How Non-Content Related Forums Influence Social Presence in the Online Learning Environment

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Abstract: Non-content related forums in online learning environments are often used for logistical purposes and they involve student-student and student-instructor interactions. In this paper, we address non-content related forums as influencers of social presence in the online learning environment. This study examined a variety of logistical-type of forums to develop a better understanding of the concept of social presence. Based on data taken from eight online courses, findings show that non-content related forums influence social presence based on the affective content of postings, individual leadership of students, common bond among group members, empathy, and message timing. Suggestions on how to design less formal discussion areas for non-content related purposes are recommended.

Keywords: online learning**,** social presence, discussion forum, cognitive presence, emotive presence, actor-network theory, affective content, interaction, engagement, message timing, empathy, non-content related discussions, relationship building.

Introduction

Since the advent of online learning, much has been researched about the differences between online learning and traditional classroom learning situations. A major difference is the replacement of the interpersonal aspects of face-to-face interaction with that of online interaction by individuals who are physically in their own spaces. That change in interpersonal contact has led researchers to examine the concept of presence, which has been examined on a variety of levels. Wang and Kang (2006) have identified three domains of online engagement: cognitive presence, which deals with knowledge construction and learning; emotive presence, which includes feelings (of comfort or security, for example), and social presence, which involves sharing, cohesiveness, and collaboration.

Researchers who have examined the concept of social presence online often look to discussion boards when attempting to measure social presence. They might examine the number of postings made by students, number of words per posting, or the timing and dates of postings. However, there is other information that may also be related to social presence that has not been analyzed until now. Many course websites include a frequently-asked questions forum, or a site for students to pose questions for the instructor that

are not directly related to course content. Questions are often on course mechanics, pertaining to course work, the course site, or the computer in general. They are posed by the student and answered by students or the instructor. Many online courses also offer a forum for course participants (both students and instructors) to get to know each other. In these forums, which are often used at the start of a course, participants share information about themselves and their reasons for participating in the course (among other things). Again, these types of forums are not directly related to course content, but they do help participants to become acquainted with each other, which is beneficial as the course progresses.

Tu and McIsaac (2002) note the following, which they believe have positive influences on social presence: "familiarity with recipients, informal relationships, better trust relationships, personally informative relationships, positive psychological attitude toward technology, and more private locations" (p. 140). Positive feelings and informal relationship building are often created through the interactions that students have among themselves and with the instructor in non-content related online classroom forums. These interactions typically deal with the mechanics of the online classroom and with what one might consider "housekeeping" duties in the traditional classroom. Forums in which students can ask questions about how to find course materials on the class website or how to use different functions on the course management system; those in which students can clarify issues related to assignments; those in which students are introduced to their fellow students; and those in which students can discuss anything at all (outside of class topics) are all examples of exchanges that occur in non-content related forum areas.

We believe that these interactions are important, but not yet fully addressed as a component of social presence. A properly-run question and answer forum, or a "get to know your fellow classmates" forum can influence many of the factors noted by Tu and McIsaac (2002), including the building of a trusting and personally informative relationship between instructor and student. It may also affect the student's attitudes toward technology. Nevertheless, little is known about the type of interaction that occurs in these venues, who is using this forum, what types of questions are being asked, and what responses look like.

In using the term "non-content related forum" we are not intending to create nor suggest a new theory related to social presence. Rather, we are describing an existing aspect of social presence that has not yet been named nor researched. The concept of social presence has been researched a great deal, and is an aspect of both Garrison, Anderson, and Archer's (2000) Community of Inquiry Model and Wang and Kang's (2006) Dimensions of Online Engagement. Both of these models examine components of the educational experience. The Community of Inquiry Model is based on the idea that the educational experience is made up of social presence, cognitive presence, and teaching presence, and that "learning occurs within the Community through the action of these three core elements" (p. 88). In this model, cognitive and teaching presence contribute to content-related decisions; cognitive and social presence are related to supporting discourse; and social and teaching presence are related to the educational setting or climate (Garrison et al. 2000). Wang and Kang's (2006) model is focused on dimensions of online engagement, which, they posit, can be broken into three categories: cognitive presence, emotive presence, and social presence.

