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Exploring New Roles for Technology in a Law School Seminar

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Word Count: 5,885

S-511: Conducting Qualitative Research
Prof. Ellie Drago-Severson
May 14, 1999

Prologue

This study examines some of the consequences for teaching and learning of combining the use of "cyberspace"--email and Web pages--with "realspace"¹ class meetings for a seminar at Harvard Law School in Cambridge, Massachusetts. Course Web sites, a collection of pages for a particular course on the Internet's World Wide Web, are now commonplace throughout colleges and universities. Electronic syllabi, on-line course descriptions, class lists, discussion areas and digital libraries have now become the standard elements of commercial "courseware" packages, software sold to universities and colleges to facilitate the creation of course web pages. Yet, the instructor for this course, Prof. Jonathan Zittrain, had a more ambitious agenda than to replicate in electronic form what already existed on paper or in class. He sought, in his words, to give, "a sense to what you could do with computers and networked computers that is not possible without them . . ." (Jonathan, #2, p. 16)

In addition to his position as a lecturer on the faculty of Harvard Law School, Jonathan also serves as Executive Director of the school's Berkman Center for Internet and Society. An overview of the Center describes it as "a research program founded to explore cyberspace, share in its study, and help pioneer its development"(Berkman Center, 1998, p.1). The Center's literature labels this "entrepreneurial research". The Center also serves as sponsor of several law school courses related to the Internet, among them the Internet and Society '98 or IS98 seminar that is the focus of this study. Jonathan points to the Center's "entrepreneurial research" agenda as a principal impetus for his experimentation with what a student of his terms "non-traditional" ways of integrating on-line and in class teaching and learning (personal communication).

Among those non-traditional ways is his collaboration to design and manage the seminar's web site with two students enrolled in the course, Alex Macgillivray and Wendy Seltzer.² This is one of the ways Jonathan sought to create what he calls an appropriate "architecture" (Jonathan, #2, p. 19) for the course that seemed to blur the boundaries between teacher and taught, expert and novice, insider and outsider, classroom and real world. In this study, I show some of the ways in which Jonathan wanted new technology not only to be the object of study for his seminar, but also a keystone in the structures that introduced the possibility for greater or different understanding of the subject matter. He asks rhetorically, "Is there something about cyberspace that makes it different from which you have to study it differently?" (Jonathan, #1, p. 12). This study explores one attempt at a different mode of studying.

Introduction

Research Question

The research question I bring to Jonathan's on-line experiments in his class is this: How do the teacher and the students who work with him come to define the identity and role of technology in a law school seminar that combines the use of email and Web pages with class meetings? I arrived at this question after my initial round of interviews and observations last semester for S510, which took a broad look at how Jonathan, Alex and Wendy understood the role of technology in the course.

Focus on Students

For S511 this semester, I expanded my pool of participants to include students in the course other than Alex and Wendy, the student-developers. Among those I interviewed or met in a focus group discussion were:³

- "Annie," a graduate student studying educational technology at a school of education in the Boston-area who cross-registered to attend IS98. Early in the Fall semester, Annie decided to both participate in IS98 and make the use of the course Web site the object of her own independent study.
- "Kent," a second-year Law School student who worked on a journal produced by students at Harvard that examined issues around the law and technology.
- "Beth," a second-year law student who joined the Berkman Center as a research assistant at the end of the seminar.
- "Andrew," a second-year student who also became a research assistant at the Berkman Center after the seminar.

- "Peter," a second-year law student who made a conscious decision to stay away from both the Berkman Center and the technology journal because, as he puts it, ". . . I'm rather terrified of just being a servant of other people's agendas when I can be a servant of my own" (Focus Group, p. 29).

