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Title: The Genre of Electronic Communication: A Virtual Barbecue Revisited.

Richard Giordano

Brown University and Massachusetts Institute of Technology

Richard_Giordano@brown.edu

The Education Alliance

Brown University

222 Richmond Street

Providence, Rhode Island 02903-4226

+401-274-9548 x233 (w)

+401-831-6287 (h)

+401-421-7650 (f)

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Background.

Recent research into cultural formations on the World Wide Web has led to a growing debate about the propriety of describing the users of newsgroups, discussion lists, Multi User Dungeons and chat rooms as members of a community (see, e.g. Gates, 1996; Jones, 1995; Mitra, 1996, 1997; Rheingold, 1994; Turkle, 1995). Moreover, there is no agreement on how to identify the formation of electronic communities. For example, some observers propose different ways of identifying virtual community, and consider the similarities and differences between virtual (online) community and embodied 'real space' community. Bruckman (1992) considers that technological features of the virtual environment combine with self-selected membership to create a community with a strong shared sense of values. She also argues that shared activity reinforces community, a theme which is developed in her later work on her created professional community environment, MediaMOO (Bruckman and Resnick, 1995). Reid (1994) identifies users of MUDs and MOOs as a distinct cultural group, which is characterized by their use of novel methods of textualizing non-verbal communication. Again, she considers that the group has its own distinct systems of meaning. A central issue for Reid is an examination of forms of social and technological control, which are employed to regulate interaction and penalize or exclude disruptive influences. Smith (1992) evaluates virtual community in terms of its capacity to create collective goods in the form of the provision of social networks, the production of 'knowledge capital' and communion; this last term is understood as a sense of membership, which is fostered by personal and emotional communication. Smith is also concerned with mechanisms of control, which can be used to overcome obstacles to community formation and deal with violations of community standards. Rheingold (1994) has proposed a definition of virtual communities as "social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace." The prerequisites of communicated, human feeling, and the concept of a shared system of meanings and/or values, are key factors in identifying the existence of virtual community as opposed to any other sort of group or aggregation. Other observers argue that Internet users do not form a community, but compose assemblies of like-minded people without the normative elements of community. A contra-indication of community, a 'pseudo-community' occurs when mass media is personalized such that recipients believe that a communication is meant for themselves alone when in fact it is aimed at a much larger set of recipients (Beniger, 1987; Peck, 1987; Resnick, 1997). Both ways of

examining the authenticity of communities have presumed that communities can be defined around a set of criteria that have operated for a long period of time (Mitra, 1999; see, e.g., Bellah, 1996; Dewey, 1930; Selznick, 1996; Tönnies, 1963).

In a paper presented to the Annual Meeting of the ACH and ALLC in 1997, we argued that language is the medium of computer-mediated communication, and that empirical linguistic analysis should be both an alternative and fruitful way to understand the emergence and structure of a virtual community. A 'speech community' can be identified by linguistic convergence at a lexical and/or structural level. Because Computer Mediated communication is strongly oral in nature (December, 1993; Ferrara et al., 1991), we believe that speech accommodation theory (Giles and Powesland, 1975), Fish's (1980) "interpretive community" and Bizzell's (1982) "discourse community" are appropriate models by which to explain the acquisition by the group of shared meanings and understandings—shared cognition—which are vital elements in community formation (Sackmann, 1991).

Our methodology in that paper was strongly influenced by Stubbs's (1996) approach to corpus analysis in the British, neo-Firthian tradition. Stubbs proposes a model of meaning that is situated in the relationship between text, writer and reader; meaning is analyzed distributionally based on observed, objective textual evidence. Specifically, to paraphrase Firth, *the meaning of a word can be deduced from the company it keeps*—not only is meaning conveyed directly, but also indirectly through patterns of co-occurrence of words. Stubbs shows how corpus evidence such as the patterns of usage of keywords/focal words (Williams, 1976) (Firth, 1935) help to explain a linguistic structure that transmits and reinforces culture.

Our work indicated that usage of certain keywords and pivot words, especially as they related to jobs and the act of working, were used by an electronic discussion group as a means of sharing meaning and building cohesion among members. We also identified the process of adoption of words and abbreviations peculiar to the group. For example, new words and stylistic conventions were introduced to the group by members who made relatively small numbers of postings. These words and conventions were assimilated by the group only when one of the members who posted frequently used it. Our conclusion was that, in a linguistic sense, the formation of community can be ascertained through the computer-assisted analysis of discussion group logs. The electronic discussion group under study formed into a virtual community—a social aggregation in cyberspace which possessed a flexible but characteristic set of shared meanings, located in the speech community in the form of a consensus interpretation, and that meanings within the community differed significantly from the equivalent meaning possessed by the wider culture in which the virtual community was embedded. Members of that community communicated with a sufficient degree of emotion to create and maintain a sense of communion and shared presence. In addition, mechanisms of control, including sanctions, were used to regulate social interaction and shared social activities. These sanctions indicate shared normative behavior.

