) model has been developed, in part, to make this point.

Reid (1991, 1993) has proposed that within interactive CMC systems such as IRC, people are free to experiment with different forms of communication and self-representation. As a result, she argues that interaction on IRC involves a deconstruction of traditional assumptions about the dynamics of communication and the construction of alternative systems (one could argue, of course, that the same process occurred when the telephone or the telegraph was introduced). It is possible that as part of this process, as Walther (1997) has recently proposed, users of CMC systems may be inclined to idealize the impressions they construct of their communication partners, overattributing on the basis of the few cues available. Thus, although some interaction management features from more traditional wide-bandwidth media, such as FTF interaction, may be used intact or with some modification, other features developed to deal

with the unique aspects of CMC systems may also appear. In other words, at least part of the adaptive process (Walther, 1995), and one aspect of an alternative system (Reid, 1991, 1993), is likely to involve interaction management features. Levels of experience with the medium and acquaintance with other users will be important determinants of how much adaptation is likely to be used by individual users (Walther, 1995).

Both IRC's name—Internet Relay Chat—and its structure of short message exchange in a synchronous, real-time, multiuser arena seem to be deliberately connotative of chat sessions in other media, particularly casual group FTF chat but also casual telephone conversations (Dimmick, Sikand, & Patterson, 1994; Moyal, 1992) and possibly ham radio, CB radio, and casual letters, although the short messages are more like conversational turns than letters. Further, despite the problems of medium-induced time lag, IRC is a medium that fosters casual chat, in that all users are present in the same real-time time frame; messages are not saved, appearing on the screen only until enough conversation occurs to scroll them off the top of the screen (in a crowded channel, often only a few seconds), and messages are usually answered with little time delay. December (1993) has also suggested that, despite its orthographic nature, IRC exhibits characteristics of oral discourse, such as explicit and empathetic sociability and rapidity. All this suggests that IRC is not only designed to resemble but has been taken up as an oral chat medium.

### IRC as Analogous to Casual Group FTF Interactions

Although we accept, then, that IRC has characteristics in common with several oral media, such as casual telephone conversations, and written media, such as casual letters, the points previously discussed in addition to the group nature of its public channels suggest that the closest analogy to IRC is casual group FTF interaction. Casual FTF interactions have received much attention, both in terms of structure and their verbal and nonverbal characteristics (Argyle & Kendon, 1967; Atkinson & Heritage, 1984; Hall, 1959, 1966; Knapp & Hall, 1992; Laver, 1975, 1981; Sacks, et al., 1974; Scheflen, 1964). Within FTF interactions, openings and closings in particular have been singled out as important to the development and maintenance of interpersonal relationships (Knapp & Hall, 1992; Schegloff, 1968; Wiemann & Knapp, 1975). From the earliest research, it has been known that greetings and goodbyes perform regulatory functions and that we can isolate several stages within both openings and closings that are characterized particularly by nonverbal but also verbal behaviors (Kendon & Ferber, 1973; Laver, 1975, 1981; Schegloff & Sacks, 1973; Wiemann & Knapp, 1975). A comparison of interaction management features in IRC and FTF interactions, then, could profitably focus on these phases. Of special interest is whether and how strategies analogous to

nonverbal behavior are incorporated into the opening and closing phases of IRC interactions.

Laver's (1975, 1981) account of the management of openings and closings in FTF interactions is especially useful for an examination of IRC: He focuses on management; brings together work on both openings and closings; draws together into an explanatory framework of earlier work, such as that by Argyle and Kendon (1967), Hall (1959, 1966), and Scheflen (1964); and considers both nonverbal and verbal channels in terms of behaviors and functions. As such, although it remains a speculative account, it provides a useful comparative starting point for IRC interactions and, with Kendon and Ferber's (1973) framework for FTF openings, will be used as an exemplar in this study. Laver's (1981) work also incorporates Brown and Levinson's (1978) work on politeness, which Hiemstra (1982) recognized as significant for the analysis of CMC interactions. The management of the opening and closing phases of interactions forms a large part of what Laver, following Malinowski (1972), called "phatic communion," that is, ritual behavior functioning to establish and maintain interpersonal relationships. Coupland, Coupland, and Robinson (1992), in their review of phatic communion, noted that many users of the term have referred to it negatively, underplaying Malinowski's original emphasis on the human and social aspects. Laver is an exception, shifting attention back onto the positive, relational value of phatic communion in FTF interactions.

Laver's (1981) focus is on routine behavior, which, according to him, is polite behavior designed to manage aspects of interaction where face is at risk, specifically those strategies designed to redress face. If participants desire the development and maintenance of personal relationships, overt loss of face can be counterproductive: "Maximum risk leads to maximum routine, and conversely, maximum routine reflects highest risk" (p. 290). Phatic communion provides a means of staking claims about identity and characteristics that will shape the participants' relationship in the opening and closing phases, when their psychological comfort is most at risk (Laver, 1975). How face needs are addressed in a low-bandwidth medium such as IRC is one of the points we will consider.

In the opening phase of FTF interactions, phatic communion has at least three functions related to interpersonal relationships (Laver, 1975): (a) a propitiatory function—defusing the potential hostility of silence in situations where speech is conventionally anticipated; (b) an exploratory function—allowing participants to feel their way toward the working consensus of their interaction; and (c) an initiatory function—allowing participants to get the interaction comfortably under way, using emotionally uncontroversial, highly conventional communicative material and demonstrating by signals of cordiality and tentative social solidarity their mutual acceptance of an interaction taking place. Closing-phase phatic

communion is sometimes avoided when participants are likely to meet again in a space of a few hours or where the situation defines the roles of the interactants. However, when present, it allows participants to achieve a cooperative parting, in which any feelings of rejection by the person being left can be assuaged by appropriate reassurance from the person leaving, and it consolidates the relationship.

Hence, routines of phatic communion in these phases serve two broad functions. The first is the establishment and consolidation of the interpersonal relationship between the participants, establishing ties of union in terms of the exchange of ritual tokens of psychosocial exchange. The second function is the comfortable transition from noninteraction to full interaction, looking inward toward the upcoming interaction, followed by the transition from interaction back to noninteraction, looking to the resumption of social life outside the momentary encounter. We will compare both the behaviors and apparent functions of phatic behavior in the opening and closing phases of IRC interactions with FTF interactions.

### Summary

Some of the early research on CMC failed to recognize the possibilities of adapting channels of communication available to users in communicating socioemotional content and developing personal interactions. Such types of adaptation are likely to be found in the opening and closing phases of interactions and, given the regulatory nature of greetings and goodbyes, manifested in the interaction management strategies adopted. We have suggested that IRC retains sufficient characteristics of chat to be considered a chat medium. What is unclear, however, is whether the management features characteristic of the medium we believe to be most like IRC—casual group FTF chat—will be found in IRC interactions. Our aim, then, is to compare interaction management strategies and their functions in the openings and closings of IRC with FTF interactions and to propose an explanatory framework for IRC that can be compared to FTF. In doing this, we will consider the implications for CMC generally.

