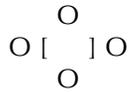


Seated Around the Virtual Table



Stephen Gance and Samantha Caughlan

These are the promises of the online classroom: more student participation; silent students find their voices online; more student control as teachers find it impossible to dominate the discussion (Faigley); a more egalitarian online community as visual and paralinguistic signs of status are removed (Kiesler, et al.). The image of rows of desks facing the front of the room is replaced by that of teachers and students seated around the virtual table.

Claims made about the effect of online communication on teaching and learning have been quite optimistic. The use of electronic conferencing tools to replace certain face-to-face interactions such as student-teacher conferencing and class discussions has exploded, with a prolific growth in the number of electronic classes offered. In spite of the promises made by early writers about these technologies and by 'Boosters' of technology (Bigum), our own involvement in online classes has led us to question claims of equalization or classroom liberation. While some authors have critiqued any overgeneralization of these claims (Eldred and Hawisher; Faigley; Hawisher and Selfe), few have presented a close look at online interaction over time.

The present analysis is prompted by questions about how these classes actually appear to those attempting to negotiate them. What influences who 'speaks' and when? Students do not contribute proportionally: what about this environment or the way in which it is used might put some students at a disadvantage? How do students deal with the pace of response, and the lack of time for reflection: more people are participating, but what are the qualities of this participation? How do forms of online discourse develop and change over time as students gain experience? This paper is a

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contribution to a larger conversation about the new forms of classroom discourse made possible by computer-mediated communication (CMC), about what they look like in use, and what their consequences are for teaching and learning. As a beginning, we look at how the students taking one class experienced these new forms, what their cultural models (Gee) of online communication were, and how these factors impacted their participation over the course of a semester.

We examine transcripts from two semesters of online discussions in the class "Critical Educational Use of the Internet," taught by Professor Ann DeVaney for the past several years at the University of Wisconsin in Madison. Our data includes most of the online discussions in the fall of 1997 and all of the discussions from fall of 1998. The class met once per month face-to-face and three times per month synchronously using conferencing software. One of us was a teaching assistant for the course over the two semesters, and the other took it as a Ph.D. student in the fall of 1998. The class consisted of both Masters and Ph.D. students at various stages of their education. Most of these students had not previously participated in an online discussion, but several had extensive experience with computers and chat rooms.

Issues addressed through readings, instructor lectures, and resources on the World Wide Web included free speech, privacy and democracy, feminism and technology, and the virtual body in cyberspace. Each week a discussion leader recruited from the class posted questions relating to the reading a day or two prior to the class meeting. Online, this leader facilitated the discussion, usually by helping the class to address each discussion question in turn.

It was our experience that in many cases the discussants became sidetracked by discussions of the qualities of face-to-face versus electronic interaction, reflecting on the experience of holding class online. These comparisons and descriptions were more common early in the semester, which seemed to indicate that students were focusing on the novelty of this experience. We began to see this as an opportunity to see how people draw upon cultural models in negotiating a new cultural form.

We first approached the data with the hypothesis that students made sense of online discussion primarily by drawing on more familiar discursive forms, such as the graduate seminar or informal conversation. Students would then try out forms and protocols with each other to construct discussions which approximated their idea of what a class discussion should be. In the process of this negotiation they found themselves speaking explicitly of the expe-

rience of being online. Eventually they should create new cultural models to fit the new situation. Would they take advantage of the openness of the situation to create more egalitarian models of discourse? Or would they attempt to close off options in order to more closely approximate the traditional seminar?

As we examined these discussions more closely, we could see that students interacted with and within the space in a variety of ways. What did this reveal about what cultural models were operating in this environment? What were the consequences of holding and acting upon specific models in this situation? Did their cultural models of the online seminar change over the course of the semester? In particular, we follow the stories of two particular students as they attempted to make contributions to the seminar in ways which drew on different previous experience, with varying success.

Cultural Models

Janet Cary Eldred and Gail E. Hawisher point out that much of the research on online groups has come from the discipline of social psychology and was heavily influenced by work at Carnegie-Mellon in the 1980s. Social psychological research has been dominated by laboratory studies in which the participants, who have never met, engage in decision tasks assigned by the researchers. A typical laboratory method that is used in this tradition involves the presentation of choice-dilemma problems in three different contexts: 1) face-to-face, 2) using a computer anonymously, and 3) using a computer non-anonymously (Kiesler, Siegel, and McGuire).

Typically, social psychological research has focused on three variables: self, social, and task (Eldred and Hawisher). Self has to do with the identity of the user. Social has to do with how much of a group identity or community is formed. Task has to do with the actual work to be done online. In social psychological research, technology is assumed to affect all three variables by effacing or enhancing individual and group identity and thus either contributing or detracting from the efficiency or effectiveness of the task. In a systems view of group interaction with self, group, and task as important variables, technology is the new input to the system and, as such, is seen to affect every other variable in ways describable, at least in principle, by universal laws. We do not consider technology to have such power but neither do we consider technology to be transparent (De Vaney, "Will Educators"). Rather, the technology in use affects the types of cultural forms that

may be available for communication but itself doesn't determine those forms.

Social psychological research often considers language as simply representational. The assumption is that social cues are noise that get in the way of pure communication and that these social cues are transmitted primarily visually, not through language. Here we have an extraordinary quote that indicates the limitations of a view of language as simply representational, where the important emotional cues must occur face-to-face: "Our results suggest that computer-mediated communication is not physiologically arousing" (Kiesler, et al. 343). Such research could not have predicted the phenomenon of net sex, for instance. The social psychological perspective ignores the subtleties of language with its various genres, registers, styles, and the ways in which meaning and interpretation are situated in discourses.

