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Terrence W. Epperson
The College of New Jersey, twepperson@outlook.com

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Toward a Critical Ethnography of Librarian-Supported Collaborative Learning

Terrence W. Epperson
Social Sciences Librarian
The College of New Jersey
Ewing, NJ 08628-0718

Critical ethnography rejects the notion that we can somehow innocently write descriptions of others, whether in the service of understanding or of intervention. Instead, both the terms "we" and "other" are opened to question.

Lucy Suchman "Making Work Visible" (1995:61)

Introduction

The emerging multidisciplinary field of computer-supported collaborative learning (CSCL) has the potential to address several theoretical, political, and praxis issues within academic librarianship. Conversely, librarians are uniquely situated to contribute to the ongoing development of CSCL, and the library is an ideal "place" for the development, implementation, and evaluation of collaborative learning strategies and systems. Unfortunately, there are few explicit linkages between academic librarianship and CSCL, although some practitioners in both fields share important interests and theoretical orientations.

I begin by presenting three pressing, interrelated challenges within library and information science (LIS). I then discuss how CSCL analyzes the social production of knowledge, emphasizing the distinction between cooperative and collaborative learning. Issues of shared concern between LIS and CSCL can best be addressed through ethnographic analysis of small group collaborative learning. Although ethnography is often seen as merely a research strategy or methodology, I advocate a critical, explicitly theoretical approach that challenges the often implicit and unacknowledged privileging of the individual over the social. This discussion of critical ethnography includes summary of recent debates within LIS about positivism and ethnographic research. I then briefly discuss four research strategies that have the potential to capture the social nature of learning. The issues related to individualism and community will be fundamental in any ethnographic analysis of collaborative learning. I use a recent popular ethnography of higher education to introduce the distinction between networked individualism and communities of practice and close with a discussion of our potential contributions to what I am tentatively calling librarian-supported collaborative learning.

The Challenges

Methodological Individualism

Birger Hjørland uses the term "methodological individualism" (MI) in his critiques of empiricism and positivism, related epistemologies that are both predicated on the primacy of the individual over the social (Hjørland 1997, 2004, 2005). First and foremost, MI is grounded in the often unstated and unexamined premise that "social explanations and descriptions should be based on facts about individuals." (1997:132). According to Hjørland, the MI paradigm within information science "is the point of view that conceives of knowledge as individual mental states rather than—or in opposition to—knowledge as a social or cultural process or as a cultural product." MI therefore studies the individual's "cognitive processes isolated from the world," and favors "psychological methods (interviews, thinking aloud, recording of behavioral patterns, etc.)." (1997:118).

While MI is a well-established concept in the philosophical literature, there is no commonly-recognized mirror concept. Hjørland therefore proposes the term "methodological collectivism" (MC) to describe a theoretical perspective that does not use the "individual's knowledge structure" as its starting point, but instead "looks at knowledge domains, disciplines, or other collective knowledge structures." (1997:118). Elsewhere, Hjørland highlights the importance of this distinction in LIS:

> Traditional views of users and relevance criteria tend to see the user as an isolated person in relation to the information being searched for (dualism). and the information as factual and true. More social and culturally oriented views see the user as part of different discourse communities and thus more or less influenced by different viewpoints, which always affect what information is sought. (2004:87).

Hjørland (1997:122) draws a conclusion that resonates with the fundamental premise of CSCL: "I therefore wish to emphasize that human concepts and human knowledge are a result of human cooperation and communication. The individual knowledge structures can only be understood based upon a group-oriented analysis of language users." (see also Dick 1991; Dick 1999; Weissinger 2005).

