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Levels of Discourse within a Web-based Collaborative Learning Environment

The purpose of this paper will be threefold. First, I shall discuss several key constructs emanating from the work of John Dewey – constructs that form the foundation for a discussion of the differential use of Web-based technologies to foster the creation and maintenance of online learning communities. Second, I shall advance a strategy for discriminating among online learning environments in terms of their capacities to foster varying levels of discourse within communities. Third, I shall speculate about the practical and empirical implications of stimulating and sustaining varying levels of discourse within online learning communities. Leaning heavily on John Dewey -- specifically, *The Public and Its Problems* – I will define concepts such as: the associative being, public and private communications, and community. Finally, I will close with a discussion of the practical implications for the creation of Web-based collaborative learning environments in educational settings.

“There is no sense in asking how individuals come to be associated. they exist and operate in association...while singular beings in their singularity think, want and decide, what they think and strive for, the content of their beliefs and intention is a subject-matter provided by association.”

- John Dewey, The Public and Its Problems (pg. 23-25)

With these words, John Dewey offers a view of the relation of humans to one another as more than simple fancy, but as an inherent need of acting as associative beings. Collaboration, as a method of conjoint action toward mutually beneficial goals, satiates this need of humans to join in associations and to act together. Collaboration provides a mode for individuals to share in and learn via the participatory activities that occur as a result of various partnerships. Such activities enable the formation of evolving peer groups and the ability of an individual to participate concurrently in peer discourse at varying levels. Computer-supported collaboration -- more specifically, collaboration via the World-wide Web -- provides an excellent metaphor and venue for communicating in such an associative manner. Computer-supported collaboration has emerged as an effective model for sustaining such endeavors.

Community, Association, and Computer-mediated Communications

“Wherever there is conjoint activity whose consequences are appreciated as good by all singular persons who take part in it, and where the realization of the good is such as to effect an energetic desire and effort to sustain it in being just because it is a good shared by all, there is in so far a community”

-- John Dewey, The Public and Its Problems (pg. 149)

Before there is community there is association. The concept of “associative beings” serves as the bedrock for constructing a transactive environment for discourse. Dewey offers the existence of “the helpless infant” as an example of the inherent associative nature of humans. Helpless infants are truly dependent on those around them to provide the fodder for their thoughts, desires, and decisions. The important distinction here is that Dewey is clear in his

statement that the *acts* of thinking, desiring, and choosing are acts made by individuals (i.e.: the infant), rather than the result of “group thought” or actions made *en masse* (the family). The *objects* of these actions, however, are provided via association -- they are specifically bound by context, situation, and application -- much like the letters of the alphabet. The letters of the alphabet represent individual characters, each with its unique characteristics, but the letters essentially “exist and behave in constant and varied association with one another” (pg. 69). The belief in “constant and varied association” as a human experience begs the question: “*In what ways* are we in constant and varied association?” To answer, one may examine the concept of community, and the role of communication in causing such associations.

An understanding of the concept of a *community*, and the manner in which computer-mediated communication contributes to its existence, is paramount to an inquiry into levels of discourse within a Web-based collaborative learning environment. Identifying the appropriate level of discourse for a given communicative transaction is dependent upon situating an individual actor within a community, a method of communicating and the consequence of the conjoint action. The definition of community offered by Dewey suggests that activity, consequence, appreciation and communication are essential elements toward the creation, the definition and the sustenance of a group of like-minded individuals who have bound together in a common interest. A community is not a singular mass, making singular decisions. A community consists of a collection of individuals acting in a conjoint manner -- that is, each conducting himself with an appreciation of the consequences of such action. Each of these individuals is keenly desirous of these consequences, and puts forth effort towards the sustenance of the community, *because* it is good for each actor within. A community, then, is not delineated in any way by size or number but by the intentions of the participants *in action* and the scope of the consequences brought forth.

The continuation of such effort is supported via active and on-going communication between and among the participants. This process of communication provides an avenue for maintaining the “communicative unity” (Bredo, 1997) necessary for sustaining the cooperative effort of like-minded individuals, and generally occurs within the context of the community’s most natural methods of associating with one another. In a computer-supported community, one is utilizing some form of computer-mediated communications while participating in the online endeavor. Such computer-mediated communications within a Web-based collaborative learning environment can take the form of any combination of discussion groups, news groups, listservs, videoconferences, chat rooms, email, or journals. Each of these methods of communicating has inherent characteristics that makes it more or less suited to a particular type of communication. A direct relationship exists between the form of the communication utilized and the level of discourse in which an individual is participating.

