

"Anonymity is Part of the Magic": Individual Manipulation of Computer-Mediated Communication Contexts

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ABSTRACT: This study looks at the behavior of self-selected users of an electronic bulletin board system (BBS). Its goal is to investigate the reported lack of social context cues in computer mediated communication contexts. Using participant observation methods, the study demonstrates how BBS users establish online identities. The study also identifies communication "leaders" who maintain their identities and leadership roles through manipulation of the BBS social context. These findings appear to contradict perspectives that characterize computer-mediated communications as "deindividuated" (Kiesler et al, 1984).

Studies of computer mediated communications (CMC) in institutional and professional contexts suggest that individuals value organizational goals over personal gratification. Work related activities have been investigated while communication play has been largely ignored¹—except as an interference or a "noise" variable within the communication system (Emmett, 1981; Hiltz & Turoff, 1978; Marvin & Schultze, 1977; Uhlig, 1977). These studies—and others that deal with computer mediated communications within broader theoretical contexts (Short et al, 1976; Kling and Gerson, 1978; Pool, 1983)—seem to assume either a single set of CMC characteristics and/or a causal relationship between those characteristics and user behaviors.

Missing has been a conceptualization of communication as a developmental process (Miller, 1977) highly dependent on social norms (Feldman & March, 1981), wherein meanings are continuously negotiated through symbolic interaction. Such an interactionist perspective has seemed out of place in one way mass communication systems, but finds new life in heavily interactive, computer based media. Such an approach would presume communication similarities rather than differences among media in an attempt to discover a common process of human communication.

Perhaps few researchers have examined computer-mediated commu-

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nications from this perspective due to an assumed lack of social/cultural data within the computer-mediated environment (Kiesler et al, 1984). In an attempt to test this assumption, I have used an eclectic data collection scheme within a public, free access computer-mediated communications environment. My purpose was to investigate the computer-mediated *social* context and the extent to which that context is determined by participant interaction. Specifically, the current study examines online play with "self" (e.g., the creation of online communication identities) as an example of how users manipulate context and (re)design computer-mediated communication systems.

Questions guiding my research:

- To what extent do CMC system (hardware/software) characteristics determine online identities/roles?
- What techniques, if any, do online participants use to overcome system-imposed identities/roles?
- And, most important, is the computer-mediated communications environment fertile ground for human social interaction—that is, are social/cultural data available within computer-mediated contexts?

Method

For two months (May 23–July 23, 1985) I operated a local public (free access) bulletin board system (BBS) under the auspices of Loyola University in New Orleans.² During this period, the Loyola University BBS (LUBBS) received over 800 telephone calls from more than 100 New Orleans area telecomputerists. There were approximately 1,000 individual electronic messages (ranging from one to 300 words in length) exchanged during the two months. Message content, sender, receiver, and time of posting were recorded electronically throughout this period for later analysis.³

There were three distinct stages of communication activity during the two months, and I used slightly different data collection techniques during each.

Initial Use: Online Surveys

The first two weeks (May 23–June 7) were a learning period in which the news of LUBBS diffused through the New Orleans BBS community.

After bringing the system online during the last week in May, I left the LUBBS telephone number in a public message on three of New Orleans' more than 30 local bulletin board systems. Responses to these messages were received less than an hour after they were written and continued to grow during the following weeks.

All callers were initially required to answer two online surveys. One of the surveys concerned the diffusion of information about BBS: How callers had learned of LUBBS, whom they had told about LUBBS, and what was their "most reliable" source of information about new bulletin board systems. The other survey asked questions concerning caller demographics and telecomputing habits. I verified responses to this survey randomly through telephone calls and, whenever possible, face-to-face interviews.

By the end of the first two week period, the number of callers peaked at between 20 and 30 per day and remained at this level through the next data collection stage.