Customer-Oriented Librarianship

The increasing commoditization and "customer" orientation of librarianship has recently been challenged by a number of activist scholars (e.g. Budd 1997; Buschman 2003, 2005; Vaidhyanathan 2002). In *Dismantling the Public Sphere: Situating and Sustaining Librarianship in the Age of the New Public Philosophy,* Buschman elaborates upon Jürgen Habermas' concept of the democratic public sphere to demonstrate how "librarianship, in many important, thorough, latent, and concrete ways *embodies* and *enacts* the public sphere . . ." (2003:170). However, mainstream librarianship's embrace of the "new public philosophy" (which tends to reduce all social issues to economistic cost/benefit analyses) contributes to the undermining, and even dismantling, of the public sphere. A specific manifestation of the new public philosophy is viewing the library patron as a customer rather than as an explorer or a researcher. According to Hjørland:

> These perspectives will suggest very different research questions and research methods. The customer perspective will tend to be associated with best-seller statistics, empirical surveys of 'information needs and uses,' and related methods, while the enlightenment perspective tends to focus less on empirical studies of users' behavior and more on trends and qualities in the published literature and the

> production of information associated with historical and theoretical studies and hermeneutical interpretations. (2004:82).

Customer-driven librarianship presents information as a commodity and "abandons the notion of the library as a sharer of information and a place of creativity . . . where information's value does not erode because it is shared, and in fact, can sometimes increase in value." (Buschman 2003:120). As was the case with MI, the concept of library patron as customer privileges the individual over the social and undermines our role in sustaining and enhancing the democratic public sphere.

Working With Today's Faculty and Students

Librarianship, like other realms of education, must negotiate a delicate, dynamic balance. On one hand, dialogic education is predicated upon an understanding of, and engagement with, the learner's social context, needs, interests, and capabilities. On the other hand, education—and by extension librarianship—cannot be bound or limited by the marketplace expectations of the learner or patron. To quote Buschman and Warner's discussion of information literacy training, "The essence of education is learning what we do not know and complicating what we do. Taken together, these points call into question *whether the field is trying to educate students or play to their preconceptions* when we teach information literacy and design programs." (2005:16, italics added).

The "Millennials" who comprise the bulk of today's college-age population are, indeed, the generation "born with the chip," a reality with which many academic librarians are struggling to come to grips. (Abram 2003; Abram and Luther 2004; Maness 2006). One attempt by librarians to utilize the skills and expectations of college students is the use of instant messenger chat technology to provide real-time remote reference services (Abram 2004; Hirko 2005; Radford 2004). As librarians, we also need to be sensitive to changing curricular requirements and expectations and strive to understand and help shape evolving pedagogic theories and practices (Shanbhag 2006). For example, my institution is completing a thoroughgoing curriculum transformation that explicitly emphasizes collaborative learning skills:

> [Transformed course] assignments are designed to strengthen critical thinking skills such as analysis, integration, problem-solving, *collaboration* and the application of theory to practice. Additionally, students are expected to be engaged in *more collaborative efforts with other students* . (TCNJ 2004, emphasis added).

A related development of interest to LIS researchers and practitioners is the explicit formulation and nurturance of campus-based learning communities (Pedersen 2003; Wastawy, Uth, and Stewart 2004). However, we must also remember that collaborative learning and learning communities are becoming pervasive buzzwords in academe. For example, the 2006 *Horizon Report* manages to use "collaborative" or variations thereof 23 times in the space of less than 30 pages (New Media Consortium and EDUCAUSE Learning Initiative 2006). Student use and appreciation of ubiquitous information technology, together with increased curricular emphasis on collaborative learning, presents exciting opportunities and challenges for academic librarians. However, these developments should not be embraced uncritically and we must endeavor to differentiate genuine collaborative learning from the latest fad in the academic marketplace.

CSCL and the Social Production of Knowledge

By privileging the individual over the social, both MI and customer-driven librarianship threaten the democratizing, libratory potential of librarianship and severely constrict our research agenda and vision. While students' embrace of social computing technologies such as instant messaging, coupled with the growing emphasis on collaborative learning, provide potential avenues for addressing these issues, we still need to develop, implement, and evaluate specific theoretical and methodological strategies within LIS. The emerging field of CSCL combines a powerful (if implicit) theoretical challenge to MI with a range of replicable empirical research methodologies (Stahl 2004, 2006; Stahl, Koschmann, and Suthers 2006; Strijbos, Kirschner, and Martens 2004). CSCL researchers have two interrelated interests: designing information systems that scaffold collaborative learning activities and using computer technology to capture and analyze the collaborative learning process.

