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The asynchronous webmediated discussion as a learning genre

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Introduction

Various forms of computer mediated communication (CMC) have been used in distance education for some time to solve the lack of interaction and social interchange between teacher and students as well as between students. Electronic conferencing systems are also increasingly being used in ordinary higher education courses, either as a result of the call for 'flexible learning' or as a pedagogical supplement to face-to-face teaching. It is therefore important to understand the processes which are involved in these new ways of using writing as a pedagogical tool, and what factors contribute to a high learning potential.

The use of information and communication technology in education has always been closely tied to different views of knowledge and learning, as has also been the case with the research in the field. Koschman (1996) points out four paradigms in the short history of educational technology. The first use of computers in education, Computer-Assisted Instruction (CAI), was built on behavioristic view of learning as passive reception of predefined knowledge. The learning tasks were analyzed and divided into small parts, and software was developed to support the learning of specific subgoals. Effect studies were designed to research the instructional efficacy. The second paradigm was a direct result of research in artificial intelligence, where the mind was seen as an information processing device (Simon 1979). In principle machine systems could be made to take over the role of the teacher. Even though this was built on cognitive and not behaviourist theories of learning, the same view of teaching as transmission was at the bottom. The third paradigm was based on constructivist cognitive theory and Piaget's developmental psychology. The basic idea is that knowledge is constructed when information is tied to prior knowledge in an assimilation or accomodation process, and this happens best when the learner is actively engaged in a discovery process. Technology should no longer primarily support student learning or replace the teacher, but the learner could instruct the computer through programming, for instance Logo (Papert 1980).

The fourth paradigm according to Koschman, is Computer Supported Collaborative Learning (CSCL), which is built on social constructivist and sociocultural perspectives of learning. Vygotsky's idea that all higher mental processes take place between people before they are internalized is basic to sociocultural views of learning. The social aspects of learning and intellectual development are thus foregrounded, and learning is understood as "a process of social negotiation or collaborative sense making, mentoring and joint knowledge construction" (Zhu 1998, p. 234). The focus in CSCL is therefore to provide tools for interactive processes where learners engage with one another as well as with the teacher, mentor or experts in the field. Electronic conferences or discussions

where writing is used as a medium of communication, can be synchronous, which means that students discuss in real time, for instance using 'chat' functions, or asynchronous, where students are free to read and to write their responses when it is most convenient for them. While some research studies focus on the total learning environment within which the electronic component is just one element (Wasson 1997), other studies, like the present one, focus particularly on the interactive processes.

The context and character of the discussion

The discussion which I have chosen to analyze is one component of a module in a postgraduate diploma course in "Moral Theory and Moral Reasoning" in a philosophy department at an Australian university¹. There were ten students in the course, all of whom were working professionals. They met for half day sessions on some weekends, but students from interstate were unable to attend, and the web discussion was the only regular communication form in all the four modules in the course. The discussion was mediated by the use of "Web Teach", an interactive program developed by Chris Hughes and Lindsay Hewson at the University of New South Wales, Australia. The assessment form was essays. The electronic discussion was an integral part of the course, but participation was not graded, nor was it compulsory. For the majority of students the computer mediated discussion could be seen as a supplement to face to face teaching and learning, while for a few of the students this was the only 'meeting place'. The teacher prompted the discussion by posting the following message in the Web Teach forum:

Part of the readings for module 3 was the essay, "Good Ethics is Good Business." Central points in that essay include a) good ethics can coincide with good business in a number of quite different, often not straightforward ways, and b) some ethics simply does not at all coincide with good business in the sense of being good for the practice of business. Give some thought to what this possibility amounts to, and try to give some examples (hypothetical, or imaginary, and small scale will be fine) which would illustrate the point. In giving the examples, explain how it is that they exemplify this suggestion.

