ABSTRACT
         To maximize the level of comfort that will facilitate
an equal exchange of ideas instructors need to tailor their pedagogy
to fit their audience. That means they must consider the extent to
which their students have been exposed to computers. The University
of Houston-Downtown (UHD) has a high percentage of "non-traditional"
students. Students in composition classes taught there bring a great
deal of real world experience, but that real world experience does
not necessarily include computer exposure. Consequently, a
computer-centered pedagogy requires special attention to factors such
as different degrees of experience, technophobia, and
outside-of-the-classroom access to computers, in order to understand
the ways they impinge on academic performance and self-image of
students in the classroom. An informal survey of students in a
composition course showed that of the minority students, only 25%
owned a computer and all of these considered themselves to be
middle-class. Of the 75% who did not own a computer, about half
considered themselves lower-income and the rest were lower middle and
middle class. Still, the benefits of computer assisted instruction
are great. Computers are especially useful in challenging students to
examine their positions on sensitive or controversial social issues.
Students often prefer electronically based discussions because they
suspend the social dynamics of interpersonal communication, such as
eye contact, shyness, and body language. (TB)

Ethos, Ethnicity, and the Electronic Classroom:
A Study in Contrasting Educational Environments

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I.   My original intent for this presentation was to discuss the impact of cultural and class difference on communication in the classroom by examining the ways in which writers assume authority and establish credibility in different contexts. The enabling or dis-enabling role of the electronic classroom in negotiating social difference was to be discussed and contrasted as it has been utilized in different sites: a "flagship" state university (University of Texas-Austin) and an open admissions urban university (University of Houston-Downtown). When I wrote the abstract for this paper last Spring I had just been hired as an assistant professor at UHD, a school I had attended for two years as an undergraduate before going to their Central campus to finish my undergraduate degree in English. I was excited about the prospect of going back to this school as a professor because it offered so many of the things I admire in an educational environment; it places a high value on teaching and with its 30% Latino, 20% African American, 30% white, 10% Asian, and 10% international student population UHD is the most culturally diverse campus in the state of Texas. Furthermore, I know first hand how important for its student population, with an average age of 30, is its open admissions policy, which enables many students to have a second, third and much needed fourth chance. Coming from UT-Austin, I had had the good fortune to work as an instructor and lab staff in their well-equipped electronic classrooms and had witnessed also the many benefits and some of the deficiencies of this setting. And so it was that two years ago at the Ninth Annual Computers and Writing Conference that a colleague and I gave a presentation that compared our pedagogical strategies and experiences at UT and Austin Community College. When I visited the UHD campus last Spring they were very proud to boast of their technology friendly environment and they were pleased that I had experience teaching in such a setting. I was shown the two Departmental classrooms that were "in the process" of being prepared as electronic classrooms. Well, this semester I am teaching in one of those classrooms; it remains unequipped with computers however. So, I have had to change the focus of my paper because the comparative analysis I had hoped to conduct is not possible; the non-materialization of hardware and software for our electronic classrooms is not irrelevant or immaterial, though. In fact, the absence of computers very concretely underscores one of my working premises about the caution that needs to be exercised when we hear uncritical celebrations of the democratic influence of technology. What is raised in its place are questions about access, affordability, and the consequent segmentation along class and race that is produced by inaccessibility to technology and technological know-how.

As Cynthia and Richard Selfe have recently pointed out, a "positive rhetoric of technology" has become commonplace in the scholarship on computer-based pedagogy. The adulations about the electronic classroom foreground the decentered position of the instructor and the "leveling" effect of electronic communication that is conducive for student participation. The language used to describe the electronic environment is politically charged, suggesting a politics of empowerment that often invokes the triad of race, class, and gender, one that supposedly transcends the politics of the institution and its social location. Given the serious inequities among educational institutions, it is important to remind ourselves that our pedagogy and our pedagogical tools cannot transcend but instead must adapt to the material capabilities of our home institutions, even as we continue the struggle to balance the inequities in the larger realm of the educational system. The computer-mediated classroom is a relatively recent phenomenon that is part and parcel of a complex economic and social system; as such, issues surrounding access, anxiety, and the effects of social stratification need to be raised. The first half of my presentation will further address these issues and the second half will make a closer examination of the particular experiences of students at UHD and the adaptation of computer related pedagogical strategies to that environment.

