

**HYPERPEDAGOGY: INTERSECTIONS AMONG POSTSTRUCTURALIST
HYPERTEXT THEORY, CRITICAL INQUIRY, AND SOCIAL JUSTICE
PEDAGOGIES.**

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ABSTRACT

Hyperpedagogy seeks to actualize social justice pedagogies and poststructuralist theorizing in digitally enhanced and online learning environments. Hyperpedagogy offers ways to incorporate transactional pedagogies into digital curricula so that learners throughout the United States' pluralistic culture can participate in e-learning. Much of the hyperbole promoting e-learning is founded on social-efficiency pedagogies (i.e. preparing tomorrow's workers for the information-based, new global economy) that tend to homogenize culturally pluralistic learners. The premium placed on a strict adherence to rigid learning systems inculcated within standards-based reform movements typically, moreover, discriminate against historically marginalized learners. Hyperpedagogy seeks to elucidate the closeting of privilege in e-learning so that learners of color, female learners, and homosexual learners can be better represented in the literature than is currently practiced.

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i carry your heart with me(i carry it in
my heart)i am never without it(anywhere
i go you go,my dear;and whatever is done
by only me is your doing,my darling)

i fear

no fate(for you are my fate,my sweet)i want
no world(for beautiful you are my world,my true)
and it's you are whatever a moon has always meant
and whatever a sun will always sing is you

here is the deepest secret nobody knows

(here is the root of the root and the bud of the bud
and the sky of the sky of a tree called life;which grows
higher than soul can hope or mind can hide)
and this is the wonder that's keeping the stars apart

i carry your heart(i carry it in my heart)

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HYPERPEDAGOGY: INTERSECTIONS AMONG POSTSTRUCTURALIST HYPERTEXT THEORY, CRITICAL INQUIRY, AND SOCIAL JUSTICE PEDAGOGIES.

Introduction

Hyperpedagogy is a union of hypertext theory and critical pedagogy within a burgeoning digital discourse. Hypertext is not simply a change in medium as traditional educational theorists contend; rather, hypertext, as envisioned most particularly by George Landow (1992; 1994; 1997; 1993a), is a dynamic means to revision pedagogy. Hypertext builds upon poststructuralist theories respecting communication, authority, knowledge, and power, including their multifaceted intersections. When hypertext becomes a mode of transactional communication, not merely a medium alteration, then dynamic knowledge creation, not hierarchical information downloading, can take place. Critical pedagogy, as advocated by Paulo Freire (1970/2000), espouses that learners need to name the world for themselves. Critical pedagogy recognizes that knowledge is a social construct made up of common meanings and cultural artifacts. It also proclaims that cultural elites dominate epistemological discourses and the educational institutions that promote hegemonic episteme. Therefore, naming the world for oneself in conjunction with a social matrix is not a call to academic relativism and classroom chaos as some have ascribed to revolutionary pedagogies (Paige, 2002) but a revisioning of pedagogical assumptions and subsequent practices. Moreover, traditional, social efficiency pedagogies make hegemonic goals invisible by masking subjectivity as objective, scientifically derived and clinically verified Truths. This project specifically questions the assumptions and practices inculcated within information age pedagogies and promotes an alternative that I call hyperpedagogy.

Hyperpedagogy is founded upon a belief in an unfinished and unfinishable universe. As such it does not predetermine learning's ends before learning is initiated. It does not hold that learning is an accumulation of trivial details. It does not suppose to identify students needs based upon identifying students' educational ends. It does seek to harness imagination. It seeks connectedness to students' experiences, dreams, and possible futures. Hyperpedagogy is art; it is aesthetic; it is emergent; it is technological without being technocratic. It does not merit natural, deterministic uses for technology, but sees e-learning as a tool for dynamic, embodied intellectual growth as best fits an educational situation. It can be defined as what it intends to be and what intends not to be. Hyperpedagogy does not warrant myths of meritocracy and the rhetoric of crisis. It does not subscribe to the utilitarian agenda of the information age educational reform movement to better prepare students for the new global economy. It seeks to actualize social justice pedagogies and raise consciousness as to both pluralistic and discriminatory educational practices in this country. It allows room for freeplay, for artistry, for imagination, for creativity. It does not endorse solipsistic navel-gazing, however. That is not to say, either, that hyperpedagogy is a via media between bipolar extremes; it is an alternative. Guidance is an important factor in hyperpedagogy as productive learning. An ethical imperative is for educators to guide learners through experiences that lead to growth. Part of this ethical imperative, moreover, is to show how unnatural social constructs are through consciousness-raising. It frees space for resistance to hegemony and to the practices of reifying the *status quo*. It seeks, overall, to be grounded in praxis—that is education as a constant state of becoming. Students create their own worlds in conjunction with social artifacts and in the midst of a complex social matrix that seems as natural as the air we breathe.

I contend that in a properly functioning democracy schooling should not foster a caste system; it should serve emancipatory goals. I assert that current trends in educational practices, curriculum theory, and instructional design are exacerbating the savage inequalities that exist in our institutionalized schooling systems (Kozol, 1992). Therefore, the preeminent purpose for positing hyperpedagogy is to determine methods for pluralistic pedagogy that will encompass a wider variety of learners than most standards based models and their requisite methods do. The overriding purpose for this project is to build a theoretical basis for an alternative discourse in schooling based on pragmatist, poststructuralist, and feminist theories and practices respecting education. The latest installment of social efficiency curriculum – the so-called reform movement for explicit standards, high-stakes testing, and rigorous accountability – needs not only to be examined for its discriminatory practices as Susan Ohanian (1999) has done so admirably but alternative practices need to be developed and explored. Moreover, the recent fetish for information technology in education needs to be assessed for its purposes and results. Educators need to look beyond the rhetorical hyperbole of digital horizons in education to determine what social forces are promoting the high infusion of digital technology in education, the effects of this infusion, and possible alternatives. While educators are utilizing the opportunities that computers in the classroom offer, we need to inspect digital practices from a social justice perspective as well. I wish to make clear that I am not calling for a Luddite revolution that dismisses all digital and Internet technologies as inherently bad in education. I embrace the possibilities of such technologies in education; at the same time, I query what purpose does the infusion of digital technologies serve: who do computers benefit in schools and in a larger socio-economic context, what social roles do computers question and reinforce, how are computers used in classrooms? I often hear the rhetoric of social efficiency (Callahan &

Switzer, 2002; Molnar, 1997) associated with computers in the classroom, but I believe that educators have an ethical imperative to promote social justice with technology use. This project, then, seeks to promote social justice pedagogies, writ large.

To better understand what social justice pedagogies entail, I will look to critical pedagogies (Boler, 1999a, 2001, 2003; Freire, 1970/2000; J. Garrison, 1997, 1998, 2001; J. Garrison & Burton, 1995; Greene, 1995) in conjunction with hypertext theory (Delany & Landow, 1991; Landow, 1992, 1994, 1997; Landow & Delany, 1993a). Hypertext theory, in turn, relies on poststructuralist pedagogical perspectives to deconstruct traditional social efficiency educational models (Bobbitt, 1918, 1924; Dick, Carey, & Carey, 2001; Tyler, 1949). Hypertext theory owes a great deal to poststructuralist semiotics, particularly Roland Barthes (1964/2000; 1970/1974; 1971/1977; 1977), Jacques Derrida (1966/1998), and Michel Foucault (1971; 1972; 1977; 1980a; 1986). I will, accordingly, explain how semiotics informs hypertext theory and critical pedagogy. Semiotic theory is dually significant as it aims for active, critical reading to deconstruct myths and regimes of power in order not only to recognize how mythologies and metanarratives script the microtechnologies of power but also to reconstruct fables of learning and power hierarchy practices in schooling. Hyperpedagogy advocates, above all else, an attempt to enact a more pluralistic pedagogy than what is currently being endorsed by standards proponents, traditional curriculum makers, and modernist instructional designers. In order to do this, one should be able to deconstruct the mythologies and discourses that underlie such social efficiency (Fordist) pedagogies. Barthes (1971/1977) claims that sociolect meaning – those most deeply ingrained cultural myths that go largely unquestioned – needs to be examined, evaluated, and alternatives constructed. This project seeks to examine, evaluate, and offer an

alternative to the myth of rigorous, accountability driven, pro-globalization, capitalist-laden curriculum reform advocated by the plutocratic elites of this and other nations.

Fordist pedagogies rely on the modernist or positivist tradition; hyperpedagogy, on the contrary, denies positivism and relies on poststructuralism. In the modernist tradition, learning occurs, it is assumed, as Human Information Processing (HIP), a means of passive reception of information. Learning is determined by recall of information on objective and scientifically verifiable standard tests. One of the mainstays to such testing is hierarchical categorization, best exemplified by the Stanford-Binet IQ test. Quantifiable tests are effective means for determining intelligence if one considers knowledge as finite and static—a discovered substance (ousia) of the Newtonian cosmos. From poststructuralist and constructivist perspectives, quantifiable tests are at best very limited means to determine if learning has taken place. Learning is a co-construction of understanding within a socially informed learning environment. Knowledge is not so much discovered facts as socially mediated guiding principles collected and passed on over the years. If a guiding principle holds in application, it is valid in that context. When guiding principles do not work in a specific context, they need to be altered. Acquisition of knowledge requires then the ability to apply it in normal circumstances and the ability to manipulate guiding principles to account for differing circumstances. In this construct, knowledge is dynamic and relational, not relative, but a simulacrum. Learners are not merely information collectors, but knowledge creators and users in a complex social matrix. Learners take an active part in their education or intellectual growth, applying abstract theories to real life situations. Put succinctly, biological entities, students, are not mechanical devices, computers. Another key difference is that prior experiences and values should be taken into consideration, whereas in the modernist discourse, such factors as prior experiences and values are problematic,

noise that interferes with the reception of discovered Truths. In poststructuralist learning, the concept of discovered Truth is an anathema. An emphasis is placed on critical reception, in fact, where the learners evaluate so-called facts for relevancy and inculcated discriminatory ideals.

Dominant Fordist discourses discriminate against learners of color, female learners, and poor learners decidedly more so than dominant social groups. In fact, Fordist methods and standards based curricula benefit affluent, white males. Hyperpedagogy pursues alternative discourses as an ethical imperative in a democratic society, one that should be more pluralistic in educational practices than it currently is. Assumptions that computers will set us free from issues of color and gender actually reinforce discriminatory structuralist discourses. The Cartesian ideal of escaping or transcending race and gender online reinscribes the assumed negativity of not being a white, affluent male. Educational practices must accommodate the needs of the marginalized segments of this society, categorized as the nebulous and encompassing “minority,” which taken together (people of color, the poor, and females) make up a vast majority. The minority masked by the construct of minority as it is used normally is the privileged—typically white, affluent males and those people from historically marginalized groups who subscribe to the dominant discourse. Such a binary construction exists because social assumptions script majorities as good and minorities as bad. Besides, if a powerful minority of plutocrats can instill systematic conceptions of their values as the majority’s values, then the dominant schooling system seems normal and appropriate except for a few (i.e. the minorities) rabble-rousers seeking preferment and undeserved entitlements. If we accept that American schooling’s preeminent purpose is to prepare workers for the new global economy, we will continue to marginalize the interests of many dislocated voices in our educational system. Hence, the increased need for vigilance and alternatives given the strong alliance between technocratic

and plutocratic elements in educational institutions' dominant assumptions and subsequent practices.

Hyperpedagogy pursues alternative discourses as an ethical imperative in a democratic society, one that should be more pluralistic in educational practices than it currently is. Assumptions that computers will set us free from issues of color and gender actually reinforce discriminatory structuralist discourses. The Cartesian ideal of escaping or transcending race and gender online reinscribes the assumed negativity of not being a white, affluent male individual. Educational practices must accommodate the needs of the marginalized segments of this society, categorized as the nebulous and encompassing "minority," which taken together (people of color, the poor, and females) make up a vast majority. Such binary constructs exist because social assumptions script majorities as good and minorities as bad. Besides, if a powerful minority of plutocrats can instill systematic conceptions of their values as the majority's values, then the dominant schooling system seems normal and appropriate except for a few (i.e. the minorities) rabble-rousers seeking unfair preferment and undeserved entitlements. If we accept that American schooling's preeminent purpose is to prepare workers for the new global economy, we will continue to marginalize the interests of many dislocated voices in our educational system.

In order to ground my argument for hyperpedagogy, I have conducted a series of case studies of online discussion forums to illustrate hyperpedagogy as a praxis. The context of the various iterations of my online forum is Virginia Polytechnic Institute and State University (Virginia Tech), a primarily engineering institute located in Blacksburg, Virginia. Blacksburg is far from most major urban and surrounding suburban settings, nestled among the Appalachian Mountains, and thereby borders Appalachian culture areas. However, the vast majority of the student population does not come from surrounding mountain communities, but largely from

Virginia (15,944 undergraduate / 1,751 graduate), Maryland (1,022 / 46), Pennsylvania (857 / 47), New Jersey (693 / 18), North Carolina (286 / 33), and New York's (271 / 28) suburban communities (Office of University Relations, 2001, p. 13), thereby creating some dissonance with the local community and the majority of the student population. Of the Virginia population 31% come from suburban Northern Virginia, 15% from suburban Tidewater (this area includes Virginia Beach, Chesapeake, and Williamsburg), and 23% coming from Western Virginia. The last area seems to indicate that perhaps a sizeable minority of the students come from rural, Appalachian areas, but the vast majority of the students from Western Virginia come from the suburban areas surrounding Roanoke, Virginia, a modest city located 38 miles away from Virginia Tech (p. 14). Another predominantly suburban population comes from Richmond, the state capital. The racial profile consists of 81.6% White, 4.4% Black (includes all students declaring sub-Saharan African descent), 5.7% Asian (including both domestic and international students), .2% Native American, 1.9% Hispanic / Latino / -a, and 5.8% international (includes all racial categories). Hence, Virginia Tech's population does not reflect Virginia's diversity in terms of geographical environment, class, and race. Moreover, this lack of diversity has been steadily worsening since the mid-nineties when the Black student proportion hovered near 7-8% of the population and tuition has increased significantly limiting who can afford to attend this land-grant university (see Table I-1).

Table I-1: Combined Tuition and Fees, Virginia Tech				
Undergraduate			Graduate	
<u>Year</u>	<u>In-State</u>	<u>Out-of-State</u>	<u>In-State</u>	<u>Out-of-State</u>
1988-89	\$2,544	\$5,184	\$2,946	\$3,324
2001-02	\$3,664	\$12,488	\$5,219	\$8,189
Source: Virginia Tech: University Facts and Figures, 2000-2001. Blacksburg, VA: Virginia Polytechnic Institute & State University, p. 17; Virginia Tech: University Facts and Figures, 2001-2002. Blacksburg, VA: Virginia Polytechnic Institute & State University, pp. 31-32.				

One can readily see that tuition increases have been significant and have subsequently limited enrollments from economically marginalized areas in not only in Virginia, but even more so from outside the Commonwealth of Virginia. Increases in the costs associated with graduate studies have increased dramatically, and since conferral of a graduate degree typically equates to higher earning potential and increased social status (Spring, 2002), economically marginalized groups have seen such access to cultural capital diminished if not nearly eradicated.

Virginia politics has been on the forefront of conservative backlash to academic diversity. Recently, Virginia Tech's Board of Governors elected to end all diversity programs on the advise of the state's reactionary Attorney-General Jerry Kilgore, to remove a clause in Virginia Tech's anti-discrimination clause revoking the working and constitutional rights of homosexuals, and to increase tuition rates significantly (Dwight, 2003). The last two governors, Republicans George Allen and Jim Gilmore, enacted policies, such as the "No Car Tax," that undermined funding for higher education and so tuition rates have risen while grants and scholarships have decreased. Given the economic and political climate at Virginia Tech, issues of social justice and cultural diversity in education, which my courses and hyperpedagogy focus on actually, can prove difficult to address.

At the same time as this created budgetary crisis has occurred, Virginia Tech has mandated that all students buy an expensive computer system and that the faculty find ways to use computers in the classroom. The university has sought what it euphemistically calls class transformations, which is to transform a face-to-face class into a digital version that takes advantage of economies of scale. A transformation typically includes a great deal of input from the recently Institute for Distance and Distributed Learning (IDDL) created to increase economies of scale, in which a class of 100 students can be raised to 500. In other words, a

digital version of a class can be taught by a tenured professor in name, who creates the content, is transformed into a digital version of html text, flash movies, and real audio lectures by IDDL specialists, delivered digitally, and maintained and graded by a cadre of instructors and graduate teaching assistants. Students act as recipients of information they consume and regurgitate within online environments. Such economies of scale reduce the need for classrooms, reduce the number of tenured faculty necessary to instruct a traditional number of classes, and creates intellectual properties Virginia Tech can market. According to Virginia Tech's Strategic Plan for Distance Education (<http://www.iddl.vt.edu/about/plan.php>), the university seeks to increase high enrollment transformations by 30%, market online classes to out-of-state and international communities, and require that all educational environments embrace online education with economies of scale as the guiding principle.

While I have grave concerns with the marketplace rhetoric and the embedded assumptions that online learning is somehow superior to traditional face-to-face education or at least necessary for the new global economy (the presumed destination for all of Virginia Tech's graduates), I have adopted elements of online learning for my classroom environment. First, I should make clear that I do not intend online educational opportunities to supplant f2f classroom activities; I do not subscribe to such reductive binary logic. Second, I have sought through various iterations to address social justice and diversity in education in both proximal and online environments. Third, I do not credit the hype of disembodied education (in chapter 5 I address this topic in detail); I am quite wary of declarations that the Net will free people from racism, sexism, ageism, heterosexism. Fourth, I have sought to engage students emotionally, yet attempted to maintain a collegial and professional atmosphere in the online asynchronous discussion forums and so have set rules for discussion – Netiquette. Finally, I grade student

postings for content to questions from class readings and discussion. As I delve into particular issues and iterations of the online forum, I will detail the specifics.

Chapter 1: Hyperpedagogy's relationship to hypertext theories

Hyperpedagogy relies on poststructuralist perceptions of hypertext, while denying technocratic, social-efficiency definitions of hypertext as simply a medium modality in education. Hypertext has the possibility for using digital technology to enhance capabilities for emergent discourse and enacting social justice pedagogies. Hypertext is a technology and pedagogy; what sort of technology and pedagogy one envisions depends significantly on one's ideological perspective. In this chapter, I discuss modernist and postmodernist definitions of hypertext the technology and pedagogy. Furthermore, I illustrate how a postmodern vision for hypertext can actualize dialectic and hermeneutic possibilities in education. First, I need to express that hypertext is not an educational singularity, so I am not promoting a correct way of teaching irrespective of context. In contrast, hypertext is what participants make of it; it is a non-linear and emergent possibility; a possibility that becomes what it is in a context. It is an open-ended endeavor denying teleological epistemologies. To clarify my point, I illustrate an iteration of hypertext's possibility from a case-study I participated in as a student. I examine the poststructuralist theories that inform non-technocratic hypertext theories and explain how these theories manifested themselves in a case-study. Hypertext as a praxis contravenes traditional curricular practices that tend to deny student's experiences, desires, and contexts. In this reform minded era of getting back to the basics with a premium placed on highly disciplined and liner information presentation and retrieval, I believe alternatives need to be presented. It is a sad fact that most uses of digital technology assume and promote dominant discourses – if not exacerbate them. Historically marginalized learners are finding yet another academic hurdle to overcome on their narrowly defined curriculum vitae.

In order to introduce readers to hypertext theory I present Jay Lemke's (1993) vision for hypertext and how his hypertext practice offers alternatives to hegemonic teaching practices by stressing the need for learners to act as novice practitioners. After examining Lemke, I extrapolate how Landow's theories on hypertext are applicable to this project. Landow relies heavily on poststructural theorists, such as Foucault, Derrida, and Barthes, to make his case for dialectic textuality.¹

George Landow's (1992) alternative narrative for text, hypertext theory, relates to poststructuralist semiotic theories and pluralistic pedagogical practices. Landow moves beyond the structuralist confines of Cliff McKnight, Andrew Dillon, and John Richardson's (1996) survey to postulate how applicable hypertext is to social justice pedagogies, a primary goal in postmodern education (Voithofer & Foley, 2002). In order to underscore the necessity for hypertext, I present modernist assumptions of what hypertext is and detail how such assumptions fail to grasp the significance of hypertexts' dynamic potential as an educational tool. From a modernist perspective, hypertext does not make much sense as it is too sloppy, disorganized, and chaotic. However, from a poststructuralist perspective, hypertexts' fluidity, transactional nature, and ability for knowledge construction proves an excellent means to deal with issues of authority and critical reading of dominant cultural tropes. One of poststructuralist goals is to deconstruct hegemony² and cultural myths that ascribe cultural preference to elites and to reinscribe such myths from a critical perspective.

While Landow builds his hypertext theory on poststructuralist ideals of deconstructed texts, other critics, such as Alex Pang (1998), have argued that Landow's vision for hypertext fails, as it is both overly deterministic and optimistic.³ Pang argues that the World Wide Web (WWW) has for all practical purposes overwhelmed how networked communication and

subsequently computer mediated learning takes place, so hypertext as envisioned by Landow will never come to fruition.⁴ However, I believe that hypertext should not be equated with the Web, that it exists differently, serves different purposes. Additionally, hypertext should not be confused with being simply such software programs as Hypercard or Supercard; these programs, while important technological innovations in the last decade, have been superceded by the emergence of the Internet and more dynamic, multimedia programs, such as Macromedia's Director and Flash and networked educational databases such as Blackboard and WebCT. Overall, hypertext should not be confined to its earlier manifestations or even current technologies, but defined by what it has evolved into and may continue to evolve into.