### METHOD

We analyzed language from 10 logs of IRC interactions on two channels: #penpals and #australia. #penpals was logged from 7:00 a.m. to 8:30 a.m. and #australia from 7:00 p.m. to 8:30 p.m. Australian Eastern Standard Time (AEST). These particular channels were chosen because both are as permanently open as IRC channels can be; consequently, they are relatively stable. In addition, the times were chosen to ensure a relatively large amount of interaction. #penpals is popular for American users at the

time it was logged. 7:00 p.m. to 8:30 p.m. (AEST) is prime time for #australia's Australian and European users. Both channels are primarily English speaking, and neither has fixed topics or agendas.

As a qualitative form of analysis was being undertaken, the transcripts were read several times independently by both of us, and the opening and closing phases were examined for all interactions that took place in each log. Openings were deemed to have begun with the automatic server announcement that someone had entered the channel and, where possible, to have ended once a successful conversation was engaged, the greetings completed, and 2 or more participants were interacting successfully on a topic. Similarly, once closing tokens were used by any participant, the closing phase was deemed to have begun for that interaction, and, again, the server announcement indicated an end to the closing. We did not assume that all attempts to open or close an interaction would be successful. The presence or absence of the phatic behavior, however, was used as the primary marker of the transition from opening phase to medial and from medial to closing.

That said, it was not always easy to determine the transition points. Three factors influenced this. First, users can begin public interactions, then switch to private interactions at any time, including in the opening phase. Second, as in other media forms, and as implied above, the transitional behavior did not always appear even when the interactants remained in the public part of the channel. Finally, medium-imposed time lag can alter the order in which messages appear on individual screens, thus making it possible for the order of messages to be reversed on occasions. Although it is usual to find multiple interactions in progress at any one time in the public IRC channels, all of which appear on the screen, some users engaged in only one or two interactions at any one time or made comments to the group as a whole. Even when individual users did engage in multiple dyadic and/or group interactions, however, the examination of the transcripts allowed these to be separated, in part by the content and in part by the IRC convention of preceding the message with the name of the intended recipient.

We set out primarily to explore what was present in the data and to compare what we found with FTF interactions. The aim, therefore, was not to make generalizations about interaction on IRC as such but to show a range of possibilities that illustrate how the logs become a form of situated practice shaping the psychological and social reality of IRC interaction (Henwood & Pidgeon, 1994; Tracy, 1995). Examples are presented from the logs to illustrate the points being made and are provided with line numbers from the original logs. They are presented here as they appeared on the screen, with spelling and grammatical errors. In a num-

ber of instances, to preserve space, lines that are not relevant to the point discussed have been omitted in the extracts. Names have been changed to preserve anonymity.

## FINDINGS: SIMILARITIES AND DIFFERENCES

The interaction management strategies found in the data have been grouped under the two general headings of opening and closing phases. We discuss them in terms of their similarity or difference to FTF interactions and the functions they appear to serve in terms of three subheadings: *Interpersonal Goals*, specifically, the presentation of self and showing interest in others; *Level of Experience and Acquaintance*, at least in terms of relatively new versus more experienced users, and whether interactants appeared to be strangers or not; and *Medium-Imposed Strategies*, stemming both from the orthographic nature of IRC and the process of entering/leaving an IRC interaction. Inevitably, some examples fit more than one subheading; when this occurs, reference to the other subheading(s) is made.

### Opening Phase

*Interpersonal goals.* Just as a cordial face and positive gestures of acknowledgment from the initiator in a FTF interaction should help create a good impression on the desired respondent, the choice of name (particularly when the user is not known to others) is crucial in a CMC environment for initial impression formation. On IRC, names are known as *nicks*, after nicknames, giving an insight into the ethos of name selection. Because nick choice is conscious, this is a strikingly literal application of Goffman's (1969) dramaturgic model of interaction—users creating meaningful impressions through verbal and nonverbal communication to indicate the specific roles they wish to play in different social settings. The name chosen may help determine the characteristics of the ensuing conversation. Thus, we can point to a similarity in function in IRC and FTF, but the behaviors used differ. The importance of the nick can be seen when it is appropriated by another user as in Example 1; the longer the original user has had a nick, and the more of a novice the appropriator is, the more upsetting the situation is.

1. 1735 [DISP-#australia][parker] psycho:u r using my nickname!!!!!!!!!!!!!!!!!!!!  
1741 [DISP-#australia][parker] psycho:u r using my nickname!!!!!!!!!!!!!!!!!!!!

- 1742 [DISP-#australia][parker] psycho:u r using my nickname!!!!!!!!!!!!!!!!!!!!!!
- 1744 [DISP-#australia][parker] psycho:u r using my nickname!!!!!!!!!!!!!!!!!!!!!!
- 1745 [DISP-#australia][Psycho] parker: this is MY nickname!

Reid (1993) has pointed out that, unlike FTF, on IRC there is essentially no information that a receiver can obtain about a sender that is not manipulable by that sender. Some users hide all personal information, using the anonymity and cue limitations of IRC to present selectively gender-switched or even multiple identities. Although many IRC users are aware of the possibilities of gender swapping, nicks were still used in our data to judge the gender of a new user. Thus, women using "nonstandard" nicks were sometimes mistaken for men, as "Sta" is in Example 2:

2. 884 [DISP-#australia][Chunky] sta: hehehe—most generous dude again ;)
- 886 [DISP-#australia][Sta] chunky: not a dude...but still generous!!
- 899 [DISP-#australia][Chunky] sta: hehe—not a dude?

Our data showed that the choice of a female nick ensured that the user received high levels of attention, particularly from users with male nicks but also from those with female nicks. This may be due to the still prevalent gender imbalance of men and women on the Internet. The choice of a male "standard" nick did not seem to lead to as high attention levels. When gender could be verified by checking e-mail addresses, we found that men tended to choose nicks that were nonstandard, such as "PlumBer," "Zoltar," "Govmnt," "Metal," and "ORC\_BOY," and that some adopted obscene or offensive nicks, all perhaps as a means of gaining attention or provoking interaction.