Rather than viewing learning as an activity that occurs within the "black box" of individual cognition, CSCL believes learning occurs through social interaction between individuals and therefore focuses on concepts like intersubjective learning and group cognition. From this perspective, learning "is not merely accomplished interactionally, but is actually *constituted* of the interactions between participants (Stahl, Koschmann, and Suthers 2006:418). Because knowledge can be constructed through collaborative interaction, it can be "made visible," providing "the methodological basis for empirical analysis by researchers. Researchers of collaborative learning are not restricted to indirect evidence of learning (such as pre- and post-test differences) because they can analyze and interpret the making of meaning as it unfolds in the data at the group level and in individual trajectories of utterances." (Stahl 2004:78). A variety of research methods can be employed, depending on the context and research agenda, ranging from video analysis of co-located group members (Koschmann, Stahl, and Zemel forthcoming) to the analysis of IM chat logs produced by learners who are geographically dispersed (Stahl 2006:431-469).

The field of CSCL evolved in part from the earlier work of researchers in computer supported cooperative work (CSCW). This distinction is important. On one hand, *cooperative* work typically involves the disaggregation of a task into discrete components which are then assigned to individual group members. The productions of the individual group members are then reassembled into a final product. The work of individuals is often performed asynchronously and the group members may be geographically dispersed. *Collaborative* learning, on the other hand, is less concerned with task disaggregation and reassembly and places greater emphasis on work performed by the group as a whole. The group members may be co-located or spatially dispersed, but there is a greater emphasis on synchronous ("real time") interaction. Through their interactions the members negotiate a shared understanding of the problem and potential solutions. This approach is especially well-suited to "wicked," non-routine, or ill-defined problems (Stahl 2006:155-176). Because of the importance of shared group understandings, genuinely collaborative work or learning requires explicit provisions for social interaction and community building among participants (Kreijns, Kirschner, and Jochems 2003). As discussed below, it is difficult to establish the conditions, incentives, and tasks appropriate for genuinely collaborative learning. Within critical pedagogy there is also a growing awareness that the terms cooperative and collaborative are not synonymous:

> Collaboration is an outgrowth of cooperation. However, collaboration requires knowledge creation and thus goes beyond the cooperative goals of task completion. . . . [C]ollaborative learning is student-focused because it emphasizes building consensus among students, while cooperative learning is teacher-centered because it encourages students to complete a given task where there is a right or wrong answer expected. (Murphy and Valdéz 2005).

CSCL should be of interest to librarians because of its emphasis on the irreducibly social aspects of learning and the development of a repertoire of tools and theories to scaffold

and document collaborative interaction, thereby making the learning process "visible" and "accountable." Within this realm, ethnographic research holds particular promise, but, as we will see, the meaning of "ethnography" is particularly contested within LIS, CSCL, and the social sciences generally.

Towards a *Critical* Ethnography

Although critical perspectives were already well-established in venues like *Critique of Anthropology* and *Dialectical Anthropology* , the publication in 1986 of *Writing Culture: The Poetics and Politics of Ethnography* (Clifford and Marcus 1986) was a watershed event in the mainstream development of explicitly critical approaches to the theory and practice of ethnography (Clifford and Marcus 1986). A particular target was the empiricist concept of the detached neutral observer:

> Because post-modern ethnography privileges 'discourse' over 'text,' it foregrounds dialogue as opposed to monologue, and emphasizes the cooperative and collaborative nature of the ethnographic situation in contrast to the ideology of the transcendental observer. In fact, it rejects the ideology of 'observer-observed,' there being nothing observed and no one who is the observer. There is instead the mutual, dialogical production of a discourse, of a story of sorts. (Tyler 1986:126)

For some, the critique advanced by *Writing Culture* resulted in a "paralysis of analysis," a retreat from the engaged practice of ethnography. Others, like Nancy Scheper-Hughes, responded to the critique through their praxis: "though empirical, our work need not be empiricist." Citing sociologist C. Wright Mills' admonition "Methodologists, get to work!" she continues, "I grow weary of these postmodernist critiques, and given the perilous times in which we and our subjects live, I am inclined toward a compromise that calls for the practice of a 'good enough' ethnography." (Scheper-Hughes 1992:23, 28).