While determining what hypertext is in this paper, I examine postmodernist and poststructuralist theories regarding what a text is and how readers / learners are active agents in meaning making—a point that is essential in determining the function of hypertext in schooling. Computers, with hypertext as a theoretical basis for their uses, have the dynamic potential to inspire active learner engagement with education, run realistic and meaningful simulations, and adapt to very specific and multiple cultures co-existing in increasingly diverse classrooms. Poststructuralist semiotics, the basis for hypertext theory, offers a means towards goals for pluralistic pedagogies and disrupts dichotomous ideologies. To make this argument more concrete, I interlace hypertext and poststructuralist theory with manifestations of such from a Social Foundations case-study.

While examining controversies over hypertext the technology is important, I wish to also consider how I may couple this dynamic technology with pluralistic pedagogies. William Doll (1999) offers a guiding principle for pedagogical practices in general that I intend to actualize for digitally equipped learning environments:

In a reflective relationship between teacher and student, the teacher does not ask the student to accept the teacher's authority; rather the teacher asks the student to suspend disbelief in that authority, to join with the teacher in inquiry, into that which the student is experiencing. The teacher agrees to help the student understand the meaning of the advice given, to be readily confrontable by the student, and to work with the student in reflecting on the tacit understanding each has (pp. 2-3).

Doll clearly is indebted to John Dewey's (1916/1944) ideal that experience leads to experience, that is "to make one experience freely available in other experiences" (p. 87). The point here is that new educational experiences need to build upon learners' prior experiences and help prepare them for later experiences. An open-ended, non-teleological, non-linear pedagogy has the ability to actualize this; however, most educational methods, and increasingly so in this latest round of reforms, have preset methods and preset ends. This is the heart of a linear, standards-based pedagogy in which students learn material that may or may not pertain to their lives and recite the learned material in a modernist version of a scholastic mantra on a test. As Dewey (1902/1998) writes in "The child and the curriculum,"

Subject-matter furnishes the end, and it determines the method. The child is simply the immature being who is to be matured; he [sic] is the superficial being who is to be deepened; his [sic] is narrow experience which is to be widened. It is his [sic] to receive, to accept. His [sic] part is fulfilled when he [sic] is ductile and docile (p. 238)

Modernist pedagogies, as described above, promote what Alfred Whitehead (1929/1967) calls dead or inert material that does not connect to prior experiences and holds little chance for being connected to latter experiences. Traditional education assumes that facts and truths essentially transcend context and culture, time and place that inalterable substances are preeminent.

However, Dewey, Whitehead, and Doll believe that facts and truths emerge from situations and are applied in situations. Knowledge is a process, not a set of given facts. The subject-matter of school is the distillation of years of various processes: science, literature, math, history, etc....

Yet, subject-matter, text-book facts are typically taught as facts divorced from the processes that produced and use them. Texts should be instead “tools for thinking” (J. Garrison, 1997) or springboards for educational action. The hypertext I purpose should act as educational springboards as experiential practice and accumulation in action. A hypertext should be a seed from which ideas flow, not end. From hypertext dialogue between student and text, student and teacher, and student among students should ensue. To borrow again from Doll, “a matrix/sphere/web of relations develop” (p. 6). Knowledge emerges from the contextual dialectic, so no one hypertext will be the same as another. What I am presenting here is just one example, a “tool for thinking,” from which I encourage others to borrow from and to critique.

Respecting how hypertext is defined as a technology, I refer to Cliff McKnight, Andrew Dillon, and John Richardson’s (1996) survey, entitled “User-centered design of hypertext/hypermedia for education.” I critique how hypertext currently manifests itself as little more than an expensive piece of underutilized hardware in schools. Computers are used all too often nowadays for low-order cognition, i.e. drill and practice in preparation for standardized tests, whereas given that we live and teach in a democracy, I believe it is beholden of teachers to find ways to use computers to instill democratic principles as a praxis not merely as a knee-jerk jingoistic ideology. Computers, with hypertext as a theoretical basis for their uses, have the dynamic potential to inspire active learner engagement with education, run realistic and meaningful simulations, and adapt to very specific and multiple cultures co-existing in increasingly diverse classrooms. An example of such an interactive hypertext usage occurred in a

graduate level social foundations class in which I took part and facilitated the hypertext. I express how this inclusion of a non-linear hypertext demonstrates a hypertext in action.

Defining hypertext

I begin defining hypertext as it is normally articulated. McKnight, Dillon, and Richardson (1996) present an overview of hypertext theory's history, practice, and applicability as the concept stood in the mid-nineties. They seek to define what hypertext means broadly as well as account for how it performs empirically and quantitatively against traditional (i.e. print) textual practices in the classroom. Their overview provides a good starting point, yet is limited to how they define success as almost exclusively improved test scores. However, simply examining hypertext's benefits for improved test scores, limits its benefits in terms of more active meaning construction and potential for serving the needs of social justice pedagogies.

Beginning with a modernist perspective, hypertext is most often defined as linked texts, taking advantage of computer-mediated-communication (CMC), so that nodes replace pages offering multiple paths through a text. Hypertext can, therefore, be highly interactive and responsive to learners' needs. Hypermedia, a corollary to hypertext, means that pictures, movies, and sounds can be included. McKnight, Dillon, and Richardson (1996) note that, besides the novel, most print texts are read in non-linear ways in which readers consult dictionaries, appendices, and indexes to name just a few. While this may be the case, hypertext makes such intertextual applications easier than traditional print texts. I should note here that their vision of hypertext is limited primarily to computer programs, such as Hypercard, that allow for nomadic, brachiated migrations through a largely finite text. Their hypertext is one authored by a designer and content area expert in which users/learners/readers do not add or subtract from prespecified,

typically global, content. Such limitations from networked communication models and mediated content appreciably curtail how they examine hypertext and what they consider hypertext to be.

Educational technology's dominant discourse tends to define hypertext as an alternative to a print, audio, and visual media. The most common method to establish if hypertext lives up to its hype as a dynamic teaching methodology is to see how standardized test scores improve from a traditional print-based medium to a digitally enhanced medium. Often the results are "no significant difference," in that test scores between the mediums are not different or test scores are actually lower in the case of hypertext. Before we declare hypertext defunct because it does not stand up to limited positivist scrutiny, typically defined by standardized test scores, we should examine the modernist assumptions inculcated within standardized tests. First, there is a tacit assumption that knowledge is a static substance that can be distilled into a standardized test format; second, that the proof that learning has taken place is a test with proscribed, correct answers; and third, that exploration in ill-structured spaces tends to confuse students and correspondingly do not learn what they are supposed to learn. This is the dominant discourse of testing. But we should not take such assumptions as correct. In fact, I argue that knowledge is created in disequilibrium, that learners faced with challenges and determining an appropriate means to overcome a challenge is when lasting change in conceptual knowledge takes place. The ideology that one, prespecified answer is correct is a fallacy; one enmeshed more in issues of authority than in issues of learning. So the very premise that students do not learn in loosely structured digital spaces, or in other words hypertexts, is an erroneous one due to positivist assumptions of knowledge. I hold that amassing trivial information, that will not be applied to life's circumstances, and that is unconnected to a learner's experiential background, is not learning because learning requires understanding and conceptual revisioning. By understanding,

I mean that students can apply knowledge in new situations to guide action. That is conceptual knowledge, or a lasting change in habits. Conceptual knowledge guides action in similar endeavors.

Tergen (1997; 2000) stands forth as an exemplar of unapologetic positivism in his critiques of the claims for hypertext. In his critique of theoretical assumptions for hypertext, he makes a series of assumptions that underscore a positivist position. His first assumption is that the only adequate means to verify the validity of hypertext theorist's claims (e.g. matching human cognition network theories to hypertext practice, constructivist principles of learning, and multiple mental modes for representation of knowledge) is through empirical means. This assumption is based upon another, that empirical verification can be determined solely by quantitative means – particularly test results comparing traditional linear text usage (the control group) with hypertext text usage (the experimental group). Another inculcated assumption then is that Human Information Processing (HIP) defines learning. HIP, in turn, assumes that learners store information in long-term memory for later recall. A further assumption is that information is stable, discoverable, bits of finite and acontextual data, much like machine code. Tergen (1997) displays his philosophical screen as “examining their [hypertext advocates] theoretical basis in light of modern cognitive theory” (p. 258). As such, he dismisses Landow's (1992) claims for assuming a poststructuralist perspective for weighing the benefits of hypertext.

In a later essay, Tergen (2000) proposes a hypertext that “has been tailored adequately for coping with the cognitive requirements of particular tasks and conditions of effective learning in instructional contexts” (p. 208). He bases his Hyperdisc on “the school learning paradigm with comprehension and retention of well-structured subject matter as the central criteria of learning efficacy” (pp. 208-9). As such, the Hyperdisc is made from a structuralist perspective assuming

that students “lost” in hypertext navigation are not learning and that a clearly hierarchical and linear mode of information retrieval will make his Hyperdisc more effective than non-linear, transactional hypertexts. Moreover, the Hyperdisc is a cd-rom and thereby denies the learner to manipulate static data. Again, seeing knowledge as finite data, a substance standing by itself not a dynamic relational phenomenon, informs the discourse. He also assumes that ill-structured learning environments, a value-laden term for non-linear and non-hierarchical learning environments, are inherently inferior to highly structured learning. In such structured environments, a premium is placed on proscribed learning goals and privileged learning methods. Interestingly, Tuirgen does offer a caveat in his conclusion “that disappointing results of research may be due to the fact that research has focused on traditional criteria for school learning which may not be appropriate for advanced studying” (p. 220). In the section on poststructuralist hypertext, I will expand upon what advanced learning may well entail.

At this point, I believe that an examination of McKnight, Dillon, and Richardson’s (1996) version of hypertext’s history is appropriate. These authors present a list of the usual suspects for hypertext’s development: V. Bush (1945), D. C. Engelbert (1963), M. McLuhan (1964), and J. Conklin (1987). Their limited examination of whom they consider the fathers of hypertext helps one to understand how modernists typically view what hypertext is. Glenn Russell (1997) argues that most modernists look to this list, or one closely aligned to it, of computer and cognitive scientists and this has serious ramifications of how hypertext is defined. Russell proposes that by limiting hypertext’s intellectual founders to computer and cognitive scientists the discourse is controlled and so are subsequent practices. This historical solipsism tends to limit hypertext to the sorts of positivist practices advocated by Tuirgen (1997, 2000) and McKnight, Dillon, and

Richardson (1996). Taking Russell's perspective into consideration, I examine the legacies of these founders of hypertext.

From a computer science perspective, Bush (1945) stands out as the father of hypertext theory and his reliance on cognitive sciences has had a marked influence on how many theorists envision and promote hypertext to a larger audience. In fact, his label as the father of hypertext points to the conservative trope of patriarchy frequently inculcated in modernist discourses. Revolutionary technologies and theories are often enveloped within patriarchal structures as a means of control, cultural ownership by dominant social groups. His promotion, therefore, of hypertext as a parallel construct to natural cognitive processes has influenced more general hypertext usage. Bush, in "How we might think" (1945), purposes that human memory systems can be mimicked in creating a huge database of information. He modeled his system, Memex, on theories of semantic, cognitive associations, in which his envisioned storehouse of information would be cataloged on premises of natural, logical cognitive systems. All cognitive scientists needed to do was to map natural human cognitive structures and apply this to his data warehouse. However, the decline of structuralist cognitivism, the failure of rational positivism, and the dearth of readily available technologies to collect and store huge amounts of information doomed his project's development. And yet, his vision still lives on in such Internet tropes as the "information highway" and the "world-wide-web" and in assumptions about the benefits of hypertext as emulating supposedly scientifically verifiable models of information processing. As such, many people perceive hypertext not as a revolutionary mode of reconstructing reality, active writing practices, and a poststructuralist pedagogical tool but as an information storage and retrieval warehouse. Even though his theories have been largely debunked, his mythos plays a dominant role due to the power of patriarchal constructs.

Engelbert (1963) further develops Bush's (1945) Memex ideal by envisioning CMC as an amplification of human intellectual capabilities. He particularly endorses the use of CMC for distanced, asynchronous collaborative work. The critical limitation of his theory, that still haunts conceptions of CMC to this day, is that exchanges are disembodied and rational. However, as Allucquere Rosanne Stone (1992/2000) contends, disembodiment is an age-old myth constructed and reconstructed to maintain hegemonic oppression:

Forgetting about the body is an old Cartesian trick, one that has unpleasant consequences for those bodies whose speech is silenced by the act of our forgetting; that is to say, those upon whose labor the act of forgetting the body is founded – usually women and minorities. (p. 196).

Not only does the Cartesian ideal of disembodiment still plague hypertext theory, but Engelbert's reliance on the cognitive sciences to inform hypertext as a logical extension of Human Information Processing limits users to primarily information retrievers, not to meaning makers.

The proceeding examination of modernist hypertext theory hints at how traditionalists reinscribe structuralist pedagogies; accordingly, I will outline McKnight, Dillon, and Richardson's (1996) survey of hypertext practices in education to further problematize modernist hypertext theory. They rely on quantitative measurements of testing results primarily, often ignoring the broader social and structuralist ramifications hypertext may have. With that caveat in mind, hypertext does not work well with traditional, straight-line curricula, such as information retrieval testing strategies, prominent in Human Information Processing (HIP) pedagogies. They do, however, acknowledge that hypertext does have the potential to alter texts to fit specific learning environments more readily than traditional print texts. Hypertext may also prove more appropriate for exploratory learning in ill-defined learning environments. They cite

Stanton & Stammers (1990) that hypertext proves useful in three particular ways: (1) allows for different levels of prior experience, (2) encourages self-guided exploration within a learning environment, and (3) allows subjects to manipulate materials to fit their learning styles.⁵ I would add the following two aspects are well worth considering: (4) hypertext allows learners to negotiate their individual goals and methods and (5) it encourages responsibility and agency in education. Depending on the structure and flexibility of a hypertext, the learners' experiences, values, and goals may be taken into consideration. If a hypertext is overly structured and limited in terms of manipulation, it will prove to be an e-lecture or e-book exacerbating the dilemma of large lecture model education. Certainly, such an argument raises the specter of the debate between pluralistic reasoning and confused thinking. I will more to say on this issue in the section examining how learning takes place. Suffice it to say, I tend to endorse the former, while not dismissing the concerns of the latter. Studies by Gordon & Lewis (1992), Higgins & Boone (1991), and Jonassen (1993) conclude that hypertext, again depending on structural and environmental factors, tends to work worse for rote learning of proscribed information retrieval favored by standards-based reform advocates. However, these investigations find that learners tend to do significantly better in problem-solving scenarios and in applying learning in real world situations. Such findings are encouraging for social justice pedagogies in that learning can be applicable to learners' embodied, lived experiences and actually provide tools for augmented learning outside the school. One of the goals for this project is to lessen the "Great Divorce" between learning experiences in and outside the schoolroom.

A hypertext that emerged in a Social Foundations class illustrates how this use of a digital medium can actualize Stanton & Stammers' (1990) three goals for hypertext and my two inclusions. In the following quotation and subsequent responses one can see how a topic that

relates tangentially to issues respecting church and state discussed in class emerge on a digital discussion list:

Here's an issue I hadn't thought about before that was brought to my attention by my girlfriend, a prospective music teacher. How much religious music should be allowed in public schools, if any? My first reaction is that none should be allowed. But this restriction is crippling to a music program, especially a chorus. Insisting on no music with any religious content forbids a LOT of choral pieces. It throws out almost all major works composed before, when, like 1800? It would mean that students could learn next to none of the work of many great composers (like Bach, for example). But then, if we do permit some religious music, where do we draw the line? Just wondering what you thought about it .

This inclusion to the list, growing out of in-class discussions on school vouchers and prayer in school, exemplifies how a student adapts an open-ended, non-linear pedagogy to (1) segue his prior experiences, (2) allow him to explore a shared pedagogical space, and (3) allow him to manipulate the class' subject-matter to fit his learning style. Moreover, the respondent has (4) followed his learning goals and (5) shown responsibility within this free-form medium by adding content to the class discussion. This particular entry to the class electronic forum elicited ten responses, one by the author to further illustrate his position, evincing how such a hypertext dialectic emerges. There were eight different people who responded, one being the professor, and students responded to the professor's response. One student posted the following:

When I was in band in Junior high and High school, we never played "Christmas Music" at the Christmas Concert (which had been renamed the Winter Holiday Concert). We played Jingle Bells, and other quality winter music, but nothing that could be closely

associated with Jesus. It is sad, because there is good music there that was being eliminated.

Another example from high school that showed how religion was being washed from the schools was the prayer service that was held before graduation. For us, it was held the Sunday before graduation at the school. It was presided over by a priest, a minister, a rabbi, and a Muslim cleric. This practice has now been abolished by the school. It doesn't make any difference that the service was voluntary and was multid denominational, it was religion in school .

To which the professor replied, “Jacob⁶ points to something that worries me. Religion is a part of culture. If we go too far, we end up barring religion from the public realm altogether, and that has its problems also.” The professor has urged the dialogue on, opting not to play the master behind the podium. He follows Doll’s (1999) advice for responding to student dialogue: “From the multiplicity of responses given [this was the sixth response to the initial remark on religious music in school], the teacher chooses some for further exploration (the curriculum now begins to develop or emerge) and encourages dialogue relationships among responses given” (p. 6). To wit, a student responded to the professor’s dialogue and two classmates, exhibiting hypertext as a hermeneutic praxis:

I think we need to allow some room for religious music in school. I am not saying that we have to talk about the religious undertones, but students should be exposed to it. Sherri is right, yet again, religion does play a huge factor in classical music, and music before that. Hello, Handel's messiah...Good stuff and contains religious undertones. We can admire music for music; it is possible. Sometimes school systems get sooo uptight, like Jacob’s school system. It is ridiculous that they eliminated the activity before graduation. I

participated in the function, and it was a diverse group of people. It is part of tradition and culture. Just as we play religious western music, we should play eastern religious music. Let's explore! Isn't that what education is about. Terry

The respondent has attempted here to ameliorate various positions further showing how effective this dialectic is in working towards consensus and understanding. Her responses, I should add often aimed at such conciliatory gestures, urging her peers to deny polemic logic and explore positions as ways to work together towards shared goals. This is democratic education in full bloom.

Given how modernist educational assumptions limit hypertext to a modality change, I look to an alternative educational perspective: postmodernism. Postmodernists usually stress hypertexts' properties as narrative, discursive, non-linear, intertextual, emergent, and collaborative. Glenn Russell (1997) argues that two dichotomous discourses have evolved regarding hypertext. One is the modernist discourse based on computer science, information technologies, and cognitive sciences critiqued above. Postmodernists, he argues, rely instead on literature, communication, and film theory along with constructivist psychologies and pedagogies. Russell refers to Charles Dickens' (1966) Hard Times' character Thomas Gradgrind as the epitome of modernist teacher. Mr. Gradgrind bases his pedagogy on facts, not fancy and so commands his charges to memorize biological classification systems without emphasizing what role such systems have in understanding nature. Classification and memorization are far more important than creativity and conceptual understanding in Mr. Gradgrind's class and similar educational systems that stress memorization of seemingly infinite and inane facts. Russell urges educational theorists and practitioners to avoid this Joe Friday mentality and look to narrative to be the informing trope for hypertext.

By narrative he relates an over four hundred year old tradition of marginalia in texts, such as the Geneva Bible of the 16th century. One can look further back to Geoffrey Chaucer's (1987b) "Wife of Bath's Prologue" in The Canterbury tales to discern intertextuality as her husband, Jankyn, has a compendium of bad wives tales he recants to his taciturn spouse until she beats him about his head.

In fact, The Canterbury tales and other 15th century story collections such as the Romance of the rose (Chaucer, 1987a) offer a collection of seemingly unrelated stories bound together by a frame narrative to give an order to this seeming chaos. Gary Berg (2000) argues that the narrative metaphor can serve to discount modernist claims that hypermedia navigation is chaotic and disorienting. Having a central purpose and the freedom to explore provides a balance that the modernist critiques fail to recognize in their dichotomous worldview.

He posits that film theory also can inform hypertext interpretation. He argues that films require audiences to make sense of what is occurring on the screen; different films with different audiences can be read in many ways. For example, audiences can make sense of Leni Riefenstahl's (1935) Nazi propaganda film Triumph of the will in drastically different ways from shocked dismay to engrossing rapture. Berg (2000) lists six factors to consider for hypermedia presentation: (1) present educational content in narrative form to increase comprehension, (2) adopt film narrative theories to take advantage of a meaning-making tradition, (3) tell stories from multiple perspectives, (4) prompt learners to create their own stories using a narrative framework, (5) make learners aware that they are active participants in meaning making, and (6) focus critically on discursive tropes. Berg strikes an admirable balance between narrative used for making sense of seemingly chaos and that the narrative form itself needs to be critically

examined. Urging students to create hypertext instead of merely downloading discovered facts on the Internet is an excellent manner to contradict the claims of Human Information Processing.

One can perceive from the example of Riefenstahl's film that the narrative metaphor works well to understand the role of society in making meaning. Narratives are inculcated with social values. Like ballads, narratives often serve to instruct people on appropriate social behaviors. However, the recipient is not necessarily passive, simply encoding social expectations and following them. The reader makes sense of the dialogue through his or her own critical lens to differing degrees. People, in other words, choose to play the believing game or be skeptical depending on the story, their values, their mood, their prior experience with a genre, their genre preferences, and many other complex factors competing simultaneously. Russell (1997) also acknowledges that some texts, such as James Joyce's (2000) disjointed and eclectic montage Ulysses, are more likely to prompt critical reaction as "it invites the reader to explore multiple possibilities and participate in the uncertain process of discovery and creation" (p. 403).

Other critics, such as David Moore (2000), wary that a blind acceptance of narrative theory, argue that argumentation needs to be an intricate part of hypertext education. Moore does not believe that hypertext has an inherent property calling for users to constantly construct their own meaning, but that through argumentative dialogue, a critical perspective is more likely to come about in users. To avoid hypertext's as narratives from being too didactic, he urges that dialogue be encouraged and argumentative stances be practiced by students. In the next section, I will illustrate Lemke's vision for an active hypertext segues nicely with Russell's perspective and Moore's call for critical dialogue.