My Focus

Like all of these students but Peter, I also have multiple layers of commitments to technology. I work within a graduate, professional school as a developer of curriculum materials that rely on new media. This work has led me to want to understand whether technology can truly foster new perspectives on learning, or whether it is serving less as a midwife to new visions and more as a different conduit for existing ones. I approach my interest in research with the hope of understanding the process of adaptation--the dance--that occurs among teacher, students, and technology as each grapples with new possibilities. How is use of this technology shaped by pre-existing beliefs and practices? What is the process by which new uses come to be revealed? What prevents or augments that revelation?

The "Rotisserie"

In this study, I am particularly interested in looking at the ways in which teacher and students came to understand the role of one particular facet of the course web site. This was an on-line forum for discussion known as the "rotisserie," which was integrated into the web site for the course. According to all participants, the "rotisserie"⁴ allowed for a more personal exchange among students than other approaches to on-line discussion that were also asynchronous, that is the back-and-forth of exchange occurred with a lag between responses.⁵ I describe the functioning of the "rotisserie" and its email complement, the "Bot", in Appendix G.

Data Collection

Methods

Interviews. I conducted four interviews with Jonathan in his office in the Berkman Center at Harvard Law School on: 1) December 9, 1998 (approximately 60 minutes), 2) January 5, 1999 (approximately 45 minutes), 3) March 31, 1999 (28 minutes), and 4) April 27, 1999 (35 minutes).

Jonathan suggested I speak Alex and Wendy because of their role in developing the software and with Annie because of her interest in studying its use. I spoke for approximately an hour with Alex on December 12, 1999, and Wendy for the same amount of time on December 11, 1999, both in Pound Hall 511, a conference room just outside the Berkman Center offices. I interviewed Annie on March 15, 1999 for 80 minutes in a small conference room at her school.

Focus group. I solicited focus group participants via email. Jonathan sent out a message I composed appealing for help to an email list of all students who had signed-in on the course Web site⁶, which brought two responses. I then followed up with a personal email to the 38 second- and third-year Harvard Law School students who were officially registered in the course. I did this because I wanted to limit the conversation to the experience of Law School students in the hopes of getting more focused data. Four additional responses came back from this mailing, with two students offering help, but unable to meet at the time I had specified. On the morning of the day the focus group, I sent out another mailing to the entire list of students, fearing that some among the committed four were likely not to attend. Five people eventually appeared when I held the focus group on April 15, 1999 in Pound Hall on the Law School campus--Beth, Kent, Peter, Andrew and Wendy, the student-developer, whose appearance in the focus group I discuss later in the Validity section of this paper.

Observations. I conducted two, two-hour observations of the final two class meetings of IS98 in December (see Appendix C). I did not use these observations within my contextual analysis but used them instead as the means to pursue additional information from Annie, Jonathan, and those in the focus group.

Documents. I reviewed a summary of the Berkman Center's projects (Berkman Center, 1998), on-line documents available from the Berkman Center web site (Berkman Center [On-line]), informal course evaluations conducted by Jonathan, and Annie's term paper from her independent study. As with my observations, I did not use these in my analysis but used them instead as a means of developing my interview guides.

Analysis

My primary means of analysis for Jonathan's and Annie's data was to use open coding by word and sentence for each transcript to generate a list of 65 codes (see Appendix F). As I coded, I wrote a stream of analytic memos, and I also recorded general observations and musings in my daybook throughout the semester (see Appendix D).

Much of my assignment work in S511 this semester focused on Annie, and I feel her data was the most fully plumbed in my analysis, particularly through the creation of her profile (see Appendix E).

The analytic memos, daybook entries and Annie's profile provided a stepping-back that led me to focus on three different roles for technology in the class, that of assimilator to the issues and ideas of the course, of facilitator of a sense of cohesion among class members on-line, and of mediator between the class and the outside world. I also had a catch-all category holding codes highlighting specific attributes of the technology used in the course. Appendix F contains

my list of codes and a working draft of a matrix of these significant themes with corresponding categories.