These debates are reflected, somewhat obliquely and belatedly, within LIS. In 1997 Hjørland wrote: "The positivist paradigm is officially a bygone era, but as this book shows, this invisible theory of science still has a dominating position, among other reasons because it is a spontaneous or naive theory. Within information science there has yet been no real debate about positivism." While Hjørland's point about the continuing, pervasive influence of positivism within LIS is well taken, he perhaps underestimates the emerging critique. In 1995-98 *Library Quarterly* published an extended debate about the proper role of ethnography within LIS. In one corner we have cultural anthropologist Alan R. Sandstrom and librarian Pamela Effrein Sandstrom (Sandstrom and Sandstrom 1995, 1998, 1999) and, in the opposing corner, cultural anthropologist James M. Nyce and library and information management professor Nancy P. Thomas (Nyce and Thomas 1999; Thomas and Nyce 1998). Sandstrom and Sandstrom open the debate by proclaiming their allegiance to "scientific ethnography," explaining, "[w]hile ethnography exists in many guises, it is a practice firmly rooted in the positivist scientific tradition." (1995:161, 166). In a classic empiricist maneuver they reduce the fundamental theoretical issue to the realm of methodology: "Our definition of positivist science focuses on what working scientists do in their investigations of the natural and social world and seeks to avoid dragging along the philosophical baggage often attached to positivism." (1995:167). In response, Thomas and Nyce (1998:111) decry the proscribed "[re]turn to positivistic ethnography," warning LIS researchers that the Sandstroms' assertion that "either ethnographic research has positivistic roots or it is necessary to return to them are positions that most contemporary anthropologists would consider indefensible."

In addition, Thomas and Nyce (1998:111-112) decry the reduction of ethnography to the realm of methodology, to "some kind of tool or tool kit that the researcher has at his or her disposal to be mixed and matched as he or she sees fit. On the contrary, ethnography is a

methodology that not only comes with its own set of assumptions—its own epistemological baggage—but also carries within itself the possibility of revision and extension." Within CSCL there is, not surprisingly, little consensus about the status and practice of ethnography. For example (Suthers 2005) describes ethnography as an atheoretical "descriptive methodology," an approach that "is data-driven, seeking to discover theoretical categories in the data rather than impose them in the analysis."

I have selected four related theoretical strands that are found within CSCL. Although they differ in important respects, all four strategies challenge the observer/observed dichotomy; refuse to reduce social life to the actions of discrete individuals; and present practical, replicable research strategies. Any genuinely critical ethnographic study would undoubtedly include one or more of these approaches.

Critical Design Ethnography

Critical design ethnography (CDE) practitioners strive to combine the *Writing Culture* critique with the engaged, activist approach exemplified by Scheper-Hughes. In CDE,

> the goal is to empower groups and individuals, thereby facilitating social change. In contrast to traditional ethnographic research in which the researcher seeks primarily to understand (not change) the conditions of the community being studied, participatory action research assumes a *critical* stance, in which the researcher becomes a *change agent* who is collaboratively developing structures intended to critique and support the transformation of the communities being studied. (Barab et al. 2004:254-255, emphasis in original)

Recall that Stephen Tyler, in his contribution to *Writing Culture* , highlights "the cooperative and collaborative nature of the ethnographic situation," which results in the "the mutual, dialogical production of a discourse, of a story of sorts." (Tyler 1986:126). Well, CDE takes that approach even further. Collaboration between the ethnographers, instructional designers, and community stakeholders (parents, teachers, and students) results not only in the "dialogical production of a discourse" but also in the design, evaluation, and implementation of an instructional artifact, in this case Quest Atlantis, "an immersive context designed to engage children ages 9 to 12 in socially responsible dramatic play . . . whose storyline inspires in children a disposition toward social action." To complete Quests, students "participate in real-world, socially and academically meaningful activities," including environmental studies, interviews of community members, and development of action plans. (Barab et al. 2004:258-259).