Perceptions of positivity may be heightened by the use of textual symbols such as exclamation marks, possibly to make greetings stand out and potentially to defuse silence. Examples 3 to 5 show three different methods (and combinations) of such signaling, providing an analogy to vocal intensity and duration (and thus are also determined by the orthographic nature of the medium). Users may increase the number of exclamation marks past the point of normal conventions, use extensive capitalization, and/or add redundant letters to words. Positivity among known users may also be manifested in affectionate extensions to a user's nick:

3. 679 [DISP-#australia] [princess] B&D!!!!!!!!!!!!!!!!!!!!!!
4. 58 [DISP-#penpals][plastic] MEGASTAAAAAAAAAAAA!
5. 6 [DISP-#penpals][joooni] saxypuppy.



In terms of existing frameworks of the opening phase of FTF interactions, Examples 3 to 5 could be said to take the place of Stage 2 gestures and Stage 3 facial expressions (Laver, 1975, 1981) or head dip (Kendon & Ferber, 1973), as well as creating an analogy to an affable tone of voice—by orthographic extension and expansion (larger gestures and more cordiality). It is possible, given Walther's (1997) arguments about overattribution, that users who are still relatively unknown to one another may also use these strategies precisely because of the "positivity" with which they are imbued.

An analogy to Laver's (1975) Stage 5—the exchange of appropriate contact gestures (Kendon & Ferber, 1973, Stage 6)—was sometimes achieved by apparently opposite-gendered users who had clearly had several contacts with each other. In IRC, the textualization of physical gestures is achieved by the use of the "/action" command (Byrne, 1994; Reid, 1991). Users may preface a sentence by typing the command "/me," which leads to utterances on the receivers' screens of the type "<name> <performs an action>" as in Examples 6 through 10:

6. 344 [DISP-#penpals][ACTION] metal shakes Jacstra's hand
7. 349 [DISP-#penpals][ACTION] Bobby \*hugaz\* his big sis!!!!!!!!!!!!!!!!!!!!!!!!!!!!
8. 481 [DISP-#penpals][ACTION] melba hugs her lil broother Bobby
9. 553 [DISP-#penpals][ACTION] Megasta \*huggggggggaz\* his big sister
10. 86 [DISP-#australia][ACTION] JaKe waves to all the new folks...

Although it is not true to say that IRC is devoid of nonverbal gesture, we found only rare examples of "virtual" handshakes and other less intimate phatic contact gestures (i.e., those appropriate to strangers or new or mere acquaintances) in the opening phase of interactions. Similarly, apparent same-gender users never hugged each other in these data, although this has been observed to occur in other IRC channels. The lack of analogous opening-phase nonverbal behavior does not appear to result in specific management strategies being used to counter this, beyond a tacit recognition of the situation.

Of some importance is that all such virtual contact gestures occurred after at least one or two linguistic tokens, not before as proposed by Laver (1975), for FTF interaction. There is no reason why opening greetings of this type should not precede linguistic tokens, at least between friends, although the lack of visual cues may act to inhibit such virtual contact until linguistic tokens are exchanged. In FTF interaction, recognition (or at least acknowledgment of the presence of the other) usually occurs visually, allowing contact gestures to occur in fact either before, after, or at the same time as linguistic tokens.

A type of greeting found in one of the interactions was the imitation by others in the group of a playful style employed by one newly joined member to another, possibly as another way of showing group solidarity and having a little fun. This is shown in Example 11:

- |                                |                                   |
|--------------------------------|-----------------------------------|
| 11. 311 [DISP-#penpals][Kelly] | hhhhhhaaaaaaazzzzzzzaaaaaarrrrrrr |
| ddddddd!!!                     |                                   |
| 317 [DISP-#penpals][traffic]   | kellyyyyyyyyyyyyyyyyyyy           |
| 323 [DISP-#penpals][Kelly]     | ttttrrrraaaaaaaffffiiiiiccccc!!!  |
| 324 [DISP-#penpals][traffic]   | blind1111111111111111             |
| 325 [DISP-#penpals][traffic]   | JOnESSSSSSSSSSSSSS                |
| 328 [DISP-#penpals][traffic]   | nevhokkkkkkkkkkkkkkk              |
| 329 [DISP-#penpals][traffic]   | Sfrankkkkkkkkkkkkk                |
| 330 [DISP-#penpals][JOnES]     | Trafficcccccccccccccccc           |
| 334 [DISP-#penpals][traffic]   | JOnESSSSSSSSSS                    |

A somewhat similar strategy using repetition was found that, from the ensuing interaction, appeared to illustrate friendliness between users—see Example 12. There is no way, of course, that we can determine the length or depth of friendship between these two users, or whether this is an example of hyperpersonal communication ascribable to overattribution (Walther, 1997).

- |                                  |               |
|----------------------------------|---------------|
| 12. 660 [DISP-#penpals][plastic] | SUPADOG!!!!   |
| 661 [DISP-#penpals][plastic]     | SUPA!! DOG!!! |

Laver (1975, 1981) argued that one of the most important functions of opening phase phatic communion is its exploratory function, which provides participants with the means of communicating their views about the developing relationship, such as social status. This is achieved, Laver continues, by participants' choice of neutral, other-oriented or self-oriented phatic tokens. Neutral tokens are factors that affect each actor equally, therefore making no reference to social status, such as those about the weather or narrow local references. It is perhaps surprising to note that weather-based phatic tokens were chosen in the early stages of successful IRC interactions, despite the fact that the weather is usually entirely different for both interactants, so in a sense the search for commonality is frustrated. On the other hand, the differences in weather often lead to further discussion about weather preferences and therefore can still function as viable tokens for phatic communion.

An important part of Laver's social status argument rests on the use of other-oriented and self-oriented tokens as elements allowing the negotiation of social positions. Self-oriented utterances tend to be declarative statements, such as "Hot work, this" or, on IRC, "I'm lagged!" Other-oriented tokens are often questions directed at eliciting personal information from the addressee, such as "How's life?" On IRC, unless participants have either previous or extrainteractional knowledge of each other, all physical and social cues regarding status differentials are missing, and thus the choice of phatic token will not be based on, and cannot be used by, either participant for this function. In the data collected for this study, the other-oriented "How are you" (or "What's up?" and variations—see the following example) was a phatic token almost as common as "Hello" variations. In fact, the only way to find out status information on IRC is by exchange of verbal utterances either freely given or in answer to questions. Thus, by the time enough social status information is known to make status judgments, the interpersonal relationship will have formed in an environment conducive to equality. As Laver (1975) argued for FTF interactions, in doing this, participants are setting aside social differences and assuming familiarity. Although this was Kiesler and Sproull's (1986) and Kiesler et al.'s (1984) prediction, in this study we found not impersonal interactions but a reinforcement of the casualness and interpersonality of the medium. This has implications for Walther's (1995) SIP perspective, because these users, through anonymity, can use more face-invasive, other-oriented strategies from the outset of interactions.