Wang and Kang's (2006) model is most appropriate in discussing and positioning the "non-content related forums" within the greater scope of social presence. Figure 1 illustrates the relationship between non-content related areas and Wang and Kang's (2006) dimensions of online engagement. This diagram summarizes the concept of presence in the online classroom. We suggest that interaction in non-content related forums influences (or is an aspect of social presence) social presence. According to Wang and Kang (2006), social presence is one of the three types of presence, along with cognitive and emotive presence, that comprise the concept of online presence. It is also important to clarify that presence is different than interaction (Gunawardena, 1995). Interaction is necessary for presence to occur in the online environment. However, interaction in the online classroom can happen without any type of engagement or learning taking place (Garrison & Cleveland-Innes, 2005). In that sense, interaction is a small and very basic aspect of the nature of communication in general (Garrison & Cleveland-Innes, 2005). Social presence requires student involvement at a higher level than simple interaction (Gunawardena, 1995).
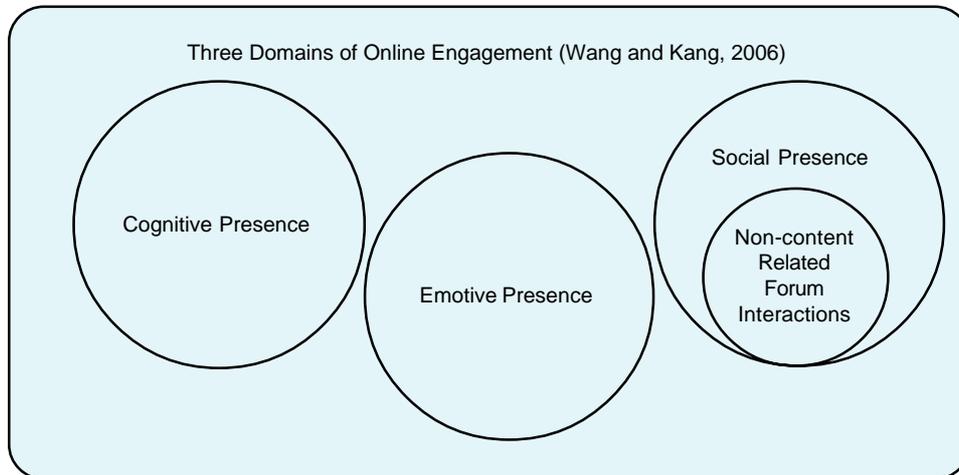

Figure 1: Non-content related forums in the Context of Social Presence

This paper examines non-content related forums as influencers of social presence (or as a component of social presence). Data taken from eight online courses were analyzed and categorized to develop a better understanding of this concept, and of this aspect of online learning. Findings show that non-content related forums influence social presence based on the affective content of postings, individual leadership of students, common bond among group members, empathy, and message timing.

Review of Literature

The theoretical bases for our study lie in social learning theory, social presence, and actor-network theory. Social learning theory focuses on learning from the observation of other people in social settings. It provides the context from which adult learners interact with others. Social presence is "the degree of awareness of another person in an interaction and the consequent appreciation of an interpersonal relationship" (Tu &

McIsaac, 2002, p. 133). Actor-network theory is an important theoretical basis because it examines relationships and boundaries between the technical and the social (Walsham, 1997).

Social Learning Theory

Social learning theorists believe the locus of control is the interaction of the person, the environment, and the behavior (ascribed to both external and internal causes). Effective social learning involves modeling and interaction, as well as the ability to make adequate generalizations and sharp discriminations. Social learning theorists stress concepts such as mentoring, socialization, and guiding as part of learning processes (Bandura & Walters, 1963). The main focus of social learning theory is interaction, which distinguishes it from other theories of learning. However, regardless of the specific learning theory, Aragon (2003) notes that in general, teaching and learning "are inherently social endeavors" (p. 57) that involve some type of interaction. That environment in which the interaction takes place is key in the learning process.

In our study, social learning occurs in the context of adult learning. Adult learning theory and practice are built on the importance of an environment conducive to learning. The role of the instructor is to create a climate of mutual respect, a friendly, informal, and supportive atmosphere.