The teacher poses here an 'authentic question', an openended assignment to which there is no correct answer and which therefore encourages each student to contribute to a co-constructed understanding (Nystrand 1990). The introduction by the philosophy teacher was followed up over the next two weeks by 27 entries, contributed by nine of the ten students. Of these, three students made only one entry, and thus the majority of the entries were made by six of the students. The average length of the entries was around 300 words, but some considerably longer. The teacher did not participate except for an anonymous intervention after two entries to refocus the main question. The discussion could therefore be seen as an example of symmetrical interaction where none of the participants have more authority or power than the others.

The writing which appears in computer mediated communication shows many

¹ An earlier version of this analysis is published in *Literacy & Numeracy Studies*, University of Technology, Sydney. Vol. 9, No 1, 1999.

of the characteristics of oral speech. The asynchronous written discussion analyzed here, also have some of the informality of oral speech, but can better be characterized as a hybrid genre between two written genres, informal, exploratory writing sometimes called 'freewriting' (Elbow 1973) or 'writing-to-think' (Dysthe 1995), and presentational writing. It is however obvious that the students write with an audience in mind, which is a typical aspect of presentational writing.

Theoretical framework

This study is based on a sociocultural understanding of learning as negotiated, situated and mediated, and my particular focus is dialogue theory. I will argue that the web mediated philosophy discussion created a high learning potential for the participants. '*Learning potential*' is a concept I developed in a study of the interactions in three classrooms in Norway and the USA (1993, 1995). Measuring the growth in understanding and conceptual changes in individual students as a result of an interaction is very complex at best and most likely impossible. Besides, each participant in an interaction will have a different learning experience. Even though efforts have been made to measure the knowledge and understanding gained from a particular interaction by using pretests and posttests (Nystrand & Gamoran 1994), the problem remains that of isolating what has been learned in this particular activity from other influences. As Laurillard (1993) points out, it is a commonplace statement in education that engagement of the learner in interactions with others will enhance the learning process and that students learn through discussion, but this is "one of the great untested assumptions of current educational practice" (Ibid p. 171).

This is where 'learning potential' comes in. It may not be possible to test what each student actually learns from a particular interaction like this discussion, but it is possible to analyze aspects of both the interactional patterns and the development of the content, and on the basis of this make assertions about the learning *potential* in the particular activity. To what degree each student actually avails herself of this potential for learning, is determined by contextual and personal factors which defy analysis.

I will base my analysis on the Russian literature and language philosopher Michail Bakhtin's theory of dialogue, the Norwegian psychologist Ragnar Rommetveit's theory of intersubjectivity, and more specifically on the Estonian semiotician Yuri Lotman's extension of Bakhtin by his concepts 'the dual function of texts' and 'texts used as thinking devices'.

Bakhtin emphasized the dialogical construction of meaning as a basic characteristic of all communication. Meaning is created as a bridge between the speaker and the listener, the writer and the reader. "Understanding comes to fruition only in the response; understanding and response are dialectically merged and mutually condition one another; one is impossible without the other" (Bakhtin 1981, p. 282). Rommetveit espoused similar ideas in his book *Message Structures* (1974) where he criticized the information processing paradigm of the cognitivists and presented a sociocognitive and dialogical alternative, underlining the importance of intersubjectivity in the meaning making process. While Bakhtin contrasted monologic communication with dialogic, Lotman extended on Bakhtin's basic framework by arguing that two functions are characteristic of all texts: *the univocal function* focuses on conveying meaning as accurately as possible and *the dialogic function* on how to generate new meanings. His point is

that all texts serve both functions, but one or the other is most dominant, depending on the context. The univocal, transmission-like function has gained most attention, and has served as a basis for a universal model of communication, the "conduit metaphor" of communication, with its emphasis on transmission and reception (Reddy 1979, Wertsch 1991). This communication model has also served as a universal basis for teaching. The second function of texts is grounded in the Bakhtinian notions of multivoicedness and dialogicality.