Unstructured Use: Focus Group

By the middle of June, LUBBS had reached a plateau (of approximately 30 callers per day) characteristic of local BBS in New Orleans. While new callers continued to contact the system, the number of repeat callers (those who called LUBBS three or more times) leveled off at slightly less than 100. Of this number, less than 20% could be characterized as frequent callers (those who called an average of once per day).

Once callers had been established as both frequent and "active" (determined by use of the system to send and receive messages), LUBBS was used as a computer-mediated focus group to determine what motivated frequent and active BBS use and (therefore) which aspects of BBS use should be the subject of closer scrutiny in a final, experimental phase of the project.

The focus group proved quite popular during its two week run. Messages within the focus group totalled approximately one-third (in number) and one-half (in length) of all messages exchanged within LUBBS. Virtually all messages left within the focus group were left by the previously identified frequent and active callers or, as they will be called hereafter, "heavy users"—although the focus group was public and open to all LUBBS callers.

At the end of the two week focus group, I conducted private *online* interviews with a random sample of heavy users (through the LUBBS "chat" mode) in order to follow up data gathered during the focus group and to further verify information obtained earlier in the online surveys.

Restricted Use: Role Play

Immediately after the online interviews, I restricted LUBBS access to heavy users. At this point all heavy users were given the opportunity to participate in a role playing game designed (1) to test the creation and maintenance of online aliases (which had been the most important topic of discussion among focus group members), and (2) to observe how communication strategies develop within a researcher determined context in which previously established identities/aliases were unavailable.

The role playing game involved two teams of seven heavy users each. The teams had conflicting goals to accomplish within the space of two weeks (July 9–23). Play was similar to that of popular fantasy role playing games (Fine, 1981), with the exception that all player “moves” were conducted through the LUBBS message boards. Game identities were assigned randomly at the beginning of the game so that no player was certain who controlled which game character. To accomplish game goals it was necessary to communicate with fellow team members and to interfere with the communications of opposing team members.

Findings

By far the most important result of the study was the extent to which BBS heavy users manipulated the communication context to create personally meaningful communication identities.⁴

Initial Use

LUBBS was the first system in the New Orleans area to attempt to explicitly record and measure BBS activity for research purposes. This goal was of great interest to the BBS community. Many users commented on how LUBBS was a “good idea”⁵ and asked whether or not the research results would be made public. This was the first indication of the introspective nature of the focus group that was to follow—and the fact that most callers thought the BBS community was a relatively homogenous group whose members had similar characteristics and concerns.

The general pattern of use during the first two weeks was cursory, cautionary, and explorative. Callers entered the system, read information files concerning system goals and policies, and then logged off with-

out leaving any messages. The few messages that were left were sent directly to the system operator in a private communications mode (which hid their existence from other callers).

Reaction to the online surveys (which were presented to all callers at their initial log on) differed greatly according to the type of question asked. Diffusion information was granted readily, with few exceptions. Demographic data was granted rarely, with few exceptions. These two reactions reflected a set of telecomputerist cultural values that became increasingly clear during LUBBS' two month run. LUBBS users systematically distorted certain types of information in order to manipulate the BBS communication context.

Information concerning BBS use and knowledge, which marked a caller as a full fledged citizen of the BBS community, was readily granted, even offered spontaneously. However, callers created and used more personal information to manipulate communication patterns—in ways that will be explained shortly—and maintain a unique identity within the BBS community. Therefore, personal information (real world names, jobs, ages, etc.) was very carefully guarded, because that information represented a "secret" identity that, once known, might limit further BBS communications of the individual who had "blown his cover."

Although response rates for both the diffusion and demographic survey were very high for all callers (95 + %), I found much of the information contained in the latter survey to be spurious (with many missing or nonsensical responses)⁶—so much so that detailed cross references could not be made.

While initially disappointing, this discovery proved useful to a later analysis of user motivations. Simultaneous honest and heart felt interest in participating in an "educational" BBS and the hidden sabotage of the survey questionnaires were consistent with the "heavy user" values and motivations elicited later in the study.