Clearly, research institutions are the vanguard in the development and establishment of the electronic classroom. The high costs associated with acquiring the hardware and software necessary to create an electronic setting are prohibitive for many underfunded educational institutions, such as UHD. Nevertheless, the importance of computer literacy in the work place, among other things, has made it necessary and practical for educational institutions to accommodate the technology as a learning tool and computer literacy as a subject, if not a requirement for every student. There remain, however, vast differences between research-oriented institutions, teaching-oriented universities and community colleges that need to be considered and which should temper our assessment of the "democratic" nature of the electronic classroom. Two years ago, Barbara Monroe and I cautioned our colleagues at the Computers and Writing Conference that the varied social locations and target populations of learning institutions affect classroom dynamics and a writer's creation of ethos and should prohibit an instructor from assuming homogeneity within the classroom at any given site; we should also be mindful of the way in which access and availability of technology within and outside of the institution for our students is another way in which the technology reinscribes itself as a "passport" of power and privilege. The "decentered authority" of the electronic classroom only has the potential to mediate and level the different social divisions created by ethnicity, class and gender for those institutions and individuals who have authorized entrance such a space.

In a September 1994 policy brief published by the Tomas Rivera Center of Claremont College, Anne Larson and Anthony Wilhelm noted the potential for increased economic disenfranchisement for communities that contain significant segments of working poor when they

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do not have access to or training in expensive and sophisticated technology. In "Latinos in the Age of Information" the authors claim that "socio-economic disadvantages and linguistic differences place Latinos in a unique position in the technological age" because unless the issue of access is addressed, they will be "barred from the information highway—as consumers, as producers of information, and as political participants. In a market driven highway, the balance between treatment of information [and its hardware vehicles] as a commodity, and treatment of information as a resource of political and social value, is much harder to maintain."   In this policy brief the authors are primarily concerned with the impact of telecommunications policy as it relates to affordability, but they are mindful of the fact that open connections with libraries, business, government institutions, and so on is not separate from "know-how." Larson and Wilhelm's questions go far beyond telecommunications policy, they recognize that without the training and education needed to navigate the channels of information, the value of technology and its by-products will be limited to a privileged few. They ask:

> How will Latinos access the information superhighway given that many are limited English
> proficient? Will schools in low-income and minority communities integrate "PC literacy"
> into the curriculum to prepare students for the competition of the 21st
> century? How will poor Latinos be able to afford this new equipment? These basic
> questions must be answered to ensure that Latinos can afford and make use of the
> information highway. While technology has the potential to support democratic principles,
> without a guiding social contract the highway may further separate our already segmented
> society.

Their concerns, of course, are not only relevant to Latinos, but to any class of people whose social status is a factor in their being technology poor. We must begin asking ourselves the degree to which we are we assuming that everyone has access to computers. Certainly it is a fact that computers are now present in the vast majority of primary and secondary schools; however, just because they are there can we afford to assume that every student is computer literate? That is certainly not the case in Houston, where most often the building of a computer elite begins taking place at a very young age when "academically advanced" students are given an abundance of access to computer technology while academically and economically "poorer" students face restrictions to technology.

If computers are to become a tool of "liberatory learning" in the advancement of critical thinking, then we must confront the material limitations that prohibit universal access. Electronic redlining, which Larsen and Wilhelm define as the "bypassing or underrepresenting certain communities in the development of the information superhighway on the basis of race, income or ethnicity" (Rivera report) is a reality that has woven its way into the fabric of our educational system and created invisible but very real discrepancies in students' preparation for a high-tech society. According to a February 1993 survey conducted by *Advertising Age,* only about 9.6% of Hispanic

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households own a personal computer, while the figures from all homes is over 30%. For many Hispanics, their only exposure to computers comes in schools, libraries or the workplace.