Lemke's vision for hypertext

Lemke (1993) offers a version of computer-mediated instruction that is radically different from those described by McKnight, Dillon, and Richardson (1996) above. Like Moore (2000), Lemke desires to use hypertext as a critical dialogic tool. He proposes that hypertext theory embodies traditional scholarly principles of cross-referencing and self-guided inquiry, more closely aligned to Russell (1997). Hypertext and digital technologies offer a qualitative change in how people can conduct learning and research, how scholars communicate, how scholars and students can interact, and how one authors a text. Hypertext theory provides a means to take advantage of changes in information technology to make education more dialogic. Lemke stipulates that most scholars use texts not as linear narratives, but as databases from which they selectively gather information. Typical educational systems up until and often including graduate school instill linearity and largely unquestioned authority to the work. How hypertext can alter this is by fostering scholarly practice much earlier to better prepare not just future academics, but others to act as more critical readers. By critical reader, I mean one who engages the text as a multinoded tool more so than as linear, authorial work. Textbooks should not be the telos of educational discourse, but “tools for thinking” (J. Garrison, 1997). Scholarly communication, Lemke argues, conforms to a distributed model of communication, a dialogic conversation. Pedagogy more often than not, however, is construed as a monologue, a centralized mode of communication with a closed, hierarchical semiotic. Computer mediation can enable efforts to decentralize learning, by allowing more voices to join the conversation including students’ questions and even answers, engaging an outside specialist, having electronic conference groups, disseminating papers to one another, continue conversations outside the confines of the classroom, and pool resources.

After the case-study was complete, I asked participants to reflect on the nature of communication: “Lemke (1993) urges that teachers use more interactive aspects of digital technology so that students feel more like peer practitioners than students being dictated to. Do you think this claim is appropriate, and do you feel that the discussion board did this to some degree?” To this query, a student replied, “I think that Dr. Gerry provided that philosophy of teaching to us from day one, therefore I feel that the ‘peer practitioner’ [sic] experience permeated the entire classroom experience, as we all had an autonomy to express our thoughts during each class period as well as having a sole influence over teaching 4 hours of class throughout the semester per cohort group.” The participant refers to the professor’s strategy of having student groups teach class more often than he lectures and that the content of their lessons comes from class texts and their research related to class. This non-digital practice segued well with the dialectic discourse used in the digital medium, so the two complimented one another. The students by practicing the art of teaching acted as practitioners preparing them for realistic entry into their chosen profession. By doing this, the likelihood for intrinsic motivation is higher than if the students had been merely lectured to. Moreover, they built confidence as teachers.

The most essential change he foresees is a switch from a curricular model to an inquiry paradigm for education. Scholars often write to pursue their own research agendas and wail that their graduate students cannot do the same. Even a cursory glance at the structuralist dominated educational system provides part of the answer. Students are neither trained nor encouraged “to go their own course.” Curriculum means the “course” to be run, established well before the learner ever enters the picture. Outside academia, employers complain that recent graduates are not self-reliant by and large as they should be. Again, the educational institution’s role in this in an age of increasing standardization and authoritative hierarchies should not really surprise us.

The closest education comes to self-guided inquiry is the research paper, but two facets limit its effectiveness: topics chosen by educators and highly artificial audiences. Hypertext presents opportunities for more choice in that altering syllabi with electronic publishing is much easier than even fifteen years ago and for larger audiences by disseminating papers to peers. In sum, we are not teaching students what they need to be able to do.

In the case-study class, Dr. Gerry had the students choose from 12 broad topical educational issues to research [see Appendix 1-1]. Groups, starting from very broad issues such as Church and State, narrowed their research to a topic within the broader issue, such as the legality of and ethics surrounding school vouchers. After jointly researching and writing the paper, as often educational researchers do, the group presents their paper online for their peers to read, serving as the content for that week's in-class meeting, and then discussing the finer points of their argument with the class. This does an excellent job of approximating the practice of doing research, publishing the findings, and discussing the findings at a professional conference.

Finally, Lemke proposes a set of fundamental skills that people should possess: (1) database exploration, (2) information search and retrieval, (3) authoring skills, and (4) user skills. Database skills entails instilling abilities for exploring texts available on a given subject. This not only emphasizes searching abilities, by using such skills to become more adaptive and self-reliant learners. Information research and retrieval involves not only how and where to look for information, but how to judge its validity. Instead of reading the class' one authorial text, students need to be able to draw from fields to satisfy their curiosity. Next, students need to be able to share what they have researched effectively through word processing and desktop publishing that can include more than simply the written word, such as images, models, and animations. Digital authoring can even include hyperlinking and sound. Finally, students need

user skills; they need to be able to read all sorts of texts from non-linear to hypermedia. These literacies do not encompass a critical foundation for hyperpedagogy, however, but some aspects of hypertext that illicit greater scrutiny. With this scrutiny in mind, I shift now to Landow's vision for hypertext that relies on poststructuralist semiotics and critical pedagogy.

Landow's hypertext theory

Now I shift away from Lemke's (1993) introductory examination of hypertext; Landow proposes that the paradigm shift in textual technology that is currently transpiring offers opportunities for actualizing poststructuralist theories respecting the metaphysics of presence. In Hypertext: The Convergence of Contemporary Critical Theory and Technology (1992), he points to Derrida's deconstruction theory and Barthes' "readerly" text as two theoretical positions transforming how people in a nascent postmodern world think about and perceive reality. These perspectives coupled with hypertext lead him to declare "that we must abandon conceptual systems founded upon ideas of center, margin, hierarchy, and linearity and replace them with ones of multilinearity, nodes, links, and networks" (p. 752). Poststructuralist theoretical perspectives and technological innovations affect, in particular, the character of textuality and narrative structure and the function of reader and writer – easily translated to student and teacher for my purposes. The coupling of hypertext theory with emancipatory pedagogies challenges traditional notions of power and hierarchies in the curriculum and the classroom. By decentering the educational text and the power of hegemonic hierarchies, hypertext has the potential to liberate schooling from traditional notions of Human Information Processing and the regimen of discriminatory dualities.

Landow relies on Roland Barthes' (1970/1974) lexia concept that a poststructuralist text is a collection of nodes, networks, webs, and paths having no beginning, end, or particular paths.

Meaning is made from a transactional collaboration among the reader, the writer's artifact, and shifting cultural environments. Users access texts through no preset gateways and make their own connections among texts and cultural suppositions. Readers ability to reference multiple texts, a concept constrained by the technological limitations of print culture and philosophical assumptions of modernity imbrued with a teleological epistemology, becomes the norm due to the ease of hyperlinking and the readily available nature of various texts in digital environments. A text's focal point shifts away from the author to the reader as its primary producer and user—authority resides more in the reader than the writer in making sense of a text. Such a paradigm shift will have far reaching effects on the institutional culture of schooling over time.

This convergence of reading and learning contexts will open culture to more divergent voices, borrowing here from Mikhail Bakhtin's "heteroglossia" (1981), and reduce the strictly enforced hierarchies explicated by Michel Foucault in Discipline and Punish (1977). The active reader engages in metacognition, inherently questioning the privileged status and univocal tyranny of authority figures, such as authors and teachers. The text and its inexorable link to institutional education will evolve into a mediated and emergent montage of functional centers within curricula. As Jacques Derrida (1966/1998) claims, the text's center is not the inexorable transcendent signified at once outside the text's borders and controlling it at the same time; rather, a hypertext has multiple centers located within its bricolage – Derrida poaches Levi-Strauss' (1963/1998) term for a complex, organic function – determined by users' needs. No primary organizational axis exists a priori; organization emerges from users' jeu, or freeplay, as part of the experience.

Another aspect that hypertexts are well suited for is intertextuality. Thaïs Morgan (1985), whom Landow cites, writes that intertextuality frees "the literary text from psychological,

sociological, and historical determinisms, opening it up to an apparently infinite play of relationships” (p. 759). The hypertextual triad of text / discourse / culture, moreover, supplants the long steeped one of author / work / tradition when playing with text from this perspective. Related to intertextuality is Gilles Deleuze and Félix Guattari’s (1987) ideas about rhizomatic, or nomadic, thought. Travelers in a hypertext can opt to walk down whatever paths suit their needs, spurring on democratic participation within a learning process.

In the following sections, I intend to more specifically develop how hypertext relates to Derrida’s decentered semiotics, Barthes’ readerly semiotics, intertextuality, and rhizomatic textuality. In the following chapter, I address issues of power and hyperpedagogy in greater detail, looking to Foucault’s examination of power and semiotics relationships.

Hypertext and Derrida’s decentered semiotics

With respect to Derrida (1966/1998), hypertext offers a text more closely aligned to our lived experiences in which context as the center of meaning takes the place of acontextualized truths or structural centers. A living hypertext is constantly restructured and recentered as the context shifts creating nearly infinite new contexts. Hyperpedagogy uses a similar paradigm in which a class – here defined as participants, content, and context emerging in a transactional environment – becomes an assemblage or a constantly mediated montage of meanings. Often traditionalists label decentered instruction as chaos—a lack of guiding purpose and control will lead inevitably to unrigorous education, or no education at all. Derrida, however, maintains that centers are necessary if mobile, “I believe that the center is a function, not a being—a reality, but a function. And this function is absolutely indispensable” (p. 495). By moving the locus of significance from essence to function, Derrida effectively deconstructs the viability of fixed meaning that examination standardization strategies, conduit-teaching models, and Panoptic

pedagogies (Foucault, 1977) all rely heavily on prerequisites and like-minded philosophical assumptions. Decentering a class challenges pedagogies that rely on fixed truths and prescribed methods and teacher to student power hierarchies. For example, student research papers, instead of being documents turned in at the end of the semester for the teacher as the sole audience, can act as content. Students research topics of their choosing that fit within the logical confines of the class topic and disseminate their papers as content that they will teach to their peers. Therefore, the audience is enlarged to their peers and teacher, and the students have control over choosing, researching, disseminating, and teaching some of the class' content [see Appendix 1-2].

In the case-study, students were asked to reflect on the practice of sharing the leadership of the class: "Typically, classes are limited to a teacher disseminating knowledge to her/his pupils, but in this class, we tended to share more often than not. We even created much of what can be considered the content. How do you feel about this, generally? Do you think that this sort of transaction or sharing encourages a more pluralistic, broader interchange of ideas? Do you think this can work in your discipline?" One student responded,

I feel that the webspace definitely encouraged a broader, more pluralistic exchange of ideas. I think it could work great in high school in the same way. As I mentioned before, I would want more direction given about the topics discussed, but I think writing opinions about topics involves further processing information learned. For example, when teaching about the American Revolution, students could be free to talk about opinions involving battles that took place, leadership or lack thereof, etc. I could see my students doing this and getting into it once some opinions were [shared]. Another example would be discussions about literature in an English class. If carefully monitored, it could be about controversial things taught in science. I feel the opportunities are endless.

From this quotation, this student appreciates the decentered nature of the class and believes that in her future practice she can use a similar strategy to engage her students. Engagement – making connections among learners’ experiences and the subject-matter, which is a distillation of cultural practices over time, not a set body of transcendent facts – is a fundamental issue in dialectic discourse. Seeing that the opportunities are endless illustrates how inappropriate teleological thinking is in a hypertext. She also notes how the method of interchange promotes pluralistic practices by heeding the utterances of the academic other—the student.

In decentering e-learning, then, we need to deconstruct some of the assumptions girding centered, hierarchical education. The underlying assumption for hierarchical education is that True knowledge transcends corrupted, relativistic reality and it is the duty of the enlightened to firmly guide the uninitiated. Derrida (1966/2000), in “Structure, Sign, and Play in the Discourse of Human Sciences,” questions the function of structuralism by deconstructing certain Platonic and Cartesian assumptions regarding the privileged status of transcendent episteme. He stipulates that Western philosophy’s foundational assumptions, so deeply intertwined within the structure of episteme, need to be seriously reevaluated. Transcendence is a central tenet in the metaphysics of presence, what Derrida labels the transcendent signified. Traditional curriculum and instructional beliefs likewise hinge upon fixed episteme. Moreover, this transcendent knowledge, often labeled as what everyone must know to succeed, privileges the knowledge of hegemonic groups because their valued knowledge lies beyond question as the most valuable. When we remove the concept of transcendent signified and allow for freeplay, however, we extend the domain and interplay of signification infinitely (p. 496). As he stipulates, “Freeplay is the disruption of presence” (p. 508).

Doll (1999) echoes Derrida respecting play in meaning-making in which he “invites others into dialogue with” (p. 1) the subject-matter. This is what Doll labels an “open systems theory” for education, in which students and teachers alike engage in chaotic disequilibrium. He suggests that to keep this chaos productive it needs to follow the three following principles: (1) curricular and instructional practice need to adhere to culturally normed rigors of scientific methods and logical proofs, (2) infuse the science and logic with personal narratives and purpose well beyond memorization of trivial facts, and (3) infuse the science and stories with spirit and vigor.

Recognizing that structures are flexible and adaptive to the demands of place and time, ruptures the eschatological belief in epistemology inexorably linked to the ideologies of ultimate knowledge (episteme), origins (arche), and ends (telos). Reality is no longer a discovered monad or essence confined by the alpha of arche and the omega of telos. By admitting freeplay room in our concepts of reality, we can see that knowledge must be contextualized as a social construct. As Derrida writes, “the whole historical chain which opposes ‘nature’ to the law, to education, to art, to techniques—and also to liberty, to the arbitrary, to history, to society, to the mind” deconstructs the limitations placed on pedagogues to reconstruct reality and teaching models (p. 499). Derrida, furthermore, writes how demystifying utilitarian empiricism will expose the limitations of ideologies invested in fixed, timeless, acontextual truths; seen as tools, however, we can reconstruct reality as a function. By breaking down these barriers – the supposedly inherent tensions between culture and nature, mind and body, education and nature – such dualisms fade into irrelevancy. When curriculum specialists, instructional designers, and teachers no longer own knowledge, but allow students input into knowledge construction, we have moved away from fixed, eternal, and transcendent centers to lived knowledge construction. When

students create knowledge valued in school settings, the experience should come closer to their values and experiences. Such an educational stratagem can enliven learning from the stale confines of standards-based curricula.

Returning to the case-study and the question regarding the decentered nature of the class, a student replied how much she enjoyed the dialogic participation:

I found it very refreshing that I was not subjected to three hours of lecture. I did feel, however[,] that sometimes it was hard for quieter students to break in with something because they tended to be overshadowed by more aggressive students. Other times I noticed that some members of the class were not very subtle with their snide comments and eye-rolling when they didn't agree with whoever was speaking at the time. Of course, I suppose you'll have those types in every class. Otherwise, I feel very good about the way the class was handled. I was very iffy about collaborating with people I didn't know but that only lasted about a minute once I got to know my group. I would imagine that most people feel similarly. It appears that the cohort members are pretty close knit. The collaboration helped me become more comfortable since I got to know more people and it was easier for me to speak up if I wanted to. This class was not the "sterile environment" we have spoken about negatively. Good for us.

Not only does she endorse the dialectic interchange, she indicates points that need revision, such as how peers behave towards one another and how the more aggressive students silence those less so. By adding the web-based forum the rule of loudest voice did not apply, but still aggressive students can consume digital spaces equally as well as proximal spaces. This is where a teacher, imbued with the most authority in a typical class, needs to intercede. Teachers can establish rules for discourse, perhaps canvassing what rules students desire so as not to act as the

ultimate authority on this issue. I elaborate on these topics of silencing voices in proximal and dispersed learning spaces and a teacher's role in creating safe rhetorical spaces in chapters 5 & 6. She remarks also that in this dialogic environment that collaborative work proved an excellent learning experience, not the drudgery of one student doing the workload for others that group projects can become when most learners are unmotivated.

Hypertext and Barthes' poststructuralist semiotics

Now that we have explored hypertext as a decentered, dialectical conversation, we need to see how the reader has an active role in forming the text. In order to further this conversation, I will relate Barthes' lexia concept to Landow's ideas about hypertext. Landow (1992/2000) cites Barthes (1970/1974) respecting his lexia concept that the ideal text is a collection of nodes, networks, webs, and paths having no set beginning, end, or particular paths, and is an interactive collaboration (a sign) between the reader (the signifier) and the writer's artifact (the signified). Access is gained through no particular gateway and a reader's choices and interpretations drive meaning-making. Links can be internal or external to a text; in fact, the division between internal and external texts is a functional one, not proprietary. References to other texts, seriously curtailed by the technological limitations of print culture and philosophical assumptions of modernity imbrued with a teleological epistemology, become the norm due to the ease of hyperlinking and the readily available nature of various texts in digital environments.

A fairly common occurrence on the case-study's threaded discussion board was the inclusion of links to topical news articles:

As Prof. G. said, much of what we read about and discuss in class is in the news regularly. This article was in the Washington Post on Feb. 21.

<http://www.washingtonpost.com/wp-dyn/articles/A42599-2002Feb20.html>

The article is about museums in Virginia and how they have adapted to the SOLs.

Teachers have to be able to justify the value of any given field trip (value = applicability to certain SOLs) before they will be given approval (and money) from the school.

Museums throughout the state have now begun doing this for teachers, letting them know which SOL will be covered by a visit to their museum. Interesting to see how SOLs have affected things outside of school.

This thread on the list elicited no less than fourteen responses from a group of twenty participants. One should also keep in mind that this list was voluntarily contributed to. One respondent even added a link to a different article on this subject. Another responded as follows,

I think the emphasis on the SOLs in museums detracts from other things that students may have learned on their own in a museum, had they been given the chance to explore its contents without strict guidelines. Using the museum solely as an SOL resource really narrows the field of information that museums have to offer. I liked what Sherri said about museums prostituting themselves to the standards. What is so terrible about the whole situation is that they have to in order to survive—especially the smaller museums and those related to performance art. While I do not disagree with theatre companies brushing up their scripts to better them from time to time, I do not think they should be forced to by the standards so that they can survive. These SOLs are beginning to get out of hand.

These students exhibit a remarkable amount of reflection on the issues and within interchanges with their peers. The amount and quality of brachiating ideas is also noteworthy, as the inclusion of how similar measures will affect drama companies attests. The readers are not simply

responding to the writings, but adapting the texts to their experiences and concerns, evincing how poststructuralist texts rely on readers' active engagement with and manipulation of ideas.

A text's focal point shifts away from the author to the reader as its primary producer and user; authority resides more in the reader than the writer in making sense of a text. Such a paradigm shift will have far reaching effects on the institutional culture of schooling over time, such as valuing the roles of mediation and contingency in education. We should no longer believe that inundating learners in seas of acontextualized trivia would make them more capable citizens. Honing skills of active and critical reception of information will aid learners in a pluralistic society better. However, current research illustrates that e-learning tends to cast a blind eye on critical literacy and accommodating instruction to benefit marginalized learners.

Michael Mazyck (2002) provides an example of how computer enhanced learning systems tend to disregard the learners' cultural milieu. He writes that Integrated Learning Systems (ILS) tend to disregard the cultural matrix of the intended learners. ILS stands forth as the latest example of the teaching machine concept that relies on assumptions of fixed episteme and strictly hierarchical authority. Hypertext, by virtue of its assumption that education is a cultural practice, transacting values and norms among learners and teachers, posits that without the inclusion of cultural receptivity education is likely to fail. Therefore, I agree with Mazyck when he declares that for ILS to be effective, it must consider the students' (1) general ability level, (2) previous experiences, (3) expectations of instruction, and (4) perceived relevance of instruction. To do this, he suggests that ILS designers and by extension curriculum designers, should do the following: (1) observe sample student groups in various settings to get an appreciation of local norms and values, (2) question students regarding their local cultural practices and preferences, (3) question students' parents and outstanding local leaders about

cultural practices and preferences, (4) conduct receptivity research with diverse local student populations, and (5) explore current research on target audiences. As such, cultural acceptance and collaboration are much more likely to take place than if one simply assumes that one curricular model is equally appropriate for all learners. This is an example of reading the educational context as a matrix.

Contradicting the assumptions informing ILS, linked hypertexts demand more from readers than print culture in that readers have a more active role in signifying a text that they guide in part, and perhaps even formulate. For example, students can engage the content in online discussion forums. When I recently facilitated such online forums to embellish the face-to-face (f2f) learning environment, students added a great deal to the overall learning environment by continuing dialogue outside the classroom and the class period. Students who rarely added their voice to the proximal class opted to do so on the online, asynchronous forum. Students also took the forum in unexpected directions of their choosing. These tangential sojourns did not take class “off task” but enriched the experience so that the class overall with its decentered authority paid more attention to issues that affect students’ concerns. As one student wrote after class,

I have really enjoyed this webspace [the online discussion forum] for several reasons. I like the ability to pick what topics to get involved in. It allowed me to explore what personally interested me and made it thereby enjoyable. I also more valued topics because I choose them. I also felt like things that I might not have thought about were likely to be brought introduced [sic] because of this free-style approach. It was refreshing to have random things brought up instead of feeling smothered by too much structure.

As this quotation exhibits, connections to lived experience and choice become paramount considerations in hypertexts. Students not only used this added learning space as a soapbox, but meaningful dialogue occurred quite frequently. In fact, it was the norm as chains of messages debating topics among various learners often had forty or more postings over a semester and the students were required to post only four times. These chains also morphed into new chains as more users added their input. A sense of agency clearly illustrated in the above citation is a tremendous benefit in emancipatory hyperpedagogy.

The greater amount of agency in choosing a text and creating nodes posits not only greater freedom to meander where one will, but also to be responsible and rigorous to a task at hand, not simply passively following whimsical links and irrelevant tangents. If a student needs to research a topic, such as the ethics and issues involved in the school voucher movement, research on networked sites can be easier than researching at a print-based library: easier to find information and easier to get lost in the information with the myriad links afforded by Internet research. Internet researchers must stay disciplined to a task and research online can prove more taxing than researching in encyclopedias and other such repositories of established facts; however, the freedom afforded to discern what is relevant and legitimate sources of information is a more dynamic method of constructing knowledge than regurgitating discovered encyclopedic facts. Finally, online, hypertextual research should not preclude good library skills, but rather enhance such skills.