Unstructured Use

Twenty-seven callers participated in the online focus group; discussion was dominated by approximately 20 heavy users. While a variety of topics was discussed, the main concern of the group quickly became the use of aliases on BBS. The focus group itself was divided evenly between callers using aliases and those using (apparently) real names. All but one member of the group supported the use of aliases on BBS as proper under certain conditions. All further agreed that the use of aliases was common and characteristic of BBS communications.

Most callers justified the use of aliases as aiding personal expression and creativity. The following messages, left by a 34-year-old civil engineer and 14-year-old junior high school student, express the consensus of heavy users⁷:

The character [alias] is an escape from the professional world I live in. The time spent as him is fun and allows the creative joy to develop again, that I've lost from time to time . . . he is a part of me, but a part locked away from work.

Pete Moss, 34, engineer^a

You can make the character behind the alias exactly like you, nothing like you, a combination of both, or even make it vary depending on the situation . . . if you use an alias, you can say pretty much what you want without others pinning what you say to your real name. In 'real life,' you have to wear a mask, trying not to say the wrong thing . . . under an alias, it doesn't matter.

The Professor, 14, student

The process of creating a secure and protected BBS character/self actually begins before callers select an alias for use within a particular BBS and long before they actually begin to sign their messages with that alias. Less experienced callers take some time to learn a new BBS context (such as LUBBS) before choosing an appropriate alias. Heavy BBS users with established aliases and online personalities that they wish to retain often attempt to alter the communications context in order to make that context more suitable for their alter egos, which remain in the wings until the stage is properly set.

Therefore, the first step in self-creation is to establish a context for action. This step may be either passive (learning the context) or active (creating the context). Among the LUBBS heavy user group, there were many examples of the latter. Many initial callers offered suggestions/improvements in order to rearrange LUBBS into an environment suiting communication behaviors and identities they had adopted previously, in slightly different BBS contexts:

Hi, just wanted to drop a little suggestion to you . . . now that you have an email section, kill the private messages altogether.

Westley Annis, 17, student

I would like to point out that a MAAJOOORRR thing is missing from your board. You NEED to have some type of password assigned to each caller. Maybe someone will post a totally unfit message under the wrong name and that would ruin that person's image.

The Beyond, 13, student

The process of learning the context (accommodation) takes place on

two levels in CMC systems. On one hand, initial callers must learn computer structures and commands necessary to manipulate system hardware (operate the modem, log on the BBS, etc.) On the other hand, initial callers must learn the shared values and implicit rules governing communications within the BBS context.

BBS designers make the first task easier by using similar structures and formats within all popular BBS software available for home computers. BBS users make the second task easier by perceiving a "BBS community" in which all BBS users, despite their outside differences, have similar motivations and interests within the medium. Thus, there is the widespread perception of a "free and open discussion of ideas" among "more intelligent and well educated" telecomputerists with the BBS community.⁹ Whether or not this community actually exists is less important than the widespread belief that it does exist. Much of the communication activity within BBS is based on and can be explained by a belief in an ideal context.

What are some further characteristics of this context? On the positive side it is intelligent, fascinating, and particularly conducive to free and open communications:

Here I do find it easier to talk about a lot of things that aren't usually talked about with people you just meet.

Joshua Aasgaard, 21, student

... by the far the largest number of BBS users are habitual communicators.

Andromeda X, 27, administrator

However, there are negative aspects to the community as well; these are best personified by "crashers" and "psychos"—those antisocial selves who oppose an open communication system. This opposition might take an active and violent form, or it might be more subtle, in the form of "shy users" who "lurk" inside a BBS without posting messages.

Occasionally, even a well meaning and "mature" member of the BBS community can suffer from too much "fascination," become addicted to the medium, and thereby isolated from the real world. In general, however, heavy users believe "telecommunications is nothing but positive as long as you can control yourself."

"Controlling your 'self'" is a very important capacity within this community. Any factor—personal or systemic—which decreases your control is avoided; and strategies which effectively allow you to increase your control are valued. The first of these strategies, already mentioned, is to manipulate context—through direct appeals to the system operator—in order to create a familiar environment for an old identity.