There are, however, some social-status implications in new types of phatic tokens such as the "broadcast utterances" in Example 13 (see also Example 16). "WiNeR" greets the channel (2170) in a conventional manner, but then "broadcasts" a potentially very provocative statement:

13. 2170 [DISP-#penpals][WiNeR] hello eveyone  
 2175 [DISP-#penpals][WiNeR] I AM GOD!  
 2176 [DISP-#penpals][WiNeR] I AM GOD!

One is tempted to ask whether this is an attempt to set up a very particular social status! Or it could be, as one reviewer of this article suggested, a reference to the early virtual-reality horror film *Lawnmower Man* (Everett & Leonard, 1992) or something like it. Either way, it is not conducive to status equality. However, just as it is impossible for us to determine the intention with which this statement was made, it is also likely to be difficult for IRC users to understand how this utterance is supposed to function. In the event, no reaction was provoked, possibly because of the extreme nature of its status differential.

Nevertheless, in apparent contradiction of the data about "radical" utterances such as those by "WiNeR," (Example 13) and "ORC\_BOY" (Example 16 to follow), a number of successful interactions were begun with statements/questions between users who appeared to be strangers. These interactions, however, did appear to revolve around exploratory exchanges for long periods. It appears, therefore, that what is important about opening-phase phatic communion is not the use or lack of particular tokens but the suitability of utterances permitted by the medium to fulfill the propitiatory, initiatory, and exploratory functions discussed by Laver (1975, 1981).

In general, then, self-presentation in the opening phase was achieved above all by choice of nick but also on occasion by broadcast statements that operated more as impression-making devices than other-oriented, face-threatening acts (FTAs). Interest in others and establishment of group solidarity occurred through the use of orthographic exaggeration, including paralinguistic symbols and the "/action" command. Face-invasive, other-oriented strategies seemed to be used more frequently than they might in group FTF interactions.

*Level of experience and acquaintance.* Laver (1975) has noted a strong tendency for an "incomer" to be the initiator of phatic exchange. In IRC the server announces the presence of a new participant. It was clear from the logs that when a nick (and presumably its user) was known to other participants, the latter responded quickly after the appearance of the server announcement of the name (this, of course, has implications for the interpersonal-goals category). However, unless newly joined users were known to others in the channel, they tended not to be spoken to by existing channel members—if this silence was deliberate, there is a scope for conflict between the initiatory and propitiatory functions of phatic communion. IRC has no physical cues for entrance except the server announcement, and in a crowded channel the text of all interactions scrolls by quite rapidly—sometimes a whole screen is replaced in a few seconds. In such a situation, the need to defuse the silence between potential interactants can be of lesser importance than gaining the attention of another interactant, possibly also because of the lack of visual cues and the geographic separation of participants.

The initiatory function in FTF interaction is characterized by the innocuous, emotionally uncontroversial nature of the utterances, which helps to get the conversation comfortably under way (Laver, 1975). New (as opposed to newly joined but known) users in the data sometimes found it difficult to initiate interactions, even with an imaginative or humorous name. In the following example, it takes three utterances (135,

149, 155) and several lines of conversation from the time he joins for "scaaanerrr" to get a conversational response from "Holden" (174):

14. 135 [DISP-#australia][scaaanerrr] hello!!!  
 149 [DISP-#australia][scaaanerrr] hi  
 155 [DISP-#australia][scaaanerrr] anyone out there?  
 174 [DISP-#australia][Holden] scaaanerrr : yeah

Saying "hello" to everyone on the channel was frequently used by participants in their attempts to initiate conversation with strangers, possibly because there is less risk involved on a virtually anonymous medium such as IRC, even when compared with casual group FTF interaction. The problems experienced when using what would be considered "normal" phatic tokens, however, led some users to try radical (and therefore risky) solutions that could be said to break with the convention of uncontroversiality and minimization of face imposition. One solution found was to flood the channel with a greeting to what appeared to be a stranger. This, however, can be seen as very invasive of negative face. An example of such a risky strategy is given in Example 15 when "arnie" attempts to initiate conversation with "Italian" through constant repetition. "Italian" answers the original flood (1244) but is not drawn into a longer interaction (1259). His further response (1263) to "Luigi" suggests a reluctance to interact with "arnie," whose positive face (that his wants are wanted) is thus threatened. "arnie's" inability to initiate a longer interaction eventually resulted in this flood stopping.

15. 1233 [DISP-#australia][arnie] italian! listen!  
 1234 [DISP-#australia][arnie] italian! listen!  
 1235 [DISP-#australia][arnie] italian! listen!  
 1236 [DISP-#australia][arnie] italian! listen!  
 1237 [DISP-#australia][arnie] italian! listen!  
 1241 [DISP-#australia][arnie] italian italian!!!!  
 1242 [DISP-#australia][arnie] italian italian!!!!  
 1243 [DISP-#australia][arnie] italian italian!!!!  
 1244 [DISP-#australia][Italian] hi arnie  
 1245 [DISP-#australia][arnie] italian italian!!!!  
 1246 [DISP-#australia][arnie] italian italian!!!!  
 1247 [DISP-#australia][arnie] italian italian!!!!  
 1254 [DISP-#australia][arnie] listen italian: could you be the person who would tell me what the

1255 hell is happening!!!

1259 [DISP-#australia][Italian] nope

1261 [DISP-#australia][Luigi] arnie: Which italian are u talking to???

1263 [DISP-#australia][Italian] me I guess

Other face-threatening initiatory strategies found were flooding the channel with continual "hellos" and saying "hello" to every user in turn, until someone responded (as "arnie" did throughout the log from which Example 15 was drawn). However, by far the most interesting opening strategy found was not to use routine initiatory or propitiatory tokens at all but to make a series of statements that seemed intended to provoke reactions. The statements were sometimes invasive of both positive and negative face, but in other situations they appeared to be relatively face neutral. The statements by "ORC\_BOY" in Example 16 seem more like broadcast thoughts than opening phatic utterances. None are face threatening in terms of content, or even aimed at individuals. On the other hand, the use of uppercase does go against the IRC norm of using this to represent high intensity, thus impinging to a certain extent on the face of all the channel members. After being criticized for using "caps" to broadcast the messages (2157), "ORC\_BOY" replies "i just wanted everyone to see" (2168). Of the broadcast statements, only the last provoked an agreement (from "Spinner"—2159), which, despite "ORC\_BOY" later thanking "Spinner" (2172), did not progress into a successful interaction:

16. 1694 [DISP-#penpals][ORC\_BOY] IRS: WE'VE GOT WHAT IT TAKES TO TAKE WHAT YOU'VE GOT  
 1805 [DISP-#penpals][ORC\_BOY] "VERY FUNNY SCOTTY, NOW BEAM DOWN MY CLOTHES"  
 1894 [DISP-#penpals][ACTION] ORC\_BOY IS NOT A COMPLETE IDIOT, SOME PARTS ARE MISSING  
 1926 [DISP-#penpals][ORC\_BOY] HEHEHEHEHEHEHEHEHEHEHEHEHEHEHEHEHEHEHE  
 HEHEHE  
 2155 [DISP-#penpals][ORC\_BOY] YOU CAN INVENT SOMETHING ULTIMATELLY  
 2156 MORON PROOF AND SOMEONE WILL EVENTUALLY INVENT THE ULTIMATE MORON  
 2157 [DISP-#penpals][junecat] please loose the caps.....  
 2159 [DISP-#penpals][Spinner] Orc BOY:True!!!  
 2168 [DISP-#penpals][ORC\_BOY] i just wanted everyone to see  
 2172 [DISP-#penpals][ORC\_BOY] Spinner: thanx

Another user in a different log, after receiving no response to standard greeting tokens and attempts to comment on the existing conversations, transmitted a series of increasingly negative utterances until, in frustration, he aped the speech style of comedian Rodney Dangerfield to indicate disappointment at not being able to initiate an interaction or even receive answers to his questions, saying “itellyawhat” and “noRESPECTanyofyas.” This segment of the interaction lasted about 5 minutes. Despite the fact that IRC interactions are noticeably slower than FTF interaction, such a long period of being ignored seemed to have similarly negative effects—increasing frustration and hostility. Despite its mediated nature, IRC interaction still occurs in real time to its users.

It is possible that these initiatory strategies, which are unlike those found in most casual FTF interactions, have grown out of an awareness of the difficult opening-phase situation in IRC. Our data could not provide an indication of how long it takes a user to recognize the problem or if recognition leads to yet different strategies. In these data, it seemed that despite the apparent attempts to develop radical phatic greeting styles, this failed to maintain interactions longer than one or two exchanges—at least among previously unknown users. Strategies that were face threatening in the context of strangers, however, seemed to act in quite the opposite fashion among users who clearly had met previously. Thus, a group of users may greet each other individually, using high-intensity block capitals and with everyone being greeted in the same way, as shown in Example 17, possibly to ensure that no one felt left out (many of these greetings were redundant, some members having been through a prior opening phase) and thus having implications for interpersonal goals once again:

17. 874 [DISP-#penpals][N2] XZ!!!!!!!!!!!!!!!!!!!!1  
 876 [DISP-#penpals][TUBA] andrea!!!!!!!!!!!!  
 877 [DISP-#penpals][N2] ANDREA!!!!!!!!!!!!!!!!!!!!!!!!!!!!  
 878 [DISP-#penpals][galaxy] N2!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!  
 879 [DISP-#penpals][N2] BEACHBNY!!!!!!!!!!!!!!!!!!!!!!!!!!!!  
 880 [DISP-#penpals][N2] N\_M\_E!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

We found few examples of successful opening phases leading to interactions that involved new users. The following example (18), however, is one, and it illustrates a point that brings together many of the ideas expressed previously with a novel twist. “Claire” (line 47), a new user to both IRC and #penpals, is using a standard female nick. However, rather than using a simple greeting, she uses an uncontroversial and overtly exploratory utterance (line 47) that delineates both her position and the

expected position of an answerer. The utterance is a question in the form of a statement. She is responded to by both "andrea" (a user of 4 days) and "Zoltar" (one of the regular #penpals users). "andrea" immediately answers "Claire's" distressed utterance (line 49) empathically, as does "Zoltar" (lines 53 and 57), whose statements also suggest a "dominant male" role:

18. 44 [DISP-#penpals][SERVER] \_kelly (xxxxxxxx@xxxxxxxx.xxx.xx) has joined channel #penpals  
 47 [DISP-#penpals][Claire] This is my first time using this and I'm a little out of it  
 48 [DISP-#penpals][\_kelly] hi all!  
 49 [DISP-#penpals][andrea] claire you'll catch on  
 50 [DISP-#penpals][MaL] hi kelly  
 52 [DISP-#penpals][andrea] Hi kelly!!!!!!!!!!!!!!!!!!!!!!  
 53 [DISP-#penpals][Zoltar] Claire: worry not...you have the Zoltar protection plan  
 57 [DISP-#penpals][Zoltar] Claire: ill answer any questions you have to the best of my ability

New or relatively new users, particularly if strangers to the others on the channel, then, found it harder to initiate interactions than did those who appeared to be experienced and those known to others. Risky face-invasive strategies were sometimes adopted by those unable to get conversations started, but these tended to be unsuccessful. It seems clear that level of experience with the medium and acquaintance with other users are dimensions that have significant implications for future research into this medium.

*Medium-imposed strategies.* These strategies seemed to be determined by the orthographic nature of IRC as well as (in the opening phase) by the process of entering interactions. Researchers who have proposed stages within the opening phase of FTF interactions (e.g., Kendon & Ferber, 1973; Laver, 1975, 1981) agree that most stages are effected through nonverbal behavior; nevertheless, nonverbal behavior as such is not possible on IRC. The necessary lack of these types of signals, however, did not seem to hinder the interactions. IRC users appeared to accept this as normal, and in a number of instances they created analogous textual strategies or placed more emphasis on the use, or lack of use, of linguistic opening strategies. This convention supports Baym's (1995) finding that nonverbal cues used in FTF interaction to communicate humor may in CMC be



incorporated into the humor (i.e., the language) itself. One such example in IRC is the convention of prefixing the message with the recipient's nick. Although this also may be done in FTF interaction, failing to do so does not usually result in confusion about who the message is intended for, as it did on occasions in our data.

Some linguistic strategies seemed to have multiple functions, some of which included similarities to nonverbal behaviors. On the IRC system, users can enter the channel and immediately type a phatic token, such as the "hi all!" in line 48 of Example 18, before any other conversation appears on that sender's screen (the fact that this particular greeting appears in line 48, only four lines after the server announcement, shows that this is such a case).

This type of "blind" group greeting, generalized to apply to anyone who may be on the channel, may act in a similar way to both Laver's (1975, 1981) and Kendon and Ferber's (1973) search for contact (Stage 1), as well as being a positive expression of emotion and cordiality (Laver—Stage 3) and the exchange of stereotyped linguistic symbols (Laver—Stage 7; Kendon & Ferber—Stage 6), functioning both to defuse silence (a blank screen being akin to silence) and to initiate interaction.