Sara Kiesler, et al. cite two main characteristics of online, textual communication: "a paucity of social context information and (b) few widely shared norms governing its use" (335). One would have to assume, contrary to a sociolinguistic framework, that people come to a new medium without any cultural models on which to draw. The development of norms would take place from scratch and would be theorized to have negative consequences for the participant:

This situation, where *personality and culture* lack salience, might foster feelings of depersonalization. In addition, using the computer tends to be absorbing and conducive to quick response, which might reduce self-awareness and increase the feeling of being submerged in the machine. Thus, the overall weakening of the self- or normative regulation might be similar to what happens when people become less self-aware and submerged in a group, that is, deindividuated." (335, emphasis added)

The assumption is that people come to this new medium without cultural expectations and they lose themselves in the technology.

A further limitation of social psychological research is that it uses the construct of a task to frame the method. A study of interactions during the execution of a task fails to adequately account for changes over time. These changes over time can be more usefully described as a story or narrative of the interactions. The narrative then contains an account of the interactions and the kinds of sense-making that individuals use.

Because of these limitations, we have chosen to use sociolinguistic discourse analysis methods (Gee; Fairclough). Discourse analysis operates on the assumption that language is situated within human communities and human activity, and, in fact, cannot be divorced from human social practices. James Paul Gee refers to Discourse with a capital 'D' (as opposed to the more familiar discourse, with a little 'd', or type of language used in a particular situation) as "a socially accepted association among ways of using language, other symbolic expressions, and 'artifacts', of thinking, feeling, believing, valuing and acting that can be used to identify oneself as a member of a socially meaningful group . . . or to signal (that one is playing) a socially meaningful role" (131). In other words, language use is inextricably tied up with who we think we are and what we think we are doing at any particular moment, and our wish to be recognized by other members of the same Discourse as engaging in meaningful activity.

Within a Discourse community, we share cultural models, or simplified views of the world which underlie our words and actions (Gee). For example, people identifying themselves as students come to a classroom with a cultural model of what a prototypical class is supposed to be like, what students and teachers do, and how they should operate. There may be conflicting cultural models of a classroom co-existing in the larger culture: the bitter disagreements between the proponents of direct instruction and whole language approaches to teaching children literacy practices are partially based on different cultural models of what should take place in a classroom. In the case of the students in our study, they engaged in online "class discussion" without many of the "props" of classroom Discourse, including a classroom, or a teacher controlling the discussion with her questions and evaluation.

What does being in an online class do to the roles of teacher and student, and the activity of class discussion? We propose that students come to this class with different cultural models of what a graduate seminar should be like. Different models exist in tension in the academic community, as Karen Tracy points out. For example, she points to the tension between 1) intellectual discussion as dialectical, a free critique of ideas, and 2) intellectual discussion as an act of constructive criticism of ideas, supporting and building on ideas in a constructive manner. Proponents of the first model tend to feel that issues of status and experience of members of the community are not a factor in the free exchange of ideas, which should be judged purely on their merits. Those who favor the second hold a model closer to that of a supportive intellectual com-

munity, with more of a focus on the intellectual development of its members. Indications of these and other cultural models could be seen in the way students interacted online in these discussions.

In the case of this online class, students arrived in possession of various cultural models ready to act as members of Discourse communities, and found themselves face to face with a computer monitor, a keyboard a three-line buffer, and the challenge of doing the activity called 'class discussion' without many of the usual tools and cues to help them negotiate. In response, they called on the various discourse types at their disposal, and creatively constructed ways of being online which most closely approximated their sense of what this activity should be like. In looking at the transcripts, we find evidence of the different cultural models which were available to them, and evidence that some models were viewed as more acceptable than others. Over time, the practices associated with these models came to dominate the online discourse. The two indicators of cultural models we focus on below are the use of metaphor and intertextuality (Fairclough).

Context

FirstClass conferencing software produced by SoftArc was used in both semesters (version 3.5). The online discussions took place synchronously during class time with the members of the class dispersed to various locales such as home, computer lab, or office. Occasionally, several members of the class would be physically present in the computer lab but each at a separate computer.

People would gather online in a public chat space to wait for class members to 'arrive' and also to organize themselves into discussion groups. In 1997 the class was small, so the entire class participated in each discussion. In 1998 the class typically split into two discussion groups, each of which would create a 'private' chat for members of that group. The teaching assistant and the professor would monitor this process and assist in any organizational or technical difficulties that might arise. Each discussion chat always included the TA and the professor, who were always available to answer questions addressed to them. In the fall of 1997 the TA participated as a member of the discussion, but in 1998 he only participated as a discussion leader when necessary to fill in when a class member was not available.

The FirstClass software allows up to three lines of text to be entered at any one time. The text builds up on the typist's screen and only appears on everyone's screen when the typist performs a

return keystroke. Text entered is displayed at the bottom of each user's window and previous text scrolls upward. In principle, users could scroll back through all of the text that had been generated so far. In practice, however, FirstClass made it difficult to do so because the appearance of new text interrupted a user's scrolling, returning him or her back to the most recent text. For this reason, we believe few ever used the scrolling feature of FirstClass to review previous comments.