Non-content related forums in the online classroom provide opportunities for learner interaction similar to those offered during non-structured times in traditional classrooms. The challenge for anyone who is new in a learning situation, regardless of venue, is to ease their level of anxiety in the new environment, and become comfortable so that learning can take place. In face-to-face situations, that can be done through both verbal and non-verbal communication and through observation (Aragon, 2003). However, it is not as simple as turning the spoken word into the written or typed word. Verbal communication alone includes a number of variables, such as phonetics, linguistics, register, tenor, and genre; all of which are affected by physical settings and the knowledge and expertise of other participants (Hughes & Hewson, 2001). Written text by itself cannot capture all of these variables. Therein lies the challenge faced by online educators. In online environments, the ability to make interpersonal contact with colleagues, and to obtain that level of comfort, is much different. Aragon (2003) says that, "when individuals participating in online learning events are separated by physical or geographic location and sometimes are working in isolated conditions, the ability to establish interpersonal contact with others greatly diminishes because all contact is electronic" (p. 58).

Social Presence

The concept of social presence was born out of this realization that interaction, communication, and the development of relationships, both formal and informal, is an important part of the learning process, and in online situations, that presence is very different than in the traditional classroom. Rourke, Anderson, Garrison, and Archer (2001) enlighten us as to the history of the construct of social presence. Originally thought only to exist in face-to-face communication, social presence was the offspring of the concept of immediacy as studied by Mehrabian (1969). Early research indicated that nonverbal cues in face-to-face communication led to "more intense, more affective, more immediate interactions" (Rourke et al., 2001, p. 4). Literature reported that computer mediated

communication (CMC) did not have the ability to promote social presence. However, recent research indicates that CMC can support social presence in educational situations.

Researchers differ on the elements that comprise the construct of social presence. Tu and McIsaac (2002) found that social context, online communication, and interactivity were key in establishing a sense of community among online learners. Pozzi, Manca, Perisco, and Sarti (2007) posit that indicators of the social dimension in online learning situations include affection and cohesiveness. Affection is defined by expressions of emotion, intimacy, and presentation of personal anecdotes. Cohesiveness includes vocatives, references to the group using pronouns, phatics, and salutations. The social dimensions of online learning, as defined by Pozzi et al. (2007), have been found to be present in online courses. Angeli, Bonk, and Hara (1998) analyzed the content of an online course and found that 27% of the total message content consisted of expressions of feeling, self-introductions, jokes, compliments, greetings, and closures.

The difference in the concept of social presence in traditional face-to-face learning situations and in online learning situations is that in the online learning environment "these interaction opportunities have to be purposefully built and maintained" (Nicholson, 2005, p. 217). There are a variety of ways that social presence can be developed in online classrooms. Chou (2001) notes that "online conversations can support both academic and social needs" (p. 173). Nicholson (2005) suggests the development of a community scaffold, which would "serve to connect students, faculty, alumni, and professionals in a distance education environment" (p. 231). This scaffold would consist of a variety of activities involving these different stakeholders. Activities may be synchronous or asynchronous; they may employ technology or face-to-face methods; they may be facilitated or non-facilitated; and may involve one-way or multi-way communication (Nicholson, 2005).

Actor-Network Theory

Actor-network theory is another important theoretical base of this study because this theory "examines the motivations and actions of groups of actors who form elements, linked by associations, of heterogeneous networks of aligned interests. A key feature of this theory is that actors are taken to include both human beings and nonhuman actors such as technological artifacts (Walsham, 1997, p. 468). Actor-network theory is particularly important in online learning situations, in that it examines relationships and boundaries between the technical and the social (Walsham, 1997); both key concepts in our study. Tatnall and Gilding (1999) state that "what seems, on the surface, to be social is partly technical, and may appear to be only technical is partly social. Actor-network theory deals with the social-technical divide by denying that purely technical or purely social relations are possible" (p. 957). They further posit that actor-network theory can be useful in the study of situations "where interactions of the social, technological and political are regarded as particularly important" (p. 963). As the concepts concerning non-content related forums deal, in part, with the mechanics of the online classroom and the interaction of students and technology, actor-network theory is an appropriate theoretical base for this study.