An open question, however, was what role the *genre of electronic participation* plays in the formation of electronic communities. For example, does linguistic, lexical, and stylistic convergence form faster in chat rooms than in discussion groups? Does the persistence of such features last longer in chat rooms than in discussion groups?

The current study.

This study addresses the question of the role of genre in the formation of electronic communities. To that end, we have compared two corpora: one of the original discussion group logs with those of a chat room established by the same discussion group participants. The discussion group logs consist of eight months' postings to one electronic discussion list consisting of 2,600 messages. The discussion list is composed of people who have little else in common except that they listen to a certain radio program in New York City, or obtain tapes of the show if they reside elsewhere. The show they listen to is Vin Scelsa's "Idiots Delight," and the name of the mailing list is the Idiots Delight Digest (IDD). We gathered postings from the very first issue of the digest; through to when they organized their first face-to-face barbecue. During the period when the logs were made, members of the Digest established a chat room, and conducted weekly chats. We have collected ninety-seven weekly chat room sessions that parallel those of the discussion group. The current study compares chat room logs with the logs of the discussion group.

Experimental design.

Our preliminary investigation indicated that Stubbs's approach is useful in discovering and measuring the emergence of and growth of a virtual community. We applied that same framework to both the discussion group and chat room corpora to discern the extent to which linguistic and stylistic patterns exist in both corpora, the time it takes to reach convergence, and the persistence of unique lexical, linguistic and stylistic features in both the discussion group and chat room corpora.

The period for data collection of the chat room data (the first six months of the life of the parent discussion group) is the same as that of the discussion group. The chat room participants themselves are a large subset of the discussion group participants: all participants of the chat room participate in the discussion group. Chat rooms occurred once a week at roughly the same time of day, often when Idiots Delight was on the air.

We have compared the chat room logs with the discussions logs in two ways. First, we have included all of the participants in the discussion group logs with those in the chat room. Second, we have compared only the contributions to the discussion group who have also contributed to the chat rooms. The second comparison, thus, allows us to isolate the discourse of the same participants using both genres. Discourse was analyzed using TACT as well as a series of small programs written by the author.

This is a quasi-experiment meant to examine causality between the genre of electronic communication and the emergence of community using Stubbs's framework. There are limits to such a design. First, we define community as a set of shared cognitions that can be discerned by language by members of a group (Sackmann, 1991). Second, as in most quasi-experiments, we assume that one variable (genre) is thought to influence another variable (speed or features of language, lexical and stylistic convergence). Finally, as is common in all quasi experiments, there is no randomization of members, nor is there a true control group (see Cook, 1979). Despite these limitations, the design has provided us with results that we believe are applicable to the design and evaluation of systems supporting cooperative work, as well as electronic systems that support teaching and learning.

Preliminary findings.

We have limited our discussion here only to those members who have contributed to both the chat room and the electronic discussion. When examining contributions and interactions of participants in the chat room with the same participants in the discussion group, we find that the use of a chat room as a genre of participation results in a higher use of slang and shared language peculiar to the group, a higher use of shared abbreviations common to the group, a higher use of stylistic features common to the group, and a higher degree of shared emotion all in a shorter period of time. While the spread of linguistic and lexical features in the discussion groups were influenced by participants who contributed very much to the discussions, such influence was made by virtually all members of the chat room. Moreover, there was a greater use of reciprocal links among all members of the chat room. Often, a contribution by a discussion group went unnoticed by other members of the group. The use of reciprocal links and the high degree of lexical and stylistic convergence all indicate a building of shared cognitions. It also lends support to the Social Identification Model of Deindividuation Effects (Lea & Spears, 1995; Lea & Giordano, 1997; Lea, Spears, Watt, Rogers, in press) because participation was both individual and as a group member.

Of particular importance is that there was virtually no diffusion of lexical and stylistic features from the chat room to the discussion group. One would expect that discourse markers used in the chat room, such as "well", "but", and "and" (used to break up speech into parts) or the use of "Oh" (that prepared participants for a just-remembered item) would not travel well from a chat room to a synchronous discussion group. There was, however, almost no diffusion of slang, peculiar abbreviations or emotion from the chat room to the discussion group. Occasionally, a chat room member would alert discussion group members of what was "said" in the chat room.

Conclusions.

This quasi experiment supports the notion that community formation is faster and stronger in chat rooms than in discussion groups. There is a marked style of participation that is deeply influenced by genre of participation. The results of this analysis should support technical and design decisions of systems intended to support collaborative teaching and learning and other forms of collaboration that depend on shared ideas and outlooks.

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