The second function of texts is to generate new meanings. In this respect a text ceases to be a passive link in conveying some constant information between input (sender) and output (receiver). Whereas in the first case a difference between the message at the input and at the output of an information circuit can occur only as a result of a defect in the communications channel, and is to be attributed to the technical imperfections of this system, in the second case such a difference is the very essence of a text's function as a "thinking device". What from the first standpoint is a defect, from the second is a norm, and vice versa (Lotman 1988, pp. 36-37). Lotman's theory implies that "when a text is serving a dialogic function, it cannot be adequately understood in terms of the transmission model of communication ...because this model presupposes that a single univocal message is transmitted from sender to receiver, whereas Bakhtin view the process as involving multiple voices from the outset." (Wertsch and Toma 1995, p. 166).

Lotman's point is also that there is a place for texts of all kinds on the scale from univocal to the dialogic. Thus he helps us come to terms with the seeming dichotomy between monologic and dialogic by showing how all texts (in the widest possible meaning of the word) contain a univocal and a dialogic function, but depending on the purpose and the context, one or the other dominates.

Focus and method

In my analysis of the asynchronous discussion, my focus is on the learning potential. The analysis will focus on the following aspects:

- * The overall interaction pattern and the extent of engagement with other texts.
- * Factors which influence the dialogicality of the discussion.
- * The dual function of the discussion entries and the learning potential of univocal and dialogical texts.
- * The contribution of multiple voices to the learning potential.

My aim is to show how the theoretical concepts of dialogue, intersubjectivity, multivoicedness, univocal and dialogic text functions and symmetrical interaction may help us unpack factors that contribute to enhance the learning potential of writing in this particular context. The complete text version of the discussion was coded by means of Henri's (1995) operationalization of some concepts of the interactive process: 'explicit interaction', 'implicit interaction' and 'independent statement' (See Appendix for subcategories and descriptions). Each discussion entry was treated as an utterance, i.e. the text unit uttered by one speaker (or writer) before someone else takes over (Bakhtin 1986). The result formed the basis for the communicogram (fig.1) which helps us get an overview of the extent that students explicitly or implicitly related their own text to other students' entries, as opposed to independent statements with no relation to other utterances. To explicate the results I discuss contextual factors like the format of the assignment, the role of the teacher as well as the students.

The analysis of the verbal interaction was supplemented by content analysis, because in order to determine the learning potential of the multiple voices, it was necessary to deal with the content. The second coding focused on Lotman's univocal and dialogical textfunction.

Participation and dialogue

There is a general and intuitive consensus in the literature about CSCL that the learner builds knowledge through discussions with peers and teachers and tutors. Many authors equate the interactive process with participation: "they imply that to measure participation is to measure interaction. ... 'Participation', 'collaboration' and 'collective process' are often used as synonyms for the interactive process – itself presumed to denote learning" (Henri, p.150). Henri operationalizes interaction by building on Bretz' (1983) distinction between genuine interactivity, quasi-interactivity and simulated interactivity. Because I use Henri's categories, I will briefly compare their view with Bakhtin's view of interaction. Bretz and Henri call interaction between two ("a message from A to B") 'quasi-interactivity', while genuine interactive communication require three actions, where B elaborates on A's message and A responds. This seems based on the traditional communication model of a sender who transfers a message to a receiver. According to Bakhtin, however, meaning cannot be transmitted from one to the other, but is constructed between the speaker and the listener, the writer and the reader, and the number of actions is irrelevant. In its essence all communication is dialogic, but Bakhtin also distinguishes between monologic and dialogic. Bakhtin's theory of dialogue makes it clear that turntaking alone does not qualify as dialogue, it is the reciprocity and the active engagement with the ideas and thoughts of others that makes an interaction dialogic. Participation does not ensure dialogue, and therefore the overall analysis of the interactional pattern in the philosophy discussion is interesting.

The interactional pattern of the philosophy discussion: the communicogram

The arrows in the communicogram point to whose entry and ideas the student commented on, agreed with, disagreed with, discussed, built on and so on. Note that the student written entries in the discussion were numbered chronologically as they occurred. The numbers close to the lines thus indicate whether the entry occurred early or late in the discussion and their internal order. When the same number occurs on lines pointing to different persons, it indicates that the student engaged with the ideas of several others in the same utterance. The names used are fictitious, and permission to use the transcripts were cleared through the teacher.