Barthes' critique of structuralist semiotics resemble Derrida's decentered text, yet Barthes urges that more than decentering is necessary for critical engagement. I further my dialogue of hypertext by seeking to recenter the conversation. Barthes' theories respecting semiotics bear a great deal of importance in understanding hypertext as a poststructuralist form

of text. Subsequently to better understand the concept of hypertext, I will summarize some of his key ideas about text and illustrate how these theories took form in the case-study. In “The structuralist activity,” Barthes (1964/2000) critiques traditional semiotics, specifically examining de Saussure’s structuralism. Traditionally, the goal is to mentally reproduce (the mimetic approach) an object in the mind; Barthes, however, writes that this process is a directed, interested simulacrum—intellect added to the object, not simply a mental mirror. We do not so much represent an object as much as we interpret it from experience and interest. We choose what we see, and we attach further value in interpretation. The purpose is not to copy, but to render signs intelligible. Traditional pedagogies, however, maintain that education should fundamentally be based on the ability to successfully exhibit proven facts, which emphasizes mimesis. Students study a fixed and finite content and illustrate via testing that they have assimilated facts. This ideology supposes that facts are static substances (ousia) and ultimately the same for all learners. In fact, inability to assimilate fixed knowledge are often labeled as learning disabilities, foisting the problem solely on the learners and largely exempting the educational system and its methods. Hypertext, in its ability to be flexible, can link to students’ prior experiences, cultural and contextual value systems, and intrinsic motivation. Thus, the text that emerges is a collaborative and transactional function.

For instance, the discussion board in the case study entitled “You choose” proved to be the most popular, nearly double the closest and more than four times the least popular. Such topics as Bob Dylan and education, the purposes of education, critiquing Bush’s “No Child Left Behind,” (both with sympathy and antipathy), and how legislation being debated in Virginia’s General Assembly might affect educational practices in the Commonwealth emerged—just to name a few. While many of these topics grew out of class discussions, such as one on Robert

Zimmermann changing his name to Bob Dylan to ostensibly honor the poet Dylan Thomas, few could be directly cited in the texts we were using. The issue of government involvement in education was a topic in Joel Spring's (2002) American Education and Susan Ohanian's (1999) One Size Fits Few, but referred respectively to national and California issues. The students, of their own accord, took the spirit of these critiques and applied them to their local situation, their intended careers, and prior experiences. This is an example of how a mediated text emerges, through active reader engagement guided by cultural and personal preferences not a set of unequivocal facts.

Barthes holds that perception is an activity colored by social preferences, not a recreation of objective reality: "technique is the very being of all creation" (p. 490). Creating meaning is neither real nor rational, but a social function. The simulacrum takes place in two steps: dissection and articulation. The former is the image of the world; the latter is the analysis attached to it by embodied intellect. These are not distinct activities, but subfunctions. Typically, the former is the entirety according to the metaphysics of presence—the essence. Things do not have meaning in of themselves, but are fabricated by humans transacting with the environment: "it [is] not so much stable, finite, 'true' meanings as the shudder of an enormous machine which is humanity tirelessly undertaking to create meaning, without which it would no longer be human" (p. 492). Ideology not function maintains the myth of essential, quantifiable meanings. Hypertext, instead, presupposes that signification is a simulacrum of socialized association to various stimuli. As such, learners' subjectivity inculcated within social mythologies takes precedence, yet hypertext by its very emphasis on critical inquiry urges learners to question the social ideologies within which they are awash.

During the case-study, students questioned the social ideologies surrounding them. In particular, a group of respondents debated the issue of science and ethics and the purposes of education. One student reflecting on a class discussion about one group's paper and discussion on the separation of church and state wrote,

Okay, last night's class discussion on the separation of church and state got me really wound up. But I promised myself not to go off on a rant and I will try to stick to that. However, I did note that our discussion led back one of the basic problems—what is the goal of educating students? I will be teaching students science. But there are a lot of scientific advances (both past and present) that raise ethical / moral questions (the theory of evolution, cloning, etc.) and are very controversial. And I think it is very important for students to be well informed on these topics so that they can develop (and defend) their own opinions as well as understand the opinions of others. Also, as I strive to remind myself, high school is a trying time for young people. So while helping students understand science may be my main goal, I think that attending only to their intellectual well-being is short-sighted. Teachers must address numerous other issues and help their students become thinking, caring, and learning adults. I would love to hear everyone else's opinions on what the goals of education should be / are.

The student here not only questions serious social issues in science and ethics, but she also wants to raise these concerns with her students while keeping their context in mind. She is mindful that church and state cannot be thoroughly separated due to questions of ethics and morality that affect scientific practices, such as cloning. Her Janus headed approach to look both at the cultural norms (scientific discourse) and at her students' cultural nexus is highly admirable. I would argue that the way in which this class used the digital medium enhanced the possibility for this

conversation to be disseminated to the entire class. Certainly, such sensibilities are difficult if not impossible to convey as facts in a textbook or lecture, much less test that a student has changed her habitus to incorporate such sensibilities. No, this had to emerge in a dialectic space. I would also like to highlight that she actively sought feedback, invoking further discourse.

If an ideal or belief can be decentered and deconstructed, then it follows that it can be recentered and reconstructed. Being that hyperpedagogy focuses on consciousness raising and changing habits, educators must not merely seek to deconstruct social injustices, but seek alternatives. Hence, I look to Barthes critique of deconstruction and his formulation of a reconstructive philosophy. In “Change the object itself: Mythology today,” Barthes (1971/1977) revisits Mythologies (1957/1995) to claim that the work of deconstruction is not the reductio absurdum or infinite regression of deconstructing sociolect meaning. He describes sociolect as the thickness of language by which language’s deepest social myths “present an unshakeable homogeneity . . . woven with habits and repetitions, with stereotypes, obligatory final clauses and key-words” (p. 168). Poststructuralists need to move beyond merely critical decipherment to evaluation. In this evaluation of myths, we need to find alternative myths to replace dominant myths. Barthes posits that the best way to combat oppressive myths is by writing against them. By writing, I mean that internalized social scripts inform signification and that a rewriting signifies a move for alternative narratives to inform social scripting. This writing is not only critiquing mythical scripts as oppressive social constructs but also creating alternative scripts thereby increasing the likelihood for changing the world we live in. Recognizing, moreover, that recentering is possible allows for an evolution of recenterings, not a move from wrong to right but an ongoing change. Hyperpedagogy seeks to rewrite embodied myths of gender, sexuality, and race for the purposes of social justice as opposed to reifying structuralist myths as social

efficiency pedagogies tend to do. Structuralist pedagogies often take social scripts as the truth and consider questioning such scripts a waste of valuable time that should be set aside for molding the next generation of workers. Hyperpedagogy regards critical inquiry into social and economic inequities as a manifest duty in democratic education. Therefore, practitioners of hyperpedagogy should challenge learners to look at their world with a skeptical eye and to instill desires for a more equitable society. By examining the world about us from this critical perspective, learners may begin to disturb the social scripts that inform gendered, sexual, cultural, and racial dualisms. Just being in a digital environment alone will not do this, but teachers constantly urging students to examine commonplaces as socially mediated expectations and raising how socialized expectations discriminate against some people may well serve the ends of social justice better than simply hammering home the status quo in standardized tests and information biased pedagogies.

Returning to the case-study and the discussion of church and state, one student replied, I agree the discussion about church and state motivated many questions to surface. Until Tuesday I thought I knew about the separation of church and state, but I was so confused with the whole concept of church and state after class. I did not know there was so much paranoia and unwillingness to see different perspectives from people who are support separation [sic]. Keep in mind that I am not for union of church and state, but I do recognize the fact that they do intertwine at one point or another. I know they are kept separate (for the most part in school), and I also know that teachers cannot talk about religion in schools. However, I always thought that if the topic came up, for example in science and history, then the teacher dealt with it in a matter of fact way. That is what happened in my school. Sometimes we would talk about the history of things and

religious history would come up. Usually students brought it up, but teachers would not censor them. I remember in class we had a teacher who was wearing a pendant that had a star and a circle around it (I forgot the name). We, the students, asked her what it was and we talked about it. She did not force her ideas on us or offend us. In fact it was a very matter-of-fact conversation. It was informative. I know that no one converted after she told us about what she practiced. Religion and the lack of religion is everywhere and it is talked about. Yes, it may be controversial, but that is the essence of living. The more we decide to hide theories and perceptions the more taboo it will become. So yes, Liza, I agree with you. It is short-sighted to just think about education when so many other factors come into play. The goals of education [are] to motivate thought, not instill memorization and review. Teachers should take advantage of current events and controversy, it is reality. Isn't this why the elite went to school at one point, to learn how to analyze and process more in depth?

In this instance, we can see how this student has come to a point of disequilibrium, that her mythology regarding the clear separation of church and state can no longer hold. She suspends herself in chaos, critiquing a simplistic myth of separation, yet builds her new mythology, her new metanarrative. She returns to equilibrium, and we are fortunate enough to have witnessed this process in action. Her new understanding, prompted by the problematic nature of the paper and ensuing debate, is more sophisticated and avoids the narcissistic nihilism of infinite regression.

Pluralistic properties in hypertext

Having examined Derrida's bricolage and Barthes' lexia and how these concepts relate to hypertext, I return to Landow. He builds upon Derrida and Barthes' foundations and then directs

his vision for hypertext towards pluralistic goals, postmodern rhizomatic textuality, and hypertexts potential affects on cultural institutions. Landow claims that hypertexts will have certain properties along a continuum: dispersed, anti-hierarchical, and unbounded. The dispersed text links to other texts as an attribute. Instead of having to look up a term in a dictionary used in the primary text, one can use the cursor to look up the word in a dictionary that is already part of a metatext. This will weaken the concept of textual uniqueness, a product of inspired genius, to a cultural artifact that either serves a purpose or gathers dust. The related notion of a canon that one must read privileged texts to be considered culturally literate (Hirsch, 1988) will also fall into the dustbin of spurious social agendas. The boundaries of a text will blur, so we will not so much consider Shakespeare's second quarto of Hamlet a good version and the first quarto a foul copy and the associated critiques and explanations as secondary to the main text but as part of a larger social process. Variation will no longer be considered an academic sin. The second quarto, albeit a heavily edited one supposedly Shakespeare's autograph, may well serve as a functional center, but should not eclipse variations and associated texts as wrong or trivial. We put faith in the idea that hypertexts will help us overcome eschatological assumptions about what is a good text and what is the real text as the essence of the matter of study. Finally, hypertextuality's absence of textual borders and fixed hierarchies can promote democracy as a lived experience. In texts with blurred boundaries the role of the user / reader becomes much more powerful than in the linear, bounded, and fixed text, so active readers may learn how to act as participants not recipients in a social network. Hypertexts inspire integration not isolation of ideas and texts.

The distribution of text and its implications is one of the ways we can differentiate print from digital text. The printed text did provide for a much broader audience than its manuscript counterpart, especially after the steam press came into being; however, this technological

paradigm had other influences on culture, such as the privileged position of the author (from the Latin auctores or authority on a subject, particularly theological). The printed text boosted literacy, ideas of a free intellect, and the sanctity of the individual. Yet this individual is not as authoritative as the text; paradoxically, print culture reified Descartes' claims that the individual intellect was the supreme achievement of man and the unchallenged master of the universe. Certainly, this en masse solipsism has had adverse affects on multicultural societies and pluralistic democracies. Four aspects of hypertext may do much to help tear down such a myopic edifice: (1) dematerialization, (2) manipulability, (3) new discourses, and (4) textual dispersion.

With respect to dematerialization of texts, one can reproduce virtual copies almost instantaneously for nearly any reader. The significantly reduced cost of individual texts (keeping in mind that one has access to a networked computer), the access to typically hard to find texts (such as those either out of print or in the holdings of some remote, limited access library, becoming much more available), and the ability to search multiple texts at once (including reference materials and critical observations) can dramatically effect how people come to comprehend texts in the burgeoning digital age. The fact that copies of text can be stored within electronic databases offers dramatic possibilities for wider distribution, safer textual preservation, and access to rare texts, such as a digitized Beowulf or a scanned Dalhousie manuscript, that limits the risk of damaging irreplaceable texts.

The notion that almost any user can manipulate a text according to his or her interests undermines the author's vaunted position. Concordances will become dynamic and in much greater touch with users. Texts will no longer seem so stable, substantial, isolated, and owned; they will be dynamic, concrete, and multi-voiced. Additionally, the notion of individual property will come into greater debate. The balance of power between author (curriculum designer or

teacher) and reader (learner or student) and work will shift towards the reader in the digital text. Correspondingly, the reader will have more freedom within text's framework and more responsibility for its construction. Barthes' readerly text expects more from the new, much more inquiring reader than the Gutenberg counterpart of the past. The greater ease of meandering through a text and altering a text can instill a greater sense of agency in readers / users / learners; however, such flexibility also requires acclimation on the reader's part to adjust to reading in such a decentered manner. Moreover, educators have the ethical obligation to help learners become progressively more acclimated to such a malleable environment.

Hypertexts have the potential to become multivoiced and transactional, with on-going conversations occurring throughout a text's nebulous framework and among texts. This can subsequently lead to novel forms of discourse in education in which students have a greater responsibility for the direction of class. As Landow asserts, the circulation of ideas will tremendously accelerate, especially for research scholars. Listservs have already opened debates beyond the normal journal and conference circuit with many more voices contributing. Jay Lemke (1995) argues that in turning to multi-voiced social discourse, a dialectical as opposed to analytical paradigm, we can peer into society's mechanizations not as the way things should naturally be, but as how societies and its participants transact in a constantly evolving and emerging nature. For example, Lemke (1993) relates that hypertext can aid students' emulation of how practitioners communicate as peers. David Harvey (1996) promotes phenomenological, hermeneutical, and dialectical traditions as a way to confront positivism, naïve empiricism, and historical materialism. He emphasizes that reality is an event, a flow of and flux among processes that disperses Cartesian ideals of fixed centers, essences, independent, a priori structures, and intelligently organized systems. This understanding "transforms the self-evident

world of things with which positivism and empiricism typically deals into much more confusing world of relations and flows that manifest in things” (p. 49). Moreover, the Cartesian dualities between mind and body, consciousness and materiality, thought and action, theory and practice “have no purchase” (p. 48).

Finally, Landow and Delaney (1993b) argue we have a durational-extensional dispersion of texts – a “docuverse” of related texts (p. 15). Digitized texts smash the containers of the traditional text so that readers and others can form their own hypertexts according to their needs, interests, and purposes to form an eclectic cornucopia of what is available virtually. Covers and a spine no longer bind conventions of what comprises a text once we enter hyperspace and hypertime. We no longer have to default to an author’s bound work as a singular, fixed, and final artifact. In a Darwinian universe, hypertexts capture the complex, iterative, amorphous, and evolving nature of living more honestly than their print predecessors.

Reconfiguring text and thought

Having seen that computers can be used for democratic purposes in education, we can begin to speculate what text and class may evolve into. The computer and the internet can help us break away from the bounded, linear, and fixed way of thinking that print culture has deemed true since Gutenberg’s revolutionary invention. Hypertext, by offering a technological means for reading in unbounded, multiple-pathed, and decentered manner, lets us ponder hyperthinking. In hyperthinking classic suppositions about ontology and epistemology become confused, if not obliterated. When the author and teacher no longer stand forth as the sole authority in a work and the tyrant behind the podium, respectively, democracy can start to function as a lived experience when reading and being educated. But what will these revolutionary hypertexts look like?

First, we can hypostasize what properties a postmodern text may have. Next, we can explore the concept of rhizomatic text and how this concept relates to Landow's hypertext. Hyperpedagogy relies upon poststructuralist constructs of meaning making, language (broadly speaking), and textuality. One such theoretical basis is the idea of a postmodern text. Spring, in his introduction to American Education (2002), lists five factors that account for a postmodern text:

1. The postmodern text creates a dialogue between the student and the text. While information and data are transmitted to the reader, the information is presented in a manner that raises questions in the mind of the reader;
2. Postmodern textbook writers do not claim they are presenting an "authoritative, neutral, objective, unchanging source of knowledge." In fact, a problem with most textbooks is that they appear to be presenting "truth" to the reader when there continues to exist debates about the nature of truth in most fields of knowledge;
3. The postmodern textbook is an original piece of scholarship as opposed to a compendium of supposedly objective information. Authors provide their own interpretation and synthesis of material;
4. The postmodern textbook provides a context for knowledge by discussing the history of ideas and the impact of social and political forces; and
5. The author is concerned with telling a story through the introduction of anecdotal narrative material. The postmodern textbook provides the student with an opportunity for critical thinking and intellectual pleasure from engaging in a debate with the text. (p. xii)

Hence, a postmodern text strives to create dialogue with learners, accepting semiotic suppositions that knowledge is not a fixed, timeless commodity. The postmodern writer not only accepts the semiotic play in language and textuality, but also provokes response and critical reading by prompting engagement with the material as thoughtful questions. Postmodern texts bypass modernist assumptions of truth and objectivity that squelch active engagement; rather, postmodern writers are aware of their subjectivity and urge the readers to reflect on their own subjectivity. Context – historical, political, and social – acts as major component within textual and epistemological construction. Finally, the text provides stories of people as living exemplars so that learners may better relate to the psychological other, not as a nameless statistic or worse

yet a stereotype, but as a fellow human with whom the reader may share some empathy. Spring also raises the possibility that open texts may provide enjoyment that nomadic texts can connect more easily to learners' varied ambitions than the traditional linear text.

Like Spring (2002), St. Pierre (1997) advocates a decentered and negotiable text, basing her textual studies on Deleuze and Guattari's (1983, 1987) nomadic text and Foucault's (1985, 1986, 1988) writings concerning text and power. She writes that decentered writing has the potential to free oneself from allegiance to discriminatory binaries and constructed social truths: "poststructuralist theories are all deconstructive in that they seek to distance us from and make us skeptical about beliefs concerning truth, knowledge, power, the self, and language that are often taken for granted within and serve as legitimation for contemporary Western culture" (p. 1).

Writing to transcend the concept of self in order to have empathy for the other is a core postmodern value. By writing in a manner that gives preference to "disjunction, difference, deindividualization, multiplication, displacement, disunity, mobile arrangements" (p. 3) in thought over unitary, totalizing, sedentary, and systematic thought, people can experience disequilibrium and begin to reconfigure thoughts about the other. In negotiated and multiply constructed hypertexts, such a potential for nomadic thinking exists. Deleuze and Guattari's (1987) ideas about rhizomatic, or nomadic, thought can be viewed metaphorically as seeing student-users as travelers in hyperpedagogical space who can opt to walk down whatever paths suit their needs or interests, spurring on democratic participation within a learning process; the trans-actions they undergo define their temporality, not that of some far removed creator who remains eternally, omnisciently, and omnipotently above the fray. The realization that the mind participates within fluid events readily yields the ideal of democratic participation. This does not mean that by immersion into a hypertext medium, participants will automatically be able to

experience disequilibrium and empathy, but that a distinct possibility for such exists in hypertexts established to invoke curious transitions and cooperative exchanges. By disrupting normal modes of categorization in communication, educators may instill a respect for marginalized voices that has traditionally been found wanting in dominant western discourses. The challenge is to determine practices that are likely to provoke disturbance and not merely reinforce dominant tropes. In order to do this, one needs to judge ideologies imbricating cyberculture, information technology, and digital technology.

Hypertechne

In order for hypertexts to evolve into postmodern, rhizomatic textual practices, cyberculture researchers need to critically examine the privileged status of digital technology in education and its effects on social justice pedagogies. The largely uncritical promotion and acceptance of digital technology calls for further reflection, so I start with the underlying premises informing technology, rationality, and science – all intricately tied together in modernist dominant discourses. In a rational world, scientists (social and physical) discover the essential meaning of things, the monad. Latour (1987) remarks how in typical scientific processes, real things are abstracted into laboratory symbols cleansed of interference from the outside world; such abstractions have little to do, however, with the initial thing that actually exists in its environment. In a less rational world, one that is not reduced to the world as a controlled laboratory, essential meaning is a chimera, so why should we base our pedagogies on a worldview that purposefully ignores the richness, diversity, and complexities of what it is to be human caught up in the nebulous sweep of existence? Foucault in The order of things: An archeology of the human sciences (1971) provides an answer: because people in power, who claim to discover truth, actually construct it. Foucault writes, “the problem is not changing

people's consciousness – or what's in their heads – but the political, economic, institutional regime of production of truth” (p. 133). When we acknowledge that truth is not fixed in an ultimate origin (arche), is not predestined to a specific end (telos), nor has an essential value (monad), we can see that reality (ousia) is contingent on context and one's perspective within a given locus. When this emancipatory vision occurs, we can pull down the edifices that sustain hierarchies, rules, and categories as givens and rebuild pedagogy around concepts of relevance.

One way to deconstruct digital technology's preeminent position is structuralist ideologies is to examine the concept of technology from a poststructuralist perspective. According to Wolfgang Schädewaldt (1979), the Greek term techne refers to a master craftsman manipulation of a natural thing into a manufactured artifact (p. 165). Certainly the manipulation of sound into language and the evolution of pictographs to phonetic symbols constitute uniquely human technologies. Moreover, techne emphasizes the mutability of invented things (p. 166), and language – both verbal and written – are undeniably liquid forms constantly undergoing change. Larry Hickman (1992) writes that techne was a productive skill that implied a learned ability not mere natural ability or chance (p. 17). While technology was more certain for the Greeks, Dewey perceives it as the resting point between ambiguity and resolution in which people test new skills while reconstructing old ones (p. 19). Dewey's conception of technology and culture is instrumentalist: “whatever is real on Dewey's account is whatever has effects; that is, whatever points beyond itself because it is meaningful or significant” (p. 23). From a pragmatist and poststructuralist perspective,⁷ his technology is not an achieved state but a constant non-teleological progression towards reconstruction and new learning.

