Social and Ethical Dimensions of Computer-Mediated Education

ABSTRACT

This paper addresses social and ethical issues in computer-mediated education, with a focus on higher education. It will be argued if computer-mediated education is to be implemented in a socially and ethically sound way, four major social and ethical issues much be confronted. These are: (1) the issue of value transfer in higher education: can social, cultural and academic values be successfully transmitted in computer-mediated education? (2) the issue of academic freedom: are computer-mediated educational settings conducive for academic freedom or do they threaten to undermine it? (3) the issue of equality and diversity: does a reliance on computer networks in higher education foster equality and equity for students and does it promote diversity, or does it disadvantage certain social classes and force conformity? (4) the issue of ethical student and staff behaviour: What kinds of unethical behaviour by students and staff are made possible in computer-mediated education, and what can be done against it? Existing studies relating to these four issues are examined and some tentative policy conclusions are drawn.

Keywords: distance education; ethics; academic freedom; social equality; academic value

1. Introduction

This paper addresses social and ethical issues in computer-mediated education, with a focus on higher education. Computer-mediated education is here defined as education that in which much or all of the interaction between faculty and students, or between students themselves, is mediated by computers. Computer-mediated education hence encompasses both distance education and the use of computers to mediate the educational activities of students and faculty on physical (nonvirtual) campuses, in so-called blended learning: educational activities that include both physical classroom meetings and computer-mediated interactions.

I will argue that if computer-mediated education is to be implemented in a socially and ethically sound way, four major social and ethical issues much be confronted. First, the *issue of value transfer in higher education* must be addressed. Universities have historically had a major function in the transmission of social, cultural and academic values. But can such values be adequately communicated and learned over computer networks? Second, the *issue of academic freedom* should be considered. Are computer-mediated educational settings conducive for academic freedom or do they threaten to undermine it?

Third, the *issue of equality and diversity* must be considered. Does a reliance on computer networks in higher education foster equality and equity for students and does it promote diversity, or may it disadvantage certain social classes and force conformity? Finally, the *issue of ethical student and staff behaviour* must be considered. What kinds of unethical behaviour by students and staff are made possible in computer-mediated

education, and what can be done against it? After discussing these four issues, I will draw some general conclusions about the prospects of computer-mediated education.

2. The transfer of values in computer-mediated education

The cultural transmission of values has often been identified as one of the major functions of universities (Clark, 1983; Croy, 1998). For most students, the university functions as a social microcosm, a miniature society in which they learn to function as one of its members. It is a place were many students learn to live a life for themselves, without constant supervision by their parents, and thus to become autonomous citizens. In the process of becoming this autonomous citizen, students adopt new cultural values in interactions with their teachers, their peers, and other members of the university community.

One set of values that is acquired by students in universities is particularly important, since their transmission is considered to be a central function of university education, and universities pride themselves with them. These are *academic values*. Academic values are values that academically trained individuals are expected to uphold in academic settings and in professional life, and that define what has been called academic integrity (cf. Center for Academic Integrity, 1999). They are values that directly bear on the manner in which academic work is performed, the manner in which professional interaction takes place, and the attitudes that are taken to professional work and professional interaction. Academic values include values such as honesty, objectivity, fairness, trust, collegiality, respect, accuracy, thoroughness, independence, openness, curiosity and responsibility. A university training, then, is not just about learning knowledge and skills in a certain discipline, it is also about acquiring academic values so as to acquire an academic "mindset," a set of attitudes and practices in which these values are brought to life.

Can universities that strongly rely on computer-mediated education serve as proper vehicles for the transmission of academic values, and for the transmission of cultural values in general?   A number of authors have argued that they cannot. They have argued that a profound learning experience, which includes the transmission of academic values, requires real-world settings in which people engage in face-to-face interaction. This, indeed, seems to be the feeling of many educators throughout the world. For example, the New York Times has reported that "the American Federation of Teachers …. critical of the sterility of distance learning, noted, 'All our experience as educators tells us that teaching and learning in the shared human spaces of a campus are essential to the undergraduate experience' " (in Dreyfus 2001, p. 32). Nancy Dye, president of Oberlin College in the United Stages, has claimed that "learning is a deeply social process that requires time and face-to-face contact. That means professors interacting with students." (also in Dreyfus, p. 32). And Bernard Tan, student dean of the National University of Singapore has argued that interaction via the internet and video conferencing "cannot replace the face-to-face interaction which must be at the core of our teaching programmes".   He emphasizes in particular that the transmission of "the values which will underpin our students' working lives and their interaction with their fellow

citizens … cannot be achieved without face-to-face interaction which is unmediated by high technology." (Tan, 1999, unpaginated).

