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Intellectuals in many fields have long argued that, as the distance between people increases, the possibility for genuine empathy between them decreases. Eighteenth-century philosopher David Hume said as much in his *Treatise on Human Nature* (1898) when he argued that "The breaking of a mirror gives us more concern when at home, than the burning of a house, when abroad, and some hundred leagues distant" (Vol. 2, 206).

Just over a half-century later, novelist Graham Greene suggested the effects of physical distance on human compassion in *The Third Man.* From the top of a Ferris wheel in Vienna, his character Harry Lime comments on the "people moving like black flies at the base of the Wheel." Lime asks his companion, "Would you really feel any pity if one of those dots stopped moving—for ever?" (Greene 1950, 129).

Computer pioneer Joseph Wiezenbaum (1972) explained the same phenomenon: "In modern war it is common for the soldier, say the bomber pilot, to operate at an enormous psychological distance from his victims. He is not responsible for burned children because he never sees his village, his bombs, and certainly not the flaming children themselves" (1972, 613). For Wiezenbaum, this example illustrates how humans use technology to evade moral responsibilities.

In this article, I argue that distancing has as-yet unexplored pragmatic consequences in online education. As I have argued elsewhere (Russell 2004), distancing can be understood as *a separation in time or space that reduces the empathy that a person may have for the suffering of others*. Distancing results from human, mechanical, or electronic agencies. When one person walks away from another, uses mechanical means to travel, or uses online communication, distancing is likely to occur. Face-to-face communication, the standard of the traditional classroom, is the "paradigmatic social context and medium," and it is critical for interpersonal processes (Palmer 1995, 282). In contrast, online technologies have a reduced capacity to support affective relationships. As Nie (2001) explains, although people can convey emotion through technologies such as e-mail, the fundamentals of our socio-emotional well-being are found in something other than computer screens.

The growing use of online education, including the development of virtual schools and universities, has not been accompanied by an adequate consideration of both the cognitive *and* affective domains. In particular, notions of empathy and responsiveness have not been sufficiently explored in classrooms where online computers mediate the geographic and temporal separation of students and teachers. Although I provide little new empirical data on these issues, I reconceptualize the problem of distancing, and I propose strategies for overcoming the problems arising from the use of conventional online models.

The Affective Domain in Face-to-Face and Online Classrooms

The code of ethics from the Australian College of Educators states, "Teachers have an obligation to keep abreast of advances in learning and in theories and strategies of teaching . . . They are responsible for what they teach and for the way that they relate to students" (Haynes 1998, 176). My 30 years of experience in education following this code—20 years teaching secondary school students in traditional classes and more than 10 years teaching university students face-to-face, at a distance, and in related combinations—leads me to connect my obligation as a teacher with students' affective domain. To the greatest extent possible, I think all instructors should use teaching strategies that allow them to be responsive to their students' emotional states. In particular, online teachers have a moral imperative to consider how the choice or application of technology constrains their interactions with students.

Face-to-face instruction enables teachers to readily identify students' attitudes and emotional states and to adjust the instruction accordingly. Even when students' emotional states are not directly linked to the teacher's actions, there is, I believe, at least some moral obligation on the teacher's part to alleviate student frustration or distress in the classroom. Such problems are not as readily noticed or solved in online education. The use of mediated rather than experiential learning, as well as the geographic and/or temporal separation between teacher and student, results in a weaker understanding of the affective domain. A teacher using distance education has limited access to students' emotional states and therefore has a limited ability to respond.

Prendergast et al. (2002), for example, observed students who were involved in virtual classrooms in Queensland, Australia. The students participated in synchronous classes in their schools, using online computers and an audiographic conferencing system; teachers provided lessons and feedback from remote locations. In several classes, students demonstrated off-task behaviors like drawing pictures, unrelated browsing, cleaning the mouse ball holder, and responding to outside interruptions. The teacher appeared to be unaware of these activities and of any contingent concerns such as student boredom or misunderstanding.