The next structuralist concept that I intend to deconstruct is scientism. Scientism, a belief in discovered, essential, fixed quantities and values, gives a great deal of credence to

structuralist belief systems. Bruno Latour (1987) writes that scientists, to ensure the validity of experiments, “. . . change the world until it is just like the setting in which they made their discoveries” (p. 249-50). When we attempt to make context conform to our limited, discovered truths, we should not be surprised when the inevitable failures due to a lack of rigorous methods crop up. Latour (1994) offers another perspective on human / non-human transaction in “On Technical Mediation – Philosophy, Sociology, Genealogy.” He claims that humans and non-humans transact with one another, that we both affect one another in a complex matrix he calls symmetry or a “swapping of properties” (p. 43). More often than not, we “blackbox” these processes because we take them for granted—that is until our normally opaque technologies manifest themselves by breaking down. We typically have a metis or strategy for a tool that through existing in a complex collective (his reconsideration of the abused term society) changes as needs and contingencies change. In other words, we mediate our actions according to our tool usage, a form of “congealed labor” (p. 40). He dispels the dualistic myth of humans as subjects and technologies as objects. Instead, we exist as institutions—humans do not fly, nor do planes, but airlines, corporate bodies that have the resources and collective skills to keep jumbo-jets in the air. I incorporate his insights to look into the blackboxes of schools as loci of institutionalized learning, of computers as tools transacting with human actants (hybrid social actors with shared, contingent properties), and of hypertext as a locus where humans and computers transact in a collaborative social enterprise.

Hypertext and cultural institutions

From the proceeding sections, we have some idea of how multifaceted digital text differs from authorial print works; how will this alter the pedagogical environment requires some inspection. We can also discern that hypertext is rooted in cultural practices and so will have

reciprocal effects on culture. In this section, I discuss how hypertexts may affect how we teach, how we learn, how we design curriculum, and how we negotiate networks of power. As teachers, we know that developing course materials is an emerging endeavor from year to year or even from one assignment to the next. It is also a laborious process, especially if one designs an adaptive curriculum that allows for student input and manipulation. Hypertext allows us to save materials for later and various adaptations, so we can continue to offer texts that go out of print, parts from larger texts whose entirety are not practical in the limited duration of a class, and let students choose from a pool of texts giving them the freedom and responsibility of choice. Additionally, if we want to teach an interdisciplinary course, hypertext facilitates collaboration where a group of teachers can post materials or interact simultaneously with a class on-line. The variety of teaching tools and materials are exponentially increased with interactive programs such as Macromedia's Director and links to such sites as the [English Oxford Dictionary \(OED\)](#). Adding contextual materials from various disciplines becomes a relatively simple task. We can also expose students to current research through on-line journals and our own research to exhibit how materials are in praxis not static bodies of fixed knowledge.

Students are encouraged to become more active readers in a hypertext environment by choosing their paths and adding to the network. This is a cause for celebration itself. All too often today we hear the claxon call for standardization in education that assumes knowledge as a fixed commodity students need simply regurgitate on the appropriate test; knowledge is dynamic and the sooner students experience knowledge in context and in action – using critical inquiry skills – the better for a democratic society. Students need to be critical thinkers before all else if they are to be active participants in a democratic process.

Hypertext learning environments encourage the participation of students' voices needs. This quality of hypertext needs to be actively pursued. Students, noticeably lower in the academic food chain than their teachers, become more than active readers; they become co-authors, responsible for adding content to a dynamic, living organism. For example, students do research and present it to class, which can be easily archived for later classes as annotations. Students following a path need to make connections and defend their choices as to how their choices are important and appropriate. In short, students begin to act more like their teachers thereby diminishing the sense of otherness that often discourages our best efforts. Linking education more intimately to students' varied intrinsic motivations is an aspect of hyperpedagogy that hypertext technology coupled with poststructuralist textual practices provides for. Students can tailor materials for their purposes where they do not have to feel that some content is beyond them or beneath them. They can also drill with programs reacting to their needs much better than a one-size-fits-all drill book or asking how to do something in class, which can cause embarrassment or there may not be time to address differing learners' special needs.

It may seem that hypertext is the manifest educational panacea that educators and curriculum specialists have been seeking for time immemorial. In American culture, we often hear that students need to be computer literate to compete in the global marketplace to make America economically competitive. James Marshall (1996) warns against believing in such hyperbolic rhetoric, that hypertext can be used as much a tool for marketplace ideologies of human capital investment as for more emancipatory means as espoused by Paulo Freire (1970/2000). For example when Lemke (1993) writes that students need to be computer literate, including being able to surf the web for information, I would be quick to add that good surfing skills should be critical ones. Internet searches should not be mechanical searches for

information but an opportunity to critically read other people's opinions. To this end, I suggest that students become familiar with Toulmin's method (Corbett & Eberly, 2000) for logical analysis in which readers need to be able to distinguish a writer's claim, the data that underpin the claim, if the data is reliable and applicable to the argument, and how to offer counter arguments to the writer's. To illustrate how digital technology may serve more emancipatory goals than is the norm, such as Integrated Learning Systems (Mazyck, 2002), I showcase Florida's CROP program.

An alternative use for computers in the classroom can be gleaned from Florida's innovative College Reach-Out Program (CROP). The purpose of CROP is to identify and recruit economically and disadvantaged students to help them see college as a realistic option in their educational vistas. Pearson (2002) has found out that most of the participants have used computers as preparation for standardized tests using low-order cognition drill and practice applications. Pearson observes that the students in the program, contrary to preconceived expectation, delighted using computers for high-order cognitive purposes. In this case, they created movies using Apple's iMovie software to great success and consequently felt a sense of empowerment. Instead of seeing computers as an aspect of dreaded drudgery, they became a tool to explore, to help one another, and to excel. Conventional thinking would have at-risk students prove themselves in standardized, highly disciplinary educational activities before being allowed to use the computers for active creation. Pearson's findings turn such conventional thinking about computer use on its head. Instead of relying on computers to discipline marginalized students, agency offers these learners a sense of active participation that underscores the lofty goals of social justice pedagogy.

What are we to do?

Due to a loss of control and the variety of options hypertext holds forth, many teachers may become wary of such a dynamic method for teaching. Given the multitude of differences that hypertext can instigate, I turn to Landow and Delaney (1993), who foresee three challenges that hypertext confronts us with. The first is the assumption that a change in media does not warrant a change in epistemology and ontology; the second is that no one can claim mastery over a singular and unified text; and the third is that we cannot assume that readers have read the same text. This collage of texts offers dynamic and dialectical progress within educational frameworks, but it also requires teachers to remove the mantle of mastery. Epistemological and ontological concepts of literature, theory, self, power, property, and pedagogy have all to be addressed. Structuralist paradigms will seem oddly out of place in hypercontext, but what is to follow remains largely a mystery because hypertext calls for an emergent and co-constructed reality. I do not view this nebulous future so much as a dilemma rather as an opportunity to see reality as a process of ebbs and flows. Concepts such as distribution of labor and hermeneutics become prominent issues in this medium; subsequently, students should take part in formulating educational hypertext usage and goals.

The second challenge, that students will create texts dependent on their needs by choosing their own individual paths within the network, poses a problem to the image of the teacher as both content and discipline master. If we truly desire independent, active, and responsible readers and students, we have to deny desires to control the learning environment. Given how we typically learned and what our students are typically acclimated to, this is a difficult proposition that can frankly invite abuse. Students unwilling to share responsibility or intimidated by this prospect, can undermine our best efforts. Additionally, teachers reallocating

authority to a broader context can experience anxiety. I never proposed this would be an easy transition without adverse side-effects, but I still believe that the benefits are worth the risks.

What are teachers to do when no one has read the identical text? Many participants may have read similar elements, but no one, including the teacher, will be responsible for the entire, self-enclosed text because it will not exist, per se. Does this open the door to being hoodwinked by someone who hasn't read at all? Not necessarily if all navigators agree to start from a common place and remain in contact throughout the experience, say by adding annotations of what we have read. These annotations can serve multiple purposes. For example, other students can see pathways that others have blazed; students in making their annotations actively conduct research and work on their writing process so the likelihood for plagiarism is reduced and practicing the process of writing is encouraged; students do what academics do thereby immersing themselves in a field's culture, be it literature, math, or politics, lessening the sense of cultural alienation that Said (2002) warns us of; students practice critical inquiry skills by making strategic choices and practicing their hypotheses; students hone their dialectical skills by practicing them in co-constructing the text; and they also practice their democratic skills by participating in their own education as electors—by making participatory decisions about their lives, they make such decision making skills part of what Bordieu (1996) calls their habitus or embodied habits practiced and learned through recursive social interaction.

An example of hypertext in practice

In this section I will display screen captures of online, asynchronous discussions using CMC and the Internet through Blackboard/Courseinfo applications in order to exhibit how one hypertext evolved in context. I will also include responses from students involved in the class. The subject class took place in the Spring semester of 2002 at Virginia Tech, located in

Blacksburg, Virginia.⁸ The class was a graduate level Social Foundations course instructed by a fully tenured, experienced faculty member who graciously allowed me to add this online discussion component to the class. In order to lessen the burden of simply adding another task, the professor allowed the class members to either engage in the online discussion in lieu of an eight page final reflection paper. The issue of choice is a guiding principle in hypertext theory, and so I appreciate the how this study was implemented. In fact, I would argue that the inclusion of choice made the option to engage in the dialogue a primary factor for its success. In response to a final survey on the inclusion of the online dialogue, many students found it highly favorable to have choice and this one in particular. The question I posted, “Do you think that an ongoing, online discussion is less rigorous than a final reflection paper?,” a participant responded as follows:

I think the time flexibility was most helpful and certainly, why I found this a favorable assignment. As many of my classmates alluded to in their posting, the final weeks of the semester are busy. It is a plus that I was able to work on this assignment throughout the semester. Thanks for giving us this option!

While many traditional (social efficiency) curricular advocates⁹ tend to disregard emotional appeal and flexibility in educational models, participants in this class clearly favored such properties.

Moreover, most participants gauged the quality of their work as being qualitatively superior to a final paper, more involved, and more applicable to their intended or current classroom practices:

This has definitely been less of a strain than a final reflection paper. I, and probably many others in this class, already have a number of other reflection papers to complete shortly.

Having the opportunity to take a few weeks to read over what everyone has to say on the discussion board and add some personal comments has been beneficial in my opinion because with the number of other high stakes projects and papers due at this time it's almost too much and the quality of work goes down. The board has been a good way to still think about the same types of things that would be included in a reflection piece with none of the stress.

Many students noted that the extra time to reflect on issues outside of class and over an extended period of time made the hypertext interface (i.e. the discussion board) a more meaningful learning experience for them. Instead of feeling rushed, learners cited that they felt the lack of pressure actually improved the quality and scope of their learning. Learners often commented that intermittently corresponding about issues instead of writing a final reflection paper made their reflections:

I found doing the on-going online discussion much easier as it required only a little bit of time each week instead of one large sum of time concentrated at the end of the semester.

A peer responded to this previous topic as follows: "I also think it was very useful as we could address issues that came up in class in more depth as well as deal with topics not discussed in class." What this correspondence highlights is how comfortable learners found it to communicate with one another thereby sharing ideas and acting as practitioners / teachers themselves.

The students also noted that while the discussion board was easier to add ideas, comments, and research to intermittently, they did not consider this work less rigorous:

I think that the online discussion has the appearance of being less rigorous. However, if I consider how much time I put into it, perhaps they are about equal. Certainly, I think it was less stressful being free to pick and choose topics to participate in. Overall, if time

commitment is the criterion for comparing rigor, I would guess they are about equal for me. Someone said that it took about 10 minutes to add to the discussion. It took me much longer because I felt some apprehension about putting opinions in writing for the entire class, or I put time into some research behind adding a thread.

It is interesting to note that students distinguished rigor as time spent on task, the amount of work the interchanges required, and not as an onus of completing a final project with limited time constraints.

Not only did the users feel that the interchanges proved as rigorous as a final reflection paper, they often noted that the overall quality of dialogue was higher than they had expected from prior experiences:

I found the quality of discussion to be much higher than I expected. My past, limited experiences with discussion boards made me dubious but I think that this group utilized this format quite well.

As was typical of this particular hypertext, a peer responded as follows,

I agree that the quality of participation was high. Compared with class, I think sometimes it gave people more time to prepare comments and perhaps it promoted better participation in that way. I think overall, it was beneficial to have both scenarios. I wouldn't want them to be the same in nature because the benefits from each seemed to compliment each other.

I agree with this assessment that participation was more fluid and that some normally marginal voices found an outlet for meaningful exchange. The idea that online discussion should embellish face-to-face discussion while serving different, yet complimentary, roles is vitally important for successful implementation.

Moreover, the students noted that the class' open, inviting atmosphere made the success of the online aspect more likely:

I think that Dr. Gerry provided that philosophy of teaching to us from day one, therefore I feel that the "peer practitioner" experience permeated the entire classroom experience, as we all had an autonomy to express our thoughts during each class period as well as having a sole influence over teaching 4 hours of class throughout the semester per cohort group.

As the respondent alludes to, the pluralistic practices of class went well beyond the online hypertext to the face-to-face practices. In the case of this class, cohort groups were responsible for leading two classes apiece on required readings and their group's research topic. As such, the class functioned to prepare teachers as apprentice practitioners and in a pluralistic manner as different groups, including the professor, led discussion and engaged in dialogue, rarely lecture. Lecture served to enhance the dialogue, not squelch it.

Finally, a respondent noted that the use of this particular hypertext was environmentally contextual:

I think this webspace did accomplish this [allow for pluralistic interchanges] for our class. For a high school age class, my guess is that some students would be uncomfortable with the level of freedom that we had. At least for my students, a balance would have to be struck. They would have to be eased into the process of bring up topics themselves. I think the response to stuff already posted wouldn't be as hard. I think this is due to several reasons, some being concerns over what peers might think, lack of motivation to initiate things, and not being used to being the practitioner in past school experiences.

Before someone rushes off to see if this practice will work in any situation irrespective of audience expectations, goals, and norms, I would urge educators to discover what technologies are available, what students attitudes to interactive learning are, and tailor a hypertext to fit the needs and abilities of the environment and the actors within the environment. Moreover, I believe that scaffolding would help aid a transition from one-one communication pedagogical models to more interactive ones, such as enacted in this class.

Certainly, worries of students getting lost in an unbounded hypertext cosmos bear credence due to students being so acclimated to hierarchical, structuralist pedagogies. Therefore, I believe that hypertexts need to be scaffolded for learners—to what degree depends on the learning environment, including the learners' dispositions, the teachers' dispositions, the ability of both, and the type and level of technology available. By scaffolding, I refer to Rosenshine's (1991) method for preparing learners for higher-level cognitive strategies in loosely structured learning environments. Rosenshine stipulates that learners' individual readiness levels for the intended learning needs to be assessed, that the instruction needs to be modeled, that students' agency needs to be promoted by removing well defined structures, and that "just-in-time" interventions should occur when learners become stuck or frustrated. Rosenshine also promotes collaborative work in which students aid one another and presentations in which accomplished students' exhibit what they have done to overcome difficulties. I need to further clarify that by scaffolding I do not wish to impose an adult's telos on a child's development. Wary that the scaffolding metaphor may restrict learners' to achieving a predetermined goal, Griffin and Cole (1984) warn,

The scaffold metaphor leaves open the questions of the child's creativity. If the adult support bears an inverse relationship to the child's competence, then there is a strong

sense of teleology—children’s development is circumscribed by the adult’s achieved wisdom (p. 47).

The scaffolding I envision for hypertext is not a lock-step, externally imposed linear order to learning. Nor is it my purpose to support learning through unidirectional, information transfers. I see scaffolding as a means to acclimating students’ to a hypertext learning environment, and as a means for support so that students’ do not feel abandoned. As students become more active and self-assured in a hypertext environment, the more structure is removed to allow for more creativity and commiserate responsibility. This particular discussion list was conducted as an asynchronous list of postings left on a server, as opposed to an email list. Having postings residing on a server has the advantage of remaining more easily accessible and more readily categorized by topic as the following illustration exhibits:

Figure 1-1: Forum Overview

Discussion Board	
Add Forum	
1	Reflection on WebSite [Modify] [Remove] This folder has various questions about the inclusion of the discussion board and other available parts, such as the syllabus being online - [34 Messages] - Jim [All read]
2	Forum 1 -- Standards [Modify] [Remove] This forum will be dedicated to issues surrounding standards in education [36 Messages] Please feel free to post messages, attachments, documents, opinions, images, articles, essays [All read] Jim
3	Forum 2 -- Teacher Certification [Modify] [Remove] Why don't we have a forum on teacher certification about professionalism and standards ... [32 Messages] [All read]
4	Forum 3 -- You choose [Modify] [Remove] This one is wide open to discussion [61 Messages] [All read]
5	Forum 4 -- This webspace [Modify] [Remove] What do you like/dislike about this webspace? What would you add/substruct/modify? [16 Messages] How can we make this a more effective and inviting learning tool? [All read]

Source: www.learn.vt.edu

One can observe (Figure 1-1) that the discussion list was divided into five forums to which students could add other forums as they saw fit. The categories included “Forum 4 – This webspace” that allowed for on-going student evaluation and “Reflection on Website” that allowed for a summative student evaluation of the discussion list. The other categories were “Forum 1 – Standards,” “Forum 2 – Teacher Certification,”

and “Forum 3 – You choose.” The students initiated the forum on teacher certification as this topic emerged from a conversation continued throughout the semester. The fact that students initiated not just postings but an entire dialogue topic themselves has proven very encouraging by underscoring how hypertext can encourage active and emergent engagement in a learning environment. Because certification issues manifest themselves as critically important in preservice teacher education and because many often contradictory perceptions of what certification entails, the students began to post their questions and concerns with certification. This forum emerged as a means to a contextual ends. This forum not only dealt with how one gets certified and how to prepare for the praxis exam, it branched into home schooling. As some preservice educators began to question the constraints of institutionalized education, including

certification, they explored alternative means for educating youth. By nearly a 2:1 ratio to any

Figure 1-2: Forum You Choose

- ▣ [Information about DOE & ABTEL](#)
 - ▣ [How strict are the certification...](#)
 - ▣ [Re: How strict are the certif...](#)
 - ▣ [Re: How strict are the cer...](#)
 - ▣ [Re: How strict are the ...](#)
 - [Re: How strict are t...](#)
 - ▣ [Re: How strict are the cer...](#)
 - ▣ [Re: How strict are the ...](#)
 - [Re: How strict are t...](#)
- ▣ [Praxis](#)
 - [Re: Praxis](#)
 - [Re: Praxis](#)
 - ▣ [Re: Praxis](#)
 - ▣ [Re: Praxis](#)
 - [Re: Praxis](#)
- ▣ [Teacher Training/Competency](#)
 - ▣ [Re: Teacher Training/Competency](#)
 - ▣ [Re: Teacher Training/Competency](#)
 - [Re: Teacher Training/Compe...](#)
 - ▣ [Re: Teacher Training/Compe...](#)
 - ▣ [Re: Teacher Training/Co...](#)
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 - [Re: Home schooling \(away from...](#)

Source: www.learn.vt.edu

affect how teachers can do their jobs to how Bob Dylan's reflections on education give students good reason to ponder about what they intend to do as educators. The inclusion of issues before the general assembly highlights how hypertexts can allow students to connect what they are learning in the classroom to current practices and raise thoughtful and critical insights on a larger cultural perspective. A continuation of this theme of connecting class readings, research, and discussion to topical events can be seen by the references to Bush's educational initiative in the postings. Postings on Bush's initiative led to discussions concerning the broader social goals of education, so it is clear that these students could query about informing metanarratives on education. Finally, Figure 1-3 illustrates that the participants felt comfortable enough with one

Figure 1-3: Controversial Forum

I

- General Assembly
 - Re: General Assembly
 - Re: General Assembly
- Re: General Assembly
 - Re: General Assembly
- Re: General Assembly
 - Re: General Assembly
 - Re: General Assembly
- Bob Dylan on Education
 - Re: Bob Dylan on Education
 - Re: Bob Dylan on Education
- Article on Bush's Initiative - "ju...
 - Re: Article on Bush's Initiativ...
 - Re: Article on Bush's Initia...
- what is the goal of education?
 - Re: what is the goal of education?
 - Re: what is the goal of education?
 - Re: what is the goal of educa...
- "Nigger: The Strange Career of a Tr...
 - Re: the word "nigger"
 - Re: the word "nigger"
 - Re: the word "nigger"
 - Re: "Nigger: The Strange Career ...
 - Re: "Nigger: The Strange Career ...
 - Re: "Nigger: The Strange Care...
- Inclusion Article 
- teacher responsibilities

Source: www.learn.vt.edu

The second half of this extensive list not only illustrates how often learners voluntarily contributed, but also how important these preservice teachers feel their obligations are.

One of the longest and most intriguing discussions centered on the topic of teacher responsibility (Figure 1-4), particularly respecting the Pledge of Allegiance now required post 9/11 in Virginian schools. As was often the case, a student raised an issue he/she had with a controversial topic in an open-ended manner:

This is a problem I've come across quite often. I've discussed this with some of you already; I apologize for repeating myself. The classes that I substitute for say the Pledge of Allegiance every morning. I have a problem with this practice, and I also have a problem with reciting it myself.

But [if] I don't say it, it's very obvious to the class. Do I refrain from reciting the Pledge and set an example of breaking the rules? Or is it my responsibility to recite it to set an example of a rule follower? Just wondering what your thoughts were.