Philosopher Hubert Dreyfus has presented an extensive argument against distance education as a means for transferring values. He argues that education centrally involves the transmission of skills and a process by which educators foster commitments in their students and stimulate them to develop strong identities. He then argues that such skills, commitments and identities cannot adequately be transferred in distance education since they require bodily presence and localized interactions between students and teachers. This requires a relation of apprenticeship, which according to Dreyfus cannot be attained on-line. "Only by working closely with students in a shared situation in the real world can teachers with strong identities ready to take risks to preserve their commitments pass on their passion and skill so their students can turn information into knowledge and practical wisdom." (1999, p. 20).[1]

It is not just face-to-face interaction and apprenticeship that have been argued to be missing elements that prevent an adequate transfer of cultural values in distance education. What has also been argued to be an essential ingredient is the presence of a genuine academic community in which students are embedded. Eaton (2000, unpaginated), for example, is worried that the dispersion of faculty and students in distance education may lead to a loss of "collegiality and shared governance," which she considers a core academic value. Prosser and Ward (2000) have argued that the transfer of practical wisdom in education requires communities with interpersonal connectivity among its members. Yet, they argue, virtual communities of the kind found in distance education are too impoverished to function as genuine communities, because of their relative anonymity, the difficulty of developing genuine commitments to things or people in the virtual environment, and the risk of an overload of trivial information in virtual environments.

Next to these critical voices, there are also authors who are optimistic about the possibility of transferring academic values in distance education, as well as the possibility of developing genuine apprenticeship relations and building genuine academic communities. John Daniel, vice chancellor of the Open University in the U.K., argues that "distance learning can be absolutely consistent with academic values," if faculty and administrators are committed to them and distance education courses are set up in the right way (Daniel, 1999, unpaginated). Mafalda Stasi (2002) has claimed that current approaches to distance learning too often suffer from Tayloristic and behaviourist approaches to learning, but argues that newer theories of collaborative, ecological learning can be used together with collaborative computer technologies to create a new distance learning paradigm in which learning has many of the same qualities as it has at conventional universities.[2]

It can be concluded that the issue of value transfer in computer-mediated education is a contested issue. Critics argue that computer-mediated education leads to a loss of apprenticeship and academic community, which makes the transfer of academic

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[1] See also Borgmann (1999); see Nissenbaum & Walker (1998) for a review of arguments for and against the claim that computers dehumanize education.

[2] Mafalda Stasi, 'Can collaborative computer technology afford an effective community of practice and facilitate a new cultural identity for distance learning?' paper presented at Technotopias Conference, University of Strahclyde, 2002.

values difficult. Proponents have countered that if enough effort is put in, computer-mediated education can be just as effective in the transfer of academic values as ordinary education. Clearly, more empirical research is needed to settle this issue. Nevertheless, it seems a reasonable requirement that educators who develop computer-mediated educational programs consider to what extent the transfer of academic values can be a realistic objective of such programs, and what steps can be taken to create settings and practices that foster the development of academic values in students.

3. Computer-mediated education and academic freedom

Academic freedom has always been described one of the most central values in higher education. Academic freedom is a special type of intellectual freedom, which is the freedom to use one's intellect in a way of one's own choosing, and to both hold, receive and disseminate ideas without restraint. The American Library Association defines it as "the right of every individual to both seek and receive information from all points of view without restriction" and holds that intellectual freedom "provides for free access to all expressions of ideas through which any and all sides of a question, cause or movement may be explored."[3] Intellectual freedom has often been defended as a core Western value, as a necessary prerequisite for democracy and cultural progress (cf. Morse, 2001).

Academic freedom is intellectual freedom as it exists within the academy: it is the free pursuit of knowledge by scholars and students. Clark, in an important study of the higher education system, claims that academic freedom involves freedom of research, freedom of teaching, and freedom of learning (1983, p. 248). As he points out, the liberties of academic freedom are sought at various levels: students seek freedom to learn what they want, scholars seek freedoms in teaching and research within their department, departmental groups seek self-determination within the university, and the university seeks autonomy from the state and from outside groups . Basic to this push for liberties is, according to Clark, "the desire for individual self-expression" (p. 248). Teachers want to teach to be able to say what they please without restraint or fear of retribution. Those who learn want to learn in a way that helps realize their life plan: they want be able to choose what they learn, how they learn it, and at what pace they learn it.

In discussing academic freedom and information technology, some authors have argued that information technology enhances academic freedom for students by offering them more choice, for instance by making a university education available through e-learning for students (e.g. employed persons or disabled persons) who are unable to physically attend classes. More generally, also, authors have been emphasizing the greater informational freedom that results from the Internet as an education medium, as it enhances opportunities for academic communication, information retrieval and teaching.

However, many authors also identify challenges to academic freedom that may arise from the use of computers and the Internet in education. A major challenge that has been discussed is the challenge of content selection with resulting limitations on free

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[3] Intellectual Freedom and Censorship Q and A of the American Library Association at http://www.ala.org/Content/NavigationMenu/Our_Association/Offices/Intellectual_Freedom3/Basics/Intellectual_Freedom_and_Censorship_QandA.htm.

speech. Academic freedom means, amongst others, free access to information and freedom of speech for both students and faculty. When speech or information is carried by a digital medium, however, limitations may be imposed quite easily: an administrator, system operator or list moderator may block certain types of messages, delete certain web pages or block certain e-mail addresses in a matter of seconds. Thus, both students and faculty are in a dependent position concerning their ability to acquire information and voice opinions via computer networks.