With notable exceptions, few have given much thought to the implications of how various modes of online communication effect the manner in which information is offered and the method in which participants relate to one another. Lemke (1993) advocates the introduction of hypermedia and computer-mediated communication into higher education to share information within a community of scholars where, “the community we are addressing and the community we are making reference to are, ultimately, the same community.” Others (Koschmann, 1996; Jonassen et al., 1995) have examined online communications and various

social and group transactions. What few have done, however, is to provide much detailed insight into how the *consequences* brought forth via the types of communications utilized within computer-supported learning environment are related to the *intentions* of those engaged in the communication process.

Defining a Public and a Private Communication

John Dewey offers a distinction between the terms *public* and *private* which I will use to differentiate between public and private communications within a Web-based collaborative environment. For Dewey, the question lies not in the distinction of a particular level of discourse as either group-oriented or individual in nature. The demarcation resides in the scope, implications, and intentions of the consequences brought forth by those who are transacting within the environment. The distinction between a public transaction and a private one is *not* synonymous with the dichotomy of individual versus social. Instead, it is a discrimination between various manners of associative communication. According to Dewey, a “public” is brought into existence when “[i]ndirect, extensive, enduring and serious consequences of conjoint and interacting behavior” result in a group of transacting individuals “having a common interest in controlling these consequences.” (1927) Much like individuals acting within a community, a public exchange is marked by indirect consequences and reverberations -- the difference between the two lies in the effort put forth by the actors to sustain such consequences. Within a community, the effort is actively negotiated amongst the participants in a proactive fashion. For a “public,” the consequences of indirect actions are such that “it is deemed necessary to have those consequences systematically care for” (1927), usually via a distributed, representational model (such as a democracy).

In comparison, a private transaction is one in which the consequences are “confined, or are thought to be confined, mainly to the persons directly engaged in it.” (1927) As long as the consequences brought forth by the transaction remain between those directly involved, it may be considered a “private” one. However, as soon as they extend beyond the immediate actors -- such that the effects are of concern to those outside the immediate group -- the transaction takes on a public nature. Again, one must recognize that it is in the “extent and scope” of the indirect repercussions brought forth by the transaction, not in the number or size of the participating group, that one may differentiate between a public and a private communication.

Situating an Individual Within a Participatory Context

As each participant transacts with others within the Web-based collaborative learning environment, his actions are not occurring within a vacuum -- unrelated to the context in which they occur. Instead, the participant is acting and communicating with others *in situ*. The relationship between the intent, the actors and the time/space in which it occurs provides the parameters with which we can establish the *participatory context* for the communication. Finding this context is essential to establishing a level of discourse because, depending on the manner in which the participants are communicating, one may transact concurrently within the same community -- or subsets of the same community - at various levels.

Identifying the Levels of Discourse

Through our experiences with computer-mediated communications and collaborative Web-based learning environments, we have identified four distinct levels of discourse within

which participants transact. They are: the *distinctive peer* level, the *immediate peer* level, the *distributed peer* level, and the *associative actor* level. Each level of environment contains certain critical and variable attributes (Merrill & Tennyson, 1977) that help establish the identifying characteristics of the construct.

THE DISTINCTIVE PEER LEVEL OF ENVIRONMENT

The distinctive peer level refers to private communications within a small, selective group of people. A critical attribute of such an environment would be the existence of one-to-one communications intended as a vehicle for self-evaluation, reflection or personal communication. In addition, this level of environment contains some variable attributes. First, there exists a certain amount of security concerning the communicative transactions within this level. Also, there is an overt effort to limit the scope and extent of consequences stemming from the discourse – though, there is a slight possibility of outside influence as a result of these communications. Some examples of this level would be:

- **direct email:** Using email, each of the participants clearly defines each other before and during communications. In this way, the realm of consequence are intentionally confined to those participants directly included in the communication(s).
- **journals:** In a Web-based reading instruction class here, students are provided with a forms-based interface through which they submit weekly journals to the professor. In order to submit and/or read these entries, the student and the professor must each enter a unique user ID and password - ensuring that the communications remain between the individual student and the professor.

THE IMMEDIATE PEER LEVEL OF ENVIRONMENT

The immediate peer level refers to those communicative transactions which occur between an individual and a more intimate group of conjoint participants -- for example, a single class and that class's professor -- on a one-to-many basis. Critical attributes of this level of environment include the assumption that the other participants are like-minded and share a desire to maintain the immediate peer structure is a critical attribute of this level of environment. Also, communicative transactions at this level are characteristic of online *communities*. There does not appear to be a need within this level of environment for consequences to be "systematically cared for." Variable attributes of this level of environment would include a broadened system of security (to assist in providing parameters for the particular community), as well as permeable borders. However, communications are of a more public than private nature - with the potential occurrence of indirect consequences for individuals not actively participating in the conversation at hand. An example of this level would be:

- **discussion groups:** Web-based discussion groups offer a venue for individuals who share an interest to engage in discourse that is more community-oriented, and has the potential for more impact than more one-to-one communication models. Although communication takes place on the Web, protecting the discussion itself via a password system helps define the intended community and ensure that only those with direct interest in sustaining the group have input. In addition, as compared to single instances of email or journal entries, the discussions which occur within these groups are "threaded" -- that is, responses to previous postings are grouped with those comments which prompted them -- resulting in a hierarchical representation of how the

discussion's progress. This thread, then, provides a representation of the indirect consequences resulting from the original (i.e.: how does a posting within the third level of the thread relate to the original idea/question offered?).