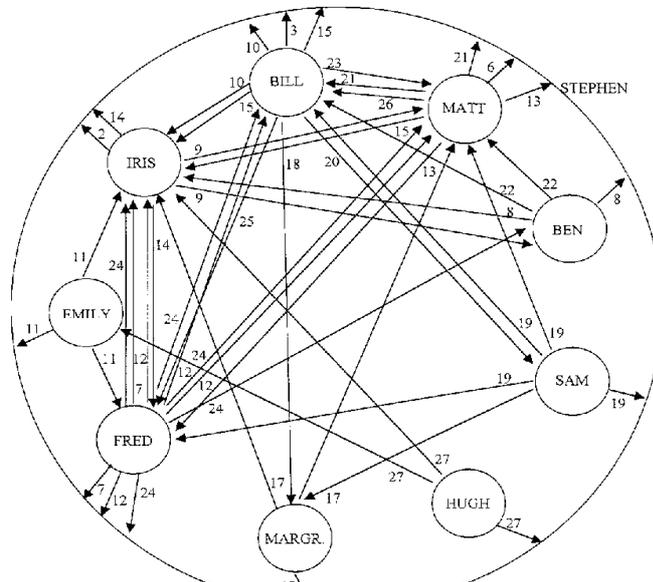
Fig 1 illustrates the following specific findings:

1. The first two student entries interacted only with the teacher
2. All the subsequent utterances also explicitly or implicitly referred to what fellow students had said. No students had only 'independent statements'.
3. All the entries in the philosophy discussion were dialogical in the sense that they engaged with the ideas of the others.
4. All the students responded to the teacher's prompt and engaged with the ideas in his essay "Good Ethics is Good Business" .
5. Most of the students also explicitly referred to the teacher's initial questions.
6. Fred, Iris, Bill and Matt received more comments and engagement from fellow

students than the others.

The overall conclusion is that the discussion displays a high degree of dialogicality.

FIG: 1. COMMUNICOGRAM OF WEB-MEDIATED DISCUSSION IN PHILOSOPHY



Discussion: What contributed to the high degree of dialogicality?

It cannot be assumed that learners are necessarily interacting and collaborating in the content even though they participate in a group discussion. It is therefore particularly interesting to look at what factors which may have contributed to the high degree of dialogicality and intersubjectivity² in the this particular discussion.

¹ Intersubjectivity refers to a temporary shared collective reality or common framework among individuals. Rommetveit says: "We write on the premises of the reader [and read] on the premises of the writer" (Rommetveit 1974, p. 63). "As learners find common ground ... or shared thoughts ...they can more easily exchange ideas, build new knowledge, and negotiate meanings (Bonk & King. 1998, p. 41). Computer tools may foster such shared space between participants that can help them negotiate meaning and create new understanding. The communicogram shows that many of the students responded to several other students in the same utterance. This also happens in face-to-face discussions but to a lesser degree, simply because in oral discussions participants feel constrained not to talk too long. The written medium and the time aspect both influence the amount of response and the number of addressees. The asynchronous aspect of the discussion is also significant here, because in synchronous discussions students normally respond just to one in each entry.

I will discuss three aspects of the context of the philosophy discussion which may have influenced the dialogicalty, and which in my view are important factors

to consider when organizing electronic discussions: *the nature of the assignment, the role of the teacher and the symmetry of the participants.*

Stephen, the philosophy teacher introduced the discussion by setting the assignment in a way which elicited complex responses from the students. The students were asked to 1) reflect on the article, 2) present examples which illustrated the point of the article and 3) explain why the example was pertinent. They were not explicitly told to respond to the others, but this was implicit. This is an example of *an authentic assignment*, where there are no obvious right or wrong answers, and it is a *complex* assignment which requires students to reflect before entering their response. It is thus well suited to the new hybrid asynchronous genre, where writing in their own time gives students a chance to review other students' contributions and to reflect before writing their own. This kind of authentic and complex assignment is instrumental in eliciting multiple responses. Other studies have confirmed the importance of giving assignments which are challenging and create a need to communicate. Very often "real world problems and issues are at the core of learning activities" (Zhu 1998, p. 257), and this is also an important aspect of the assignment in the philosophy class. In Zhu's study, however, students were given an important role in redefining teacher assignments or selecting their own discussion topics, a practice which also worked well. If the initial question is not seen as relevant and interesting by the students, they tend to view the participation in the asynchronous discussion as 'busywork' (Chong 1998). One conclusion to be drawn is that for an asynchronous discussion to become truly interactive, it is crucial to set an interesting and challenging initial assignment, a question where there is a certain curiosity about the input from different voices.