Activity Theory

Activity theory arose from the work of Russian psychologist Lev Vygotsky (1896-1934), whose cultural-historic analysis found that consciousness is located in the activity systems of everyday practice, in the interpenetration of the individual, other people, and artifacts, including language (Vygotsky 1978). The fundamental tenet of activity theory is the unity of consciousness and practice: "consciousness is not a set of discrete disembodied cognitive acts (decision making, classification, remembering), and certainly it is not the brain; rather, consciousness is located in everyday practice: you are what you do." This belief in the unity of practice and consciousness is mirrored by the activity theory conception of context. Context is not something that is "out there," "an outer container or shell inside of which people behave in certain ways." Rather, context is constituted through the enactment of an activity involving people and artifacts. It is simultaneously internal and external to the individual (Nardi 1996:76). Bonnie Nardi also reminds us of the importance of motivation and intellectual passion in the collaborative process, noting that "many different motives, from different individuals,

articulate in a single activity system . . ." Therefore, genuinely collaborative learning includes "struggles to align the motives—and not merely the tasks" of the group participants. (Nardi 2005:40). Activity theory is an important element in the field of human-computer interaction (HCI) (Nardi 1996), and—as indicated by his subtitle—Hjørland's information science research is explicitly grounded in activity theory, which he sees as a rare "attempt to reach beyond methodological individualism" in psychology (1997:118). Similarly, David Hung and colleagues use activity theory to study the transition to constructivist paradigms in learning communities (2006).

Ethnomethodology

The field of ethnomethodology (literally "folk methodology") was developed and named by Harold Garfinkel, a student of Talcott Parsons (Parsons 1937) at Harvard, and elaborated through extensive empirical studies at UCLA (Garfinkel 1967, 2002; Heritage 1984). Inspired in part by the work of phenomenological sociologist Alfred Schultz (Schultz 1962-1966; cited in Heritage 1984), Garfinkel is particularly interested in the intersubjective, situated, and commonsense understanding created between social actors. Because meaning and commonsense understandings are created through interactions between individuals, this knowledge should be "accountable," that is, recognizable and describable in context.

It should be noted that debates about ethnographic theory and practice are complicated by an unfortunate tendency to conflate the terms "ethnography" (a general term that can indicate a wide range of qualitative research methodologies or a subfield of anthropology) and "ethnomethodology" (a very specific research program originating in sociology). According to Shapiro (1994), "It has become a shorthand or simplification in CSCW to speak of ethnography when in fact what is often involved is ethnomethodological ethnography." (1994:418). Within HCI the ethnomethodological approach is exemplified by Suchman (1987). The field of conversation analysis (ten Have 1999, 2004), including some forms of IM chat log analysis (O'Neill and Martin 2003), is also derived from ethnomethodology. A possible point of convergence between ethnomethodological analysis in CSCL and research in LIS is provided by Budd's (2001; Budd 2005) phenomenological approach.

Situated Learning

In *Situated Learning: Legitimate Peripheral Participation* , Lave and Wenger (1991) present anthropological studies of apprenticeship in five very different cultural contexts: Yucatec midwives, Vai and Gola tailors, naval quartermasters, meat cutters, and non-drinking (recovering) alcoholics. In each instance Lave and Wenger found that learning is an intrinsically and irreducibly social practice wherein novices become full-fledged experts by participating in communities of practice (discussed in detail below). Accordingly, "[a] community of practice is an intrinsic condition for the existence of knowledge . . . . Participation in the cultural practice in which any knowledge exists is an epistemological principle of learning." (1991, p. 98-99). However, the emphasis in some communities (such as meat cutters) upon maintenance of hierarchical and status differentials limits the efficacy of the situated learning process.