After I had developed the matrix and the profile of Annie, I then read the focus group transcript⁷ and reread the other transcripts with these themes in mind, while continuing to trace my thoughts through analytic memos. In my analysis of the focus group data, I chose to concentrate on the lines of thinking of individual participants rather than focusing on themes running through the discussion.

Findings

I have whittled my seven interviews, two observations and one focus group down to two major findings for this paper. First, I focus on how one student, Annie, moved from feeling "nervous", as she put it, about her ability to participate in the class to a sense of capability with and mastery over the issues the course addressed. I call this her process of assimilation [italics added],⁸ and I assert that the "rotisserie" played a crucial role in helping Annie grapple with the issues the course addressed. The second finding I discuss looks at the emic concept of "community," one raised by three of the members of the focus group and two of the three interviewees. I claim that the course technology, again focusing on the "rotisserie", was essential to the facilitation [italics added] of "community" among class members. Finally, in the summary of this section, I begin to explore how in this course these twin roles of technology, of assimilation and facilitation, might act in concert and appear to offer the possibility of yet a third role, that of the mediation [italics added] among communities, a role the course instructor, Jonathan, hopes to explore in future uses of the "rotisserie".

Annie's Story: From the Outside In

My conversations with Annie, augmented by what I learned of other students' experiences in the focus group, led me to believe that technology acted for Annie as an agent of assimilation. Specifically, the course web site--especially the "rotisserie"--allowed her to become a part of the course on her own terms and begin to explore the subject of the course in a way that, at first, made her feel comfortable, and eventually led to her "taking control," as Annie said, of her chosen topic within the themes the course offered. I am going to first describe Annie's experience of entering the "realspace" classroom, and then compare this process with Annie's exploration of the on-line component of the course.

Annie came to the course as an outsider in search, as she describes, of breadth. As I mentioned in introducing Annie, she is a graduate student at a school of education with a special interest in technology. She recounts in her conversation with me that a description of the course she found on-line appealed to her because "[the course] was going to be looking at broader issues related to technology than just education" (Annie, p. 2). At the time, she says, she knew nothing of the professor, nor of the Berkman Center, nor that the course was experimenting with new uses of technology (Annie, p. 2).

In my view, Annie is looking at her time in graduate school as a way to expand her horizons beyond her given discipline, and in so doing, begin to understand the field of technology from a variety of different perspectives. Also, I assume that her lack of familiarity with the Law School and the Berkman Center meant that she had few preconceptions of what she would find or how she would find it.

She did, however, have ideas about Harvard Law School and the standards of performance to which she would be held in the classroom. She recalls initially feeling "nervous"

because she perceived her classmates as "really smart law school people" (p. 3). She worried about her ability to tackle the reading and "understand it just as well as anyone else" (p. 3). She says, "I felt I didn't have proper training to sort of pick out what I was really supposed to be picking out in terms of importance" (p.4-5).

Through these words, Annie seems to be telling me about her fears of being incapable of engaging the other students and the material in a way that will bring her to the broader view of issues she hopes to find in the course.

Annie linked these feelings of incapacity and discomfort with a sense of being "alert", a word she used five times during our conversation. Yet, the word "alert" also carried many positive connotations for Annie, that of being "stimulated by the conversation" (p. 2) and of being in "a live, exciting place" (p. 3).

I have taken a freeze-frame above of Annie's views of her initial entry into the classroom. I want these observations to serve as backdrop to my next focus, that of her initial contact with the "rotisserie."

None of the words Annie uses to describe her initial experience in class appear in her description of her first experiences with the Web site built for the course. Rather than "alert", she uses words like "novel idea," which came up six times in our conversation, and "comfortable," which appeared eight times. Annie describes that her integration into the on-line component of the class was immediate. She registered on the course web site even before she had received official confirmation of her cross-registration in the course from the Law School. She then received an email from the "Bot," the automated email process described in Appendix G.