How many Hispanics -- 29.3 percent of whom live below the poverty level --and African Americans, almost 37% whom subsist in poverty, are able to afford computers, modems, software, and the on-line connections to information? The structural changes occurring in the U.S. economy combined with a lack of education and training opportunities for the poor and for the limited English proficient are diminishing the economic prospects for a large segment of the Latino population. For many people, owning the equipment -- hardware and software alike -- is necessary but not sufficient to compete for the skilled, information sector jobs of the twenty-first century. The Tomas Rivera Report asks us to consider our priorities in the construction, reconstruction and refinement of the costs associated with building the information superhighway. If public moneys are being spent to support this project, and they are, how many "taxpayers [are] subsidizing services that they cannot afford?" As Larson and Wilhelm conclude: "To address disparities in skill levels among persons, training and education are essential -- both from public and new private providers -- to ensure universal access to new technologies."

In the December 1994 issue of *College Composition and Communication*, Cynthia and Richard Selfe examined the ways in which social borders are re-inscribed in the classroom by examining the cultural and class assumptions that inform computer interfaces and contribute "to a larger cultural system of differential power that has resulted in the systematic domination and marginalization of certain groups of students" (481). If they are correct in asserting that the computer interface is a linguistic contact zone with all its attendant asymmetrical relations of power, then they are right in pointing to the ways in which the reductive over optimism of recent scholarship on computer pedagogy tends to mask the negative contributions of technology. I turn to the Selfes at this point in my own discussion of access to hardware, software and know-how because I believe we in the business of higher education are at a historical crossroads in which technologies of power are working to produce a value (technology literacy) that is fast becoming one of the defining aspects of educational segmentation. Such a concern for equal access is not motivated by the desire to decry technology as a pedagogical tool nor an effort to stop or retard its advancement. Rather, the point I wish to make is that those of us who profess to value equality, democracy, and critical thinking must voice a concern and articulate solutions to a phenomenon that is effectively producing new elites along the same old axes of race and class. The status quo of computer use will not re-align social relations if the network of users is not broadened. We must, as the Selfes assert, become "technology critics as well as technology users," not just in the classroom but also by examining and acknowledging who is dis-enabled from participating in the classroom within particular institutions, who cannot benefit from distance learning because they do not have access to the necessary technology, and who we exclude *ipso facto* from our user groups

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because they do not have either the vehicle or the know-how to ride on the information highway. The potential for computer and telecommunication technology to help support new forms of civic participation and access to information services is enormous, but we would be wise to heed access advocate Susan Hadden's warning that the "forces of change follow a natural course towards increased inequities in the economy and heightened passivity in receiving information about policy and politics."

II. Reading and Writing Social Wrongs: Articulating the Self and Society in the Classroom

Despite my inability to live up to my comparative analysis, I would still like to share with you some observations and analysis of how different social identifications and positions can impinge upon the dynamics of the electronic classroom. These observations are intended to constructively problematize instructor's assumptions regarding their student audience in particular and the electronic classroom in general in order to inform our pedagogy. Many of these concerns are founded upon the observations made by Monroe and I two years ago, their relevance has not waned.

