

# Research Issues in the Design of Online Communities: Report on the CHI 99 Workshop

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Online communities are rapidly becoming a part of how we work, play, and learn. But how are they designed? What is already known in this emerging field? What are the key questions for future research? These were the questions with which we began our CHI 99 workshop on "Research Issues in the Design of Online Communities."

Research in this field is interdisciplinary, and we were fortunate to draw workshop participants from the fields of business, education, sociology, and rhetoric as well as from HCI. The two days were focused on four themes:

- Business and Professional Applications
- Educational Applications
- Identity, Avatars, and Embodiment
- Sociology

After brief introductions from each research team, Sara Kiesler got us started by leading a provocative discussion of research methodology. We debated both what questions about online communities are interesting, and what questions are possible to ask given available research methodologies. Some participants prefer to use an experimental methodology grounded in experimental psychology and explore only those questions for which "rigorous" quantitative answers are possible. Others prefer a design-oriented approach, which relies primarily on qualitative methods from anthropology such as ethnography. Most attendees felt that a combination of quantitative and qualitative approaches is warranted, and the challenge is how to use these approaches in a complementary fashion.

Next, Wendy Kellogg and Tom Erickson tackled issues of the use of online communities for business. They began by leading the group in a 1950's vintage IBM 'spirit' song, reminding us that the concept of community in business and professional settings is not a new one: many businesses have long found utility in invoking "community" to increase affiliation, team work, and mutual support. So, while the idea of virtual communities of business or professional colleagues may be relatively new, the impulses driving the ideas are not.

Discussion centered around three issues: the ways in which business/professional communities differ from social and/or educational communities; trust in business/professional settings; and alternative metaphors for thinking about online communities. Online communities in business settings often differ from other communities in that communication is embedded in a work context where individual and organizational agendas, politics, risks and payoffs can have substantial consequences for participants' jobs and lives. Being a member of such a community is often a long-term commitment, and, because of the frequent opportunities for face to face contact in the course of professional life, it is one that is deeply bound up with the participants' real world identities.

This lead into the second issue: what is the nature of trust in business environments? There were two threads of discussion here. The first had to do with the critical role of real-world identity in professional contexts. That is, of key import in work life is having 'connections' to others within the organization or profession; while there are occasional exceptions (e.g., brainstorming sessions, whistle blowing, etc.), anonymity is not generally desirable: professional communities (virtual or otherwise) are about tapping into

various social networks, building trust and disseminating one's reputation. The second thread of the discussion had to do with the strong tension between the individual and the organization that becomes particularly acute in online community. Who is allowed to 'speak'? Who owns the information produced? Who sets the rules about what may and may not be discussed? Here a distinction arose between virtual communities within a single business and professional communities that span organizations (e.g., SIGCHI). The former can be problematic because in some contexts discussions in such a community may be taken to represent the corporation.

The third issue we discussed had to do with the the assumptions behind describing network-mediated interaction as "communities." The word "community" evokes a set of values which are not necessarily appropriate for professional situations. For example, many professional interactions have value for a time, and then come to an end -- something not encompassed in typical notions of community. This led to a discussion of the life cycle of online groups, and the suggestion that other ways of depicting these types of interactions might often be more suitable for businesses. Alternative conceptual frameworks considered included ecologies of communicative practices, interaction genres, teams, resources, games, cities, movements (as in political), and social networks. In the end, we recognized that many of the issues that emerged from our discussion were not unique to business or professional settings.

Throughout the morning, issues of research ethics emerged repeatedly. To close the day, we spent an hour in heated debate about this topic. If your research analyzes material available on the world wide web, do you need to get permission from the author of each page/posting before studying it? What do you do if it's impossible to disguise the identity of the group you are studying? Is it appropriate to change details in the data you report in order to protect the identity of research subjects? Is it possible to obtain informed consent electronically? A myriad of questions emerged and were energetically debated.

To start the second day, Amy Bruckman led a discussion of educational applications of online communities. To begin, we debated issues of motivation: Should use of an educational online community be required of students, or should it be optional? How do we encourage students to want to participate? Students are often motivated not by a desire to expand their understanding, but by a simple wish to get by with as little effort and as good grades as possible. Does this fact change how we design such environments? Next, we talked about "evaluation" and "assessment." While designers of most online communities evaluate the success of their software, educators also must assess what students have learned. Finally, we talked about scalability. Most educational online communities serve small groups of test subjects. What are the issues in trying to accommodate an entire school or school district? Scott McDonald shared his insights from working with Nancy Songer at University of

Michigan to scale the "One Sky, Many Voices" project from dozens to thousands of students.

Next, Judith Donath led a discussion about identity. We began by looking at why identity is important - what do you need to know about another person in order to communicate with them, to trust them, to be motivated to assist them?

Our discussion first focussed on social identity, the types and categories that help people make sense of the social world. At times, the virtual world has been heralded as a utopian universe in which all prejudice will disappear and people will be judged solely on the merits of their words; we discussed the feasibility and desirability of such a utopia. Social categories are essential for our cognition of the world -- when do they become harmful stereotypes and what can we do in the design of online communities to promote a fairer world? We discussed the cues that people use to in social cognition and how they vary in different media. An interesting experiment in this area is currently being conducted by Joshua Berman at Georgia Tech; he is running a version of Turing's "Imitation Game" on the net, letting people test their ability to identify (in a text-only domain) aspects of the identity (gender, race, age, etc.) of respondents to a series of questions.

We then discussed individual identity, the identity of names, ID cards, fingerprints. We reviewed the domain of identity as it ranges from anonymity to pseudonymity to verified identity, discussing the ramifications for social interaction. Reputation is an important motivating force; it is certainly one factor (and arguably, a primary one) in getting people to contribute to group efforts and to assist one another (e.g. answering questions on a Usenet newsgroup). We discussed a variety of mechanisms by which reputations are disseminated online, from the informal interactions of Usenet, to the formal models evolving in online auctions, etc.

Finally, Barry Wellman led a discussion about the sociology of online communities. Wellman pointed out that too much of current analysis of Online Community has parochially reinvented the world by (a) failing to apply a century's worth of research into the nature of community, (b) unnaturally treating relationships online as separate from those offline when in real life, many relationships combine online and offline interactions, and (c) neglecting how social status and power affects relationships. Workshop participants agreed that it was time to move beyond pronouncements about community to develop systematic schema for applications and analysis. We worked to construct a framework for thinking about -- and developing -- online communities.

Our two days laid out a road map for future research in this new field of research, and highlighted the importance of taking an interdisciplinary perspective. We hope to make this workshop a bi-annual event, and plan to reassemble at CHI 2001 to track new developments in the field.

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