Importance of Non-Content Related Forums for Online Learning

The interactions that occur in non-content related forums are not new and many researchers have referred to the importance of addressing these types of interactions and issues in the online classroom. Wheeler (2005) recommends that "students need a place to mix socially and this kind of facility should be built into any managed learning environment" (p. 7). Forums of this nature help students "not only become more familiar with posting online messages to each other, they also gain a sense of 'belonging to a learning community'" (p. 7). Chou (2001) notes that effective strategies for working with online learners include helping students overcome their fears about technology, and helping students find ways to express themselves. Shaul (2007) has categorized the types of online discussion forums as follows: *social forums* are informal, and designed to facilitate discussion on course or non-course-related topics; *general discussion forums* pertain to course materials and are more formal than social; and *topic driven forums* are the most formal, and are related to course content. Using Shaul's (2007) categorizations, non-content related issues might be discussed in both social and general discussion forums.

Aragon (2003) says that "the overall goal for creating social presence in any learning environment is to create a level of comfort in which people feel at ease around the instructor and other participants" (p. 60). The feeling of comfort and sense of belonging is of value in the online classroom, and an understanding of non-content related postings can help online course facilitators achieve this goal. Stein and Wanstreet (2003) concluded that "When the degree of social presence is high, interaction will be high" (p. 195). This is similar to Chou's (2001) finding that "[Online] students are more eager to engage in conversation when they feel like part of a community" (p. 185). That engagement can translate to student performance in the online classroom. Mykota and Duncan (2007) related higher degrees of social presence to variables such as engagement in higher order critical thinking, increased participation in course communication, lower dropout rates, and a higher level of general satisfaction with the learning experience. Wang (2004) found a significant correlation between visibility in the online classroom and student grades. She concluded that this visibility confirms the importance of being socially present in online courses.

Methodology

The purpose of this study was to examine the relationship between social presence and non-content related forum and how it can impact overall social interaction in an online course. This study was based in the following research questions: Is there a relationship between social presence and non-content related forums areas? How do non-content related messages impact social presence? How do non-content related forums impact overall course interactions? How do non-content related postings build on social interactions among class members? How do class activities relate to non-content related forums?

Data Collection

Data were collected using student and instructor transcripts of eight online courses in the fields of adult education, instructional design, and training and development. Blackboard and Desire2Learn were the learning management systems used in these courses. These

online courses were offered to students at the graduate level in two four-year higher education institutions. Students enrolled in these courses were non-traditional coming from a variety of professions such as nursing, instructional design, military, higher education, community college, and training and development. Courses varied in offerings. For example, summer courses ranged from 5.5 to 8 weeks; fall and spring courses lasted 15 weeks. Course activities used in these courses included: online group discussions, creation of concept maps, team projects, papers, book reviews, synchronous chat, and site visits. Table 1 summarizes the characteristics of the courses analyzed in the study.

Table 1: Online Course Characteristics

Course Topic	Semester Offered	Duration	Enrollment
1. Distance Education for Adults	Fall 07	15 weeks	15
2. Instructional Design and Teaching Strategies	Summer 07	8 weeks	13
3. Using Tech. with Adult Learners	Spring 06	15 weeks	15
4. Instructional Design and Teaching Strategies	Spring 06	15 weeks	14
5. Introduction to Adult Education	Fall 06	15 weeks	17
6. Organization and Administration of Adult Education Programs	Fall 06	15 weeks	14
7. Introduction to Training and Development	Spring 07	15 weeks	11
8. Program Evaluation	Summer 07	5.5 weeks	14

Data Analysis

Data gathered were analyzed on several different levels both quantitatively and qualitatively. To begin with, non-content related discussion forums in each course were analyzed separately from a quantitative standpoint. For example, one course included three non-content related forums entitled "Clarifying Issues", "Share Almost Anything", and "Introducing Yourself". Those forums were looked at individually and for message timing.

Descriptive statistics for each course was then examined on a larger scale to determine themes and trends. For instance, in all courses, there was some type of "Introduce Yourself" forum. Posts to this type of forum (regardless of specific course or specific title of the forum) were compared with postings in other types of forums so that similarities and differences in quantities and timing could be noted.

From a qualitative standpoint, social presence based on Rourke et al. (2001) was used as a framework to analyze transcripts. Three categories of social presence were determined for the purpose of content analysis. These categories separate CMC responses as affective, interactive, or cohesive. Affective responses were those that include expressions of emotion, use of humor, or personal disclosure. Interactive responses indicated that they were responding to another message or requesting a response to their own message in one of the following ways: continuing a thread, quoting from others' messages, referring explicitly to others' messages, asking questions, complimenting, expressing appreciation, or expressing agreement. Cohesive responses showed that there was group cohesion through the CMC. This was indicated by using inclusive pronouns to address the group, referring to other participants by name, or statements that were purely social such as greetings. Table 2 lists the categories and indicators for which messages were coded.