Having learned (or created) the appropriate context for interaction,

BBS callers next seek to separate themselves from that context—that is, to individuate their online personalities. It is during this stage that callers select and/or begin to use aliases in online communications.

Significantly, however, whereas the alias is selected to express individual traits (“The Rook”—an avid chess player; “Andromeda X.”—a feminist; “Bogey Man”—a night-duty security officer), the online “self” gains online meaning only through relationships with others.

Thus, “The Professor,” an online persona of a young heavy user, was chosen as an alias on the basis of a favorite comic book character. But the alias is subsequently defined and justified on quite different grounds:

Sometimes I would use my real name, but the character behind the Professor is important to be maintained. If I log on to a BBS with my real name, then what am I supposed to do if they have a Sci-Fi¹⁰ board?

The Professor, 14, student

The importance of an alias lies in its ability to grant entry into a favored subgroup or clique within the BBS community. The character of “The Professor” is most gratifying because that alias gains meaning and social influence through interaction with and approval of others.

The way that I relate to other people on the Guild is sort of co-Dungeon Master with Andromeda X. I’m either urging on the story, dispatching rescue missions, or discussing changes with Andromeda. The sci-fi board on the A.G. is pretty much like a stage. Backstage (E-mail) Andromeda and I discuss the script or coach new players. In this way the performance turns out better for everyone.

The Professor, 14, student

The process of self-creation, then, depends very heavily on continuous group negotiation within previously negotiated interaction contexts. Thus, those users most adept at manipulating the context of BBS communications can determine and control the communication behavior of others. I designated such users within LUBBS as communication “leaders,” and I examined their behavior more closely as most successful in adapting the CMC environment to their own needs and desires.

I identified communication leaders within the LUBBS user population on the basis of both network characteristics (the number of communication links each caller had with other callers) and message content characteristics (the extent to which a caller provided information/approval for other callers). A communication leader exchanged a relatively large number of messages with a relatively large number of people and those messages contained information of some value to those receiving them.

There were two basic types of communication leaders. The first type

manipulated the communication context mechanically through knowledge (and frequently ownership) of system hardware/software. The most influential person within any BBS is the system owner/operator, or "SysOp." Previous research (Myers, 1985) has shown the extent to which local system operators dominate the communication activity within their boards. This domination is based on the single characteristic SysOps share in common—their ability (and strong desire) to manipulate actively the appearance and function of the BBS.

Other callers adopt similar leadership characteristics according to their ability either to answer system related questions or to influence the SysOp to make system changes in their behalf. These users are *system* expert leaders and include those callers mentioned earlier who offered frequent "suggestions" for LUBBS functions and structure.

Of more interest to the current study were communication leaders who gained their leadership roles through *social* context manipulations. This type of communication leader—the *social* expert—needed little system knowledge to dominate message flow.

A communication leader who relied on social context manipulation was "Andromeda X," a woman in her late twenties. Andromeda X. considered herself a "communicator" rather than a computerist. Her leadership role was based on her ability to help others create self-gratifying communication roles. She was greatly aided in this task by her own, self-created online persona.

I am a woman on BBS. When I started I took a character that I thought was obviously female. I was very surprised to find that almost all users on the BBs were young males. I am older than almost all of the others and I did this for experience in mind-to-mind communication (gotta find a word for that—my friends are tired of hearing it). To my amazement I found that users did not assume that I was female. I played the game and did not publicly admit gender for a few months. The young ones guessed first, but the older group (17–25) had to ask. I have received some very "interesting" e-mail. This character is nonprovocative . . . a sort of sci-fi guardian . . . mother nature . . . the goddess . . . I designed it to not elicit "hormonal" response. However, boys will be boys, and some just have to give it a try . . . I keep my identity secret not because I am afraid of contact with the people I meet in BBS but because anonymity is part of the magic.

Andromeda X.