FirstClass would automatically enter the user's login ID at the start of each new text submission. In both semesters the login ID was the user's name, so everyone was aware at all times who produced each utterance. In addition, FirstClass would post various informational messages alerting other users when someone would enter and leave the chat. The version of FirstClass that was used did not allow any commands that are typical in many multi-user online chat rooms such as 'whisper' and 'emote.' Thus, private communications to other discussants were not possible within a particular chat and any overt expressions of emotions had to be encoded within the text itself. We should note that we know that, at times, a few students would start an additional private chat inviting only one or two members of the class (thus excluding the professor and TA). These additional chats would be maintained simultaneously with the discussion chat. We do not have transcripts from any of these private chats nor do we know how widespread the practice might have been. However, from discussions with various class members we believe that the practice of creating a separate private chat was almost non-existent in the 1997 class but occurred with some regularity in the 1998 class, primarily involving the same two participants.

Metaphor

One way of communicating cultural models and the basic assumptions which underlie them is the use of metaphor. Metaphors not only reveal how people view salient aspects of the online 'world,' but structure how they experience and interact with it, as well (Fairclough; Lakoff and Johnson). We would expect to find metaphor appearing in these discussions, as metaphor is an aid in making sense of and talking about novel experiences (Lawler; Lakoff and Johnson). This was indeed the case. While we found most instances of metaphor to be conventional metaphors embedded in everyday language, there were also occasions when participants explicitly constructed new metaphors to communicate the nature of the online experience.

There are any number of metaphors for computers, software, and the Internet which are already part of our language, and which reveal the way in which we think about computers and computer-mediated communication. It is interesting that many of the conventional metaphors Lawler lists are almost never used in these discussions: those having to do with the computer as tool, the computer as toy, and the computer as machine. Most of the conventional metaphors used in this online class about educational practice and the Internet reflected what the participants saw as salient aspects of this online experience. Most common were those clustered about the idea of the online environment as a place, and the metaphor of oral conversation for online communication.

The very word 'cyberspace' communicates our view of the experience of being online as one of being somewhere other than seated in front of a monitor. Cliches such as 'the information super-highway' or the use of the word 'site' for Web page, communicate the image of an environment consisting of a number of related spaces which can be moved through, or which work as stable locations. Users frequently speak of the Internet as a space through which one moves, and through which one can be tracked, containing sites which can be visited. This conventional view of the World Wide Web also held for these groups.

Conventionally, chats are referred to as chat 'rooms,' a place where people 'meet' to communicate. While students tended to follow the professor's lead, and refer to them only as 'chats,' the way in which they talked carried the same metaphorical meaning of the chat as a bounded physical space. Students would speak of 'going to' a chat, of being 'in' a chat, of whether someone were 'here' or not, even though they may have been separated physically by some miles.

While the idea of the Internet as place is common, it also has consequences. Much of the push to get classrooms hooked up to the Internet has come from the idea that this will somehow expand the classroom, open that enclosed space to a wider world which can be reached via the 'information super-highway.' Thus, the Internet as a vast space, where one is "bopping around nearly instantly across hundreds of sites," as one student put it, is part of the commodification of what was once a convenient way for scientists in elite institutions to stay in contact.

The idea of the interchange of typed messages as a 'conversation,' and thus analogous to oral language, was another common metaphor, natural enough in a 'place' called a 'chat.' In fact, people rarely referred to what they were doing as a type of writing,

except for occasional comments about the difficulty of keeping up with the typing. Messages such as “Don’t all speak at once,” or a mention of a “long silence” in referring to a pause, were common usages. The idea of this experience as analogous to face-to-face communication included metaphorical use of visual contact as well: “My sister is watching class tonight,” said one student whose sister was reading her monitor. “Did anyone notice if she looked uncomfortable?” asked the TA, when one student disappeared from the chat right after a discussion of Internet sex. The use of conversation metaphors was particularly interesting in the fall 97 class, as students seemed more aware of them and commented on them. Carmen was particularly prone to do so, commenting after one of Gary’s mentions of long ‘silences,’ “But you are in a silence conversation, Gary. Can you hear us?” Students’ frequent use of oral language metaphors was also a clue that the class was taking discussion forms as their main models for chat, rather than written ones (see below).

Most metaphors used in any context are conventional metaphors, embedded in the flow of speech and writing, and rarely noticed by those who use them. At other times, people explicitly play with language, either calling attention to conventional metaphors, as Carmen does above, or making new ones. Lakoff and Johnson point out that new metaphors can give new meaning and understanding to our experience. They are also a clue to cultural models.

When we began this study, we expected that explicit references to online experiences would decrease over the semester, as the experience became more routine. What we found is that comments continued throughout the semester for both classes, but that the nature of the references changed over time. During the first few chats, there are more explicit references to the online experience, as students work to define the difference between online and face-to-face experiences. During this time, most metaphors used are conventional, embedded in the conversation. Later in the semester, there are fewer discussions about the differences between online and face-to-face, while more metaphors are new and explicit. There is a playful tone to these metaphors. These sometimes revealed what the individual thought or felt about the experience, but they could also be used to typify other views. For example, Clark’s play on words:

Clark: the internet seems very organic to me
— like kudzu vine *L*

...
Clark: it will grow around obstructions

...
Clark: being from southern climes, we can appreciate kudzu, eh Shelly.

Clark plays with the idea of the Internet as organic, having a life of its own. At the same time, in tongue-in-cheek fashion, in using the infamous pest, kudzu, as his example, he alludes to one popular myth of the Internet as an out-of-control intruder, taking over our minds.