Table 2: Social Presence Coding

Category	Indicator
Affective responses	Expression of emotions
	Use of humor
	Self-disclosure
Interactive responses	Continuing a thread
	Quoting from other's messages
	Referring explicitly to other's messages
	Asking questions
	Complimenting, expressing appreciation
	Expressing agreement
Cohesive responses	Vocative
	Addresses or refers to the group using inclusive pronouns
	Phatics, salutations

Findings

Findings of this study show that non-content related forums influence social presence based on the affective content of postings, individual leadership of students, common bond among group members, empathy, and message timing.

Affective Content of Postings

Affective content typically triggered interactive responses. This was most notable in the discussion board forums in which students introduced themselves to the group. Self-disclosure was key in these types of forums, and students often combined the use of humor and expression of emotions with self-disclosure. Replies to initial threads typically revolved around commonalities, in which students would refer to the initial posting.

Students would note things that they had in common with the initial poster. Typical topics included living or working in the same geographic area, having children of the same ages, being at the same point in their academic programs, and enjoying similar hobbies. Students who knew each other prior to participation in the course remembered personal information shared from past courses, and would mention that information when they responded to their colleagues' introductory postings. Responses frequently revolved around what their colleagues thought of past courses, whether they still lived in the same place, and the status of their jobs and families, for example. It was found that initial postings with only basic information were less likely to have responses from other classmates. People who included unique information about themselves in their initial postings were likely to have more responses from classmates.

Affective postings also triggered some cohesive responses. Some students shared their fears about things like taking online courses or being new to the program of study. Those responses were met by others who either shared their fears now or had the same fears in the past. Many of these responses used inclusive language such as "we can do it" or "we'll get through it together". Nursing students tended to generate more personal discussion more quickly in the course. They connected their knowledge about similar experiences within their fields, and about people within the field that each might know.

They also generated conversations around professional experiences, such as taking job-related tests or participating in on-the-job training.

Individual Leadership of Students

Students who participated early in these types of forums (early in the unit and in the semester) set the tone for students who followed. Early posters tended to have more responses to their initial postings from other students in the course. It was also found that students who responded to the initial postings of other students tended to have more responses to their own postings. This was evidenced in an "Introduce Yourself" type forum in one course, in which one student responded to every introductory posting by a fellow student. Rather than post a general statement such as "Welcome to class," that student picked out one or two items noted in the original posting on which to comment, making her responses more personalized. In turn, almost every student posted a response to that student's introduction.

Common Bond among Group Members

Several of the courses included group activities or projects in which groups were determined by the instructor before the start of class. Students in the same group often noted that they were grouped together, and that common bond generated earlier discussions and sharing of personal information, as those students made efforts to find personal connections among their team members. "I see we're in a group together, and I look forward to working with you on that project" was a typical example of this nature.

Common bonds were not limited to classroom-related topics. Students noted commonalities in cities or areas in which they lived (whether at the time or at some point prior), commonalities in family situations such as spouses and ages of children, and commonalities of hobbies or interests. One example of a commonality of hope expressed by a student is "I've always dreamed of taking a vacation in Hawaii too". Those common bonds typically kept online conversations going beyond the initial post and response.

Empathy

Empathy generated increased responses. Students who used humor in their postings tended to get more responses from classmates. The finding of similarities also resulted in more postings, as did responses in which the respondent empathized with the initial poster in some way. These two types of postings (similarity and empathy-type postings) were the two indicators that triggered more in-depth conversation between the original poster and the respondent. For example, several students discussed their fears and apprehensions about taking courses online. For some students, this was their first graduate-level course, and they expressed concerns about their ability to keep up, to comprehend all the material, and to be successful in their programs of study. Inevitably, these postings were met by posts from other students who were in the same situation and felt the same way. Other posts were from students who felt that way in prior courses, but had worked through those fears. These students provided words of encouragement and shared their strategies for success.