After giving the assignment, the philosophy teacher stayed completely out of the discussion and just had a monitoring role. Since this is less common than a more active teacher role, it is worth discussing whether this in itself had a positive effect on the dialogicality. In asymmetrical interactions, for instance in classrooms, communication lines tend to focus around the teacher, whose authority rests both on status, power and knowledge. This discussion was symmetrical in the sense that none of the participants had a higher status than the others. In symmetrical interactions communication lines may focus around a participant who gains status because of superior knowledge in the topic or good communication skills. The communicogram of the philosophy discussion shows that lines of interaction focus on 4 of the 9 participants: Fred, Iris, Bill and Matt. A closer scrutiny of their contribution shows that their entries contained interesting content and were well written. The participants are adult working professionals and it is likely that they place value on fellow students' utterances. It is also worth noting, however, that the teacher was an important dialogue partner in spite of his silence, because his article was the focus point of many of the student entries and his assignment set the direction of the dialogue. The communicogram shows that all the students responded to the teacher's ideas in the article. It could be argued, however, that by staying out of the discussion, the teacher encouraged symmetrical interaction between the participants and gave each student voice more authority.

In an earlier study of high school classroom interaction I found that the teacher who consciously tried to promote face-to-face dialogic interaction among students with a high learning potential, took on the following functions: Posed authentic

questions, provided 'uptake' (repeating key elements of what students said in order to make others engage with the ideas), summarized, challenged, offered new information, provided opportunities for reinforcing learning (Dysthe 1995, 1996). These are functions which a moderator or teacher *could* take on also in a computer mediated discussion, but this teacher only takes the first one.

The question of the teacher's role in electronic discussions is a complex one, and research studies show a variety in both kind and extent of teacher involvement. Several studies suggest that active teacher involvement is necessary for productive interactions, while Light et al (1999) report a study where the teacher did not participate at all. A number of studies reported in *Electronic Collaborators* (Bonk & King, 1998) conclude that the teacher has an important supporting function, but which form is most effective, is highly context dependent. The philosophy discussion reminds us that symmetry between participants may foster dialogicality and produce student responsibility instead of reliance on teacher interventions.

The dialogic and univocal function of the discussion entries

As mentioned before, dialogue in the Bakhtinian sense means that the participants must take an active, responsive attitude towards the word of the other, and new understanding emerges in the tension and struggle between the voices. We will now look more closely at the discussion entries, to find some clues why they elicited response from fellow students and thus contributed to the high learning potential. First I have analyzed the pattern and the character of each entry and secondly the univocal and dialogic function in one student's entry.

Each discussion entry is treated as the unit of analysis, following Bakhtin's emphasis on the utterance, i.e. the text unit uttered by one speaker (or writer) before someone else takes over (Bakhtin 1986). The analysis revealed that a common pattern in several of the entries was the following:

- a) Dialogic: reference to the article or to the assignment
- b) Univocal: presenting examples
- c) Dialogic: engaging in discussion of one or more points raised by other students
- d) Univocal/dialogic: raising a point of principle

This pattern indicates that the dialogue dominant parts can be distinguished from the parts where univocality dominates. Some students even introduced the structure of their entry as they would in a formal paper:

I would like to respond to the question in two segments. First an example or two of my own, and secondly a comment on the other responses (Ben 8).

A further contribution, with one example of good-ethics=good business and one example for others' response. I'd also like to respond to Matt's question and to Iris's re-affirmation of her view of ethics as consistency (Fred 12).