In each class, towards the end of the semester, there were instances of groups working together to build on and extend metaphors which came up in conversation, such as this one from the 1997 class:

Carmen: The food is almost ready... The virtual food

Gary: Where should we sit

Prof: I thank you all for participating and Katie and Gary for your good leadership

Gary: Thanks Prof. Thanks everyone.

Katie: your'e welcome. Gary, at the head of the virtual table for you

Paul: o[]o

Barb: Thanks.

Katie: thanks to all

Carmen: Choose your sit Gary

Paul: good night all

Prof: and bands of angels sing thee to thy rest

Lars: thanks!!!

Lars: bye

Gary: bye Paul

Katie: Paul, what is that emoticon?

Gary: Bye Lars

Lars has left the chat.

Carmen: Boa Noite

Gary: We need a dictionary of emoticons.

Barb: ||Bye

Paul: that's a table with two people sitting across from each other

Barb has left the chat.

Paul: eating virtual dinner

Not only does this metaphor of the class as family communicate the affection these people have developed for one another, but in moving the chat from a 'room' to the family dinner table, offers a metaphor for online communication which includes an idea of sharing which is rarely found. However, while students in both semesters engaged in the construction of new metaphors, which would indicate new ways of approaching or thinking about the technology, a closer look at the fall 98 class fails to reveal a parallel change in their practice of holding discussion or the cultural models they acted on, as will be discussed below.

Interdiscursivity

While metaphors give some sense of how participants envision the online experience, it is from their practices that we see how they construct and make use of this new form. Having a class in an online chat room is a hybrid process, an example of interdiscursivity, a form of intertextuality consisting of making new texts out of existing discursive forms (Fairclough).

Lester Faigley, in discussing students' reactions to what he sees as the relative freedom of online communication, states: "Electronic discussions are governed by the logic of consumer choice. Topics are introduced and consumed by what students like at the moment or don't like" (190). This implies a freedom of choice we do not find justified by the evidence. Students' 'choice' is constrained by the conventions and expectations of both old and new forms. Academic chat is an evolving form, and students work to figure out its possibilities, limitations, and rules.

Taking our cue from Gee's theory of Discourse, we hypothesized that since the participants were students, and since the synchronous chat was being used in lieu of class discussions of assigned readings, that the discourse of the graduate seminar would be a primary model for students. Karen Tracy's characterization of intellectual discussion in a departmental colloquium is useful because it is one of the few descriptions of academic discourse where the talk is not dominated by teacher-led IRE patterns. In Tracy's view, participants in intellectual discussion wish to establish themselves as intellectually able, coming to discussion with the background

knowledge needed to participate intelligently (in our case, having done the assigned readings), and with the ability to take on an academic register. This register is marked by the use of technical terminology, a higher level of abstraction, and an avoidance of personal allusions. Comments tend to be made as positive assertions, often backed up with reference to the text or to a relevant theorist. Examples of this can be seen in Figure 1. Bob and Gary elaborate on their understanding of a technical term, 'mediate,' and even when Bob refers to himself as a prototypical speaker in (2), it is as though he were describing himself from the outside ("via the means present," "there are cues to meaning that aren't necessarily there . . ."). Everything Bob says is presented as an assertion. On the other hand, participants in an intellectual discussion do not wish to be seen as self-aggrandizing, either, which results in various 'community building' moves, such as framing questions in such a way as to save face for both parties, idea-crediting, humor, and the adoption of a more conversational register.

- 1) Gary: Bob asked what I meant by mediate and I directed it to you, to hopefully explain what Argyle and Shields mean by mediate.
- 2) Bob: in answer to Gary's question, i can only communicate via the means present. voice inflection and tone aren't present if i am not talking. body language as well. there are cues as to meaning that aren't necessarily there when no
- 3) Gary: I'm not sure exactly how A and S are constructing "mediate"
- 4) Leah: Mediate in the sense that technology allows us to interact in ways when we are not face to face.
- 5) Bob: not physically present
- 6) Bob: something's goofy with my computer
- 7) Gary: OK Bob. Yes, then I agree the medium will make a difference.
- 8) Gary: (Including the goofiness)
- 9) Leah: Bob But don't you give inflection and tone as you read? Can't they be implied with things like punctuation marks?
- 10) Scarlet: I disagree with Bob that you cannot be bodily present online
- 11) Bob: yes, but then that is being mediated because i as the writer have to expressly put that in my message
- 12) Scarlet: If i was in class I would tell a little story that has something to do with this but it is a litle long for typing...
- 13) Gary: (This is a disadvantage of this medium)
- 14) Scarlet: Bob that is an interesting point

- 15) Leah: But as I read your message now, I hear inflections.
...
32) Scarlet: I think that if you know the other person you are talking to it is much easier to be bodily present-you can imagine...Argyle talks a little about that
33) Bob: imagine...but then can i be bodily present on the moon or outerspace?
34) Bob: even if i'm not there?
35) Scarlet: If you tried hard enough
36) Bob: i would have to disagree
37) Leah: I think that's true, Scarlet. It's hard for me to be present talking in this class when I don't know everyone very well.

Figure 1

Tracy also discusses the tension, in intellectual discussion, between a desire to appear natural and the desirability of a linear, organized, coherent presentation (47-49). While facilitators in our classes prepared for the discussions they led, usually referring to the posted questions, groups found it difficult to stay on a single topic, and coherence was difficult to achieve, as Faigley had also noted. As De Vaney has pointed out, there were generally at least two threads of conversation developing concurrently (personal communication), and the minute-by-minute work in keeping up with what was appearing on the screen while contributing to the group effort left little time for students to reflect. It was very difficult to refer back to the text being discussed. The lack of reflection was most evident when the professor called for summaries from the group at the end of each discussion. Most students did not respond, and those who attempted to summarize the past forty minutes had little to say, although a number of valuable exchanges had taken place. As a result, many of the usual mechanisms for achieving a somewhat orderly, focused intellectual discussion were not operable, and other forms of discourse were called on to help students maintain their place in what was going on.