Annie contrasts her feelings about this kind of exchange with her initial feelings of being in a class made up mostly of Law School students: "(W)hile I was feeling a little uncomfortable

in class, in the physical environment, feeling sort of insecure there, on-line . . . the anonymity . . . made me feel a lot more comfortable" (p. 6). But it was not only the "anonymity", as Annie goes on to describe, "I felt like part of the class on-line because the way the courseware was architected" (p. 7).

I relate Annie's feelings of being "comfortable" to her ability to participate in a discussion on an equal footing with other class members. After all, it was precisely Annie's "anonymity" in the classroom--her lack of identity as a Law School student--that seemed to cause her to feel "unsettled" and "out of place." She appears to have found her "place" so readily on-line because she was one student facing two other students each week--one who would respond to her answer and another to whose answer she would respond--not because she was one student facing a room filled with others. This is the way, as she puts it, the software was designed, which made her feel "part of the class on-line" (p. 7).

Annie finds the idea of this kind of exchange "novel," a sentiment that those in the focus group also share in terms such as "entirely unusual" (Group, p. 6). The element of that "novelty" that Annie found particularly intriguing was the shift in focus prompted by the software away from the professor as the source of knowledge and towards her fellow students:

. . . that was something right away I thought, "Wow, so [Jonathan's] not going to read my responses but my colleagues will!" And it was the idea that I even had colleagues was something new for me. And also that I had an audience. Because often professors ask students to write, say, reflection papers, but they're for [the student's] eyes only. Or maybe at the end of the semester for my professor's eyes. But in this case, I was responsible for doing reading and [then] writing [a] response for which I was going to have an audience every single week. (p. 9)

I view this passage as evidence of how the software stood Annie's original construction of her fellow students on its head. What had seemed a somewhat daunting sea aspiring litigators was fashioned on-line into a ready audience for her ideas. Instead of being in competition with

other students to make her "place" in the class, she was collaborating with them to fashion that "place" together.

I return to the passage above in the following section to understand more about the importance of "collegiality" to Annie and other students in the course. For the moment, I want to take the final step on Annie's path of assimilation, as she sees herself moving towards competence around the issues addressed by the course.

Annie emphasizes that the responsibility of answering to her new-found "colleagues" prompted her to "think through the issues more carefully" (p. 10). Annie describes that she felt "really comfortable pursuing my own interests in relation to the class" (p. 5) one month into the course when Jonathan prompted students to begin to define the topic of their final paper. She adds, "I got really into the final paper and I really felt like I was in control of that assignment. Like, I knew what I wanted to research, I was excited about what I was researching. I felt capable of doing the research and writing a well thought-out paper . . ." (p. 5).

I view this as a demonstration of the way Annie's sense of "comfort" shifted from a focus on herself in relation to other students and the instructor to a view of the fit of her ideas and thoughts with those held by her fellow classmates. In her use of "capable" she expresses a sense of mastery that she believes will carry her through the writing of the final paper. Her excitement now stems not from the heightened awareness of being "alert", but from the ideational stance she takes with regard to the issues of the course.

In the above discussion of Annie's process of assimilation in this course, I have tried to show how the "rotisserie" software played a role in helping Annie move from apprehension about her ability to participate in the class to a feeling of "comfort" with entering into dialogue with other students to a sense of competence with the ideas of the course. The latter allowed her

to craft a vision of how she could best make use of the course to reach new understandings of her chosen field, which was the goal of her seeking a course outside of her school in the first place. Of most interest to me is the basic shift that this use of technology fostered for Annie that moved the locus of challenge from potential competition with other students to collaboration in engaging what Annie termed the "really complex" issues of the course. In my mind, this aspect of assimilation would have been difficult to achieve without the software and certainly logistically impossible in the way the software allowed. I have to believe that this movement applied to other students in the course as well. Those in the focus group, for example, talked about their surprise with the respectful tenor of on-line discussion and how the course, in the words of Beth, "did a really good job of engaging me and finding commonalties with my other interests . . ." (Group, p. 29). This is but one aspect, albeit what I claim to be among the most salient ones, of my overarching research question that probes how teacher and students come to define a unique role for technology in this course.