THE DISTRIBUTED PEER LEVEL OF ENVIRONMENT

The distributed peer level refers to those communicative transactions that occur between individuals within conjoint groups of like-minded, contextually-similar peers on a many-to-many basis -- for example, several classes (and the professors who teach them) dealing with the same topic. The distributed peer level environment shares many of the same attributes of the immediate peer level environment. The inherent differences lie mostly within the scope of delegated control and the distributed nature of the communications. A critical attribute of this level is reflected in the need for a level of delegated oversight of transactions -- via delegates or representatives -- in order to sustain the communications. These delegates can be either self-selected, appointed or otherwise designated. Communicative transactions at this level are more characteristic of online *publics*, rather than *communities*. As a result, individuals within this level of environment tend to communicate as emissaries of groups rather than as individuals. The potential for indirect consequences is greatest within this level of environment, as well. The inclusion of a thin layer of security -- usually more of a maintenance mechanism than an exclusionary one -- would constitute a variable attribute of this level of environment. An example of this level would be:

- **listservs:** Email listservs are mechanisms for many-to-many, online communications designed to enable discourse about specific topics. Generally, only those subscribed to the list may participate in the on-going discourse. There are thousands of lists currently in existence. One example is READ-L -- a listserv designed to enable students enrolled in the content area reading classes at several universities around the country to engage in discourse concerning issues, reactions and other matters related to content area reading strategies. Many (though, not all) listservs are "moderated" -- that is, there exists a person or group of persons who oversee the communications to ensure that a certain amount of control exhibited. Listserv-based discourse is historically littered with communications which are at best peripheral and marginally true to the initial topic. In addition, with the moderator and the subscription process as the only control mechanisms in place, the scope and extent of indirect consequences of discourse is virtually immeasurable.

THE ASSOCIATIVE ACTOR LEVEL OF ENVIRONMENT

The associative actor level of environment refers to those communicative transactions that occur within the wider, global arena (for example, the World-Wide Web) in which all humans have the potential to participate. Such communications between an actor and the world are bound simply by the course brought forth by humans, as inherently associative beings, participating as members of a global society. Discourse within this level occurs on a many-to-many basis, and supersedes any single systematic locus of control. A critical attribute of this level of environment is the recognition that the full scope and extent of indirect consequences cannot consciously be known by any of the participants, but can only be assumed and negotiated through projections based upon small samples of discourse that have occurred in the past. An example of this level would be:

- **publishing on the WWW:** The Web, as a truly international medium, provides an excellent arena for associative actor discourse. Students who “publish” communications on the Web are engaging in the most distributed level of discussion possible, to date. The indirect consequences of such a message could potentially occur anywhere around the globe. Generally, the only limits to discourse of this nature lie in factors such as language and access. While these are certainly factors of great magnitude, they are factors imposed *upon* the medium and not inherently embedded within the medium, nonetheless.

Conclusion

Recognizing these levels of environment has definite practical implications for Web-based collaborative learning environments in educational settings. Creating a collaborative environment within, for example, a teacher preparation course requires some initial reflection about the desired levels of communication which one wishes to arise from the activity. Is the goal to produce a heightened sense of professional camaraderie? Is it to provide a venue for professional reflection? Or, in the spirit of legitimate peripheral participation (Lave & Wenger, 1991), is the intention to provide an opportunity for “newcomers” to transact with “oldtimers” within various levels to become a more active member of a community through active participation and discourse.

Designers, instructors and students must examine the scope and intentions of the communications they wish to foster when choosing which communication method to utilize. Instructors who want their students to recognize themselves as members of a professional or cultural community, for example, should encourage them to communicate with others at the immediate peer level of environment. If encouraging reflective practitioners is a goal, then the provision of web-based journals may be an attractive option. It is important to recognize that, more than likely, a person is concurrently operating within all of these levels of environment in some form or another. Therefore, choosing one level of environment over another is unnecessary and probably less than beneficial. For example, instructors should ensure that an adequate opportunity for private communications exists. The attributes of each level of discourse play a considerable role in what implications and consequences arise from the communications of those engaged within the environment. Those who recognize these attributes and utilize them to enhance the collaborative effort are more likely to ensure that the web-based endeavor is a successful one.

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