Students tended to move fairly fluidly between academic and more informal, conversational registers. This could partly be due to the fact that this format more closely resembled a discussion among equals: the professor was not physically present, and could not have dominated the discussion if she had chosen to (which she did not, usually staying in the background). Therefore, the line between the role of student and that of peer/friend was blurred. The context also varied for each participant: some sat in computer

labs at the university, while others used computers at their place of employment or at home. Students often mentioned the novelty of 'attending' class while their spouse made dinner or their cat or child demanded attention. This could also have contributed to the tension, not uncommon in educational discourse, between narrative and paradigmatic ways of speaking (Bruner). Often, when discussing the online experience, or when dealing with course issues of the Internet in educational practice, individuals would attempt to contextualize the subject under discussion with examples from their own experience. While this is a natural thing to do in conversational discourse, academic discourse privileges generalization, abstraction and argument. Students who relied on this narrative reference as their contribution to the conversation risked not being taken as seriously as those who referred to relevant theory or the class texts, according to the conventions of graduate academic discourse.

While the context of this text-production and the metaphors students usually used to refer to it frame it as a class 'discussion,' it is also a production of written text. The written forms closest to what was produced are those found on e-mail and in chat rooms, two other forms of disposable, rapidly-produced and consumed text with which most participants had some experience (while few had spent time in chat rooms before taking the class, everyone had experience with e-mail). These conventions made it easier to quickly produce text to submit to the group: the telegraphic language of many messages (e.g., Clark's comments in Figure 2), the use of sentence fragments, the lack of consistent capitalization and punctuation, kept the conversation going. Rather than crafting expressive prose to get across subtleties of tone and emotion, and unable to hear or see each other, participants quickly learned the use of emoticons and other shortcuts conventional to e-mail (Hawisher and Moran). However, this was not assumed without a certain tension: corrections of misspelled words and apologies for errors recurred throughout the semester, revealing the extent to which the expectation that standard English should prevail in an academic environment was still felt to be operating.

As a result, these texts are a mixture of academic and informal registers, spoken and written forms. Students differed in their mixtures of conventions and forms, thus giving clues to which cultural models they were operating under, or which previous knowledges, skills and practices they were drawing on to negotiate this new form. The stories of two students, in particular, illustrate two different approaches and their consequences.

Leah

Leah is an elementary school teacher who was just beginning a master's degree in educational technology at the time she took this class. This was her second class in the program. She taught full time and took classes after the normal public school hours. She had very little background in technology but had recently purchased an iMac as her first computer at home. In her teaching she involved her students in much hands-on, project-based work. Leah worked hard to understand the technology and put a great deal of time and effort into her technology learning, but she cannot be described as a technology enthusiast. Rather, her approach to educational technology seemed to be a pragmatic one in response to the changing environment of teaching, given the infusion of new educational technologies into the schools.

Many of Leah's comments were based on stories from her own personal experience. Here is a sampling:

"we have contracts at our school that parents have to sign saying that they agree to our school rules." (Sept. 16, 1998)

"I'm not saying that we should be overly restrictive. But if my kids are on the internet in the classroom, I want to make sure they're not on an x-rated site that isn't appropriate for children." (Sept. 16, 1998)

"My husband's school does block scheduling." (Oct. 21, 1998)

"But I can tell if someone is lying to me face to face most of the time. I can look at his or her body language." (Nov. 11, 1998)

She consistently used her personal experience to support her own and others' opinions. This is an informal style that is not well respected in the graduate academy (Tracy). But it is a style familiar in teacher lounges when people share their personal experiences when they discuss school policy and teaching. And it is also characteristic of pre-service teacher preparation programs which use personal experience as pedagogical tools. For this reason, we believe that Leah's cultural model is drawn from her experiences as a teacher and her previous experience with academia: personal experience is used to support and to reflect on the pedagogical situation. Within this model, for Leah, human interactions are pri-

mary, and personal involvement must underpin communication with others.

There is evidence that Leah avoids or is uncomfortable with an academic register. Here is an example, taken from the third online discussion of the semester, where Gary attempts to keep the discussion within an academic register whereas Leah wants to relate it to her experiences in the classroom:

Gary: To follow up on Scarlet's question: What do you think Dewey would say?

Leah: kids' access to adult material!

Bob: gary, to the need of restrictions?

Bob: or what?

Jan: Leah absolutely!

Gary: Yes, Bob, to the need for restrictions

Molly: Considering his mention of social control on p.100, and what he says on 101 . . .

Gary: Yes, Leah, I guess I was thinking, for awhile, just in terms of adult participation in Democracy.

Molly: about "each has to refer this own action to that of others, and to consider the aciton of others to give oint and direction to his own . . .

Leah: I keep thinking of these issues in terms of kids.

Molly: I think Dewey expects a certain voluntary civility on the net which does not seem to exist.

Clark: i disagree Molly

Clark: there are shady areas . . .

Clark: but it does try to self regulate

Gary: (Yes, Leah, and I didn't mean to ignore such a huge issue)

Scarlet: how does it self-regulate, give me an example

Molly: I think Dewey would be horrified — his ideas of "regulation" and ours assume different standards.