If we look more closely at each contribution, we find, however, a considerable difference in how the students frame their examples. It is possible to distinguish varying degrees of dialogicality in the presentation of examples, where we would expect most univocality. The whole utterances, as well as each of the parts, have what Lotman calls a dual function, they are univocal and dialogic at the same time. Iris, for instance, presents her examples in a dialogic form by interweaving

them with questions. The form of her questions indicates that they are part of her own exploratory thinking process and at the same time they are directed towards her fellow students, inviting them to take part in her exploration. She seems less concerned with stating a position than Matt, even though it is fairly obvious what her own position is:

1. Take an ethic of altruism. If a company is seen to be a good corporate citizen (it must be seen and promoted as such to be useful), for example a large donation is made to a charitable cause - does this not reflect well on the profile and standing of the organisation? ... Would this apparent altruistic act serve to attract a new segment of the market? The company's support for the community may well play a prominent part in their advertising, giving maximum exposure to their approach.

2. Take another example of a business that is generally seen as detrimental to the environment, for example a mining company. If it were to be prominent in supporting LandCare programs, would this not counteract some of the negative community opinion that mining companies often experience?

3. One particularly simple example of good ethics equals good business in the longer term may be the use of condoms by prostitutes. In the short term there may be a lack of business. However, in the longer term, the more enlightened client is more likely to return when he knows that the product is safe ... (Iris 2).

The dialogic presentational form of the two first examples invites response directly, and the material shows, not surprisingly, that those are likely to be taken up by other participants. The third example invites response because the content is unexpected and provocative. As the communicogram shows, Iris turned out to be one of the pivotal persons of the discussion, and this may be linked both to the explicitly dialogic elements in her presentation and to the provocative content in some of her entries.

As a follow up to this we will now look at how different students responded to Iris.

How does multivoicedness create learning potential?

According to Bakhtin and Rommetveit meaning and understanding are created where there is a 'reciprocity of differences', where multiple voices struggle with one another, argue or supplement one another. Such aspects are therefore likely to create high learning potential for the participants. A complete content analysis of the whole discussion is beyond the scope of this paper, so I have chosen as example just a subtheme which was commented on by a number of the students: altruistic donations.

Iris' first example of 'good ethics is good business' was that altruistic donations would in the long run be good for the company's business. She also raised the question about the motives of such companies for giving money away. Fred followed up by wondering whether an act within a consequentialist framework is ethical at all. His own judgement is clear, altruistic donations is a case of thinking of the return value, and therefore "just a simple exercise of instrumentality" (7). Ben goes even further and postulates that if the donating

company does not change its core business "to accord with the ethics of the donee organisation, it is not an ethical act as the reason for the donation is not ethical, rather it is a profit motive or marketing reason." He thinks this is a way for a company to disengage itself from ethics, and therefore "I would go further and say that such donations are, in fact, unethical" (8). Iris tends to agree, but makes an exception for donations done to redress damage, for instance a mining company's donation to environmental restoration (9). Emily brings into the discussion definitions of ethics as found in their coursebook on Business Ethics: "the issues cannot be identical with self-interest, they require the use of principles which can be defended with reason, they must be universal and applicable to all, and result in the good of everyone" (11). Measured against such standards, Emily finds that most of the examples of good practice are "simply attempts to dupe the public that the businesses are acting ethically."

This is an example of how understanding and insight are accumulated as each voice builds on, contrasts or extends the understanding of the other. Ethics is not a subject where there are correct answers or where the aim is to reach consensus, and the purpose of a study module such as this is to help the students develop their ethical reasoning. The exchanges cited above, reveal a 'complexification' of the issue, and this is exactly what makes up its learning potential. The students are exposed to multiple voices and multiple points of view, which counteract a simplistic view of complex issues and create a potential for development of their ethical reasoning. A closer analysis reveals that this is due both to the entries where the univocal function dominates as well as the entries where the dialogic function is dominant.