What is the relationship between the curriculum, ethnicity and ethos in the electronic classroom? My experience in various electronic settings suggests that in order to maximize the level of comfort that will facilitate an equal exchange of ideas instructors need to tailor their pedagogy to fit their audience. In the same way we inform our students about the significance of considering audience when constructing arguments, we need to remind ourselves of the diverse levels of technological experience and cultural difference that exist within the classroom. We cannot afford to assume that students enter the classroom "prepared" to use a computer. In fact, many underprepared students are already alienated from institutional education--by virtue of their cultural or socio-economic position--computers may only exacerbate this alienation and further fuel the cycle of failure they have experienced in public schools. A student's ethos is established by a variety of factors, not the least of which is the social position he or she occupies and the quality of education she's received prior to attending a university. Clearly, there is a connection between the socioeconomic status of people of color and their access, position and upward mobility within institutions of higher education. Can electronic communication and instruction really empower students whose "voices" have been otherwise marginalized? What can instructors do to assist in this process? Given the still limited access that people have to this technology, it is pertinent to ask if the electronic classroom is an alienating or empowering experience.

The University of Houston-Downtown has a high percentage of "non-traditional" students-- many of them are first generation college students, many are single parents, many are older than average, and a great many of them work full-time and are self-supporting. Students in our composition classes bring with them an extraordinary amount of "real-world" experience and a great

variety of experience with and access to computer technology, ranging from zero-knowledge to the expertise associated with everyday usage. Consequently, a computer centered pedagogy requires special attention to factors, such as different degrees of experience, technophobia, and outside of the classroom access, in order to understand the ways they may impinge on academic performance and self-image of students in the classroom.

Many of our students come from underfunded schools in Houston, where their access to technology is cut short by two problems: a "shortfall" in funding accounts for the shortage in hardware at certain schools; a "shortfall" in an administrator's vision negatively impacts those students who reside in the barrios and wards of this metropolis in which the prevailing assumption is that the majority of these students will not proceed to higher education. This power shortage--economic, hardware, and socio-political--translates into a lack of access to technology in high schools, a problem that is also apparent in the underfunded campuses of the university system, such as UHD. Thus the prospects for "empowering" students through electronic instruction are often short-circuited at the outset. The cycle of neglect which impedes quality instruction in many of the secondary schools is reproduced for those who are hampered by economic inequities. Inasmuch as it is economically feasible, UHD is a computer friendly institution. However, faced with economic limitations, faculty at UHD are hampered by limited instructional tools. For instance, for the last year-and-a-half the Department of English has been trying to secure the necessary funds to purchase the software and hardware needed to transform our "imaginary" (virtual) electronic classrooms into an integrated writing environment. Until an independent source of funding is found, we are left with no alternative but to utilize our free-standing modules as creatively as possible to re-produce a rough facsimile of a networked classroom.

In the two semesters I've taught at UHD, I've conducted surveys on my students' familiarity, accessibility and comfort level with computers. Given the unfortunate condition that minorities in higher education are the exception to the rule, (Latinos, for example, continue to experience a near 50% national high school dropout rate), I was not surprised to discover that approximately one fourth of the minority students in my classes own a computer. Of these, all of them identified as being middle class. Of the remaining three-fourths who did not own computers, approximately half identified as being lower-income and the rest were lower middle and middle class. Every student who currently owns a computer had one available to them in their household during high school; with only two exceptions the opposite is true for those who do not currently own computers. This informal survey suggests that for these students at least, their relationship to technology is not significantly altered by their status as students, except as it is required by assignments and class participation. Because the overwhelming majority of students at our campus are employed off campus more than half-time, and many are full-time parents, it is difficult to require extensive participation in assignments that require access to the technology, such as e-mail

discussion groups. Yet, this is one of the few viable alternatives for creating electronic discussion groups.

As would be expected, this survey also reveals that two-thirds of these students depend on the computer lab at school for access to a computer. Twenty-five percent admitted to having anxiety or a phobia about using a computer and about half of them do not even compose on the computer but merely use it to "type"; a slightly higher percentage is willing to revise on the computer. We have at our campus, then ,what the Selfes identify as a generic computing environment, rather than a computer-supported writer's environment (497). Because so many of my students are hesitant to compose on the computers I have scheduled time for my classes in the computer equipped classrooms that are part of the computer lab. These computers are not networked, but by giving them short assignments that they can complete in the length of a class, or just by giving them time to work on their papers in class time with a computer many of them become more comfortable with the computer over the course of a semester. Unfortunately, much of the time that could be better used discussing critical readings or discussing issues or sharing ideas were we to have daily access to an integrated writing environment is instead used for mere word processing. Because students do achieve more comfort with the technology, this use of our time does have some measurable value.