Figure 1-4: Teacher Responsibility Forum

- ☐ [teacher responsibilities](#)
- ☐ [Re: teacher responsibilities](#)
- [Re: teacher responsibilities](#)
- ☐ [Re: teacher responsibilities](#)
- ☐ [Re: teacher responsibilities](#)
- ☐ [Re: teacher responsibilities](#)
- I ☐ [Re: teacher responsibil...](#)
- ☐ [Re: teacher responsi...](#)
- ☐ [Re: teacher respo...](#)
- ☐ [Re: teacher re...](#)
- [Re: teacher...](#)
- ☐ [Wonder why there is a teacher short...](#)
- ☐ [Re: Wonder why there is a teache...](#)
- ☐ [Re: Wonder why there is a tea...](#)
- [Re: Wonder why there is a ...](#)
- [Re: Wonder why there is a ...](#)
- [Re: Wonder why there is a tea...](#)
- ☐ [Technology](#)
- [Re: Technology](#)
- ☐ [Re: Technology](#)
- [Re: Technology](#)
- ☐ [religious music in schools](#)
- ☐ [Re: religious music in schools](#)
- ☐ [Re: religious music in schools](#)
- [Re: religious music in sch...](#)
- [Re: religious music in schools](#)
- ☐ [Re: religious music in schools](#)
- ☐ [Re: religious music in schools](#)
- ☐ [Re: religious music in sch...](#)
- ☐ [Re: religious music in ...](#)
- [Re: religious music ...](#)

Source: www.learn.vt.edu

The use of heuristic questioning led many students to respond in thoughtful ways to what is surely a divisive issue. The flexibility and open pedagogical method used for this hypertext encourages the intersection of the theoretical and the practical, the curriculum with students' prior experiences and issues that are intrinsically interesting to them. For example, one student responded from her experiences as a substitute teacher to acknowledge that no easy solution to this issue seems close at hand:

That's a tough one to decide. I have no desire to say the Pledge either but at the schools in which I have substituted it is easy enough to not say it. Someone comes on over the TV for the morning announcements and leads the students in saying the Pledge aloud. I was able to stand to the side and not participate in a not too conspicuous way and I watched many of the students not participate too. Everyone seemed fine with it like that.

Personally, I just don't like being told that I have to say something that I may or may not completely agree with. It's the principle of the thing. But how do you deal with this in a school where you are required to do this? Is there actually a rule that says you have to recite the Pledge? And how old are the students you are teaching? My philosophy in general is to do what you believe is right but it may well set a bad example for the kids. And how do you answer the students' questions which will inevitably come up? Perhaps the school should rethink this practice and not put its teachers in such an awkward situation. Good luck deciding.

One of the aspects that this response illustrates well is that the participants were often quite capable of relating global issues to their specific experiences in the classroom, bringing the theoretical to the practical. One of the most poignant cases of this occurred when a student

related how she had to cope with taunting regarding the Pledge of Allegiance as a child and now has to determine how the Pledge will affect her ability to teach as an adult:

When I was in middle school, I realized that the pledge did not really pertain to me. Yes, I am a part of America, but I am not always included. Hence, I do not agree with the US being indivisible, because we are divided in many ways. Actually, my epiphany was in elementary school, when I would put my hand on the wrong side of my chest. People made fun of me, and I wondered what country is this that does not practice compassion. My peers' behavior really affected me. I continued reciting, but I would not put my hand on my heart. Then, in middle school (as mentioned before) I straight out stopped. This does not mean that I did not respect the moment of recital. I would still stand up and keep quiet, which is more than others did. However, I felt like I was being more truthful by not saying anything. People would ask, and I would explain my reason, and it was accepted. When I teach, I don't think I will compromise my idea. I think [S's] idea of having a volunteer is good. Or, I just might not recite. I will stand in respectful silence. And if someone asks why I do not recite the pledge, then I will explain my opinion and emphasize that this is only my view. I don't look down upon people who do recite, and I don't want to change their ways. My vow of silence during the pledge is for me. Right, there is no way to avoid the controversial factor of this issue, but I do think it can be discussed if the conversation is prompted. You just have to be well-defined and professional.

This dialogue evinces not only how insightful the participant proved but also that the participants felt comfortable enough to discuss very personal and emotional issues without fear of being rebuked or ridiculed out of hand.

This example of hypertext worked well in this context, I contend, due not so much to the technology's inherent qualities or the ideals of hypertext, per se, but due to a conjunction of the proceeding with the context of this particular class. Before one attempts to embellish a learning environment with the inclusion of hypertext, one should determine if students will be receptive to such inclusions and that the hypertext inclusion fits the audience. Moreover, the hypertext, as was the case here, should emerge with changing goals and experiences. Don't expect that if you build it they will come as was the case in Fields of Dreams. If you do, you may well lose the farm. I urge that people interested in including hypertext do so in accordance with the participants' learning styles, their expectations for learning, their perceived relevance of the instruction, their prior experiences and attitudes, and finally, give the hypertext the freedom to grow into what the users make of it.

Chapter summary

In this chapter, I have defined hypertext as a digital technology and as an emancipatory pedagogical method. Schools have primarily used computers to adhere to positivist curricular ideals (I will elaborate on this topic in the following section on hypertext theory). What is even more disheartening in the educational practices of an increasingly culturally diverse democracy is that computer usage particularly fails historically marginalized learners. With this dilemma in mind, I have begun to outline an alternative pedagogy to inform educational computer usage, hypertext. The case-study offered here details how hypertexts can achieve the goals set out in Stanton & Stammers' (1990) study, (1) that hypertexts should allow for differing experiences, (2) that encourage exploration in academic topics, (3) that allows for manipulation of materials to fit differing learning styles. I added to this list that hypertexts (4) need to allow for learners to negotiate their goals and methods for achieving those, and (5) students given the freedom to

choose need to exercise responsibility. I hold that this iteration of hypertext is in keeping with the spirit and methods of Doll's pedagogical creed. Hypertext is built upon poststructuralist narratives at odds with modernist assumptions for education. Of particular note is Derrida's theory for a decentered dialectic in education, in which modernist teleology holds no purchase. For the practice of hypertext, this means that learning is contextualized and emergent. Barthes carries Derrida's theories further noting that deconstructing cultural myths is not enough, but that poststructuralists need to construct their own myths, yet not shroud such myths in dogmatic ideologies. In later chapters, I will detail how hypertext can be connected to radical pedagogies, cultural studies issues (e.g. homophobia, gender discrimination, racial marginalizing, and class privileging), and reconceptualist curricular ideals to create hyperpedagogy.

Chapter 2: Towards a poststructuralist theory for e-learning

In the first chapter, I investigated the differences between traditionally informed hypertext and poststructuralist conceptions of hypertext. By looking to a poststructuralist narrative form to ground hypertext, as espoused by Lemke and Landow, the way is open to discuss how hypertext relates to poststructuralist pedagogies. In this chapter, I intend to examine how debates over epistemology between traditionalist and poststructuralists juxtapose similar debates over hypertext. An investigation of epistemology and pedagogy, moreover, should include a debate over semiotics; consequently, I will delve into the topic of information transmission and meaning-making throughout this chapter.

A history of the debate over essentialist and contingent episteme has roots in classical Greece between presocratics, most notably Gorgias and Protagoras, and those philosophers traditionally labeled as Socrates intellectual heirs, Plato and Aristotle, and continues to this day. The primary point of departure is whether or not meaning transcends context or is made through contingent transactions with a social, psychological,¹⁰ and physical environment. In the Renaissance, various intellectuals began to question medieval scholasticism's reliance on Platonic (Augustine, 1995, 2000, 2002) and Aristotelian (Aquinas, 1988) metaphysics. Francis Bacon (1620/1992) claimed that many supposed facts in natural philosophy, such as inertia, did not hold true under observation and testing. Hence, he helped to create space for observational scrutiny and rigorous testing of hypotheses. The tradition of critical inquiry owes much to Michel de Montaigne (1603/1959) and his general skepticism towards ingrained dogma. John Locke (1690/1998) proposed that ideas are formulated in social interactions, not an a priori essence to be discovered as Plato's "parable of the cave" purports. However, others held that intellect and knowledge was bequeathed by God. Rene Descartes (1637/1998) championed this

essentialist position. During the Enlightenment, Denis Diderot's (1751/1998) Encyclopédie embodied a grand attempt to collect all knowledge within an incontrovertible canon. In the modern, industrialized era, intellectual faculties were to be formed like so much raw pig iron as best benefited the bureaucratic state and the captains of industry. Jeremy Bentham (1791/1995), G. D. Strayer & E. L. Thorndike (1917), and Franklin Bobbitt (1918; 1924) all championed this social efficiency position. Social justice progressives, such as John Dewey (1902/1998, 1916/1944, 1938), alarmed at child-as-cog pedagogies sought to make meaning with learners, relying on learners' experiences and goals to engage them.

In the succeeding section, I illustrate how Bush and Paige's educational agenda, No child left behind, evinces a modernist educational agenda. I then compare modernist and postmodernist concepts regarding media and meaning-making, emphasizing how traditional Instructional Systems Design relies on modernist assumptions.

After having proposed how poststructuralist epistemologies and educational means serve a fluid, co-constructed, and emergent hypertext better than traditional, hierarchical information transmission models for learning, I focus on power relationships inculcated in epistemology, semiotics, and pedagogy by paying particular attention to Foucault's critique of the training of docile bodies and regimes of truth. Michel Foucault (1977) critiques social efficiency pedagogies as props to blind subservience of oppressed learners. Hyperpedagogy denies the validity of essentialist epistemologies and subsequent pedagogies, harking instead to the fluidity and contingency espoused by poststructuralist learning theories.

Finally, I conclude this chapter looking at how digital technology / human interfaces act as a form of congealed labor. Bruno Latour claims that computer / human interaction should not be viewed as two separate entities, but as a collective, functional whole. From Latour, I segue to

Donna Haraway's disruptive cyborg narrative that critiques more than human / computer dualities, but also those of race and gender. I finish this chapter with Katherine Hayles critique of information dualities, the flickering signifier.

Philosophical controversies concerning epistemology and pedagogy

A long-standing controversy as to what is knowledge (epistemology) and how learning takes place (pedagogy) continues to this day. The ancient Greeks debated the nature of knowledge as either relational and particular to observers or absolute and discovered. The sophists argued for the relativist (Gorgias) and relational positions (Protagoras), while Plato and Aristotle championed the metaphysics of presence (Aristotle, ca.330bce/1998; De Romilly, 1992; Freeman, 1962; Walker Gibson, 1993; Katula & Murphy, 1994; Kerford, 1981; Nill, 1985; Plato, ca.380bce/1937, ca.380bce/1951, ca.380bce/1985; Schippa, 1991; Sprague, 1972). How one views the nature of knowledge has a great deal of influence on how one assumes learning takes place. If one considers knowledge relative, then demagogic rhetoric (the ability to promote one's position) will suffice as education. From the essentialist position, knowledge – comprised of discovered facts – needs to be transmitted as efficiently as possible from experts to novices. From a relational perspective, one must understand the guiding principles, often misconstrued as facts, and the specific circumstances in which to apply and adapt such principles. These controversies became magnified in the Renaissance, through the Scientific Revolution and Enlightenment, the Progressive Era, and continue to color educational policy to this day.

A bone of contention between structuralist and poststructuralist views on education centers on basic questions of epistemology. This debate can be dated back at least to the classic Greek period when the presocratic sophist Protagoras declared that man is the measure of all things, those things that exist for him are and those things that do not exist for him are not

(Schippa, 1991; Jarratt, 1991).¹¹ What this entails is that humans construct reality from interaction with their environment. Protagoras gives an example of two people who feel a breeze: to one it is cold and to the other it is hot (Schippa, 1991). Neither person is wrong; one may have just woken up in a cold, dark room and the other run about in the sun. Signification of natural and social phenomenon comes from interaction, not simple reception. At the other end of the spectrum lies Plato's "myth of the cave," in which he details that there is only one, absolute Truth. In The Republic, Plato (ca.380/1985) sets out to scourge philosophy of Protagorean, and other sophists', relativism. His cosmos is one of concrete, eternal substances in pure form of which people can only perceive dim reflections. The crucial difference lies in the ideal of meaning made from relationships of things or the absolute properties of unchanging substances, the metaphysics of presence.

The controversy over knowledge as either dynamic or static led to a debate over learning as to whether youth should choose the course of their growth or that their growth is dictated by an external authority. Typically, the cited external is a vague concept, such as God, civilization, the polity, or a culture (e.g. what is best for America). In the Protagorean tradition, knowledge acquisition and growth are energeia, or guided choice among variables that takes into account learners' abilities and desires, and in the Platonic tradition they are entelechia, or that a youth has a predefined potential to live up to. The difference is that energeia is how an organism reacts to an environment and subsequently develops through interactions with that environment. Change can take many different forms, but can be guided and purposeful with wise tutelage. Often, essentialist philosophers denigrate such pedagogies as relativism and even blasphemy of the Truth. Entelechia, on the other hand, is unfoldment along a straight path to a prespecified goal – fulfilling one's destiny. Education from this perspective is not an interaction with a changing

environment but rather change is progress towards one's prespecified destiny, or achieving one's latent potential. The latter premise assumes a passive recipient who must obey the will of the pedagogue who knows the Truth. Learning is a discovery, or revealing of the divine light seen prior to birth. The tutor in this case pulls back the dissembling veil of the world to reveal Truth in its purest form. The difference centers on regarding a thing's potential as a thing that can come to pass or as a thing that will come to pass. In terms of learning, therefore, when someone speaks of making youth live up to their potentials we have to question, "What do they mean by potential?" Do they mean they desire, on the one hand, to help students grow in ways they find valuable or, on the other, that society has needs and so certain youth need to be molded to fit societal ends? The latter exhibits Human Capital Theory (Spring, 2002) premising that humans are exploitable commodities in a transnational, global economic system. As I believe that universal human rights includes self-realization and the state's responsibility to heed multiple voices, I find Human Capital Theory a thoroughly irksome philosophical perspective that closets the rights of the many for the benefit of the plutocratic few. Assuming that some people are merely exploitable labor, a variable in computing Gross Domestic Product (GDP), closets empathy for the economic other, often also the cultural other.

An amplification: epistemology and pedagogy in the Renaissance and Enlightenment

In the Renaissance these controversies took on new life as Rene Descartes promoted an essential epistemology that has significant repercussions to this day. In his Discourse on the method of rightly conducting the reason and seeking for truth in the sciences, he premises his famous cogito ergo sum, "I think therefore I am." The significance of this philosophy is the belief in disembodied intellect and the ability to have ultimate, acontextual knowledge (1637/1998). Disembodiment looms as a significant problem in assumptions about digital

dialogue, in that we leave behind the corrupting corporeal existence for the pure intellect. In The Neuromancer (William Gibson, 1986), for example, the protagonist, Case, relates his experience of going online as leaving behind the meat:

For Case, who'd lived for the bodiless exultation of cyberspace, it was the Fall. In the bars he'd frequented as a cowboy hotshot, the elite stance involved a certain relaxed contempt for the flesh. The body was meat. Case fell into the prison of his own flesh (p. 6)

Significantly, Case becomes trapped in razorgirl Molly's body because he is trapped by his sexual desire for Molly, a killing-machine cyborg, ex-prostitute, with razor neuroimplants. Essentially, razorgirl serves as an ideological foil to Case's free, unbounded cyberintellect. She is the trap of the flesh, the body that seduces Case into the Fall, referring to Eve's temptation of Adam and the fall from Grace. She is a cybersuccubus—tempting and lethal. I will return to this theme more specifically in the fifth chapter, but wish to raise my concerns when discussing cyborgs.¹²

Another significant problem looms in the assumption that learning is an essential move of deductive reasoning to comprehend the unveiled Truth. Unlike Francis Bacon (1620/1998) and John Locke (1690/1998a, 1690/1998b) who believed that deduction should occur from empirical observation of natural phenomena, Descartes felt that only pure intellect could perceive Truth. He has invoked Plato's "myth of the cave." The issue of disembodied intellect has proven particularly irksome in Feminist discourse for good reasons. Most particularly is that the assumed unattached intellect, free from the corrupting body, has been endowed with traditionally masculine characteristics, while the body is imbrued with decidedly feminine characteristics.

Therefore, a freeing of the intellect from the body is a freeing of the superior masculine self from the corrupting and weak feminine self.

Bacon (1620/1998), on the contrary, stated in his Novum organum that empirical observation could lead to better scientific conclusions than a dogmatic faith in scripture and passed down knowledge: “One method of delivery alone remains to us; which is simply this: we must lead men to the particulars themselves, and their series and order; while men on their side must force themselves for a while to lay their notions by and begin to familiarize themselves with facts” (p. 44). Indeed, Bacon rebukes the “myth of the cave” as one of the dogmas besetting minds from the Truth of empirical observation: “The Idols of the Cave are the idols of the individual man. For every one (besides the errors common to human nature in general) has a cave or den of his own, which refracts and discolours the light of nature” (p. 45). Locke (1690/1998b) held in his Essay concerning human understanding that people are born without prior knowledge, such as the stain of the Fall or the light of God shown prior to birth. He stated that knowledge is come upon only through experience:

All ideas come from sensation or reflection.—Let us then suppose the mind to be, as we say, white paper, void of all characters, without any ideas; how comes it to be furnished? Whence it comes it by that vast store which the busy and boundless fancy of man has painted on it with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer in one word, from experience; in that all our knowledge is founded, and from that it ultimately derives itself. (p. 49)

Similar to Locke’s premise that values and knowledge are born from experience, Michel de Montaigne (1603/1959a, 1603/1959b) argued that cultures are not inherently good or evil, rather that cultures reflect circumstances and values. In such a complex matrix of values, knowledge is

different. In his Essay “de cannibal” (1603/1959a) he argues that the cannibals of the new world live in closer harmony with nature and from different ways of perceiving what is right and wrong. Cannibalism, while incredibly abhorrent in the Western tradition, was an accepted social norm of Caribe Indian culture. Therefore, knowledge of what is ultimately good and evil is a product of social institutions, not divine mandate. Social environment dictates right and wrong more so than the revelation of a divine plan. He held that contradiction is a normal and admirable human trait, that belief varies among cultures, that skepticism and open-mindedness are requisite qualities to oppose the small-mindedness of dogmatic opinion, that self-reflection is crucial in education, and that education should aid people to live harmoniously in attempting to understand the other. In his Essay “Of education of the children” (1603/1959b) he decries teachers who pour information into their charges’ ears “as though pouring water into a funnel” (p. 85) and demand that students recall the information verbatim. He encourages, instead, that students use their intellect to engage critically in their subjects to express original thought.

During the Renaissance, therefore, the dialogue over epistemology and pedagogy continued with Descartes championing the essentialist position, Bacon and Locke the empirical position, and de Montaigne the skeptical position. These positions still inform much of the debate over the nature of knowledge and should not be held as polemic and exclusive of one another as it may seem. These traditions have been mined to promote positions in current pedagogical debates, often bastardizing the ideas. Bacon’s empiricism and Locke’s experiential beliefs can be converted into positivist empiricism and naïve stimulus-response pedagogies that tend to ignore the social environment in which learners are imbrued.

In the Enlightenment, Denis Diderot (1751/1998) and other philosophes set out on the grand mission to gather all human knowledge, Encyclopédie. This project assumes that

knowledge is finite and essential and can therefore be collected in one incontrovertible book – the book of Truth. Such a project is an incredible display in the ideal of a finite and ultimately discoverable universe. Such a universe can be collected and downloaded as needed in cyberculture, such as Bush's (1945) Memex. Respecting "Natural Law" Diderot writes,

Since this natural law is based on such fundamental principles [i.e. to live honestly, not to give offense to anyone, and to render unto each whatever is his], it is perpetual and unchangeable: no agreement can debase it, no [human] law can alter it or exempt anyone from the obligation it imposes . . . (p. 107)

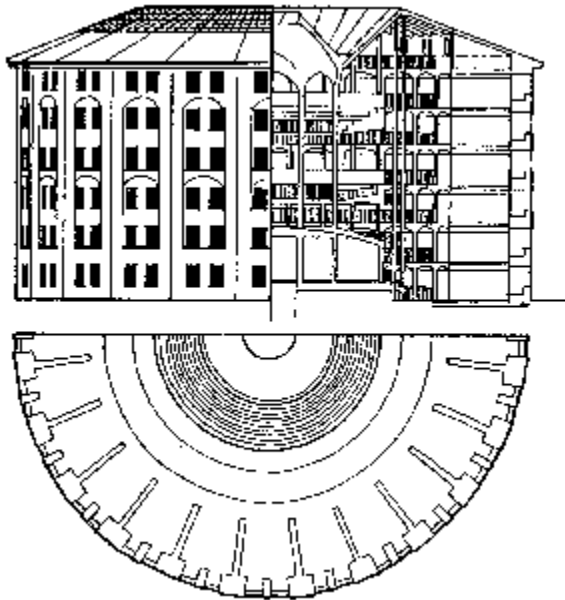
Of particular note is Diderot's conclusion that knowledge is not a social construct and can never be altered once discovered in its pure form (ousia). In many respects, the hype of all knowledge – perpetual and unchangeable – being collected in a single, worldwide system – the Internet – relies on such a philosophical perspective. Certainly, Bush in positing his Memex (1945) ideal believed in this sort of finite cosmos. The ideal of an information age owes a great debt to the Enlightenment project of Encyclopédie.

The modern era and objectivity applied to education

In nineteenth century, Jeremy Bentham (1791/1995) proposed his Panopticon (see Figure 2-1), his model for the perfect learning environment in which knowledge will be transmitted from those who know to those who do not. To make this process as efficient as possible, observation and manipulation of the most minute details and absolute

subservience to a bureaucratic system must go unquestioned. The Panopticon stands forth as an exemplar of taking Bacon's empirical tradition to extreme lengths in which the learners become

Figure 2-1: Bentham's Panopticon



Source: Bentham, J. (1791/1995). *The Panopticon writings*. London ; New York: Verso.

subjects of the controlling gaze of their masters, be they colonizers, drill sergeants, teachers, jailers, or psychiatrists. Scientists had over the years refined techniques for observation to limit interference to laboratory experiments. Unfortunately, some social scientists believed that such observation and corrective techniques were appropriate for human subjects as if they were a strain of wheat being genetically altered in a controlled

laboratory environment. The belief in a corrective laboratory environment attempts to deny or even squelch past experiences, the corruption of the outside world. Such a belief leads to the ideal of institutionalization in which defective subjects (students as maturely and intellectually defective, mental patients as emotionally or reality defective, and prisoners as morally defective) can be cleansed of corruption and set on the one right path to salvation and normalization.