In FTF or oral electronic media, nonverbal (including vocal) behavior can reveal detailed personal information such as social status, age, gender, health and mood, and so forth (Pittam, 1994). In orthographic media, such information is only partially revealed by semantic and syntactic choices. However, as these choices make up almost the entirety of an IRC interaction, vocal information must be conveyed textually, as part of the interaction itself when strangers meet, and sometimes must be repeated even among acquaintances to reconfirm previous information.

One way of creating an analogy to nonverbal behavior is through the use of the so-called smilies (Example 2—line 884—illustrates one form these can take). Another is to develop a distinct writing style, illustrating an element of IRC that is similar to casual letters. The most important feature of any writing style on IRC, however, is that it must be fast to keep up with the sometimes frenetic pace of multiple interactions. Thus, particular abbreviations, personalized tropes and schemes for greeting or bidding goodbye, and use of grammar and punctuation are combined into a style that acts much like nonverbal behavior while at the same time increasing the speed of delivery.

For the most part, in our data only experienced users had developed a particular style that could be used as early as the opening phase. Such strategies may be seen as part of the adaptive process described by Walther (1995). Experienced IRC users have, seemingly completely tacitly and yet out of obvious necessity, created a standard set of abbreviations (or rules for their creation) that are at once very quick to type and readily identifiable to new users. Because English is the dominant language of

IRC, the abbreviations were based on it and its conventions. There seemed to be one major guideline for abbreviation creation—use the shortest, easiest-to-type, “phonetic” equivalent of a word. This leads to either single letters standing for whole words, for example, “how r u” for “How are you”; obvious contractions based on slang speech patterns, for example, “!o!” for “Hello”; “sup?” or “Wassup?” for “What’s up?” Another common abbreviation in the logs that is a clear indicator of experience is “Re,” meaning “Re-hello” (i.e., “hello again,” as in “RE DUDE!”), which has been developed to deal with the situation of greeting another user after initial contact was made earlier.

As others have found, the lack of nonverbal behavior did not prove an insurmountable problem for our participants. Besides incorporating the information carried by nonverbal cues in FTF interactions into the text, participants used orthographic extension and expansion, and smilies. In addition, we found the development of abbreviated forms and examples of overtly exploratory messages used to overcome difficulties of interacting within the medium.

### Closing Phase

There are a range of choices available to the IRC user for closing an interaction, including simply exiting IRC altogether, using a series of minimal closing token transmissions (not waiting for responses), or undergoing a prolonged closing phase similar to that of many FTF interactions. Phatic communion in the closing phase of FTF interactions fulfills two highly important risk-management functions (Laver, 1975). First, “it allows the participants to achieve a cooperative parting” (p. 231). This is a mitigatory function redressing the negative FTA of leaving the conversation, making the reason for terminating the encounter external to the speaker, or involving a deferential action toward the listener. Second, “it serves to consolidate the relationship between the two participants” (p. 231). Consolidation is addressed to positive face, showing enjoyment and a desire for the continuation of the relationship.

*Interpersonal goals.* Laver (1981) suggested that a typical FTF closing phase involves each participant using at least one mitigatory, one consolidatory, and one formulaic parting utterance. As it is verbally based, this structure can be replicated on IRC. In Example 19, “BigBunny” signals a desire to leave (939) and a mitigatory reason (941); “Reaper” attempts consolidatory communion (951), which is dealt with briefly (956, 959, 968); “BigBunny” then repeats the mitigatory phrase (969), farewells the channel (971), and leaves, adding a humorous remark to the server’s leaving information (973):

19. 939 [DISP-#penpals][BigBunny] well, i got to go...  
 941 [DISP-#penpals][BigBunny] lots of work to do...  
 951 [DISP-#penpals][Reaper] big: email me someday or something  
 956 [DISP-#penpals][BigBunny] email me first  
 959 [DISP-#penpals][Reaper] big: will do...  
 968 [DISP-#penpals][BigBunny] then i'll responde to ya  
 969 [DISP-#penpals][BigBunny] gotta go...  
 971 [DISP-#penpals][BigBunny] later all  
 973 [DISP-#penpals][SERVER] BigBunny has quit IRC Just out prostituting  
 myself again!

Participants may use virtual hugs and/or the same types of orthographic exaggeration as for greetings; however, as in the opening phase, this does not necessarily indicate the depth of friendship between the users. Users' closing behavior when leaving a channel did appear to be self-absorbed, exhibiting the decrease in regard for others posited by Kiesler and Sproull (1986), as if all one is leaving is the computer itself rather than other live interactants. Thus in Example 20 "azmer" has been interacting with "Fergie." To signal that he wishes to leave, "azmer" uses the common word indicating transition "well" and then moves straight into the closing tokens, first consolidatory ("cy l8er," i.e., "See you later"), then mitigatory ("have to go"). This done, he leaves, not even waiting for a reply from "Fergie," as would generally be expected in FTF interaction:

20. 99 [DISP-#australia][azmer] fergie: NOT.. h0h0h.. well.. cy l8er .. have to go!  
 102 [DISP-#australia][SERVER] azmer has left this channel  
 104 [DISP-#australia][Fergie] ok az...see you! :)

*Level of experience and acquaintance.* Unlike in the opening phase, these factors did not seem to have a major impact on the closing phase except in one way. Experienced IRC users seemed to have developed a nonchalance toward the sudden end of an interaction. Similarly, IRC users who appeared to have developed a reasonable interpersonal relationship seemed not to consider an abrupt ending a hostile act. One reason for this may be the unpredictability of a medium in which users can either be "killed," "kicked," or "banned" (all of which remove the user from the interaction space), or "split," "lagged," or subjected to individual server problems (all of which can lead to extreme distortions of interaction timing). Despite this apparent nonchalance, however, abrupt endings may still require some repair and maintenance in the next interaction. In addition, exceptions to the pattern of sudden endings did occur, particu-

larly between participants who seemed to have a reasonable interpersonal relationship. On these occasions, interactions exhibited lengthy mitigatory and consolidatory strategies within the closing phase.

*Medium-imposed strategies.* As with the opening phase, nonverbal signals make up a great deal of FTF closing-phase phatic communion, such as the avoidance of eye contact for a longer period than usual, ostentatious iconic leaving behavior, and a widening of proximity. On IRC, these actions were found to be reproduced textually only on rare occasions. However, as is shown in Examples 21 through 23, one strategy employed by users in the data was to structure a closing utterance as an action (using the “/action” command), although the utterance produced was not an action in the strict sense of the word:

21. 349 [DISP-#australia][ACTION] Yogi has gotta go...the BF is gunna cook me dinner!!!
22. 406 [DISP-#australia][ACTION] Ron is going to fail—he’s outta here
23. 434 [DISP-#penpals][ACTION] MadGod teleports away! Before he leaves, he hollers MP and BYE to ALL!