I anticipate two objections related to this example: (1) the perceived triviality of the observed behaviors and (2) their normality in any conventional classroom. While it is true that students' off-task behaviors are not life-and-death situations like those discussed by Green (1950) or Wiezenbaum (1972), deeming them trivial and/or normal obscures a more important issue. To consider a range of hypothetical student responses—from extreme distress to mild anxiety—and then to conclude that the teacher should address some but not others is to examine the wrong question. Determining whether a teacher's apprehension of students' emotional states has been diminished by online technology is more important than determining where a particular reaction might be placed on a continuum. The normality of off-task behavior in conventional classrooms is, similarly, not a sustainable objection. While it is true that students have been able to daydream in classes for hundreds of years, face-to-face teachers have had a parallel capability to detect unmotivated or anxious students and provide the requisite guidance. Most online teachers are afforded no such capability by the technologies they use.

Physical proximity between teachers and students does not guarantee mutual respect, congeniality, or empathy. However, these sensitivities are more difficult to achieve in online classrooms because of the distancing effect, which is intensified by a reduction of bandwidth. Teachers and students interacting via computer have little access to the body language, social subtext, and relational cues that abound in face-to-face environments. In low-bandwidth electronic communication modes such as e-mail or text-based Web pages, students do experience less noise (the over-saturation of information) in their communication and thus may better concentrate on the task at hand; however, they cannot transmit or receive the affective nuances that are available in face-to-face lessons and vital for interpersonal processes.

Perspectives and Research on Distancing in Online Education

The existence or relative importance of distancing in online education is a matter of debate. These four statements represent the various positions educators might take:

- No problem related to distancing has ever existed.
- There once was a problem, but it is no longer a concern.
- There is a continuing problem that is not widely recognized.
- The problem is known, but the advantages outweigh the disadvantages.

I will deal with each proposition separately to illuminate its relative accuracy.

No problem has ever existed. This position is difficult to support. Even before the advent of the World Wide

Web, the literature contained research and theories on distancing. Daft and Lengel (1984), for example, developed a theory of media richness that defined richness as the potential information-carrying capacity of data; they argued that face-to-face information processing was the richest form because it provided immediate feedback. Wellens (1986) maintained that the reduction of telecommunication bandwidth would lead to a progressive decrease in sensory modalities as people moved from informationally rich face-to-face situations to informationally lean computer-messaging situations.

Likewise, Dede has discussed the relationship between bandwidth and rich learning experiences, insisting that "the act of learning is always constrained by the characteristics of the communications channel between the student and the content to be mastered" (1991, 147). According to Dede, the wider the bandwidth of a communications medium, the more immediate and rich a learning experience can be. Walther's (1992) experimental research indicates that computer-mediated communications are less personal or socio-emotional than face-to-face communication. Walther discusses these findings in terms of social presence theory: As the channels or codes available within a medium decrease, the user pays less attention to the presence of other social participants, and as social presence declines, messages become more impersonal. Similarly, Parks (1996) argues that the social, relational, nonverbal, contextual, visual, and aural cues emanating from physical settings are missing or reduced in online contexts, such that online communication is impersonal and less adaptable to unique situations.

One complication with the literature cited above is that the research methodologies and the technologies investigated vary. Such variation makes it difficult for educators to identify a coherent message about distancing, but, at minimum, the implication is that distancing and low-bandwidth modes of communication alter patterns of interaction.

There once was a problem, but it is no longer a concern. This proposition is worthy of support only if we can confirm that technologies available today consistently enable high-bandwidth synchronous communication. In particular, if the mediated experience offered by online education in the 21st century makes use of all the kinesthetic channels available with face-to-face communication (e.g., visual synchronous communication like video conferencing), then the availability of the affective domain in online education and conventional education may be considered basically equivalent.

However, online education currently occurs via the World Wide Web and is supported by a range of applications, including e-mail, digital presentations, film clips, and antecedent technologies such as phones and print-based materials. All of these technologies lack the fundamental corporeal dynamism of classroom work, though they offer an abundance of informational interfaces. Ultimately, in most modes of online education, it is unlikely that improvements in technology will be sufficient to overcome distancing effects. As Valovic argues, "The digital revolution . . . will be forever limited by our own relatively narrow human bandwidth" (2000, 52).