Regarding free access to information, universities sometimes place filters on their Internet traffic that effectively block access to certain web sites or to bulletin boards or messages that contain certain types of content (Rosenberg, 2001). Filtering or blocking may be done for efficiency reasons, for instance because it is found that certain sites, such as adult sites, generate a large amount of web traffic that causes net congestion. However, it may also be done as a form of censorship, to prevent users from having access to certain types of information that are considered immoral or illegal or otherwise undesirable. For instance, access may be blocked to sites with adult content, with racist or fascist content, or with illegal software available for download. Though such efforts are understandable, it may be questioned if such content control can be reconciled with the demands of academic freedom. Moreover, the use of filtering software has a reported disadvantage, which is that it invariably filters too much. Filters usually block access to messages based on the occurrence in them of certain key words. This ignores context, however, and so often leads to 'suitable' content being blocked. For instance, sites or messages may be blocked that study pornography rather than containing it, or challenge racism instead of promoting it.

Regarding free speech, universities may try to exercise control over the types of speech that are exercised by students and staff over the university network. They may, for example, have policies against certain types of speech that are considered undesirable, may remove or block messages that do not adhere to such policies. For example, the University of California, San Diego imposed a speech code in 1995 that stated: "The use of University resources such as electronic mail to disparage individuals or groups on the basis of gender, race, sex, sexual orientation, age, disability, or religion, is strictly prohibited and violates University policy." (quoted in Baase, 1997, p. 212). Universities may also monitor speech by eavesdropping on on-line communications and accessing student and faculty files on university servers.

None of these possibilities are necessarily advisable, however. The dictates of academic freedom and freedom of expression necessitate universities to be very cautious about filtering, blocking or removing electronic information or messages, monitoring computer systems and electronic communications of students and staff, or proposing speech codes for electronic communications. If any such actions are to be taken at all, they should respect as well as possible academic and intellectual freedom as well as personal privacy. While many forms of content control at universities probably result from efforts to protect individuals and groups from harassment and libel and foster a secure academic environment, there is nevertheless a serious risk that academic freedom and free speech are limited in the process. The ability to voice unpleasant and dissenting opinions has always been central to academic freedom and to freedom of speech, and a necessary prerequisite for social and intellectual criticism. When student and faculty fear that their electronically communicated views and opinions may be reprimanded or

blocked, or worry that their communication may be (anonymously) monitored by parties who are in a position of power relative to them, free speech may be stifled and academic freedom may be hurt as a result. A serious and continuous effort is needed, therefore, to balance any the need to protect individuals and groups from harassment against the need to promote free speech and academic freedom.

4. Equality and diversity in computer-mediated education

As Clark (1983) has pointed out in his analysis of values in higher education, social justice has always been a core value in the higher education system. Social justice, Clark writes, means "fair treatment for all," meaning equality and equity for students, but also for faculty and other staff (p. 241). The focus in this section will be on equality and equity for students in computer-mediated education. Clark claims that equality for students in higher education "is taken to consist, in ascending order of stringency, of equality of opportunity in the sense of access, equality of opportunity in the sense of treatment once admitted, and equality of outcome or reward." (p. 241). Based on this distinction, the relevant question to ask is what opportunities or challenges "virtual" universities offer or pose for equal access to higher education, equal opportunity within the education system, and equality in outcome for students. There have, however, been very few studies that address the issue of equality in distance education, or more generally studies who focus on differences between students in higher education (cf. Institute for Higher Education Policy, 1999). I will confine myself to those few studies that do address this issue.

How may computers and distance learning affect equality in education? Positively, distance education has been argued to be an equalizer by making academic education more accessible. Most importantly, it has been claimed that distance education may shatter geographical barriers to educational access and provide educational opportunities to people who may otherwise have not been in a position to enter the higher education system: people trapped by geographic isolation, economically disadvantaged people, people with health problems or handicaps, people who suffer discrimination, and people with jobs who are unable to relocate to a city with a university (Daniel, 1996 and Jones, 1997). More generally, computer networks have been argued to stimulate equal treatment and equal opportunity within schools because computerized interactions have been claimed to be less threatening and discrimination to be less likely because differences are less visible online (Chester and Gwynne, 1998; Smith, Ferguson and Caris, 2001; though see De Montes et al., 2002, who have found that racial and sexual inequalities may persist in distance education groups and who argue that strong teacher awareness of such inequalities remains a necessity in such groups).

Negatively, it has been argued, distance education, and more generally the extensive reliance on computers in teaching, creates new hurdles for certain groups that may induce new inequalities. This has been the main conclusion of what is currently the most quoted study on equality in distance education, *The Virtual University and Educational Opportunity* (Gladieux and Swail, 1999a), a study published by the College Board of the United States. Based on empirical data, the authors argue that distance education does not seem to help people low on the socioeconomic scale who have

traditionally been underrepresented in higher education (minorities and the economically less advantaged), and in fact seems to create new obstacles for them. Therefore, distance education may work to deepen the divide between educational haves and have-nots.