Leah: Gary: I understand.

Gary took great pains to recognize Leah's comments while dismissing them as not central to the (academic) point. In this exam-

ple Gary is modeling an academic discourse. Leah, being a new graduate student, was unfamiliar with the discourse. Within a conversational discourse such a comment would be accepted. Here, Gary is asking her to interpret Dewey as separate from her personal experience.

Other students also seemed to dismiss the personal, further evidence that the main cultural model of the online class was an academic seminar. Here is an example from Nov. 18, 1998, where a doctoral student (Shelly) lamented the use of worksheets in the classroom:

Shelly: how about the ditto sheets and workbooks that most of the students "learn" with each day—are those essential components too?

Raina: why would they be?

Clark: can not computers heighten the physical—is it an either or proposition?

Leah: Shelly Most of the students? Not mine.

Clark: i think we do a lot of things in the name of learning that are not physical

Shelly: I don't think that they are, but we are kidding ourselves if we think that every child is having a completely physical learning experience . . .

Clark: thanks, shelly

Shelly: the fact is that in many classrooms that is what is going on

Leah: I disagree.

What is interesting is that Leah's comments were totally ignored. Even her unequivocal disagreement (something she rarely did) got no response. Here Leah points out that, in her experience, worksheets are not common. But that evidence is not accepted as academic.

The questions that Leah posted when it was her turn to facilitate support her emphasis on the personal. For example, this question: "Technology mediates presence. Compare this idea with your experiences in the class and in cyberspace in general." (Nov 11, 1998). Very few students responded. She then added: "Okay. We'll be done in five minutes at this rate. Sorry about the easy question." We interpret this first, as an indication that the other students recognize that personal experience is not what an academic

discussion is really about, and second, that Leah sensed this and apologized for the question not being academic enough. What is interesting is that Gary (the TA) again stepped in and took over in an academic register. He wrote: "And Leah, the question was a good one, I didn't mean to imply that it wasn't. It's just that there is a lot to the notion of 'mediation'." Gary attempted to return control to Leah but it was in an academic register. He wrote: "Bob asked me what I meant by mediate and I directed it to you, to hopefully explain what Argyle and Shields mean by mediate . . . I'm not sure how A and S are constructing 'mediate'." Leah replied not by referring to the reading but to how she understood the term mediate: "Mediate in the sense that technology allows us to interact in ways when we are not face to face."

Leah was new to the medium but her participation early (and some of her comments) indicate that she takes well to it. Her participation early in the semester was about what would be expected in terms of the number of lines per person if each contributed equally. But as the semester progressed her participation fell. Her participation early on was as an active participant with a joking, playful attitude. For instance, during the first online discussion she wrote: "schools have more in loco parentis duties now!" and was replied to by another student (also a teacher) who wrote: "schools are still held responsible for overseeing student behavior . . . and will be sued when those duties aren't met." After several intervening comments from others she replied "many parents are not taking responsibility for some of their parental duties, and that leaves it up to the teachers. It makes us loco sometimes!"

But late in the semester her participation not only was more rare it was also different. In the following example, she was almost defensive about how teachers view technology, resisting attempts to have others characterize technology use in terms of an academic problematic. The discussion had turned to the possibility that technology will replace the teacher. A doctoral student had made the point that computers are often seen as a panacea. Leah replied: "I don't know of any teachers who see them as a panacea." The same doctoral student answered: "ed theorists and reformers do." And another student wrote, "actually teachers are somewhat afraid of technology." Leah then replied, "I think we see computers as a tool that is useful in certain situations." Interestingly, the student immediately offered, "sorry about the generalization," but then continues with, "I think most people agree there is something lacking in educ . . . or perhaps they don't really know how to solve it." To which Leah replied, "Or they look for easy answers and even

point fingers sometimes.” Leah is clearly aligned here against academic researchers who tend to blame teachers for the failure of technology implementation. But, as we have seen, by this point in the semester the academic discourse has become dominant: thus, Leah finds herself aligned against the more academically oriented students who are being socialized into educational research.

We interpret her fall in participation and her increasing marginalization as the semester progressed as an inability, being a new graduate student, to sustain an academic seminar discourse. Her lowest participation rates were in the middle of the semester in a discussion of a difficult theoretical reading (only 4 contributions out of 166 total contributions) and at the end of the semester (only 5 contributions out of 142 total) when the academic discourse of the class was well established.

Leah’s main strength was community building, a process that was facilitated by her references to narratives of her personal experiences. Early on, she showed facility with managing multiple threads in the online discussion, responding personally to each comment addressed to her. She was also the one to start or continue a series of jokes or puns, also an aspect of community building (Tracy). In Figure 1 we can witness Leah’s continual attempt to emphasize the value of face-to-face human interaction over technology-mediated interaction. In utterance 4 we can see that she considers that mediation with technology is only a substitute when human interaction is not possible. She emphasizes in utterance 9 and utterance 19 (and in data not reproduced here) that she relies on knowing people face-to-face to feel comfortable in this environment. In utterance 32 she directly relates her own reliance on close, personal interactions to the comfort level she feels interacting in any class. Interestingly, these comments come more than ten weeks into the semester and after four face-to-face class meetings.

Leah’s cultural model of online interaction seems to be drawn from her experience and training as a teacher. Her model of interaction was dialogic and personal. In such a model, ‘academic’ sharing involves relating personal stories of classroom practice and interactions with parents and schools officials. School and technology policy is interpreted through the lens of classroom practice and practitioner narratives.