Andromeda X.'s relationships with others within LUBBS were either based on family roles . . .

You learn fast, baby boy, soon you won't need a keeper . . .

Andromeda X.

The kid's growing up before our very eyes, dad . . .

Andromeda X.

. . . or on more broadly dramatic roles (of which the family roles may be considered a subset) created entirely within the BBS communication context. Andromeda X, and her "followers" had established their own protected environment within the BBS community (on another local New Orleans BBS) where these roles were practiced and learned—and where those ignorant of their self-created interaction context (and possibly disruptive to it) were prohibited access.

We consider the Assassin's Guild "Home Base." We have there a private "high security" board which most people think is a hacking board. We call it the "party board." There is a password necessary to enter and it must be earned by your value as a good contributor to the board action, being a member of the defender fighting group, or at the sysop's discretion (we do nominate). Here we drop the character (while retaining the alias names) and post a lot of conversation and "silly" stuff which is delightful. This forms a bond between us which transcends our use of the other BBS boards.

Andromeda X.

Conflict seems to exist between system expert and social expert leaders. Andromeda X. refused to divulge any personal information—even during the private online interviews—which might enable others to identify her outside the BBS environment. She continually argued that giving her true identity would destroy the "magic" of BBS.

In sharp contrast, all system expert leaders proved very open and amendable to face-to-face meetings (so much so that it often seemed that LUBBS was as much an object of research and investigation to them as they to the LUBBS project). Furthermore, a single system expert leader voiced the loudest and most sustained opposition to the use of aliases—a position that became increasingly unpopular as the focus group grew to be dominated by the online family of Andromeda X.

Restricted Use

Having established two distinct types of leadership strategies, the final phase of the project was designed to investigate how leadership roles emerged in situations where past roles and relationships were unknown. After introducing the role playing game to callers and asking for volunteers, responses were received concerning the game much as were originally received concerning LUBBS. System expert leaders led the questioning concerning game rules; social expert leaders led the questioning concerning game characters.

Whereas previously all callers had been allowed access to the focus group discussion, game play was restricted to heavy users who were will-

ing to give accurate (and verifiable) name, age, and sex. Andromeda X. and a few other social expert leaders balked at this requirement and, despite initial interest, refused to participate if all players were required to divulge this type of information. System expert leaders readily agreed to this requirement (as most had already provided the information beforehand) and were therefore slightly over represented in the final player makeup.

Though all game participants were heavy users, they represented well the variety of ages and (lack of variety) of sexes that seemed to compose the total LUBBS user population. Of the 14 game participants, only one was female. The remainder was rather evenly distributed according to age, with a median of 21. The oldest participant was 34; the youngest was 13. Five participants had proven through earlier communications to be system expert communication leaders; all but one of these had, at one time, been SysOps of their own bulletin board. Three participants were members of the Andromeda X. family and were therefore classified as "social expert" communication leaders. The remaining six participants were unable to be classified clearly in either category.

Game results showed that the five system expert leaders dominated communication activity during game play, sending more than two-thirds of total messages (often to each other). This domination (and/or the inability of social expert skills to achieve game goals) resulted in a high drop out rate among the nonsystem expert players. In particular, the social experts found their skills poorly suited to accomplishing the task oriented game goals and either refused to (or could not) adopt alternative online strategies.

Perhaps the most significant result of the game play was the use of alternative media (telephone, face-to-face contact) by the system expert leaders to quickly relay information among team members and thereby gain an advantage in game play. Those participants more skilled in social context manipulation played by implicit game rules (implied only by system expert leaders) and communicated with other players solely through LUBBS.

Due to the high drop out rate and because game activity proved supplementary to earlier observations of communication behavior, the game ended before either team was able to accomplish its original goals—resulting in no clear cut winner. This outcome was much to the relief of the social experts and much to the dismay of system experts, who wished to carry the game forward to a final conclusion. As an alternative, the social expert leaders suggested starting the game again (now that the rules—and game characters) were more clearly defined for all players. Eventually, both ideas were dropped; and, after a brief period in which social experts and system experts communicated with each

other concerning game play, both returned to their previous, nonintersecting communication patterns.