The authors identify two kinds of obstacles for socioeconomically disadvantaged groups in distance education. First, members of these groups often do not have access to computers and online services at home. And if they do have access at home, or if they make use of computers at a local service point, the quality of the hardware and software is often lacking, resulting in technological problems like equipment malfunctioning, Internet congestion and delay. As the authors claim, "Technical difficulties can befall anyone in cyberspace, and usually do at one time or another, but they disproportionately affect those who have the least ability to pay." (p. 21). A second, perhaps even more important, obstacle for traditionally underrepresented groups is their relative inexperience or even discomfort with computer technology. Gladieux and Swail cite studies that show that prospective college students from underrepresented groups have much less experience working with computers, both in their pre-college education and at home. They infer: "Such disparities could preclude significant numbers of students from participating in the virtual university." (p. 20).

The authors conclude: "The virtual campus may widen opportunities for some, but not by and large for those at the low end of the socio-economic scale, who have traditionally been underrepresented in higher education. Virtual space is infinite, but it does not promise universality or equity, nor is it appropriate for many students whose experience with technology is limited - and who might benefit far more from traditional delivery systems." (p. 22). In Gladieux and Swail (1999b) the conclusion is even harsher: it is claimed that the Internet may become a new engine of inequality by reshaping the global market for higher education in a way that may deepen the divide between educational haves and have-nots. Their conclusion can be rephrased to say that the much discussed digital divide between the 'information-rich' and the 'information-poor' (Campaine, 2001; Norris, 2001) frustrates the promise of distance education being an equalizer, and in fact only seems to worsen existing divides in higher education.

Although there does not currently seem to be a significant gender gap in higher education (women enter universities in about the same numbers as men), some authors worry that the extensive use of computers and the Internet in schools and universities may create a new gender gap. Studies have indeed shown that a digital divide exists between men and women; though this divide is perhaps less profound than the digital divides that exist between groups with different economic status, race, and ethnicity (Cooper and Weaver, 2003). Access is probably not the issue. Sulaiman et al. (2002) found no difference between the level of availability of computers, Internet access and the rate of usage of computers both at home and at the workplace between distance education learners according to gender.

However, there may well be a gender gap in knowledge of and attitudes to information technology. Janssen Reinen and Plomp (1997) have found such a gap, claiming: "Females know less about information technology, enjoy using the computer less than male students, and perceive more problems with software." (65). This suggests that women may have a disadvantage to men in distance education settings. Such disadvantages need to be addressed in the virtual university, as well as gender differences in the use of information technology, that have been reported in a number of studies.

Vale and Leder (2004), for example, have found that girls in middle schools experienced the use of computers in mathematics lessons much less favorably than boys. Herring (1996) found that male users of computer-mediated communication tended toward "more adversarial behaviour" while women tended to "more attenuated and supportive behaviours" and concluded that these behaviours correspond to two value systems, "One considers individual freedom to be the highest good, and the other idealizes harmonious interpersonal interaction." (p. 137). And in a comprehensive study, Cooper and Weaver (2003) report numerous findings that girls and young women are at a serious disadvantage in their ability to learn about and profit from information technology in eduation.

Additional inequalities may arise because of linguistic and cultural hurdles. An initiative is now underway for a Virtual European University, supported by institutes of higher learning from different European Union member states, that would provide college-level instruction for a multicultural and multilingual student population. This kind of university would inevitably bring such hurdles along. How can one make sure that a Virtual European University respects cultural diversity and does not embody cultural presuppositions that put students from certain cultural backgrounds at a disadvantage? How does one balance the need for linguistic diversity against the need of a common lingua franca, and how can it be ensured that students with diverse linguistic backgrounds have equal opportunities within the Virtual European University? And as Alain Dumort, director of the New Technologies in Education and Training division of the European Commission, asks in a paper on distance education in the European Union, "How can diversity of culture and language be valorized in an emerging market dominated by Anglo-American content, supply and technology investment?" (Dumort, 1999, p. 4).

In a study of cultural and linguistic diversity in virtual instruction in Europe, Van den Branden and Lambert (1999) conclude that "language and other aspects that are typically considered as culture bound, such as (differences in) prior knowledge, cultural subjects, attitudes towards culturally embedded topics, discussion and learning styles, and so forth, remain barriers to transnational educational networks." (p. 200-1). The authors claim that cultural and language problems in transnational education are often underestimated, and that it is moreover difficult to find adequate solutions for them even if they are recognized (though see Bowers, 1988 for a discussion). Positively, they claim that cultural diversity can also be very stimulating to students, and should perhaps be capitalized on more. Linguistic diversity, however, is mostly just a problem, which as the authors argue perhaps cannot be solved, but can only be made more manageable through the development of language management policies.

To conclude, serious challenges are raised for equality and diversity in the virtual university. These include both inequalities that affect socioeconomically disadvantaged groups, gender inequalities, and equality issues that relate to cultural and linguistic diversity. If computer-mediated education is to gain further prominence, universities will have to address these challenges. They can provide special facilities, for example, for socioeconomically disadvantaged groups. They should also put in special effort to address attitudes to computers of female students and their different learning styles, for instance through the choice of software and educational method in the use of computers in the classroom. Care must be taken to use teaching methods and tools that are sensitive

to gender differences in the use of information technology and that do not contain gender biases. Universities should be cautious in the realization of computer-mediated transnational educational programs, and make sure that if these are realized, adequate language management policies are in place.