Clark

Clark, in his mid-twenties, was a first-year Ph.D. student in educational technology. He earned his Masters at a southwestern uni-

versity after teaching English for five years in a rural district. He is a cyborg, fluent in computer-mediated communication, someone who keeps up with changes in technology and is very playful in its use. His style online is quite distinctive, riddled with emoticons and quick allusions to popular culture.

Clark was an active participant in the class, the short, staccato bursts of text typical of his style sometimes seemed to dominate the exchange early in the semester. His expertise was evident in both his contribution of information and in his style. He was often called upon to share his knowledge of cyberspace: how news-groups function, how search engines choose number one, etc. His style, a stream of short messages (probably partially a reaction to the small buffer in First Class), seems more related to the chat room than the seminar room. From the first week, he used a telegraphic style reminiscent of chat and e-mail, rarely capitalizing except for shorthand (*LOL* or BTW) or emphasis. Punctuation was rare: he never used periods, but occasionally used questions marks and dashes. His facility was evident, and he easily handled three conversations at once: answering a question, checking meaning with another person, then making a joke, in quick succession.

He dropped frequently in and out of formal register, but a closer look reveals that he was definitely involved in academic discourse. His quick remarks were on topic. Clark generally asked questions to raise new issues or challenge the author's assumptions—what Tracy considers high status questions in contrast to requests for information. His offers were generally made in the form of a question, although they were taken up by others only a little more than half the time (one of the qualities of online class is that it is easy to overlook a tough question unless it is specifically addressed to an individual). Unlike a number of his classmates, he avoided the use of personal experience as examples, for the most part sticking to abstractions and factual information, as is usually considered appropriate for academic discourse (Tracy). However, he often expressed these in an informal, conversational style, and had his own ways of using narrative forms (see the kudzu example above). The following example illustrates how Clark shifted his style:

Clark: the problem is is that the interent is made up
of many seperate entities that have their own mores

Clark: universities, commercial sites, private individuals

Brian: but alt.sexy.bald.captains?

Shelly: the homolka issue?

Shelly: Brian, have something against baldness???

Clark: where were those sites located??

Brian: Not really, can you tell?

Clark: the holmolka story raises some interesting points

Prof: I'm stopping in—any questions?

Clark: whether i like something or not - if it is on the internet from norway, there's not a hecjuva lot i can do about it. (Sept. 16, 1998)

The use of first person in his final comment is interesting, as he is not one of those who generally believes that outside protection against the Internet is desirable: he seems to be putting himself into a position that belongs to someone else. His previous comments are in a more formal register. On the other hand, when asked specifically whether having class online had influenced his personal interactions, Clark begins by answering in the first person, but in succeeding remarks proceeds to distance himself from his own reactions:

Sue: yeah, but I guess I think its appropriate to include this class as VR . . . if it is, how do you think—do you think it has changed your interactions in the physical world?

Bob: hmmm . . . , i don't know

Bob: has it changed yours?

Raina: I've been teaching speech this semester anyway, so nonverbal cues and body language have been highlighted for me lateley.

Sue: In some ways I think so

Clark: i think it has for me Bob—much like any class in some ways

Sue: I think I might choose my words a bit more carefully in "real life" now

Clark: it is weird to not have those physical cues in communication

Raina: i agree

Sue: but has that had an effect on your real-life?

Clark: and it makes oyu aware of what you are "trying" to say. (Dec. 2, 1998)

By the end, he moves from first person to a more distant second, generalizing his personal experience as a story of what happens to a more universal 'you.'

While maintaining the distance considered proper to intellectual discussion, Clark was very active in what Tracy calls 'community-building' activities. He generally maintained contact with several people at once. This was particularly evident the week he facilitated the discussion of an article by Ann Balsamo (see fig. 2).

- 32) Clark: one has to understand that there is always the possibility that you won't meet your audience. . .
- 33) Sue: that is a rather constructivist viewpoint about the internet
- 34) Brian: No, an ideal design would circumvent the "true" perception?
- 35) Clark: right, what is ideal???
- 36) Clark: am I making sense Brian?? you've been in her class too - I am struggling here - it makes sense in the head, but not when I type
- 37) Clark: William
- 38) William: yep
- 39) Clark: you mentioned co-opting
- 40) Brian: You are right...the only thing is that we cannot prescribe conditions...that is the whole idea of accuracy.
- 41) Clark: see question 3
- 42) Clark: are there forms of resistance
- 43) Clark: phew, thanks Brian
- 44) Sue: so are we moving on to #3?
- 45) Clark: yes, Sue, let's
- 46) Brian: OK Clark, start us out.
- 47) Clark: We are assuming that the Internet does silence others?
- 48) Sue: Yes, I think these languages silence/exclude others...do I think it is necessarily women? —no. They exclude a lot more people than that, men and women alike
- 49) Clark: what about chat rooms, online classes?
- 50) Clark: we talked about this earlier this year - can a person be sexually harassed in a chat
- 51) Clark: Sue - who might be excluded??
- 52) Sue: I don't remember, what did we decide?
- 53) Clark: you know i am not sure

Figure 2

His percentage of statements went up, with part of the increase due to his attempts to get the discussion started on his questions (although once people had begun, others influenced the direction of the discussion), part due to his tendency to check with one person who tended to drop out of the conversation for periods of time. The excerpt stands in contrast to most discussions led by others in that he is so much in control of his discussion section, continually a part of the conversation, addressing individuals. Much of the current literature on the liberatory potential of CMC takes the stand that a teacher cannot dominate an online chat: however, several examples from these semesters would indicate that more observation of various styles of online interaction may weaken that claim.