There is a continuing problem that is not widely recognized. This contention is supported by two factors. First, distancing effects receive insufficient attention because the affective domain is considered difficult to address (Inglis 2001) or even inappropriate in distance education (Holmberg 1989). Thus, some online educators consider this ill-defined phenomenon a low priority given their pressing daily tasks. Second, the lack of poor scores and/or student dissatisfaction reported in online education leads most educators and researchers to conclude that distancing is not a significant problem because it does not impair achievement. For instance, Cavanaugh's (2001) meta-analysis of interactive distance education technologies in grades K-12 suggests that there is little difference between achievement in conventional and online settings; this study, like many others, did not assess students' attitudes about their learning experiences.

Distancing can be framed as a significant problem in education only when educators and researchers value the affective domain as highly as they value achievement. Kahne (1996) argues that we have moved from a discussion of the ways that goals shape individuals and societies to a discussion of the best means of pursuing learning outcomes. Heretofore, the focus has been on establishing the equivalence of online and

face-to-face environments in concrete areas, such as the quality of marked assignments (Johnson et al. 2000). The impetus of most scholarship is to describe how specific policies or technologies may affect test scores and graduation rates, not to consider the local and long-term effects of mutual respect, compassion, and empathy in classrooms.

The problem is known, but the advantages outweigh the disadvantages. The Florida Virtual School has adopted the motto of "any time, any place, any path, any pace," and this slogan highlights the flexibility of online learning. The convenience of being able to study when and where one chooses may outweigh the disadvantage of missing some of the human interaction that characterizes conventional learning.

A Pedagogy to Reduce Distancing Effects

The difficulty of measuring the distancing effect in the affective domain and the willingness of so many to overlook its consequences should not deter educators from taking steps to reduce its influence. An appropriate pedagogy for reducing distancing effects with online learning will follow these broad principles:

- High-bandwidth solutions are preferable to their low-bandwidth equivalents. If the communication medium allows for human emotions, gestures, body language, and other cues, it will replicate some advantages of face-to-face teaching. For example, the use of video rather than text-only e-mail will provide a more information-rich learning context.
- Blended approaches that combine face-to-face and online learning are preferable to an online pedagogy alone. Face-to face classes are likely to enable high levels of emotional understanding, while the convenience and flexibility of online components can motivate students to complete educational tasks.
- Synchronous technologies are preferable to their asynchronous counterparts because the former permit immediate feedback. A webcam with sound will allow the teacher to modify pedagogy or change the direction of an individual lesson based on student reactions.

Future Directions of Distancing Research

The central dilemma related to distancing is the inability of online educators to measure it. Yet, I am encouraged by the example provided by the early history of radio. As Maxwell (1965) reports, the Royal Society in London was introduced to the theory of the electromagnetic field, which demonstrated the theoretical existence of electrical forces, in 1864. However, it was not until more than 30 years later that Hertz (1898) was able to measure electric waves and Marconi and others were able to develop a radio. I believe that this illustration parallels the problem of distancing in online education. While the measurement of any distancing effect remains difficult, the problem may be seen as theoretical, and some will not regard the solution as urgent. Nevertheless, the contrary is likely to be true.

I conclude by issuing an open invitation to colleagues in distance education. I continue to feel some unease with the adult students that I teach in distance mode. Although I believe that online education offers considerable benefits to students, I worry that my students and I have too quickly accepted the constraints of the technologies involved, forfeiting the affective domain for the sake of convenience and achievement. There are three areas in which future research could provide a valuable perspective on the distancing effect. First, I would like to see new and rigorous studies that identify online students' attitudes about online learning and the enabling technology. Second, I would like to revisit the application of theories such as media richness and distancing to online learning. Finally, I would like to see a reconceptualization of the value system that underpins much of our current use of distance education. It is, I believe, possible for educators to become overly preoccupied with online technologies, financial considerations, and utility at the expense of ethical and community considerations. Any contributions to this debate are welcome.

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