Growing from the Bentham tradition, G. D. Strayer & E. L. Thorndike (1917) posited that only objectively and quantifiably verifiable means of teaching should be used: “whatever exists at all exists in some amount. To know it thoroughly involves knowing its quality as well as its quantity” (p. 207). Terman (1919/2001), in conjunction with Thorndike's positivist empiricism, developed a supposedly flawless and thoroughly objective means to test intelligence: the Stanford-Binet intelligence test. The test purports to define a person's native or raw

intelligence from a battery of objective and standardized tests, including language comprehension, size of vocabulary, and knowledge of familiar things (p. 208). Terman believes that intelligence can be quantified in an objective, unbiased manner. As a social efficiency progressive he advocated the creation of a standard educational product: "Standardization is coming to play the same role in psychology that it has long played in various branches of applied sciences. The architect or bridge engineer plans his structure with constant reference to foot-pounds of strain which materials will withstand" (pp. 208-9). Such a faulty analogy leaves me wondering just how many foot-pounds of pressure a standard student can stand. My point is that students, complex social beings are not steel girders or pillars of concrete; this is a case of comparing oranges and orangutans. Another wondrously fallacious analogy is that people have intellectual fingerprints that a well-trained psychological scientist can determine like a forensics expert. Once again, the human mind is far, far more complex than a fingerprint. Amazingly, Terman addresses the question as to whether or not IQ is influenced by social environment only to debunk his critics in a straw-man argument. He absolutely denies that class has any effect on what he determines as a hereditary trait: "It is a general rule that children of borderline intelligence improve little if at all in IQ as they get older, notwithstanding their increased school experience and the extra attention they receive in special classes" (p. 213). What this rhetoric cloaks is Terman's belief in eugenics and social Darwinism, that poor children tend to have lower IQ's because they come from inferior stock and that money spent on educating the poor to become intelligent is a waste of public funds. The Stanford-Binet IQ test does not test raw intelligence, but uncritical acceptance of social norms. The primary use for the test is to determine if students are standard or deviant. Such testing leads to tracking and self-fulfilling socio-economic classification.

No child left behind: An embodiment of the essentialist tradition

Strayer, Thorndike, and Terman's assumptions, their philosophical screen of positivist empiricism, still wields great presence to this day. In No child left behind (Paige, 2002) Secretary of Education, Rod Paige, proclaims, "Accountability systems gather specific, objective data through tests aligned with standards" (www.NoChildLeftBehind.gov). This faith in objective, test derived and scientifically verifiable data leads Paige to make claims in "The facts about measuring progress" section that "For too long, America's education [sic] system has not been accountable for its results, and too many children have been locked in failing schools" (ibid). To rectify what he delittles as "unproven fads" (Paige never identifies what these particular fads entail, much less explains how they are unproven), the educational system must adhere to scientifically verifiable methods and teach only the facts. Verifiable methods must pass the muster of the scientific method, using a treatment and control group methodology, be generalizable, and meet rigorous standards. This assumes that a narrowly defined, positivist empiricism is the one appropriate way to determine that instruction works, that gains from pre to post tests determines if learning has taken place, and that all students learn identically. Paige ignores differing learning styles, social contexts, and that bodies of knowledge (episteme) have inculcated values. For example, the only way to teach reading is phonics: "Thanks to scientific research, we now know how to teach our children how to read" (ibid). The title of every section itself proves irksome and illustrates an unquestioning faith in positivism, "The facts about—". This is troublesome because it is a rhetorical move to say that all other opinions are not factual and therefore not worth considering.

No child left behind is fraught with this sort of dichotomous logic and unsubstantiated logic. Respecting either / or logic, Paige writes, "No child left behind is an unprecedented

commitment and focuses not on money, but on results” (ibid). The problem, according to Paige, is not funding, but a lack of accountability. To further silence criticism, Paige writes, “Standards have gone from controversy to necessity” (ibid), a troubling idea in a democracy. Similarly, programs that attempt to reach out to marginalized communities, such as African-Americans, Native-Americans, and Hispanics, are “the soft bigotry of low expectations” (ibid). He declares that the “racial achievement gap” of 34% reading proficiency for African-American fourth graders compared to 14% for Native-Americans can be attributed to one thing: low expectations. Of course, European-Americans serve as the invisible group to which this gap refers to, reifying Katz’s (1999) claim that white is often constructed as if it were not a race. One can assume that anything less than one set standard is an unproven fad and soft bigotry. The logic is as clear as it is simplistic—there is one right way of doing things, the Truth, and a variety of doing things wrong. Conveniently, Paige’s policies are the right way and everyone else is wrong. While the sheer arrogance and narrow-mindedness are disconcerting enough, the onus of the achievement gap is placed solely on the underachievers. Paige has gone from what he labels “soft bigotry” to the very real and very hard bigotry of blaming the victim. If conditions, educational values, and facilities were absolutely equal, the scientific lab mentality, then yes, Native-Americans, African-Americans, and Hispanics are all underachievers. One need look no further than the unequal spending of schools highlighted in Kozol (1992) and Spring (2002) to understand this is not just sheer nonsense, but dangerous nonsense. Eurocentric, pro-capitalist, American education does not hold the same values for all people; ethnic backgrounds have significant affects on acceptance of the white, plutocratic educational agenda for good reasons, the genocide of slavery and colonization being two such factors. In the next section, I will illustrate how the colonizer’s

gaze closets Eurocentric and bourgeoisie privileging in the fields of media comparisons, structuralist semiotics and American education, with an eye on systematic instructional design.

Modernism, media comparisons, and structuralist semiotics

In this section, I present modernist assumptions about media, cognition, and the importance of prespecified objectives in education to better develop how poststructuralist hypermedia, semiotics, and knowledge construction theories differ from modernist conceptions of media, semiotics and epistemology. First, I examine Howard Levie and Kenneth Dickie's (1973) classic study on media attributes; next, I illustrate how cognitive psychology and Human Information Processing (HIP) construct learner as passive recipient, particularly when coupled with Computer Based Instruction (CBI); finally, I deconstruct Systematic Instructional Design's emphasis on prespecified and preeminent instructional objectives.

Assuming that media have innate qualities no matter the learning context and the learners' prior experiences and inclinations, Levie and Dickie (1973) categorize what media types work best for learners. They attempt to determine "translatability" in which viewer responses will be "identical" (p. 860). A dominant assumption is that "digital signs [written characters] are trivial in and of themselves. They are intrinsically uninteresting. They are transparent" (p. 862). The authors assume the structuralist semiotics of Levi-Strauss in that signs have innate significations. Such assumptions privilege people who have little trouble reading / signifying signs, while categorizing those who cannot as illiterate, dyslexic, or developmentally retarded. They assume that signs are transparent and lack cultural significance and this assumption translates into a means for marginalizing non-standard learners. For example, the sign / word black is supposedly culturally neutral, simply a sign for a color. Yet when one examines a common dictionary, he or she can see that assumptions are manifest:

Table 2-1: Definitions of Black & White

Black	White
• Being of the color black, producing or reflecting comparatively little light and having no predominant hue. • Having little or no light: <u>a black, moonless night</u>. • often Black • Of or belonging to a racial group having brown to black skin, especially one of African origin: <u>the Black population of South Africa</u>. • Of or belonging to an American ethnic group descended from African peoples having dark skin; African-American. • Very dark in color: <u>rich black soil</u>; <u>black, wavy hair</u>. • Soiled, as from soot; dirty: <u>feet black from playing outdoors</u>. • Evil; wicked: <u>the pirates' black deeds</u>. • Cheerless and depressing; gloomy: <u>black thoughts</u>. • Being or characterized by morbid or grimly satiric humor: <u>a black comedy</u>. • Marked by anger or sullenness: <u>gave me a black look</u>. • Attended with disaster; calamitous: <u>a black day</u>; <u>the stock market crash on Black Friday</u>. • Deserving of, indicating, or incurring censure or dishonor: "Man . . . has written one of his blackest records as a destroyer on the oceanic islands" (Rachel Carson). • Wearing clothing of the darkest visual hue: <u>the black knight</u>. • Served without milk or cream: <u>black coffee</u>. • Appearing to emanate from a source other than the actual point of origin. Used chiefly of intelligence operations: <u>black propaganda</u>; <u>black radio transmissions</u>.	• Being of the color white; devoid of hue, as new snow. • Approaching the color white, as: • Weakly colored; almost colorless; pale: <u>white wine</u>. • Pale gray; silvery and lustrous: <u>white hair</u>. • Bloodless; blanched. • Light or whitish in color or having light or whitish parts. Used with animal and plant names. • also White Of or belonging to a racial group having light skin coloration, especially one of European origin: <u>voting patterns within the white population</u>. • Not written or printed on; blank. • Unsullied; pure. • Habited in white: <u>white nuns</u>. • Accompanied by or mantled with snow: <u>a white Christmas</u>. • Incandescent: <u>white flames</u>. • Intensely heated; impassioned: <u>white with fury</u>. • Ultraconservative or reactionary. • With milk added. Used of tea or coffee.
Source: The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company.	

Markedly, the definition for black has a series of negatively charged associations:

- Soiled, as from soot; dirty: feet black from playing outdoors.
- Evil; wicked: the pirates' black deeds.
- Cheerless and depressing; gloomy: black thoughts.

- Being or characterized by morbid or grimly satiric humor: a black comedy.
- Marked by anger or sullenness: gave me a black look.
- Attended with disaster; calamitous: a black day; the stock market crash on Black Friday.
- Deserving of, indicating, or incurring censure or dishonor: “Man... has written one of his blackest records as a destroyer on the oceanic islands” (Rachel Carson).

Now, when one compares this with the positive characteristics associated with white, one cannot help but notice that even black and white issues are not so black and white:

- Not written or printed on; blank.
- Unsullied; pure.
- Habited in white: white nuns.
- Accompanied by or mantled with snow: a white Christmas.

One can also observe that both colors are clearly associated with races: black typically with people of African descent and white typically with people of European descent. One could go so far to describe white as a lack of racial blemishing.

When the authors did investigate non-standard learners (e.g. Baganda children lacking formal Western education, illiterate Costa Rican adults, and impoverished Americans), these subjects could not “correctly interpret pictures” (p. 866). This example illustrates how ignorance of cultural codes disempowering these “others” and categorizes them as people who cannot correctly interpret a picture. Levie and Dickie’s (1973) conclusion is to not illustrate textbooks as the signs (pictures in this case) may be interpreted incorrectly, assuming that only one correct interpretation exists. Put another way, if students fail to give the correct answer, impoverish their learning further because they might have their own answers, albeit considered incorrect ones by dominant cultures. The point here is that too many assumptions go unexamined or are swept under the rug. No mention is made to accept alternative interpretations as valid. If students seem confused (i.e. they respond with an incorrect decoding of a sign), then remove what may confuse

them, thus reducing an enrichment of their education. What Levie and Dickie fail to consider is that the subjects made sense of the pictures from their experiential background, cultural norms, and level of interest in the project. If one discounts all these variables, then signs are indeed static, transparent, and acultural. Reality, however, dictates different conclusions from the ones derived here.

Many current studies on media comparison and hypermedia disorientation continue to exhibit manifestations of Levie and Dickie's logic. For example, Paulo Dias & Ana Paula Sousa (1997) compare novice users disorientation in hypermedia to linear text navigation and conclude that linear text reading is superior to hypermedia navigation due to user disorientation. They are not alone; Chien Chou & Hua Lin (1998) reach nearly identical conclusions and suggest highly linear and structured educational hypermedia. Arif Altun (2000) explains that loosely structured hypermedia learning environments will not work well for novice learners, thereby concurring with Dias & Sousa's findings. Nigel Ford & Sherry Chen (2000) further compliment Alton's findings that the structure of a hypertext should be built around the level of user familiarity with the medium.

Other scholars, who take cultural issues into consideration, claim far different conclusions. Timothy Ellis (2001) denies the question as to which is the better medium and concentrates instead on hypertext as learning tool. Ellis' project centers on using a hypertext as a tool for critical thinking. By manipulating content in a discursive manner, students engage in knowledge construction and question some basic assumptions about e-learning. One area for critical engagement is the issue of gender use; Leslie Miller, Heidi Scweingruber, & Christine Brandenburg (2001) conducted an ethnography of middle school students to determine use by gender and assumptions about computer usage. AAUW (American Association of University

Women, 2000) also has looked beyond the question of media comparison to larger social issues such as why are so few girls “in the pipeline” and what steps are necessary to alter the cultural landscape of computer usage from a masculine discourse to one more egalitarian.

The underlying assumption that media have their own qualities irrespective of cultural norms, learners’ backgrounds and interests is the greatest flaw in modernist media comparisons. A complimentary flaw in logic is that testing will accurately determine if a media is inherently better than another. This project makes no such claim that hypertext is better than traditional print-based media. An educational media must take into account goals for education and methods appropriate for an audience. Such tacit assumptions in modernity are so ingrained that they are largely taken as gospel Truth. In modernity the aims of education are most often to prepare future workers for their eventual careers and that a standard method of instruction and a standard knowledge base is the basis for a system of merit. Modernists fail to recognize that this one-size-fits-all mentality privileges culturally dominant tropes and consequently students from culturally privileged backgrounds.

In the following section I describe how modernist assumptions inform a discriminatory Computer-Based Instruction (CBI) program. From a modernist perspective, CBI should be very helpful for remediation, in that chronically failing students can spend as much time as possible with a computer in order to master basic skills. Of course, this perspective assumes two things: remediation must proceed creative learning and that learners will accept remediation. The assumptions rely on cognitive psychology and deny the roles of poiêsis and eros in education, that learning is merely accumulating skills and information irrespective of desires.

Human information processing, cognitive determinism, and Instructional Systems Design

For Computer-Based Instruction (CBI), the model of teaching machines has largely informed this field of study. The teaching machine is the perfect curriculum from a modernist perspective, as a student must comply with the correct material before advancing. This is also known as mastery learning, popular in radical behaviorism. The teacher's competency, the student's background and interests, and a cultural matrix are largely ignored in this system. Marcy Driscoll (1994) provides a summation of modernist CBI:

In an instructional program, content is arranged in small steps, called frames which progress from simple to complex and require a response from the learner to go on. Since the steps are small and increase gradually in difficulty, learners respond correctly most of the time, which means their responses are reinforced frequently. What this amounts to is shaping of complex academic skills [emphasis added]. (p. 59)

The last line should more aptly read: What this amounts to is shaping of complex social values as appropriate norms. Shaping assumes that students are cognitive clay that can be molded to fit dominant social norms. The values are that instruction goes from the basic – what any person should know – to the complex – what the initiated should know. As students progress from the brown reading group to the gold reading group, their cultural capital increases as does their acceptance of hegemonic values of more culturally valued episteme, docility to a passive learning method, and that one correct answer supplied by one's social superiors is an appropriate social norm.

In the cognitive sciences, Human Information Processing is seen as a corollary to computer instruction. Cognitivists tend to imagine that the human mind works quite similarly to a computer. Michael Cole (1996) writes, "The dominant metaphor of cognitive psychology was

that of the person as an information-processing system thought in terms of modern computers” (p. 99). He adds that this metaphor “dehumanizes the concept of mind” (p. 100). I concur. Mark Ashcraft’s (1994) Human memory and cognition textbook delineates how the computer-cognitive process takes place:

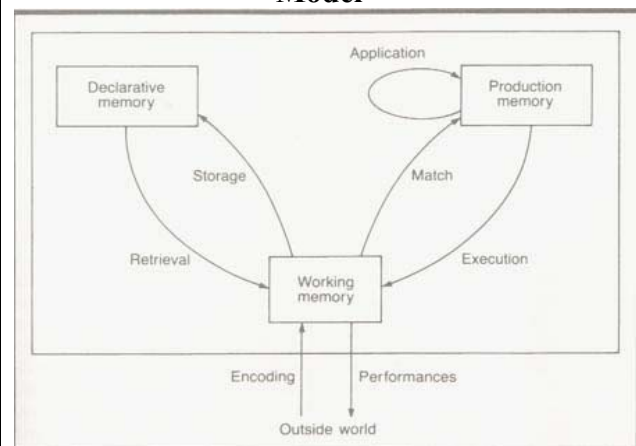
To begin with, a computer program must be a completely specified set of instructions telling the computer what to do and when to do it: if it’s not completely specified, the program simply won’t run. A verbal theory, on the other hand, may seem definite and clear but, on close inspection, often turns out to contain vague or ill-defined terms and processes. Thus a principle advantage of theorizing by means of computer programs is that it forces the theorist to think through all the elements of the theory. A related advantage is that this process of crafting a computerized theory can reveal pockets of ignorance, gaps in our knowledge that need to be addressed. (p. 636)

One can hardly imagine that Ashcroft is writing about human learning here. The paradigm is so manifestly mechanical that seeing a living,

breathing student as the subject of study is nearly impossible. Below (figure 2-2), one can see how neat cognition appears as a diagram. I hold, on the contrary, that that learning is not a neat diagram of so many lines and boxes, but a messy business that involves many, many more factors than this simplistic model can possibly hope to account for.

It should come as no surprise that Human

Figure 2-2: Human Information Processing Model



The architecture of Anderson's (1983) ACT* model, showing the major components and the processes that occur within the system.

Source: Ashcraft, M. A. (1994). *Human memory and cognition* (2nd ed.). New York: Harper-Collins, p. 636.

Information Processing (HIP) corresponded to the rise in competency-based instruction as a reaction to the open classroom movement that greatly threatened traditional notions of authority and learning in the classroom. In competency-based instruction, championed by the likes of Robert Mager (1997) and Walter Dick, Lou Carey, & James Carey (2001), teachers develop specific instructional objectives, highly linear and hierarchical methods to achieve those objectives, and measure achievement through standardized tests. In such a scenario, the test looms as the most crucial player in the classroom. The competency-based instruction movement is one of the more efficient means to squelch teacher and student input into the curriculum.

Traditional instructional design's reliance on the privileged position of goals creates superordinate structures that circumscribe student activity and reinforce fixed domains of knowledge. As such, traditional instructional design stands forth as an exemplar of modernist pedagogies. Patricia Smith and Tillman Ragan (1992) write that

Instruction is the delivery of information and activities that facilitate learners' attainment of intended, specific goals. In other words, instruction in the conduct of activities that are focused on learners learning specific things. . . . Every learning experience that is developed is focused toward a particular goal. (p. 2-3)

The student is passive and secondary to attainment of a goal he or she has no voice in choosing or manipulating to meet his or her needs and desires. The learner described in this quotation is a presumptive automaton ready for normalization that leads inexorably to a standardized product ready for the economic machine. Moreover, teleological structures that emphasize regulation and particularization of fixed goals reify the power geometry of the designer's privileged status at the expense of both the teacher (diminished to a content specialist) and the student (now little more

than content assimilator). This dissemination into fixed roles, additionally, dehumanizes and regulates the process of learning.

Mager (1997) in Preparing Instructional Objectives also designates objectives superordinate to the learner and methods as beyond the learner's reach:

you must clearly specify outcomes or objectives you intend your instruction to accomplish. You must then select and arrange learning experiences for your students in accordance with the principles of learning and must evaluate student performance according to the objectives originally selected (p. 1).

The outcomes and methods belong to the instructional designer; Mager assumes student as recipient of content he or she has no choice and by methods in which he or she has no voice. Furthermore, only one set of learning principles seems to exist – in this case a form of what Cole (1996) calls “runaway positivism” (p. 100). One can also note Mager's frequent use of the imperative voice. No room is given for any emergence, transaction, or adaptation to change that frequently happens in the emerging reality of the classroom: “instruction is only successful to the degree that it succeeds in changing students in desired ways [emphasis added]” (p. 13). The presumption of student as automaton is naked here; moreover, the instructional designer defines success for the learner.

Arguably, the most popular instructional design model, often unquestioned as the instructional design model, is Dick, Carey, & Carey's (2001) The Systematic Design of Instruction. With its emphasis on being systematic, such hierarchical statements should not surprise one: “The first step in the model is to determine what it is that you want learners to be able to do when they have completed your instruction” (p. 5). While their belief in pedagogical ownership is not nearly as blatant as Mager's (notably one of the theorists informing the design),

the next quotation is telling in how little pedagogical freedom they afford the learner: “you will determine step-by-step what people are doing” (p. 5). Here the modern, mechanistic nature of systematic design is laid bare. To further develop this dialogue I turn to postmodernist alternatives for education.