These action notices generally fulfilled the mitigatory function of parting (Laver, 1981). Another, involuntary, action notice occurs when a user leaves a channel, as the server notifies the channel as it does when a user joins. This, however, happens after the user has left, so it cannot function as prior “nonverbal” notice as the server statement does on joining.

Although Laver (1981) argued that routine behavior is often brief for openings but much more elaborate for closings, this pattern seemed more fluid, even reversed, in the interactions found in the IRC logs. The truncation of closings noted previously may be related to the orthographic and anonymous nature of the medium because, in fact, these closings are very similar to those conventionally used in mail, without the conscious sign-off (although the server performs this operation)—very short and with a minimum of the consolidatory work that is often performed in FTF interaction. If you cannot see another person, it may be that leaving the conversation abruptly is not as much of a face-threatening activity.

The trend in the logs for short closing-phatic communion was carried through to those occasions when a user was concluding multiple conversations on the one channel. Perhaps because less time was available per interaction when multitasking, less time was needed for each closing phase. Sometimes, however, the multitasking nature of IRC did lead to extended closing phases for some users and not others. This occurred when a participant uttered a formulaic closing token but was then addressed by a person other than the last user he or she was interacting with,

or when a user had had several interactions one after the other and went through a closing phase for some interactants. These situations on IRC are similar to some casual group FTF interactions. Because it can be difficult to gain the attention of one's interactants, users can take advantage of the text-based nature of IRC by leaving abruptly after transmitting a mitigatory/consolidatory phrase for each other user and expecting them to receive the message technically "sans transmitter."

### A PROPOSED FRAMEWORK FOR INTERACTION MANAGEMENT ON IRC

On the basis of our examination of the data, then, we can see that interaction management in the opening and closing phases of IRC interactions is developing in some ways that match casual group FTF interactions but that quite different strategies and sequences of interaction are also found. The frameworks developed by such researchers as Kendon and Ferber (1973) and Laver (1975, 1981) for FTF interactions do not exactly mirror our findings for IRC, at least in terms of the stages through which participants pass. Nevertheless, the functions that the behaviors serve are analogous in the two media. IRC is clearly an interpersonal medium (cf. Walther, 1995, 1997), and the opening and closing phases are important for the establishment and maintenance of interpersonal relationships. The strategies that we have listed under the categories of *interpersonal goals* and *level of experience and acquaintance* illustrate this point. The framework of management behaviors that make up these phases and their functions can most usefully be seen in these terms.

Laver (1975, 1981) and Kendon and Ferber (1973) proposed extensive linear sequences of behaviors that constitute the opening phase. We have not found such comprehensive sequences in our data. Two things that mark the openings of IRC interactions are the fluidity of such stages as do occur and the seemingly optional nature of some of the behaviors involved. In terms of the sequences of interaction that appear to have developed in IRC, then, we propose the following:

Stage 1: Server announces presence of newly joined user to all channel participants

Stage 2: Exchange of exploratory/initiatory linguistic tokens—repeat as necessary:

- (a) "Blind," traditional mass greeting token to all users *or* traditional token to individual users (followed by other phatic communion *or* the use of another strategy) *or*
- (b) statements *or* questions (interaction may follow with *or* without overt phatic tokens)

Stage 3: Textualized exchange of conventional nonverbal contact gestures of greeting (as appropriate to relationship)—may not occur

Stage 4: Transition signals for moving to the medial phase

The choices for opening-phase communion can be combined in a number of ways, depending on the individual user and who else is on IRC at the time. Users may select any or all of these stages or potential stages for any given interaction, and as noted, their ordering is fluid—a fluidity determined by both medium-induced time lag and the apparent acceptance by users that there are fewer conventions regarding ordering of phatic behavior.

When users join a channel, the server announces their presence to all other channel members. This is an involuntary action, similar in some ways to coming into view of others in a group FTF situation. In an FTF interaction, however, members of the group may see the whole person and take advantage of accompanying nonverbal behavior, while perhaps having no knowledge of the newcomer's name. On IRC, only users' names are visible. As noted above, the available information is susceptible to a great deal of selectivity. The possibility of overattribution (Walther, 1997) begins at this point. From the moment of connection, any IRC user may attempt to interact with any other on IRC at that time. Interactant choice is not governed by who is within easy earshot as it tends to be in group FTF interaction.

As Laver (1975) has pointed out, the territorial invasion that FTF conversation must usually achieve to occur is potentially seen as very hostile in Western English-speaking contexts. Physical proximity and mutual bodily orientation are major factors involving the invasion of territory, but they also put interactants into a position where interaction is possible. On IRC, the closest analogy is in the preparatory stage when users join channels and in the necessity for users to face the monitor and keyboard. Even so, the anonymity of computer use can subvert social sanctions set up by the conventions of these two stages in group FTF interaction. When no participant can reach or see another, and the participants are virtually anonymous, there can be few sanctions for not interacting with certain users on the channel. Indeed, despite the "group" nature of IRC, no user is expected to interact with every other user, nor would they necessarily want to. Users can, in fact, "lurk" in a channel, not conversing with anyone, and probably avoid the sanctions that are available on IRC. IRC more closely matches group FTF interaction in the similarity of IRC interactions to FTF party conventions about who is expected to speak to whom. The group, such as it is, in each case is split into continually changing smaller cliques of interactants. Participants tend to concentrate on one person or small group of persons for periods of time rather than attempting to be a part of every conversation. Main

interactions occur among participants in both FTF and IRC conversations, however, and it is often this interaction that new participants attempt to enter first.

Although this article does not deal with this, it is worth noting that interaction on IRC requires a conscious decision to interact via the IRC system, which means that in a very real sense the opening phase of an IRC interaction begins well before interactants enter the virtual "proximity" of a channel. A conscious stage of "interaction preparation" must occur. Analogies with other casual interactions may be found, of course: Telephone interactions have a dialing process, and even FTF interactions require participants to walk toward each other to come within earshot. The IRC preparatory stage is more complex, involving several parts, including starting the IRC client; finding, joining, or creating a channel; and a range of other technical processes. This is one important aspect of IRC openings that could usefully be explored further.

In a sense, the closing phase of IRC interactions also involves a preparatory stage, at least in terms of the decisions that a user must make. Essentially, these involve whether to use short or prolonged phatic communion for each interaction and how to do this. Thus, users, on leaving the channel, may include in the server announcement a short utterance with the `/leave` command (an illustration of this was seen in Example 19); they may also, for single or multiple interactants, decide to use (or not) mitigatory and closing utterances, or a simple formulaic closing token.