Lave and Wenger developed a consciously challenging concept, "legitimate peripheral participation," to capture the complexity of the situated learning process. They do not mean to suggest a distinction between legitimate and illegitimate participation, but rather to draw analytic attention to the " *form* that the legitimacy of participation takes" (emphasis added). In other words, how—and to what extent—does the novice learner feel she has a right and responsibility to participate in a community of practice? Similarly, the term peripheral is not used in a pejorative sense, as in a distinction between center and periphery. Rather, "[p]eripherality, when it is enabled, suggests an opening, a way of gaining access to sources for understanding through growing involvement." Finally, Lave and Wenger do not believe

peripheral participation should be contrasted with either "central participation" or "complete participation." Instead, they prefer the concept "full participation, " which "is intended to do justice to the diversity of relations involved in varying forms of community membership." (1991, p. 35-37).

Networked Individualism or Communities of Practice?

Our discussion of community and the individual is introduced by a snippet from *My Freshman Year: What a Professor Learned by Becoming a Student,* a recent popular-audience educational ethnography (Nathan 2005). "Rebekah Nathan" is the pseudonym of a fifty-something anthropologist who spent her sabbatical going undercover (as a returning student) to study student culture at her own institution, dubbed "AnyU." Well, it didn't take an enterprising journalist very long to discover that the author is, in fact, Cathy Small, and AnyU turns out to be (surprise!) NAU, or Northern Arizona University (Gershman 2005). In a chapter entitled "As Others See Us," Nathan discusses the perceptions of foreign students regarding American students at AnyU. The prevalence of "Group work" was a topic that came up frequently in discussions of how life in an American university differs from experience in their home countries. In this excerpt Nathan prompts a foreign student:

> "It's funny," I mused with Beniko, a Japanese student, "that in such an individual culture students do so much work in groups."
>
> "I think I understand why you can," she answered. "It is because of your individualism. In Japan we don't and couldn't do much group work because we would consider each other too much, and the project would get very complicated because of that." Only American students, she suggested, would have the necessary boundaries and sense of their own preferences to be able to negotiate the demands of a group project. (Nathan 2005:81-82).

This passage piqued my interest in the relationship between all-American individualism and group work. While I was already aware of the above-cited distinction between cooperative and collaborative learning, I needed more. In this context I found the work of sociologist Manuel Castells (2000; 2001), particularly his concept "networked individualism," quite illuminating [see especially "The Internet as the Material Support for Networked Individualism," in Chapter 4, "Virtual Communities or Network Society?" (2001:116-136)]. Castells' work certainly resonates with Buschman's critique of "technologically-mediated individualism" (Buschman 2003:152).

Castells examines a fundamental contradiction in the global information economy. On one hand he finds massive integrative forces, "networks of variable geometry whose intertwining supersedes the traditional distinction between corporations and small business, cutting across sectors, and spreading along different geographical clusters of economic units." On the other hand, he finds that the work process is increasingly individualized: "Labour is disaggregated in its performance, and reintegrated in its outcome through a multiplicity of interconnected tasks in different sites, ushering in a new division of labour based on the attributes/capacities of each worker rather than the organization of the task." (2000:502).

Castells' (2000; 2001) concept of networked individualism succinctly describes the attitudes and skills of many library patrons, particularly the "Millennials" who inhabit our college campuses. His description of the process whereby "Labour is disaggregated in its performance, and reintegrated in its outcome through a multiplicity of interconnected tasks in different sites" is a perfect description of cooperative work, but is a far cry from genuinely collaborative work or learning. This distinction helps explain the apparent compatibility, even affinity, Nathan and her foreign student informants noted between "group work" and all-

American individualism. Unfortunately, there are many factors mitigating against the nurturance of genuinely collaborative learning on our campuses. For example, the perceived need to assess individual contributions to a group project fosters precisely the forms of task disarticulation noted by Castells. Conversely, the knowledge that poor performance of other group members could adversely influence one's grade contributes to the problem of "group hate" (King and Behnke 2005). However, the library can provide a safe place for spontaneous collaborative learning outside the formal structures of the classroom.