The Sense of "Community"

In the following section, I want to take one step beyond the process of assimilation that I outlined for Annie in an effort to understand better just what Annie and others believed they were being assimilated into. I look closely at how participants construe the term "community," a word that four of the eight used explicitly and two others expressed in some way in relation to the ways in which they made sense of the role of technology in the course. I claim that "community" stands as a powerful concept for six of the participants. Moreover, it proves to be a durable container, one that allows both teacher and students (including Annie, the student-researcher) to hold different ideas of the kind of "community" that they, with the help of the course technology, believe they are building.

The following analysis explores the sense of "community" expressed by Jonathan. I then contrast those understandings of "community" with the ways in which Annie and the students in the focus group use the term. I first look at the places the students identified as lacking in "community" and then look to where they believe they have found it in this course.

Jonathan, as the Berkman Center's executive director, appears to pursue actively the ideals put forward by the Center in his development of the on-line component of IS98. In using the "rotisserie" to "build out into cyberspace", he is particularly interested in creating a larger sense of "community" for his students. He describes the correspondence of the Center's mission, which he terms one of "openness" to new experiments and ideas with the design of the "rotisserie":

(O)ne way that the idea of openness of the Berkman Center finds expression in the course is the notion of being able to sign up guests on the web site and have them participate substantively and productively in the exchanges going on. . . . And it shows the students then, to themselves as members of an intellectual community that thinks hard about the issues even when they don't have to because there's a grade hanging in the balance or something rather than students as students, as just we're in this hermetically-sealed classroom. (Jonathan, #2, p. 13)

In this passage, Jonathan talks of merging the two communities of the Center and the course to give the students a broader sense of how their struggles with what Annie termed "really complex issues" fits into the context of how people outside of the Law School wrestle with similar problems. He hopes to foster a wider "intellectual community" that debates the issues because of their compelling nature, not because an external incentive, that of a grade, forces participation. He contrasts this broad "intellectual community" with that of a "hermetically-sealed classroom" in which there is no possibility of being "exposed to different views" (Jonathan, #2, p. 17) and where (to risk mixing metaphors) ideas, like seeds, have no chance of germination because of the lack of "cross-fertilization" (Jonathan, #2, p. 16).

He is convinced, so he says, that the "most important feature" of the "rotisserie" will prove to be "its ability to link different classes and disparate locations together at different times" (Jonathan, #3, p. 2). This, in his thinking, is the way technology can help propel students out of the "hermetically-sealed classroom." He emphasizes that through the connections made by the "rotisserie", "You realize you're not learning in a vacuum" (Jonathan, #2, p. 15).

"Intellectual community" then for Jonathan as I understand it, is the universe of people with shared interests and equivalent enthusiasm for the "experience of starting [with] lots of questions and having them lead to more questions" (Jonathan, #1, p. 4). This on-line "intellectual community" stands in contrast to the "vacuum" of an "academic environment" where the "the professor is the only source of wisdom in the class" (Jonathan, #1, p. 9).

Annie and her fellow students who attended the focus group held their own view of "community", one that derived from their experience of being immersed in the class. It may be easiest to begin probing the students' sense of what "community" meant by looking at their examples of where "community" failed. For Annie, the time spent in the classroom did not foster "community":

I don't think that community existed. I mean it was a community in that we met every week for two hours in the same place at the same time. Um, We all had certain similar interests, obviously, but we weren't in communication with each other in a way that we even knew each other's names.⁹ (Annie, p. 11)

Annie, then, dismisses the primary dictionary definitions of "community"--either people in the same location or those sharing "similar interests". She appears to be looking for something more than just a sharing of "interests". In her view of classroom "community", "communication" is an important element, with the minimum threshold being some measure of familiarity--knowledge of "each other's names".