Summary of findings and practical implications

In this section I will list some of the findings of this study and briefly discuss some pedagogical implications for teachers and students in their efforts to utilize and develop the learning potential of netbased discussions.

Dialogicality and multivoicedness

- The interactional pattern of the discussion showed a high degree of dialogicality where students engaged with the ideas of other students.
- Each of the multiple student voices brought new perspectives to the topic and enhanced the learning potential for all the participants.

The analysis has affirmed the asynchronous webmediated discussion as a learning tool and has shown the advantages of students being able to reflect and write in their own time. In real time discussions many students have problems expressing themselves quickly enough to take part. In asynchronous discussions, where this time factor is eliminated, students should be explicitly encouraged to express their ideas in relation to other student entries, present alternatives or to continue the thoughts of other students. Understanding the importance of multivoicedness for individual and collective meaning making will provide an impetus for students in making their own voices clear, while avoiding simplistic solutions.

The discussion shows that participation does not equate interaction and dialogue. This is an important distinction for teachers and students to note. It would be useful for teachers and students in each course to agree on the importance of dialogical interaction in the learning process and on the necessity of using language to formulate emergent understanding. Much of the rhetoric of

'independent learning' fails to communicate this basic fact, and as a result too many students do not utilize the learning potential offered in webmediated or face to face discussions. The individual and the social aspects of learning are brought together in Bakhtin's dialogic theory. In the face of this, safeguarding the place for learning dialogues in the curriculum seems important.

The dual function of texts

- It was possible to distinguish between parts of the discussion where the univocal or the dialogic function dominated.
- The dialogic and the univocal were interwoven even in the most presentational parts, and new information was presented in more or less dialogic ways.

Some students spent much more time presenting their own examples than engaging with the ideas of fellow students. This indicates that students and teachers may benefit from becoming aware of the difference between the univocal and dialogic text function. There is a danger in an asynchronous discussion that students use the extra time primarily to present new information and to 'say their piece', instead of considering the thoughts of others. There is a learning potential in both, but students need to see that the unique potential of a dialogue, webmediated or not, lies the intersubjectivity and in generating new understanding through using the entries of others as a generator of new thoughts. Lotman's concept of using other texts as a 'thinking device' could serve as a useful reminder.

Factors contributing to dialogic interaction

- The formulation of the assignment was of vital importance for the dialogicality and the learning potential of the discussion.
- The philosophy teacher's lack of intervention placed the responsibility for dialogue on the students.
- Symmetry of the participants' status and knowledge made it necessary for students to develop their own perspectives and authority instead of adopting the authoritative word of the teacher.

Many teachers have experienced that it is more difficult to engage students in virtual discussions than in face-to-face discussions. It is therefore common, especially in the USA, to grade students on their participation (Bonk & King, 1998). This was not the case in the philosophy course. My analysis revealed three factors which influenced the engagement of the students: the framing of the topic and the nature of the assignment, the role of the teacher and lastly the symmetry of participants. This opened and complex assignment which combines reflection on a provocative text, constructing new examples and discussion gives one model for teachers to consider.

In many countries the role of the teacher is changing from a transmitter of knowledge to a facilitator of learning. The new role has to be negotiated and developed both in the classroom and in the new media. One aspect of this is the degree of intervention on the part of the teacher. It could be argued that by staying out of the discussion the philosophy teacher encouraged symmetrical interaction among the participants and gave each student voice more authority. In asymmetrical interactions communication lines tend to focus around the teacher, whose authority rests both on status, power and knowledge. In symmetrical interactions communication lines may focus around a participant who gains status

because of superior knowledge in the topic or good communication skills, as was the case here. It is however, premature to conclude that lack of teacher intervention always encourages dialogue, as this is highly dependent on the context. The teacher's role and what competence is needed to facilitate good web-based learning discussions are important topics that needs further study.