Conclusions

There are two sets of conclusions. One concerns the efficacy of different data collection techniques within public computer-mediated communication systems; the other concerns the implication of this study's results for previous research.

The online focus group, accompanied by participant observation of the communications process outside the focus group, proved most fruitful to an understanding of context manipulation and the use of different strategies to create and control the online "self" – including leadership roles.

The game experiment, while useful to help document relationships discovered during participant observation, was not useful in discovering the basic process by which communication strategies evolve. This "failure" was likely due to the inability of players to use a *variety* of skills to manipulate the game context. Due to the artificial, predetermined nature of game rules and goals (inadvertently favoring system expert skills), the game context proved resistant to active manipulation by all participants.¹¹

The most valuable lessons of the game were found in the adverse reaction by the social expert leaders to the game's identity disclosure requirements and the inability of social expert leaders to use their normally powerful context manipulation strategies within a predetermined context.

Least useful was the online survey. Self-reported demographic data are the most difficult data to obtain within the public BBS environment. BBS heavy users – particularly social expert leaders – seem to resent and avoid giving accurate demographic data. As Andromeda X. stated: "It destroys the magic."

Current use of local BBS appears motivated largely by user desire to create a unique and personally meaningful identity, either for reasons of experimentation or disgust with socially imposed identities within school, work, or family environments. Users appear to gain a sense of efficacy or power in this self-creation process, which is accomplished through use and manipulation of the communications context. The manipulated context is both physical/mechanical (the system) and emotional/social (the community). A sense of self-control (or other-control)

Figure 1

From the perspective of ...	System Expert	Social Expert
communication <u>context</u> is:	hardware <i>(computer as machine)</i>	software <i>(computer as community)</i>
communication <u>networks</u> are based on:	logical relationships <i>(factual/systemic)</i>	social relationships <i>(familial/dramatic)</i>
communication <u>content</u> is interpreted as:	information shared <i>(by off-line individuals)</i>	values expressed <i>(by on-line personas)</i>
important communication <u>results</u> are:	rules creation <i>(system)</i>	roles creation <i>(self)</i>

may be gained through understanding and manipulating either or both of these two elements.

Manipulation of logical relationships ("rules") within the communications context is practiced by system experts; manipulation of social relationships ("roles") within the communications context is practiced by social experts. The strategies used by communication leaders within these two groups are distinct and, to some extent, in conflict—yet appear equally effective in determining communication leadership within a public, free-access CMC environment. Figure 1 summarizes the system and social expert points of view by listing the distinguishing characteristics of the online BBS environment within each perspective.

It is important here to clarify the distinction between creating a "unique and personally meaningful identity" and having the power to create such an identity. Mere identities within LUBBS were changed as easily as hats. But the power to create these identities was highly valued and well guarded. Within such power lies the true "magic" of BBS; and LUBBS users did not seek names so much as they sought the power of naming.

Those who wield this power have the ability to change context first, others next, and, last and most importantly, themselves. They have the power to escape those names that the outside world has given them—names they believe weak and unfortunate, names that are not to their liking.

Strauss (1959) discusses a process of social interaction in which identities are formed and individuals are given status by their fellows. There is the ever present 'danger' of giving or taking affront during this process, of assigning or accepting wrong status and then being forced to recant. But along with the danger comes "transforming experiences that are more positive and creative in implication" (Strauss, 1959; p. 82).

These are the experiences that BBS users seem to be trying to achieve through individual manipulation of CMC contexts; these are the experiences predetermined contexts suppress; and these are the experiences that studies investigating work related activities in institutionalized computer networks ignore.

The findings of this study—particularly those findings concerning the prevalence and effectiveness of *social* expert communication skills—differ significantly from studies that maintain that "computer mediated communications has . . . (a) a paucity of social context information, and (b) few widely shared norms governing its use." (Kiesler et al, 1984:1126).