I found her characterization of the class curious. In the two class sessions that I observed (see Appendix C), the students appeared to have formed a unique and cohesive social order. There were special terms known only to the initiated, frequent references to events in the group's history, insider jokes, special rules, and a sense of consensus around certain topics. All these seemed to be hallmarks of "community" as I knew the term.

What was Anne's understanding? She says she "thought about how Jonathan was able to build community" (Annie, p. 9). The "community" she went on to describe from her reflections, quoted at length in the preceding section, appears to hold certain distinct values, especially respect for the "opinions" of one's peers, the importance of non-hierarchical relationships, a commitment to a view of others as "colleagues", and a readiness to share work in front of an audience of "colleagues". She draws a distinction between what she found to be a collegial atmosphere on-line and the classroom experience of "individual students coming into the class, sitting down, and listening to a lecture" (p. 12). Six out of the eight times Annie uses the word "community," she accompanies it with the words "colleagues" or "collegiality".

If "colleagues" are the building blocks of "community", what makes a "colleague"? The students in the focus group spent several minutes discussing why the tenor of the "rotisserie" discussion seemed so "collegial," a surprise to all.

Beth noted:

I found myself being very nice in [the "rotisserie" exchanges] 'though. Even the people I disagreed with, I, I had a really hard time just coming out and saying, "You're full of shit." And I'd always be like, "You know, I see your points and I can kind of see how this going, but you know, have you thought about this..." I never, not once did I just come out and say, "Uh-unh". Because, it was personal. You knew that there was a person behind it for me. (Group, p. 9)

Beth outlines an exchange in which she first acknowledged the validity of the other's point of view and then builds on that understanding to develop her own.

From Beth's reflection, I take her view of "collegiality" to mean not only respect for another's perspective but also a willingness to validate that point of view as ground for one's own deeper thinking. Moreover, I want to emphasize that she notes it was the intimate character of the exchange, knowing "that there was a person behind it," that reinforced the attitude of respect when approaching another's work.

Kent amplifies this point in the following passage:

But this way was just, you know, a one-on-one conversation. And I know when I mention this to people outside the law school, they are, you know, friends of mine from college, they say, "Wow, what a wonderful way to build community, to get to know your classmates, to talk about these things." I mean it's a forced, you know, go-sit-have-a-cup-of-coffee-talk-about-this-issue kind of a thing. (Group, p. 17)

As do Beth and Annie, Kent points to the key element of personal contact in the exchange. But then he goes on to identify a few particular qualities of that exchange, comparing it to an informal, yet serious, café chat. The elements I find most interesting in Kent's observation is that the on-line exchange has a colloquial feel to it and that it involves some sense of displacement; Kent *goes* [italics added] to have his cup of coffee on neutral ground, where neither he nor his friend feel compelled to prove each other wrong but try to understand how the other makes sense of his point.

Thus, the collegial "community" is one in which students have a particular kind of respectful, yet informal rapport; they work together in some way; they put "a lot of thought into" the work they perform, as Annie notes; and are willing to learn from each other.

This section has tried to plumb the ways in which the "rotisserie" acted as a facilitator of community. I have shown how two of the groups in this study--Jonathan and the students including the student-researcher, Annie--all held ideas about how technology helped connect the individuals of the class to a larger "community" in a way that was only possible on-line. In the

Validity section, I take up the issue of the lack of mention of "community" in my conversations with Alex and Wendy, the student developers.

I have contrasted the students' sense of a collegial "community" created among class members with Jonathan's views of an "intellectual community" which he hopes to forge from connections between his class and others beyond the walls of his classroom and, for that matter, Harvard Law. I believe the latter effort goes beyond the facilitation of "community" to a different role, that of mediation among communities, a concept to which I return in my Implications section below. I related Jonathan's efforts to forge "intellectual community" to the goals of the Berkman Center in an effort to put a larger frame around Jonathan's impetus to experiment with new technologies in the classroom. These perspectives on the unique ways the "rotisserie" assisted in the development of "community" in IS98 add one more path into my research question about the ways in which students and teacher came to define the role of technology in this class.