The benefits of computer literacy will only ever be fully realized when it is critical, not just functional literacy is the goal. Critical literacy can only be achieved if one is willing to challenge traditional curriculums as well. I have found that in argumentation-centered classes that are focused on social issues, it is more constructive to discuss "sensitive" or "controversial" topics (such as racism, sexism or gender orientation) in a way that requires students to confront their preconceived notions about the world and their cultural position. As a Rhetoric and Composition instructor I try to achieve this through a syllabus that challenges students fixed notions about the world. To mount this challenge and ultimately to empower my students' ability to "voice" themselves I engage them in discourses which require them to investigate their values to the point of discomfort. The objective of doing this is to oblige them to discover anew, or to identify for the first time, for themselves, the values underlying their conception of the world. Ultimately, I want students to acknowledge how their value systems are constructed and to identify the implications of those values on their lives. By requiring students to read and write on topics which make them uncomfortable, I ask them to interrogate, identify, and articulate their own position *in relation to others*. For me, this is the most responsible and the most relevant form of pedagogy because it asks students to assume responsibility for their beliefs, their contradictions, and their actions. As Monroe and I have noted, all too often the traditional curriculum and classroom controls the learning process ideologically by valorizing the life experiences and social position of majority culture,

usually at the expense of minorities. New instructional tools such as technology can open up new pedagogical possibilities if issues of access and electronic ethos are addressed.

The dynamics of the computer assisted classroom are such that they offer more options to the instructor for promoting discussion; in fact, my past experience has taught me that most students prefer electronic communication because even though it can depersonalize the conversation, this form of discussion temporarily suspends the social dynamics of interpersonal communication, such as eye contact, shyness, body language. In verbal discussions, students are often reluctant to "speak" to each other. One factor for the students' relative silence when they are engaged in verbal discussion are their inhibitions about confrontation. I think, however, that confrontations contain enormous potential for learning, especially when conducted over the computer. When I had the opportunity to teach in an electronic classroom at UT I found that students were more willing to admit feelings and thoughts over the screen than verbally. When I described the possibilities of conducting discussions over a network to my students at UHD, at least half of my students expressed interest and suggested that they would be "more comfortable" and "say more" than they do in face to face exchanges.

III. Conclusions

In concluding, it should be clear from my previous remarks that I do not believe that we can pretend that the electronic classroom is a utopian setting nor do I think that the technological possibilities by themselves are enough to ensure a reconsideration of power relations. I believe that the electronic classroom can give underprepared students more of a chance to be heard than does the traditional classroom. For me, the classroom ideal is an environment in which dissonance and difference are valued because they create positive possibilities for constructive engagement with urgent social matters. This is especially true when discussion or writing topics center around social issues, such as racism or poverty, that have a direct impact on students lives. In an open-admissions university setting it cannot be assumed that all students are equally prepared to interact with technology and institutional education--there exist vast differences in students' sense of place. Forums and assignments that address issues of cultural difference and racism allow students to sustain a formal discussion of these concerns in an environment that is still formal but which is not as "risky" as face to face discussions. As I see it, the objective of teaching difference (racial, cultural, or otherwise) is not to exacerbate the social distance between groups, but to explain it and to acknowledge that cultural differences can co-exist without endangering one another and without malice as a necessary linchpin.

Material conditions, such as software and institutional support, do impinge on our abilities to exploit rather than be exploited by technology. Whether the networked classroom is used to reinforce or reconstruct social relations and prejudice depends largely on the instructor, not the

8   9

technology. Given instructors decentered position in this setting, we may not so much manage as manipulate variables, such as classroom policy and practice.

Works Cited

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10