Learning potential in reading ('lurking') as well as in responding

An interesting question is whether students learn only from active participation through writing responses or also from reading what others write. Henri (1995) found that his students had learnt much from the entries of their fellow students, even though they did not overtly interact with the contents. His interpretation is that computer mediated communication was "a way for the learner to validate, with other learners, the constructs he has built up mentally, and to make sure they are adequate" (Ibid, p. 160), and he concludes that the computer mediated communication "seems to be rather an individual process, in which the learner wishes to reach personal objectives. CMC does, however, allow him to obtain some support from the members of the group" (Ibid, p.160). Henri's interpretation may be right, but Bakhtin's extended concept of dialogue offers a broader explanation. When dialogue is viewed as both *internal and external*, as Bakhtin does, internal engagement with the texts of fellow students will also result in learning, even though these processes cannot be traced. Bakhtin's theory thus bridges the social-individual divide.

Conclusion

The most direct pedagogical implications which can be drawn from this study is firstly the necessity of creating authentic and challenging assignments in order to stimulate interaction and dialogue. Secondly it challenges the teacher's role in such discussions and thirdly indicates that symmetry between participants may be an important factor in encouraging students' interactions.

On a general basis I have argued that dialogue theory enhances our understanding of educational interactive processes. The brief analysis of the asynchronous webdiscussion has demonstrated that Bakhtin and Rommetveit's concept of dialogue and intersubjectivity, Bakhtin's multivoicedness as well as Lotman's 'dual functionality of texts' can help us circle in important aspects of what creates high learning potential in student interactions, whether they occur in writing or face-to-face. They are useful both as analytical and practical tools. To understand better how to support such dialogues across different disciplines, more studies are needed.

The theoretical framework of Bakhtin and Lotman also seem to bridge the dichotomy between the monologic and the dialogic, between transmission and dialogic communication as well as between the individual and the social aspects of learning, and underlines the necessity for varied communication strategies. The learning potential for the students in this philosophy course lay in the combination of the dialogic, social interactions through the written medium and their individual processing.

There is a need to develop students' awareness of and ability to contribute to subject related dialogues and especially their ability to use the contribution of other participants as thinking device in their personal and collective creation of knowledge. There is a need to develop teachers' and students' awareness of the

univocal and the dialogic functions of texts. There is definitely a need for “developing increased opportunities for students to engage in forms of discourse grounded in the dialogic function of texts” (Wertsch & Toma 1995, p.173) at the university as well as in schools. The asynchrokous webmediated discussion offers one such opportunity.

An important part of learning is ‘to appropriate the word’, to understand and make the thoughts of others our own. This often takes place through confrontation with other’s interpretations and appropriations. “The word in language is half someone else’s. It becomes ‘ones own’ only when the speaker populates it with his own intention, his own accent, when he appropriates the word, adapting it to his own semantic intention”(Bakhtin 1981, p. 293). In the process of using other people’s texts as thinking devices, new meaning may also be generated. It is the responsibility of both teachers and students to facilitate both the appropriation of the words of others and the creation of new knowledge.

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Appendix.

Categories used to code the text of the discussion (Henri 1995: 153)

<p>1. EXPLICIT INTERAC</p> <p>1.1 Direct Answer</p> <p>1.2 Direct Comment</p>	<p>any statement containg specific reference to another message, to another person or to a group of persons</p> <p>any statement answering a question in an explicit or obvious manner by referring to it directly i.e. "in response to message 16 from Denis ..."</p> <p>any statement referring to and furthering an idea which has been raised, by direct reference to it i.e. "I am of exactly the same opinion as Nicole ..."</p>
<p>2. IMPLICIT INTERACTION</p> <p>2.1 Indirect Answer</p> <p>2.2 Indirect Comment</p>	<p>any statement containing an implicit reference to another message or to another person or group of persons</p> <p>any statement which obviously answers a question, but without refererring to it by name i.e."I think that the solution to this problem is ..."</p> <p>any statement referring to and furthering</p>

	<p>an idea which has been raised without referring to the original message i.e. ” The inheritance problem raised here needs the intervention of...”</p>
<p>3. INDEPENDENT STATEMENT</p>	<p>any statement dealing with the subject under discussion, but not answering or commenting, and not leading to any further statement i.e. ”After studying this problem, I think that ...”</p>