5. Ethical student and staff behaviour in computer-mediated education

In this section, I will address the question of how the use of computer systems in computer-mediated education changes the settings in which moral values function, for students and staff members. My focus will be on the new moral challenges and new possibilities for immoral behaviour for students and staff that may arise with the use of information technology in higher education. These moral challenges arise in part because electronic environments afford new types of actions that may require new moral codes, such as copying software and hacking. Yet, they also arise in part because certain types of immoral actions, such as plagiarism and invasions of privacy, are easier to perform in electronic settings, as well as harder to detect or control. What follows are six types of morally questionable behaviour that depend on the use of computers and computer networks in (higher) education, followed by a general discussion of them.

- *Digital plagiarism*
  Plagiarism has always existed in education, including higher education, where it is one of the major forms of academic dishonesty. Assignments handed in by students may turn out to be copied from fellow students or to be taken over, in part or in whole, from existing published works. In a way, computers and the Internet only add to the means that students have at their disposal to commit plagiarism. However, they make it much easier to do and much harder to detect. As Austin and Brown have argued, plagiarism has become easier for students in two ways: "word processing programs allow students to easily "cut and paste" information from the Internet or other electronic media to develop a paper that appears to be original work" and "students' use of Internet information that may be unavailable in traditional sources makes documenting academic dishonesty more difficult to faculty." (1999, p. 21; see also Hinman, 2002). Particularly worrisome, as they point out, is the existence of "term paper mills," which offer pre-written term papers to students on a range of topics, and many of which also offer to write papers specifically for students for a fee.

- *Breaking copyright and software theft*
  It is well known that the illegal copying of copyrighted media (texts, music works, movies and software programs) is widespread throughout society. Moreover, many people who engage in such activity do not consider themselves to be doing something that is patently immoral. This is certainly true for college students. Cohen and Cornwell (1989) and Glass and Wood (1996), for example, found that a large majority of college students do not perceive the illegal copying of software as unethical.
     This attitude of college students seems to match developments in the current information age, in which the Internet increasingly functions as the most important

information medium that people use. Hinman (2002) has argued that the very structure of the Internet undermines the notion of private intellectual property on the web: "The inner dynamic of the Web moves us increasingly toward a much more communal notion of property". As he explains, the Web stimulates copying because the very nature of browser technology necessitates making copies, because perfect copies can be made at virtually no cost, and because making digital copies does not involve physical theft from the person who owns the original (34). It may be added to this that many information sources on the Web are not obviously copyrighted, and many even lack an identifiable author (Kolko, 2002). Lipinski and Britz (1999) argue, moreover, that digital copying can often be morally, if not legally, defended because of the fact that access to information is a critical need in an age of information that may in some cases override proprietary rights.

Hence, the traditional legal paradigm of intellectual property is increasingly challenged by a new paradigm that emphasizes unrestrained access to, and use of, information. It is difficult to find an adequate moral compass to navigate the new landscape, not only for students, but for staff as well. Moral and legal confusion may moreover also result from the vagueness of "fair use" provisions in copyright law, that do not clearly state when copying for personal use or display in classroom settings is permitted, and from the existence of corporate licenses at universities, or departments therein, that may permit students to freely use or copy media that they do not own themselves.

- *Hacking*
  Hacking is breaking into computer systems for unauthorized purposes, which may be either malicious or nonmalicious. Hacking may involve, for example, snooping around on someone's personal computer through remote access, intentionally modifying or destroying files to which one has not been granted access, releasing computer viruses, stealing passwords or files, exposing personal information, and stealing electronic money (see Forester and Morrison, 1994, ch. 5 and Baase, 1997, ch. 7). Students and staff members at both virtual and conventional universities may engage in hacking for a variety of reasons. They may simply be unaware that they are breaking into a computer system, they may just be curious, they may be out to harm someone, they may want to benefit themselves, or they may have entirely different reasons. Malicious hacking is clearly morally problematic, but nonmalicious hacking has been defended by hackers as morally acceptable and socially harmless or even beneficial (cf. Baase, p. 242).

- *Improper use of computer resources*
  Hacking is the use of computer resources to which one is not supposed to have access. However, students and staff may also have authorized access to computer resources owned by the university, but then go on to use these resources improperly. For example, students may use their student account to run their own Internet business, contrary to the university's policies. Students may open up a popular website or service that generates loads of traffic that incapacitates the university's server, e.g., peer to peer downloads of MP3 files. Staff members may use the university's server or computer systems to download or view or store content that is

either illegal or against the university's policies (e.g., racist or fascist materials or pornography). Members of the academic community may also spread computer viruses or worms.