In fact, there is widespread acknowledgement of a national BBS community—with both positive and negative norms of behavior. Further, the local, public CMC environment has the ability to convey a large amount of social context information (through strategies demonstrated by Andromeda X.)—though that information may be distorted from its value within off-line environments.

The conditions "important for deindividuation— anonymity, reduced self-awareness, and reduced self-regulation" (Kiesler et al, 1984:1126)—are exactly those contextual characteristics which are manipulated by the social expert communication leader in building an online "family". They are self-creation, an emphasis on personal discovery through introspection and group interaction, and a reliance on familial and/or dramatic relationships to build and enforce interpersonal relationships.

The computer-mediated communications environment seems to be fertile ground for human social interaction. The limited social presence offered by computer-mediated communications does not inhibit those processes so much as make them easier to delineate.

Notes

1. See Kling (1980), Kerr and Hiltz (1982), and Rice (1984) for summaries of computer-mediated communications research. Turkle (1984), Marvin (1983), and Vallee (1982) have included communication play as a topic of investigation.
2. See Besston and Tucker (1984) for a full description of BBS characteristics.
3. Participant-observation in a computer-mediated communications environment requires lots of time but little travel. The physical "environment" consists only of a computer.

- modem, and monitor. Observation of communication activities—in the context of this study—involved reading message and text files on local New Orleans BBS and (as SysOp of LUBBS) watching users read and write messages to the LUBBS host computer. Participation in BBS activities involved writing messages for others to read on other systems and—as will be shown—creating and maintaining the LUBBS environment for others to observe, share, and (occasionally) manipulate.
4. Although the study observed the communication behavior of a large variety of BBS users, its emphasis is on heavy users throughout; and the strategies described hereafter are those employed most often by the heavy user group. However, the communication strategies adopted by the heavy user group were used to a greater or lesser degree by all users. The greatest difference between the heavy and light user groups was not in the communication strategies used but rather in the skills that made those strategies successful in molding the communication context.
 5. In the discussion that follows, terms and phrases used by more than one BBS participant are often written in quotes without attribution to any single participant. Any unattributed quotes are therefore indicative of widespread use *and* heavy user consensus.
 6. The activities of LUBBS users (or those of any other BBS) can be observed on the monitor of the host computer without user knowledge. Although the questionnaires were designed to be administered and tallied electronically without researcher supervision, I made frequent spot checks that discovered users giving obviously false answers to the demographic questions. While it was possible to eliminate such spurious answers when observed, it was not possible to eliminate false answers to the demographic portion of the survey recorded during all of LUBBS continuous, 24-hour, open-to-all-callers operation.
 7. All user quotes are transcribed *exactly* as they appeared in the messages left within LUBBS, with the following exceptions: omitted words/passages are indicated by ellipsis ("..."); and added words or comments are enclosed in hard brackets ("[]").
 8. Names attributed to each quote are those names attached to the message within LUBBS. "Pete Moss," for instance, is an alias. "Westley Annis" is not. Age and occupation information is included only in instances where it was verified outside the LUBBS environment—either through voice telephone calls or face-to-face interviews—with one exception: "Andromeda X." Andromeda X. described herself as a "27-year-old administrator." She agreed to be interviewed only through the LUBBS "chat" mode.
 9. This is an idea expressed by many. The exact phrases quoted here and in later paragraphs characterizing the BBS community come from messages left by Andromeda X.
 10. A "Sci-Fi" board is a BBS where discussion concerns science-fiction topics. The term is also frequently used to designate a role playing BBS—that is, an online environment in which callers adopt fanciful (fantasy/sci-fi) identities.
 11. It is unlikely that a game environment could be constructed that would display communication behavior in any more contrast than was observed during normal BBS activities. In fact, based on observations beyond the scope of this study, any imposed structures—or "rules"—within the BBS online environment seemed to favor a single type of communication leadership role.

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