As initially formulated, "communities of practice" (CoP) radically challenged basic tenets of mainstream pedagogic theory; however, the term has become popularized and appropriated to the point where it has lost much of its original disruptive potential (for example, see Coakes and Clarke 2006). Brown and Duguid wryly speculate that the concept may not have become quite so popular had Lave and Wanger written instead of "cadres" or "communes" of practice (2001:203). Although some progressive educational theorists cautiously seek to re-appropriate the CoP concept (e.g. McConnell 2005), others see the rhetoric of "community" as a the barrier to more effective and fulfilling experiences of education (Mann 2005). While Hodgson and Reynolds (2005) sympathize with the impulse of 'collaborative' educators to offer alternatives "to more individualistic approaches," they see in the concept of the "'learning community' practices of exclusion, [and] enforced coherence around a set of values which reflect the wishes of dominant factions with associated systems of control, indoctrination and social discrimination" (205:16).

Within CSCL and cognate fields several researchers, particularly sociologist Barry Wellman, have suggested that the concept of networked individualism be embraced and that information systems should be designed accordingly (Jones 2004; Jones, Dirckinck-Holmfeld, and Lindström 2005; Wellman et al. 2003). For Chris Jones and colleagues, this is still an open question to be addressed by future research: "Which models, networked models or community of practice models, are more productive with respect to the learning of the individual participant and under what conditions?" (Jones, Dirckinck-Holmfeld, and Lindström 2005). This unresolved tension between would be an ideal topic for future ethnographic research.

Conclusions

We have examined three interrelated challenges confronting librarianship today. Hjørland has noted the pervasive, and generally unexamined and unacknowledged, influence of methodological individualism upon our philosophy and practice, while Buschman (2003, 2005) examines how an individualist focus on the library patron as customer undermines our ability to defend librarianship in the democratic public sphere. Abram and others have highlighted the need to understand and serve today's faculty and students without abdicating our critical educational and social responsibilities. We need to be responsive to the needs and expectations of library users while maintaining our skepticism about current educational fads.

A common theme that unites these issues is the need for us to challenge the individualist model and more effectively theorize, support, implement, and assess the genuinely social aspects of librarianship. Because it explicitly focuses on the social production of knowledge through the interactions of group members (either face-to-face or geographically distributed), CSCL has the potential to help us address these issues within librarianship, and we librarians have the opportunity to contribute to this emerging research. Because knowledge created through small group interaction can be made "visible" and "accountable," CSCL also offers a range of replicable research methodologies. The distinction between cooperative and genuinely collaborative learning provides a vocabulary for assessing nature of group learning.

Within the array of CSCL theories and methodologies, the critical ethnographic approach offers the strongest potential for addressing questions of interest to LIS researchers

and practitioners. However, this is a vague and contested term, and we need to identify and refine strands of critical ethnography that will challenge methodological individualism. We have briefly examined four research strategies that, in different but related ways, exemplify critical ethnography: 1) critical design ethnography, 2) activity theory, 3) ethnomethodology, and 4) situated learning.

Any critical ethnography of collaborative learning must address the relationships between the individual and the community. Castells' concept of networked individualism is an apt description of the attitudes and skills of the "Millennials" on our college campuses. By contrast, the concept communities of practice holds promise for fostering and understanding engaged, collaborative learning. However, this useful concept is in danger of being subsumed by a folk ideology of community as a site of consensus and harmony where all differences are subsumed and repressed for the good of the group. As librarians, we have learned to eschew simplistic conceptions of community because we are very aware—on both a theoretical level and through our day-to-day practice—of the intense contestation inherent in the social production of knowledge. Rather than catering to a mythical homogenous community, we actually strive to embrace and foster diversity and contestation.

In an ethnographic analysis grounded in activity theory, Nardi and O'Day (1999:79-104) see the typical library as a rich and complex "information ecology" where librarians represent the "keystone species." It is also a place where networked individuals can come together to build communities of practice and engage in the social production of knowledge.

It is our job as librarians to help make this happen and share our results with other CSCL and learning sciences practitioners.

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