- *(Anonymous) harassment and hate speech*
  In universities, there may be various electronic means of communicating messages to other members of the academic community, as well as to persons outside the university: e-mail, electronic bulletin boards, IRC (the exchange of short one-on-one messages without a significant time lag), collaborative virtual environments and web pages constitute some of the most important ones. As in face-to-face communication, these computer-mediated forms of communication can be used to send threatening, obscene, inflammatory or harassing messages. These may include discriminatory messages, used to disparage individuals or groups based on gender, race, sexual orientation, religion, age, or disability. Such messages are generally not considered to be acceptable in an academic setting, as educators strive to ensure that the classroom, if not the campus at large, functions as a safe, nonthreatening environment for students as well as for staff. In this, the same principles apply for virtual classrooms and campuses as for their physical counterparts (cf. Ferganchick-Neufang, 1998).

  Moreover, in curbing harassing and obscene messages, educators will simultaneously have to make sure that they are not unduly limiting free speech (see also the section 3). As Baase has pointed out (p. 212), speech on computer systems is often treated differently from other forms of speech, and there is a tendency for less tolerance for offensive talk that takes place online. If this is true, then extra care must be taken to ensure that student discussion in the virtual classroom can take place as freely as student discussion in the physical classroom. It would be a loss if students would be more hesitant to voice their opinions because they are using an electronic medium.

  A feature of computer-mediated communication that deserves special mention is the ease by which anonymous or pseudonymous messages can be sent, for example through anonymous remailer services. Baase (1997, 214-5) points out that anonymous messages posted over the Internet can have good and bad uses. She claims that anonymity provides protection for victims of violence and abuse and users of illegal drugs who seek counseling and advice and for whistleblowers who wish to report on unethical or illegal activity in their organization without fear of retribution. However, anonymity can also be used for criminal and antisocial purposes: to perpetuate fraud, to harass people, to threaten or libel people with impunity, and ruin their reputation by spreading rumors (Baase, p. 214-5; see also Kling et al., 2000). Universities may hence want to consider having policies for anonymous electronic communication.

- *Breaches of informational privacy and confidentiality*
  Privacy is generally considered to be an individual right in Western countries, and many nations have privacy laws (or data protection laws, as they are sometimes called in Europe). Privacy has been defined as control over information about oneself and over exposure of oneself to (Schoeman, 1984, Brey, 2005). It is nowadays generally recognized that new technologies, and particularly information and communication

technologies, raise new privacy issues, for example concerning electronic databases and online privacy (e.g., Cate, 1997; Agre and Rotenberg, 1998). Many of these new privacy issues can be expected to apply to the use of universities that make a lot of use of online instruction and communication. In such universities, many important activities of members of the university can in principle be monitored or recorded electronically. This includes not only student administration but also classroom discussion, student-to-student and student-to-faculty e-mail contact, and the online behaviour of students in general. The walls of classrooms and offices at such a university are much more permeable than those of classical universities, making eavesdropping much easier, and it happens much more frequently that the things that are said and done in them are recorded so as to be available for later scrutiny, or can be copied for distribution.

At many (conventional) universities, privacy policies remain limited to student privacy policies that protect student records from being accessed by third parties without authorization. Since many student records are nowadays stored in electronic format, these policies must be supplemented with good system security. Electronic records should be adequately protected so as to avoid unauthorized access to them. Many universities nowadays also have policies that address the electronic posting of grades, which are considered to be privacy-sensitive.

Many more privacy issues can be raised at a university that has much of its communication and instruction online, however.[4] Consider, first, the confidentiality of classroom or group discussion or one-to-one and one-to-many. Can students be sure that these discussions are not logged or monitored by administrators, that they are not made accessible on public networks, and that access to them cannot be easily hacked? In a study of privacy in online learning environments, Tu (2002) argues that class discussions over a connection that is not secure may either inhibit discussion or force students to take risks in disclosing more personal information. He argues in favor of more private interaction environments, which he claims to be "key to increasing interactivity" (315). As he claims: "A sound learning environment will allow learners to adjust to the ideal levels of privacy and give students more secure and more comfortable environments to increase their social presence to enhance social interaction" (315).

It will be clear from this list that computer-mediated education makes possible many new types of unethical behaviour by staff, students and administrators. Clearly, universities need policies to address such behavior. But part of the solution may be technological. Universities need to consider the design of systems and software that is used to consider whether this technology facilitates or prohibits unethical use. This is largely a matter of systems security: the systems that are used should be designed and arranged so that they protect privacy, make hacking, software theft and improper use difficult. In addition, staff members should be provided with advanced software to detect plagiarism.[5]

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[4] See, amongst others, the Stanford Privacy Project at http://www.stanford.edu/group/privacyproject/ and Spinello, 2000, ch. 5.

[5] See also Olt (2002) for a discussion of strategies for minimizing academic dishonesty in online assessment.

As for policies, it is important that universities have widely published acceptable use policies (Flowers and Rakes, 2000) that specify what kinds of use of computer resources are considered improper. Ideally, such policies should also provide reasons for why particular uses are considered improper. There should of course also be policies for the administration of sanctions when abuse occurs. For successful online learning, moreover, it is very important that universities have privacy policies to protect the privacy rights of students and staff and to create secure learning environments in which members of the community interact with each other on a basis of trust.