Validity

Descriptive. The only interviews I did not transcribe myself were my third and fourth conversations with Jonathan this semester (March 31, 1999 and April 27, 1999) transcribed for me. With these transcripts in hand, I listened to the entire audiotape of each interview and corrected all mistakes and omissions. In all transcripts, I entered my field notes as observation notes, methodological notes and theoretical notes in each transcript.

Interpretation: The biggest hurdle to valid interpretation of the data from the focus group was the appearance of Wendy, the student-developer, in the session. I noticed at least one occasion when one of the other participants couched his critique of the course software because of her presence. About 15 minutes into the session, Peter turned to Wendy to say, " I'm sorry

Wendy to say this, but, evil Bot was user-friendly, but buggy." The group seemed to be aware of her position, and she appeared to me to be taking more of an observational stance than that of an active participant. Nonetheless, I decided to use the data because her presence seemed more of an annoyance to me than a barrier to frank discussion among those in the group. I was not able to conduct member checks for this group due to lack of time. I did validate my understanding of Annie's process of assimilation and her views of "community" in a telephone conversation with Annie after she had had a chance to read her profile (see Appendix E). I also conducted a member check on a variety of topics with Jonathan as part of both my third and fourth interviews.

Theory. I am concerned that my own immersion in technology as my line of work has led me to overplay its role in this course. Two of the students in the focus group, for example, Kent and Beth, specifically highlight the importance of Jonathan's engagement with the subject matter and with the students as the facet of the course they found most compelling. Given this, was it Jonathan's enthusiasm for the "rotisserie" and other aspects of the on-line experience that fostered a sense of shared experience that students came to see as "community", rather than the facilitation of the software?

Also, neither of the student-developers specifically address the idea of the capacity of the "rotisserie" to craft "community" in the ways Jonathan and the other students use the term. Instead, both emphasize that the most important aspect of the software was that it prompted the students to complete their reading before class, which they had to do, at least to some extent, to compose a thoughtful response to Jonathan's weekly question. Had I the time, I would have asked them explicitly about other students' impressions of the class "community" and how they felt it fit with their experience.

I have tried to guard against overemphasizing technology through careful grounding of my interpretations in the experience of my participants and triangulation of my interpretations with a variety of sources of data. I would have also liked to have developed a relationship with a research partner, but my other commitments this semester did not allow for this.

Implications

I believe the two roles for technology I have chosen to highlight in this study, that of helping with Annie's process of assimilation and fostering new possibilities for "community" combine to begin to form a larger whole. As I have implied in my findings above, the process of assimilation for Annie preceded her entry into the "community" of colleagues. I have a hunch that the same would be true of other students in the course as well, but in different ways because of Annie's status as outsider. Moreover, for Annie, the process of assimilation into what might be called the space of ideas for this course was ever-expanding. Her experience participating in the IS98 "community" propelled her to try to create an on-line forum at her own school that might offer similar potential for "collegiality" and "community" in that setting (Annie, p. 17). As I mentioned in introducing the students of the focus group, three were research fellows at the Berkman Center and two among that group joined the Center because of their experience in the class. The on-line "community" of the class itself, however, dissipated at the close of the "realspace" class. Activity on an email list to which Jonathan subscribed all members of the class was minimal in the Spring of 1999, amounting to one or fewer email message a week, usually announcing particular events, not fostering exchange on controversial issues.¹⁰ The process of assimilation for Annie and those students who continued with work at the Berkman Center appears continuous, while the collegial "community" flourishes then fades or transforms into other groupings. Annie herself found it ironic that the "high-tech courseware" when "brought

into the classroom" lay the groundwork for the kind of "reading and writing and discussion and community" that got "back to the basics" of education¹¹ (Annie, p. 24).