Most non-content related postings were classified as affective, in that they included use of humor, expression of emotions, and/or self-disclosure. They typically triggered what can be categorized as interactive responses. One student who was new to online learning

asked in her post if there were a support group for students who felt the need to print all of their course readings rather than read them online. This was met by posts from fellow students who admitted they did the same thing, or went further by saying: "I still print and highlight my readings." This initial post was one of the most responded postings of all analyzed in this study.

Message Time

Interactions in non-content related forums tended to decrease over the course of the semester. Table 3 shows a summary of message timing during the semester. Most clarifying issues-type postings were within the first two months of the semester (or the first weeks of summer sessions). There were more clarifying issues postings when students encountered problems with course set-up (missing readings or documents they could not access, for example). Postings in which students introduced themselves were also heaviest at the beginning of the semester or session.

Table 3: Summary of Descriptive Statistics

Course	Number of Students	Type of Non-Content Related Discussion Forum	Total Posting	Message Timing During the Semester		
1	15	Clarifying Issues	32	Early: 15	Middle: 13	Late: 4
		Sharing Almost Anything	9	Early: 1	Middle: 8	
		Introducing Yourself	24	Early: 24		
2	13	Clarifying Issues	84	Early: 13	Middle: 33	Late: 38
		Sharing Almost Anything	5	Early: 4	Middle: 1	
		Introducing Yourself	97	Early: 97		
		Teaching Autobiography	38	Early: 38		
3	15	Clarifying Issues	39	Early: 14	Middle: 19	Late: 6
		Sharing Almost Anything	77	Early: 75	Middle: 1	Late: 1
		Introducing Yourself	30	Early: 30		
4	14	Clarifying Issues	57	Early:47	Middle: 9	Late: 1
		Sharing Almost Anything	15	Early: 3	Middle: 12	
		Introducing Yourself	43	Early: 38	Middle: 5	
		Teaching Autobiography	47	Early: 37	Middle: 10	
5	17	FAQs	45	Early: 32	Middle: 13	
		Blackboard Café	5	Early: 5		
		Introducing Yourself	132	Early: 132		
6	14	FAQs	19	Early: 9	Middle: 10	
		Blackboard Cafe	0			
		Introducing Yourself	120	Early: 120		
7	11	FAQs	3	Early: 3		
		Introducing Yourself	149	Early: 149		
8	14	Introducing Yourself	101	Early: 101		

Implications and Conclusions

Findings indicate that students use the less formal non-content related discussion areas for logistical and social purposes. For example, they get to know each other, clarify information for assignments, assist each other with technological challenges, and share

resources. Introducing oneself type-forum generated the most postings and responses. In our study, the interactions in these forums occurred in the beginning of the semester. Students were eager to get to know each other and looked for similarities related to backgrounds and experiences. This study has shown that non-content related interactions are an important aspect of social presence because the locus of control is the interaction of participants and the design of the environment. It allows participants to make interpersonal contact with each other and start building social networks in class.

Because communication in these non-content related forums can be among students or between students and instructors, these forums assist in the creation of trust and relationship building in the online classroom, and also act as a venue for social interaction. The concepts addressed in our study lend to key features of actor-network theory, because they involve the intertwining of both technical and human aspects, with no clear boundaries between the technical and personal. It is important that instructors of online courses develop venues for students to interact on this level and encourage them to participate in these forums. It is also important that the purpose for these venues be communicated to the students. Students should be clear on where they are allowed to post questions on content and where they can interact with each other in informal ways.

A set of guidelines during the first weeks of class should be provided on how to participate and how students can contribute in non-content related forums. For classes in which students work on the same group for the entire course, these forums can serve as environments for getting to know and socially interacting with other students in the class. Instructors may also suggest social activities for students to participate in these forums such as the sharing of personal stories with the whole class (i.e., "sharing your roots," meaning of "Valentine's Day," plans for after graduation, favorite websites, etc.). The informal nature of a non-content related forum should also be considered as an effective venue for social presence.

The fact that most of the non-content related forums are used early in the class is in keeping with Wheeler's (2005) finding that these types of postings are most effective in the early stages of online learning activities. In fact, Mykota and Duncan (2007) recommend "pre-course instructional activities be provided for learners to acquaint themselves with the tools and their usage so they understand their role and responsibilities in online learning environments" (p. 167). It is important that students know up front they are interacting with actual colleagues who are people, and not simply interacting with a machine (Wheeler, 2005).

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