As the semester went on, Clark's style remained the same but his advantage decreased, perhaps as others became quicker at the keyboard. In later exchanges, he sometimes seemed at a disadvantage with certain experienced graduate students whose longer, more developed comments carried more weight in intellectual discussion. His participation never dropped as low as Leah's, but he participated less often in the final couple of sessions online making perhaps two-thirds as many offers as he had earlier in the semester, in spite of the fact that others took him up on his offers at about the same level. Clark had less of an impact later in the semester, although he still remained involved, but it is unclear whether this is because others became more comfortable with the medium, taking their share of the discussion, or because he withdrew from that level of involvement.

While Clark sees the purpose of an online graduate seminar as the discussion of ideas, and does not let himself be drawn into the personal, his style of interaction reveals his assumption that a class online should more closely approximate other online environments he is familiar with. Chat rooms or e-mail emphasize quickness of response over reflection, and multiple contacts over unity and coherence. His cultural model of how such a class should operate appears to be something like a chat dedicated to intellectual aims. He presented the group with a hybrid form, one drawing on his extensive experience with online communications. When others did not pick up on his style, and another form became dominant, he did not change his style, but seemed to pull back from full involvement in the class.

Leah, as was said above, sees the graduate seminar as being more like classes she has experienced before, perhaps like preservice training, where real-life connections were more important, or like interactions in her elementary school, where personal narra-

tives are accepted as corroboration. Neither Clark's nor Leah's model was dominant in this environment, where more experienced doctoral students worked to make interactions more like their traditional model of the graduate seminar. While the TA sometimes assisted in moving the class in this direction, the professor was careful to let the students shape the discussion; however, toward the end of the semester, when she led discussion of a new reading, it became clear that this is a model she was comfortable with, as well.

Conclusions

We have avoided references to this new technology as having agency, the ability to unilaterally change culture. Rather, cultural forms exist in society and every interaction and communication draws upon these forms for meaning (Gee; De Vaney, "Can and Need"). People come to the new form with expectations drawn from previous cultural forms and the new form both mirrors and shapes subsequent cultural developments (De Vaney, "Reading the Ads"). We have seen these cultural processes at work in our case studies here. People make use of the new medium in ways that draw from their previous experiences with e-mail, writing, and face-to-face interactions. In the process they modify their styles to work within the constraints of the new medium, a process that can give rise to new cultural forms. However, older cultural forms and attitudes can dominate the new medium, as Hawisher and Sullivan point out in their account of how sexual stereotypes persist in various forms of online communication.

Contrary to the assumptions of the equalization phenomenon, we have seen a student be marginalized online because she has not yet mastered an academic discourse, and another student's attempt to construct a hybrid form fail to be adopted by his fellow students. There are also several points during the semester when one person will successfully dominate the discussion for a time, although each time it is done in a different manner. It may be that earlier descriptions of online discussion as free environments beyond the control of the teacher, such as Faigley's, were the impressions of those new to the medium, when the dynamics of the interactions were unfamiliar. Also, they tended to be snapshot views of a few class periods; more narratives of discourse development over time might give us a better idea of how this process works. In online communication, just as in other contexts, we should not be surprised that status and other markers of power will

be salient, regardless of the absence of some of the more visible cues (Eldred and Hawisher). The ability to define the cultural model operating in the online situation is as powerful a way to gain power online as it is in 'real life' (Gee).

The majority of these students came to this situation holding the cultural model of the graduate seminar, and, although they borrowed elements from chat and e-mail, it was with the purpose of approximating a face-to-face seminar as closely as possible. Only Clark, one of the younger students, and one with a great deal of online experience, offered a model which took advantage of both the limitations (the small buffer) and the opportunities (quickness of response) of the new medium. This is not that surprising. Most of these students are what Lankshear and Knobel call 'immigrants' to digital communication, over twenty-five years of age and latecomers to the technology, as opposed to 'natives,' the young people who grew up playing with computers and video games. Like most immigrants, they work to make this new 'home' as much like their own as possible, acting on familiar cultural models of face-to-face intellectual discussion (Tracy). It is as though they wished to make the technology as transparent as possible. They spoke explicitly about the differences between online and face-to-face communication early in the semester, and added emoticons to raise their comfort level. However, impacts on the intellectual level of discussion, such as the difficulties in referring to the text and in summarizing, were not directly addressed. Towards the end of each semester, students' willingness to play with new metaphors exploring the qualities of the online experience was perhaps an indication of possibilities for future change, but there was little change in their practice.

What are the implications of our results for further study of online environments given the increasing availability of more sophisticated technologies of interaction such as audio and video? Previous research based on the assumption that text-based interaction is an impoverished context suggests that these new technologies will move us toward an environment more and more like face-to-face interaction. Our results suggest the dangers of making claims prematurely. A discourse view considers that the technology is not simply a medium that transmits the message more or less faithfully but rather constrains and structures that message in subtle ways, depending on the users' goals and ways of operating. As new software is developed, and new online environments are made available for use in the classroom, careful study of their appropriation and use by real groups over time as they act, react and interact

should be done before claims are made of their liberatory potential. Any medium presents both opportunities for and impediments to democracy, but these are realized only in their situated use.

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VI

Views of Techno-Identity and Virtual Spaces

Web Politics and Internet Resistance