Jonathan's use of technology in this course serves as a potent realization of the Berkman Center's mission to "explore the boundaries" of this new frontier. Jonathan terms this, "our grand experiment" when explaining his interest and that of the Center's in "watching the relationships that form or don't form thanks to the new incentives [technology] is creating . . ." (Jonathan, #2, Jonathan, #4, p. 21). Jonathan's interest in exploring the role of technology in what I describe as its third and yet-to-be-realized role as a mediator among communities offers abundant opportunity for "watching . . . relationships." Jonathan appears to be working towards the means of assimilating the transient collegial "community" of the classroom into what appears to be for him a more enduring "intellectual community" that spans accepted distinctions and uses the technology to make new connections across old borders.

As Jonathan moves forward with his plans to link classes via the "rotisserie" in next Fall's Internet and Society seminar, I look forward to exploring how learners beyond those closely associated with the Center take up the invitation to test the boundaries of this new space.

Looking Back

Participant selection. If I were to repeat this study, I would think more coherently about participant selection. I would want to include a broader range of class experience than just those that already had fluency with technology and, for the most part, worked closely with Jonathan.

Analytic skills. I feel I have begun to develop a solid foundation of analytic skills. My weak point, however, is in data reduction. The second-time around I would rely more heavily on narrative summaries, make greater use of matrices, and find more coherent ways of organizing my analytic memos.

References

Berkman Center for Internet and Society. (1998). 1998-99 Work in Progress. (Available from the Berkman Center for Internet and Society, Harvard Law School, Pound Hall 510, Cambridge, MA 02138).

Berkman Center for Internet and Society. The Berkman Center Mission [On-line]. Available: <http://cyber.law.harvard.edu/mission/>

Footnotes

1. Participants in the study used the term "realspace" when talking about the physical, as opposed to virtual, world.

2. Jonathan, Wendy and Alex explicitly asked that I use their real names in my research. All other names, as I note later, are pseudonymous.

3. I have used pseudonyms for all of the students with whom I spoke in the Spring. Jonathan, Alex, and Wendy chose to use their real names.

4. Jonathan adopted the term "rotisserie" for the software after the class had ended. Annie first introduced me to the term in my conversation with her. During the class, Jonathan and the student-developers used "round robin" or "question-answer-response" to label the software.

5. A telephone conversation would be a synchronous exchange; telephone tag, however, would be asynchronous.

6. As explained later for Annie, students who were taking the course for credit had to register with the Law School registrar and then sign-up or register on the course Web site to be included in the "rotisserie". Students and guests, such as me, who were not taking the course for credit were free to register on the course Web site to participate in the "rotisserie".

7. The focus group discussion was the last interview I transcribed, and it took me longer than I had anticipated, leaving not as much time for analysis as I had hoped.

8. Only after I had identified "assimilation" as a label to attach to my interpretation of Annie's experience did I learn from a colleague that the same label was one used by Jean Piaget to describe the first stage of learning. I have not yet had a chance to explore the correspondence between my use of the term and Piaget's.

9. In a subsequent telephone conversation with Annie after I had given her a draft of this section in the form of an analytic memo, she reported that her understanding of the in-class "community" of IS98 had changed as a result of her experience in one of her Spring semester courses. She said that she now believed a sense of community existed, even though people were not familiar with each other's names, a community based on "shared interests". But she said that this was separate from what she termed "real community", giving as an example what she had growing up in her home town. (Member check, May 5, 1999.)

10. I was a member of the list and thus received these broadcasts from Jonathan and a handful of others.

11. Annie's sense of an on-line community had helped her get a *college* education, in the most literal sense of the word. The Latin root of college, *collegium*, means "a body of colleagues" as the Oxford English Dictionary, Second edition notes.

Appendix B

Figure 1: The "Rotisserie" as used in IS98.