6. Conclusion

In this essay, I have considered four major social and ethical issues in computer-mediated education. I have argued that universities should have policies that address these issues so as to foster the transfer of (academic) values in computer-mediated education, academic freedom, equality and diversity, and ethical student and staff behaviour. Some of the issues that have been discussed raise serious questions about the limitations of computer-mediated education, particularly in relation to academic freedom, social equality, academic freedom, and the transfer of academic values. These issues require particular consideration in decisions whether or not to choose for computer-mediated education, and how to choose for it.[6] At the end of each section, tentative conclusions were done regarding the kinds of policies that are needed to address the issues at hand.

To conclude, the preceding discussion points to several areas where more research is needed. First, more research is needed on the nature of academic values and their transfer in higher education, the importance of face-to-face interactions, apprenticeship and physical communities in the transfer of academic and social values in higher education, and the possibility of such value transfer in distance education settings. More research is also needed on the positive and negative effects of computer-mediated education on the participation of socioeconomically disadvantaged groups and women. More research is needed, finally, on ethical issues in online educational settings, on the dynamics of transgressions and conflicts in such settings, and on the functioning of policies that address student and staff behavior in such settings.

References

Agre, P. and Rotenberg, M. (1998). *Technology and privacy: The new landscape*. Cambridge and London: MIT Press.

Austin, M.J. & Brown, L.D. (1999). 'Internet plagiarism: Developing strategies to curb student academic dishonesty,' *The Internet and higher education*, 2: 21-33.

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[6] This paper draws from the report *Ethical Issues for the Virtual University* (XXXX, 2003). The report was written for the cEVU project coordinated by EuroPACE and supported by the European Committee, for a publication for the European Committee.

Baase, S. (1997). *A gift of fire: Social, legal and ethical issues in computing*. Upper Sadle River: Prentice Hall.

Borgman, A. (1999). *Holding on to reality: The nature of information at the turn of the millennium.* Chicago: University of Chicago Press.

Bowers, C. (1988). *The cultural dimensions of educational computing: Understanding the non-neutrality of technology.* New York: Teachers College Press.

Branden, J. van den and Lambert, J. (1999). 'Cultural and linguistic diversity: Threat or challenge for virtual instruction,' in Feyten, C.M. & Nutta, J.W. (eds.), *Virtual instruction: Issues and insights from an international perspective. Englewood: Libraries Unlimited, Inc.*

Brey, P. (2003). *Ethical Issues for the Virtual University*. Report for the cEVU Project (EuroPACE/European Commission). See www.cevu.org.

Brey, P. (2005). 'The importance of workplace privacy,' in Hansson, S. O. & Palm, E. (eds.), *The ethics of workplace privacy*. Brussels: Peter Lang, 97-118.

Campaine, B. (eds.) (2001) *The digital divide: Facing a crisis or creating a myth?* Cambridge, MA: MIT Press.

Cate, F. (1997). Privacy in the Information Age. Washington, D.C.: Brookings Institutions Press.

Center for Academic Integrity, The (1999). The fundamental values of academic integrity. Des Plaines: Office of College Relations. Also at http://www.academicintegrity.org/pdf/FVProject.pdf.

Chester, A. & Gwynne, G. (1998). 'Online Teaching: Encouraging Collaboration through Anonymity,' Journal of Computer Mediated Communication 4 (2). Unpaginaged.

Clark, B.R. (1983). The higher education system: Academic organization in cross-national perspective. Berkeley: University of California press.

Cohen, E. & Cornwell, L. (1989). '*A question of ethics: developing information system ethics*,' Journal of Business Ethics 8: 431-437.

Cooper, J. and Weaver, K.(2003). *Gender and computers: Understanding the digital divide*. Mahwah: Lawrence Earlbaum.

Croy, M. (1998). '*Distance education, individualization, and the demise of the university,*' Technology in society 20:317-326.

Daniel, J. (1996). *Mega-universities and knowledge media: Technology strategies for higher education.* London: Kogan Page.

Daniel, J.(1999). *"Distance learning and academic value."* Paper for Teaching and Learning with Technology Conference at Indiana University, 1999. Unpaginated. See http://www.open.ac.uk/johndanielspeeches/IndianaDEWksp.htm.

De Montes, L. & Oran, S. & Willis, E. (2002). *'Power, language and identity,'* Computers and composition 19: 251-271.

Dreyfus, H. (1999). *'Anonymity versus commitment: the dangers of education on the internet*,' Ethics and information technology 1:15-21.

Dreyfus, H.L. (2001*). On the internet.* London: Routledge publishers.

Dumort, A. (1999). *'New Technology and Distance Education in the European Union: An EU - US perspective.'* Paper presented at New Media in Higher Education and Learning, October 1999, USC, Los Angeles, 5 pages. See http://www-rcf.usc.edu/~ics/ed/ICS99.doc.

Eaton, J. (2000*). Core Academic Values, Quality, and Regional Accreditation: The Challenge of Distance Learning*. Council for Higher Education Accreditation (CHEA) Monograph Series. Unpaginated. http://www.chea.org/Research/core-values.cfm

Ferganchick-Neufang, J. (1998). '*Virtual Harassment: Women and Online Education*,' First Monday, vol. 3 no. 2. Unpaginated. http://www.firstmonday.dk/issues/issue3_2/fergan/

Flowers, B. and Rakes, G. (2000). *'Analyses of acceptable use policies regarding the internet in selected K-12 schools,'* Journal of Research on Technology in Education, 33 (3). Unpaginated.