As with the opening phase, we see the stages of this phase as optional and fluid in terms of ordering. We suggest the following:

- Stage 1: Initiate closing phase—perform appropriate linguistic signals of transition
- Stage 2: Textualized nonverbal iconic adumbration—special use of IRC `/action` command
- Stage 3: Exchange of tokens of phatic communion—neutral-, self-, other-oriented; mitigatory and consolidatory
- Stage 4: Textualized exchange of conventional contact gestures of parting (as appropriate to relationship)
- Stage 5: Leave channel/IRC; server will announce departure including any desired message

## CONCLUSIONS

Users of IRC face several formidable barriers. Once overcoming the technical aspects of connection, an IRC user must not only come to terms with the basics of interaction management vis-à-vis the technical com-

mands necessary to communicate but also the curtailment of the social context cues that are used in managing interactions and establishing interpersonal relationships. All interaction must take place not only orthographically but usually virtually synchronously. Many of these points apply to text-based CMC systems generally. Added to these technical problems is the likelihood that a channel will contain multiple participants from any one of hundreds of countries, many of whom are complete strangers in the strange land of IRC. None of these factors deter an increasing number of users from interacting on IRC. In the past few years, IRC usage has increased from a few hundred to over 11,000 users in peak periods. It is clear that, for IRC at least, as bandwidth narrows interaction does not become increasingly impersonal. Perse and Courtright (1993) argued that new technologies may function as alternatives to more traditional channels of communication. Just as they found that perceptions of the functions of telephones have similarities with FTF chat, so the strategies in interactions found in our logs suggest that the same might be said for IRC.

Our findings also support the suggestion that the opening and closing phases of IRC interactions are important for the development and maintenance of interpersonal relationships, and that interaction management features have an important role to play. Interaction management in these phases bears some resemblance to FTF interaction, particularly in the functions that the strategies have. At a fundamental level, initiatory, propitiatory, and exploratory strategies (in the opening phase) and mitigatory and consolidatory strategies (in the closing phase) are important to both media and indeed may be basic to most forms of human interaction. That said, both the content and structure of these phases are subject to adaptation, as others have shown for CMC generally (Walther, 1992, 1995).

In the orthographic environment of IRC, the choice of name, as the first impression-making device a user has, becomes highly significant in the construction of both an IRC persona and for perceptions about other interactants. Innocuous standard names allow an interactant to use other verbal tokens as the main initial impression-making devices, whereas offensive, strange, or funny names make impressions more quickly but may also lead to sanctions. IRC's combination of lack of bandwidth and multiple users per channel makes it more difficult to initiate interactions than in FTF interactions, where proximity and visual stimuli can be used both to show intent to interact and to gain the attention of another participant, or in telephone interactions, where the process of ringing and exchanging voice samples sets up an immediate interactive situation. We have considered only the public channels of IRC, however. Channels that provide the opportunity for private dyadic interactions may well overcome some of the difficulties we found.



Kiesler et al.'s (1984) argument that increased anonymity on a CMC leads to uninhibited behavior was shown in the attempts by some users to try extreme (and risky) attention-getting strategies to initiate interactions, some of which threaten both negative and positive face. Other opening attention-getting strategies, such as flooding and multiple greetings to the channel in general or to several individual users, also point to the difficulties of coordination ascribable to the lack of immediate informational feedback (Kiesler et al., 1984). IRC is essentially real-time, so it feels synchronous, but messages take time to travel, which may be increased by medium-imposed time lag. Despite the fact that risky strategies are also used by friends, most such strategies fail to establish new relationships and sometimes result in retaliation rather than interaction. We might argue that face needs in IRC interactions are as important as in FTF interactions, although once again, differences are apparent in the way in which face operates. Generally, opening tokens tend to indicate equality rather than social difference, being more often self-oriented or other-oriented than neutral-oriented, although there are exceptions. In the closing phase, although the mitigatory/consolidatory pattern is used, the increased anonymity of the medium apparently makes it easier for participants to engage in risky behavior and leave an interaction without the elaborate closing phases found in FTF or telephone interactions. Finally, writing style may play a useful alternative role to some forms of nonverbal behavior.

The data found in the logs tend to validate Walther's (1992) proposal that the time variable has an effect on the degree of impersonality of interactions. Time was an uncontrollable factor in this study. It was quite clear that some users were more experienced than were others, and these users experimented the most with the orthographic channel to express what was considered inexpressible by the "cues-filtered-out" theories (e.g., Kiesler & Sproull, 1986; Kiesler et al., 1984). IRC's distortion of order in message transmission also has two other effects on interaction management. First, the nature of the medium gives users the luxury of pretransmission composition and editing, allowing them to present those aspects of identity that they wish to highlight and hide those that they do not. On the other hand, time lag creates unwanted silence, which must be worked around. This is an area we are currently exploring. Medium-induced silence—whether the time distortion of lag, the multitasking engaged in by some users, or the actions of other users resulting in some participants being removed from the channel—requires strategies for management.

Interaction management strategies on IRC are more overt than in FTF and telephone interactions and may, as Walther (1997) proposed, result in overattribution. Nothing is transmitted automatically, and little is accidental. Consequently, interpersonal relationships are formed on very specific presentations of identity-forming material. This can lead to gen-

der swapping (Reid, 1993) and other radical changes in self-presentation. On the other hand, as users become more adept at handling and interpreting orthographic "nonverbal" behavior and writing styles, it is possible that such representations will become harder to keep up for extended periods. They are, however, not likely to disappear, for anonymity and the lack of physical cues are often the factors most enjoyed by users.

Walther (1992) argued that previous CMC theories, generalized on the basis of laboratory experiments, failed to take into account the effect of environmental and social factors such as depth of acquaintance and user experience. Our data have supported the importance of such factors. As yet, however, no one has directly considered how these interact to influence IRC, although both Walther (1992) and Reid (1991, 1993) have implied its importance. These are interesting questions for future research not only into IRC but CMC systems generally. On IRC, perhaps more so than with other media, experience and depth of acquaintance may form related continua that together have a dynamic impact on the management strategies adopted. Although a user's experience is likely to grow over time, the user's place on the acquaintance dimension will vary depending on the other interactants. When meeting a stranger, each user has a constant place on the experience dimension and an initially low place on the acquaintance dimension. One can imagine a user being an experienced stranger and experienced acquaintance, or a novice stranger and a novice acquaintance, within the same interaction. In each case, the amount and type of interaction management strategies may be different, which may have a corresponding effect on the type of relationship that is established.

No matter how dependent we ultimately become on CMC systems for interaction, technologically advanced societies are in for a period of communicative flux. Indeed, IRC's life span in its present incarnation may already be limited by the growing capability of personal computers to handle full digital video and audio conferencing. Whatever media are created, it is of paramount importance that the designers of future programs, computers, and networks take into account the consequences that media structure has on interaction management.

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