Forester, T. & Morrison, P. (1994). *Computer ethics: Cautionary tales and ethical dilemmas in computing*, 2nd ed. Cambridge and London: MIT Press.

Friedman, B. (eds.) (1997). *Human values and the design of computer technology.* Cambridge: Cambridge University Press.

Gamson, Z.F. (1966). *'Utilitarian and normative orientations towards education,'* Sociology of education 39: 46-73.

Gladieux, L. & Swail, W. (1999a). *The virtual university and educational opportunity: Issues of equity and access for the next generation.* Washington, D.C.: The College Board of the United States. Also at http://www.ed.gov/offices/AC/ACSFA/april.pdf.

Gladieux, L. & Swail, W. (1999b). *The Internet: New Engine of Inequality?* Paper presented at EDUCAUSE '99. See http://www.educause.edu/ir/library/html/edu9949/edu9949.html.

Glass, R. & Wood., W. (1996). *'Situational Determinants of Software Piracy: An Equity Theory Perspective,'* Journal of Business Ethics 15: 1189-1198.

Herring, S. (1996*). 'Posting in a Different Voice: Gender and Ethics in CMC,'* in Ess, C. (ed.), Philosophical Perspectives on Computer-Mediated Communication. Albany: State University of New York.

Hinman, L.M. (2002). *'The impact of the internet on our moral lives in academia*,' Ethics and information technology 4: 31-35.

Institute for Higher Education Policy (1999). *What's the difference? A review of contemporary research on the effectiveness of distance learning in higher education*. See http://www.ihep.com/Pubs/PDF/Difference.pdf.

Janssen Reinen, I. & Plomp, T. (1997). *'Information technology and gender equality: a contradiction in terminis,'* Computers and education 28:65-78.

Jones, G. (1997). *Cyberschools.* Englewood, CO: Jones Digital Century.

Kling, R. & Lee, Y. & Teich, A. & Frankel, M.S. (2000). *'Anonymous communication policies for the internet: Results and recommendations of the AAAS conference and assessing anonymous communication on the internet: Policy deliberations,'* in Baird, R., Ramsower, R. & Rosenbaum, S. (eds.), Cyberethics. New York: Prometheus Books.

Kolko, B. (2000). *'Intellectual property in synchronous and collaborative virtual space,'* in Baird, R., Ramsower, R. & Rosenbaum, S. (eds.) Cyberethics. New York: Prometheus Books.

Lipinski, T.A. & Britz, J.J. (1999). '*Deconstructing (the concept of) intellectual property: Designing and incorporating Alternative models of property ownership in the new millennium and the protection of indigenous knowledge,'* Proceedings of Ethicomp 99. Luiss University, Rome, 5-8 October 1999. CD-ROM (1-13).

Morse, J.F. (2001). *'Intellectual freedom and economic sufficiency as educational entitlements,'* Studies in philosophy and education 20: 201-211.

Norris, P. (2001) *Digital Divide: Civic engagement, information poverty, and the Internet worldwide.* Cambridge: Cambridge University Press.

Nissenbaum, H. and Walker, D. (1998). *'Will computers dehumanize education: A grounded approach to values at risk,'* Technology in society 20: 237-273.

Olt, M.R. (2002). *'Ethics and distance education: strategies for minimizing academic dishonesty in online assessment.'* Online journal of distance learning administration, vol. 5 (3). Unpaginated. http://www.westga.edu/~distance/ojdla/fall53/olt53.html.

Prosser, B.T. & Ward, A. (2000). *'Kierkegaard and the Internet: Existential reflections on education and community,'* Ethics and information technology 2: 167-180.

Rosenberg, R.S. (2001). *'Controlling access to the internet: the role of filtering.'* Ethics and Information Technology 3:35-54.

Schoeman, F. (ed.) (1984). *Philosophical Dimensions of Privacy. An Anthology.* Cambridge University Press.

Smith, G., & Ferguson, D. & Caris, M. (2001). *'Teaching college courses online vs. face-to-face.'* T.H.E. Journal (www.thejournal.com), unpaginated.

Spinello, R. (2000). *Cyberethics. Morality and law in cyberspace*. Sudbury, MA: Jones and Bartlett Publishers.

Sulaiman, A., Rahman, Z. and Idrus, R. (2002). *'Gender differences in availability, Internet access and rate of usage of computers among distance education learners,'* Educational media international, 39: 205-210.

Tan, B. (1999). *Transmitting values to students in an age of high technology education.* Lecture presented at CDTL Orientation Programme, 7 September 1999. http://www.physics.nus.edu.sg/~phytanb/induct4.htm.

Tu, Chih-Hsiung (2002). *'The relationship between social presence and online privacy,'* The internet and higher education 5:293-318.

Vale, C. and Leder, G. (2004). *'Student views of computer-based mathematics in the middle years: Does gender make a difference?'* Educational studies in mathematics, 56: 287-312.