Postmodernism in education

To order to detail how postmodernists generally envision education as opposed to modernists, I refer here to Rick Voithofer and Alan Foley (2002). They write that postmodern ideals should be included in curricular reform and the current technological infusion into educational environments. They recognize that postmodernism means different things to different people and that generalizing postmodern educational practices proves difficult: “Instead of looking for generalizable and universal approaches, postmodern perspectives tend toward approaches that are applicable to specific situations and are based on the conditions of those situations” (pp. 5-6). They attempt to define what they consider postmodernism in education to avoid vagaries that can plague postmodern research. They generalize seven outstanding ideals that guide postmodern educational research and practice: (1) “postmodern perspectives are interested in how technology shapes pedagogy and curriculum by asking how particular technologies or delivery media frame what is teachable and unteachable” (p. 7), (2) postmodern educational research is concerned with curriculum, (3) postmodern research and practices is self-reflective and concerned with issues of social justice and democracy, (4) “postmodern perspectives are critical of theoretical and methodological systems that uncritically favor particular points of view or belief systems” (p. 7), (5) “postmodern researchers favor multidisciplinary and interdisciplinary approaches that are guided by complex ecological, rather than systematic questions, instead of questions that artificially carve out a narrow area of inquiry

within a learning system” (p. 8), (6) “postmodern researchers are concerned with language and meaning (often broadly referred to as ‘discourse’), and with what research, learning, designs, and teaching are possible in relation to particular social languages” (p. 8), and “postmodern researchers are not merely hesitant about avoiding universally generalizable claims about learning; they avoid them in favor of more contextualized conclusions” (p. 8). To summarize, they outline that postmodern education does not ignore what Herbert Kliebard (1970/1992) calls the philosophical screen, that commonplaces are socially inscribed values not a natural order. As such, reflection and critical analysis are paramount concerns for postmodernists that will hopefully shed light on discriminatory practices informed by supposedly scientific and verifiable facts. Critical analysis deconstructing tropes that inform discriminatory practices should promote democratic and social justice curricular reform, as well.

Postmodernist perspectives on education share similarities with social constructivist perspectives. Jan Herrington & Peter Standen (2000), in detailing a conversion from an instructivist digitally enhanced class to a constructivist one, detail not only how they altered the instruction but why they did this. They remark that the instructivist pedagogy involving one-way transmissions of static facts and tests to determine if facts could be recalled did not serve the purposes of their business students who found the material boring and irrelevant thereby demanded more a realistic and collaborative problem-solving pedagogy. The original class transmitted data in a linear fashion and was comprised of eight modules and 26 lessons stressing mastery learning. The transformed class, however, relied on situated problem solving in a realistic environment and collaborative work—mainstays of the business work environment. In their conversion of the class, they adhered to nine guiding principles similar to those listed by Voithofer & Foley (2002): (1) teach using an authentic context that illustrates how knowledge

may be applied; (2) employ authentic activities for role-play; (3) have students access expert performances and activity modeling; (4) have students take on multiple roles in a scenario¹³ and inquire from multiple perspectives; (5) prompt students to reflect on instruction for deeper understanding; (6) structure instruction to promote collaborative construction of knowledge; (7) have students articulate their ideas in the dominant discourse of the field to become effective practitioners; (8) provide coaching and scaffolding to ensure just-in-time support, and (9) authentic assessment that follows procedures in realistic applications. While this list does share many qualities with the list articulated by Voithofer & Foley, it lacks one essential element – critical introspection. Like much of cognitive apprenticeship and activity theory, a lack of critical engagement, deconstructing dominant tropes, can lead to highly efficient docility to a system. Learning the mechanics of a system, being able to properly mimic expert activities, does not promote deconstruction, a factor critical to social justice pedagogies. With this heeding of critical inquiry into social, political, and economic inequities, I turn to Foucault's deconstruction of power constructs in language and education's role in instilling habits of docility to authority.

Hyperpedagogy and Foucault's disruptive semiotics

In the first chapter, I developed Landow's (1992, 1994) argument that hypertext relies on poststructuralist semiotics as advocated by Derrida and Barthes. While Derrida's decentering and Barthes' lexia ideals can disrupt power relationships, it is Michel Foucault who best develops how discriminatory power relationships form and exist in educational institutions. With the inclusion of Foucault's discourse on power, hypertext evolves into my radical proposal for e-learning: hyperpedagogy. Hyperpedagogy calls for critical inquiry into power inequities that further cultural marginalization. Accordingly, I develop hypertext's relationship to Foucault's poststructuralist semiotics with its emphasis on power relationships inculcated in language and

social institutions, including the school. I, therefore, examine concept of heteroglossia, docile bodies, and regimes of truth. Foucault's critiques of school power relationships and the training of subservience to authority inculcated in education serve as the most prominent bridge from hypertext to hyperpedagogy.

Foucault relies on what Mikhail Bakhtin (1981) identifies as heteroglossia. Heteroglossia premises that language is made up of a many utterances, that language is an evolving, contingent, and complex orchestration of voices. However, not all utterances are equal. Some voices hold more status and power by speaking the Truth, whereas others are marginalized as blasphemous. What poststructuralists argue is that Truth needs to be disrupted in order to deconstruct and reconstruct power relationships; one way to do this is the enable students to become critical readers of social norms. A critical reading of social contexts should open cultural myths to more divergent voices, marginalized utterances. The purpose for heeding heteroglossia is to reduce the strictly enforced structuralist hierarchies explicated by Foucault in Discipline and Punish (1977). The active learner engages in critical reading of cultural texts, questioning the privileged status and univocal tyranny of authority figures, such as authors, teachers, instructional designers, and school boards. The text and its inexorable link to institutional education can evolve into a mediated and emergent montage of functional centers within curricula, thereby manifesting properties of hyperpedagogy. I purpose hyperpedagogy as a means to combating intellectual and social docility by respecting marginalized voices. The first aspect of Foucault's Discipline & punish I will delve into is that of docile bodies.

In modernist pedagogies and systematic instructional design models,¹⁴ we see an example of Foucault's concept of "docile bodies," which manifests itself as the science of behavioral control in a clinical environment. "Docile bodies" relates how "modern disciplinary technology

does for the human body and the body politic what Newton had done for physical bodies;” in other words, it has created Man-the-Machine; as Jim Garrison & John Burton (1995) claim instructional designers all too often presume students are thinking machines and extensions of their tools (pp. 72-3). Moral accountability can now be quantified as a numerical representation, grades; political control thereby manifests itself as the inexorable controlling agent in this utilitarian rationalization (p. 73).

Discursive power makes individual automatons of habit. The body, from the enlightenment on, has become the target and object of power. The individualized body is a transformed and an improved one. Power exercises itself through constraints, prohibitions, and obligations on the body. Yet the coercion is subtle; it is as invisible as the air we breathe. As such, provoking students to engage in a robust and constructive critique of hegemonic ideals and practices can prove difficult, even in the best of circumstances. The scale of control is individualized to all members of a society; the object of the control is not the body as a whole, but the most efficient, infinitesimal, and simple gestures; the modality implies that coercion exists constantly and in a supervisory role. This does not signify that social coercion is a form slavery or outwardly visible servitude. This manifest level of coercion could not exist without a belief in the freedom of the individual that supposedly chooses to obey discursive power, what Marshall (1999) describes as the autonomous chooser. In my teaching experience, trying to raise a students’ consciousness that they may well have internalized cultural prejudices often ironically results in resistance and even hostility. Hypertext as a pedagogical method may help ease levels of tension with its emphasis on questioning the status quo. Students may become aware of their own internalization in dialogue with their peers.

Discipline increases the effectiveness of the body for social ends as aptitudes and abilities. Disciplinary institutions, such as schools, jails, military bootcamps, and insane asylums, instill socially beneficial behaviors and habits. Detail, the micro-physics of power, takes on scientific airs. The model schools of the eighteenth and nineteenth centuries developed from the rigors of monastic life, with its attention to detail, emphasis on obedience and training, meticulousness of regulations, and enclosure from the society at large and neophytes from veterans. This cloistering of education not only keeps pupils riveted to the task at hand away from disturbances, it also relieves more intensive policing duties. The system induces pupils to work in segregated functional spaces that discipline them to stay on task. This segregation also serves the rewards / punishment duality: good pupils earn the merit of valued classes, while deficient pupils earn the demerit of less valued classes. An underlying irony in modernist pedagogies is that well behaved students are rewarded with more flexible methods for learning (the gifted), whereas disruptive students (at-risk / remedial learners) are constantly monitored and chained to highly disciplined methods that reinforce their inferiority. For the purposes of pluralistic pedagogies, freedoms bequeathed to achieving learners should be systematically instilled for “problem” learners who need flexible methods more so than the “gifted” achievers to connect learning to their experiences and values. The term “gifted” underscores a belief in innate abilities tied to social Darwinism and essentialist ideologies. Hence, the fact that the children of the privileged tend to do better on standardized tests becomes a self-fulfilling prophecy that such children are inherently more gifted (Herrenstein & Murray, 1994).¹⁵ The construction of giftedness reifies class privilege for yet another generation. For impoverished learners, on the other hand, schooling limits freedom because discipline serves the needs of the segregated class system inculcated within capitalist societies. The monastery model has replaced the

apprenticeship model, although pupils tend to regard the latter as more practical to their needs and thereby favorable. Apprenticeship models tend to skill habits more successfully than Fordist factory models. However, an inquiry driven model, such as apprenticeship, does not serve the economic and social needs of the modern state and its entrenched class system.

Hyperpedagogy differs significantly from the ideal of a modernist school, which relies on a set episteme, hierarchical discipline, one-dimensional observation (Panopticon), solitary work, and a belief in acultural, high-stakes testing. Hyperpedagogy, on the contrary, purports that knowledge is an emergent social function, that authority is shared, that work should be a collaborative, social enterprise, that evaluation of student work should be highly contextualized and a product of being able to do something, not simply parrot a correct answer. The premium placed on understanding, not on memorization, tends to undermine the positivist assumptions propping-up modernist educational ideologies and practices. For example, students collaborate on a project to illustrate their understanding of Archimedes Principle. They can show how an oil-tanker stays afloat by displacing a volume of water and how efficient its propulsion system is through a computer mock-up. They can also further contextualize their project by demonstrating how a double-hulled oil-tanker works in accordance with Archimedes Principle and proves safer for the environment, thereby further connecting the world of Physics to their world. Such a project would be more likely to elicit student participation and increase the likelihood for understanding.¹⁶

Modernist pedagogical discourse calls for activity to be controlled by not only spatial alignment, but also by temporal specificity. The emphasis placed on efficient time usage is unparalleled in educational history. The quality of time used to complete a task stands paramount to good education in the modern pedagogical discourse. Time constraints permeate the body of

the school and the pupil. The gesture in education becomes a Cartesian correlation in time and space for rational efficiency to form the body-machine complex. Pupils learn to synthesize their actions to normative procedures established by what is the most efficient time / gesture for most pupils. This discourse assures “a form of continuity and constraint, a growth, an observation, a qualification” (Foucault, 1977, p. 161).

Foucault not only claims that modern forms of education instill largely unquestioned obedience to the state, but he also delineates a requisite tripartite hierarchy of power for the training of docile bodies: (1) hierarchical observation—the teacher constantly monitors student activity exemplified by traditional classroom organization; (2) normalizing judgment—the culture restructuring itself by enforcing student accordance with a hegemonic episteme; and (3) examination—determining if students meet the standardized criteria that reify socio-political norms. President Bush and Secretary of Education’s Paige’s No child left behind (2002) modernist educational agenda relies heavily on these three coercive factors. They place a premium on close and coercive observation of students that is a top-down model and relies on strong authority figures, such as former military and police personnel. In No child left behind the preeminence of the test – the normalizing judgment – is daunting to educational progressives. In this so-called reform agenda, the test is the ultimate and monolithic classifier of success and failure. Because this agenda refuses to recognize that different social groups face inequities in education, what Paige refers to as the soft-bigotry of flexible educational programs, thereby normalizing all test-takers to one standard. Paige exhibits a blind faith to the ideal of all men being created equal as espoused in the Declaration of Independence that makes a de facto system of blaming the victim. Put more succinctly, the historical testing gaps between white and black, poor and rich, male and female, are now “achievement gaps,” so failure to score well is an

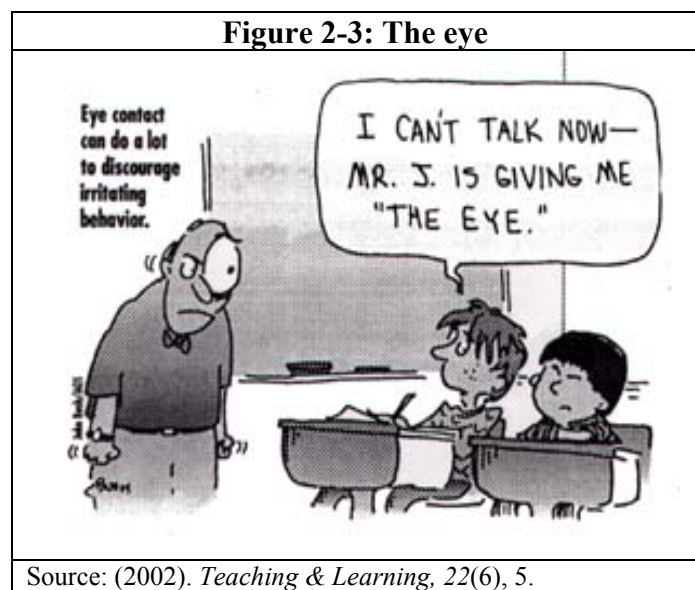
indication of failure to achieve one's predetermined potential, harking back to Platonic ideals of entelechy. The system proposed categorically denies governmental responsibility and cultural preferences inculcated within tests as the following quotation exhibits: "If some schools can do it, then all schools can do it" (www.nochildleftbehind.gov).

Unfortunately, Foucault's (1977) warning that such a system predicated on an all seeing and centralized eye, a Panopticon, can come to fruition in this current reform climate with its emphasis on discipline and high-stakes testing. Figure 2-3 illustrates the power of observation to correct undesirable behavior. One can also note the teacher's anger in the clinched fists—a very clear message of physical threat and thereby coercion. In e-learning, electronic observation is becoming increasingly important for educational structuralists. For examples, Paige advocates, "Online tests deliver reports on children's progress instantaneously instead of weeks later. When designed well, curriculum software can

engage students in solid academic curriculum

like never before"

(www.nochildleftbehind.gov). The emphasis on reporting behavioral failings in education allows for more efficient corrective interventions. The curriculum software, moreover, becomes the mechanical corrective tool for "solid" teaching. Foucault (1977) writes,



A relation of surveillance, defined and regulated, is inscribed at the heart of the practice of teaching, not as an additional or adjunct part, but as a mechanism that is inherent to it and which increases its efficiency. (p. 176)

This digital surveillance is part of Paige's curriculum, but not anything unique to digital pedagogy. The role of the punishing observer has deep roots into Western mythos, even to the omnipresent eye of god: "Nothing in all creation is hidden from God's sight. Everything is uncovered and laid bare before the eyes of him to whom we must give account" (Hebrews, 4:13).

The reliance on hierarchy sorts individuals as objects into ability categories depending on how well they score on exams developed from norms taken, in turn, as fixed or natural categorization models. Such models assume that the norms are value neutral. Even a cursory glance at the material constituting standardized tests, one can see that the material is biased towards the hegemonic values of a society's power elites. As Howard Becker (1998) points out, such tests are highly value laden based on the skills that dominant social groups value, and mistakenly taken as raw scores of intellectual ability and gauges for future success—as long as the same dominant group defines success. Hyperpedagogy, with its manifesto for student transactions with their peers, their teacher, and the subject-matter, abrogates the worst aspects of linear, one-way authority. Moreover, a transactional dialectic tends to undermine the modernist concept of hierarchical observation as witnessing takes place as a shared activity. For example, students can grade each others work along with the teacher and provide feedback to the teacher so that he or she may alter classroom practices. In the case-study, students were required to grade each others work with a rubric provided to guide them [see Appendix 2-1]. While distributed grading does not entirely do away with normalizing judgment, it does dilute the authority vested in the teacher. Grading in hyperpedagogy being an emergent, project oriented endeavor

undermines the positivistic ideologies informing standardized testing that all students have equal opportunities to perform well on tests, that the tests are not culturally biased, and that scores indicate actual intellectual ability (i.e. Standardized Aptitude Test). Hyperpedagogy does not seek so much to normalize as to harmonize. This is not merely a semantic difference because in harmony differences are respected and encouraged so that tenors, altos, baritones, and the rest compliment each others' differences. To harmonize is to find commonality without sacrificing diversity. High-stakes testing simply does not work in conjunction with hypertext as no sole, authoritative discourse regime exists. A monadological episteme is replaced by a fluid, multiple, and transactional episteme.

Discipline creates and conditions individuals through this tripartite discourse of hierarchical observation, normalizing judgment, and examination. Vigilant observation must occur as supervision to efficient actions. This constant surveillance becomes embedded within the body to the point where bodies begin to police themselves: “an internal, articulated, and detailed control” (Foucault, 1977, p. 172). Typical of the consumerist hype for e-learning, AGS Publishing promises to make learning – here defined as performing better on standardized tests – more efficient through corrective, coercive observation:

According to Maxey, the district chose Performance Power for a number of reasons. The program's ability to track student progress and its alignment with state standards topped the list. As teachers quickly learned, Performance Power helps them monitor their students' daily work, and pinpoint areas where additional instruction is needed. Teachers and administrators appreciated the program's efficient reporting options—and loved the fact that they didn't have to spend time on detailed training [emphasis added].

(<http://www.agsnet.com/testprep/summer.asp>)

The very architecture of schools and classrooms are built upon the principle of supervision: chairs in neat rows, long corridors, surveillance systems, and homeroom roll-call: “This infinitely scrupulous concern with surveillance is expressed in the architecture by innumerable petty mechanisms” (Foucault, 1977, p. 173). Such structures better prepare workers for later corrective workplace surveillance, their life on the assembly-line or in the cubicle-bin.

Normalizing judgment is a micro-technology of discipline—an internalized penal system. The bi-polar system of punishment and rewards exists for abnormal and normal activities. It is, moreover, corrective so that students learn to take on class habits and perform desirable social functions to maximize their obedience along with their efficient work skills.

The examination exists as the next prop in this discursive system. Pupils need to be sorted, categorized into social roles. The examination also serves as a ritual of power by acquiescence to its usage. Exams coerce desired behaviors by an exchange of knowledge: the social elites’ knowledge. Information moves from a predefined curriculum to the student through the means of the lecture and extracted through the examination. The pupil is hereby objectified as the receptacle of knowledge from on-high. Ceremonies for excellence endorse collaboration. Exams also exist as a form of surveillance as people become paper records, codified and categorized by corrective examinations. An individual becomes a document for possible use. While this system may seem perfectly rational and unbiased on paper, the application of this discourse closets many social and economic discrepancies in the modern educational system.

In No child left behind, for example, Paige (2002) points out that more than of 30% Hispanic students drop out, that only 16% are at reading proficiency levels for fourth grade readers compared to 40% for white students, that only 10% of Hispanic students go on to earn a bachelor’s degree (www.nochildleftbehind.gov). He states, “The racial achievement gap is real,

and it is not shrinking” (ibid). His remedy is to test more often to make sure Hispanics are measuring up to standards. This is not a remedy, of course, but a measurement; one, I fear, that will indicate that Hispanic students are being further alienated by a system that increasingly fails to accommodate their differing circumstances. The logic here is that Hispanics need to accommodate their experiences to Eurocentric, masculine, and plutocratic standards, disguised as universally American standards, without a budge in the system. This is reactionary pedagogy at its most discriminatory by demanding that those who are different are to blame for their own lack of achievement.

Foucault’s critique of power / knowledge in discourse regimes provides yet another means for deconstructing dominant educational power relationships. In his examination of microtechnologies of power, Foucault positions semiotics away from analyses of global myths and ideologies to questions about how power functions at the local level. Such a means for examination is invaluable for determining how domination, obedience, and subjectivity function in the classroom as part of larger and often heterogeneous social constructs. His analytical model for language centers less on how individual words are encoded and decoded, but how they function as cultural practices. In particular, he centers his research around the production of knowledge and the authorities involved in such complex social productions. He grounds his work in historical and contextual terms to emphasize how knowledge must be seen as part of a specific culture, even when cultures and subcultures are competing for prevalence. He especially examines how the social sciences produce knowledge as truth in the modern era. He rejects Sausaure’s preoccupation with determining meaning as signifying structure to one more concerned with relations of power:

Here I believe one's point of reference should not be to the great model of language (langue) and signs, but to that of war and battle. The history which bears and determines us has the form of war rather than that of a language: relations of power not relations of meaning (1980, pp. 1145)

In poststructuralist semiotics, the word “discourse” holds great significance and so it appropriate to explore its meaning. Hall (1997) defines discourse “as a group of statements which provide a language for talking about – a way of representing the knowledge about – a particular topic at a particular historical moment” (p. 291). Discourse is the production of knowledge through the medium of language, writ large. Foucault (1980) attempts to overcome the distinction between language and practice, by examining language as a practice. Power determines, then, how language practices and regimes of power, or accepted knowledge, limits and defines how people can talk about a subject normally and limit and restrict ways that lie beyond accepted norms. What bears import is not individual speech acts in themselves, but how these enact institutional patterns and practices of knowledge contextualized in time and space. These communal practices, embodied unconsciously as normal within the subject, constitute what Foucault calls discursive formations. Contextualized systems of knowledge, episteme, produce meaning. In fact, Foucault would argue that meaning does not exist outside discursive formations. Things can exist outside discourse, yet they do not have meaning until appropriated by discourse that categorizes existential things thereby giving them significance.

In Power / Knowledge, Foucault (1980) develops how power defines knowledge and truth as discourse. states that power, knowledge, and truth exist as a triangular, self-reflexive matrix in which the rules of right provide a formal limitation of power and counterbalancing this are the effects of truth that power produces and transmits, and subsequently reproduce power. He

denies the traditional philosophical inquiry of “how does truth limit the rights to power?” instead he opts to ask, “what rules of right are implemented by relations of power in the production of discourse of truth?” (p. 93). Discursive inquiry seeks to determine how multifarious relations of power permeate, characterize, and constitute the social body and how these relations of power are not self-constituting but are implemented through the production, circulation, accumulation, and functioning of discourses:

I would say that we are forced to produce the truth of power that our society demands, of which it has need, in order to function: we must speak the truth; we are constrained or condemned to confess or discover the truth, Power never ceases its interrogation, its inquisition, its registration of truth: it institutionises, professionalises and rewards its pursuit [sic] (p. 93).

Power not only limits as a negative element in discourse, but also induces pleasure and produces forms of knowledge. It is above all else, inescapable. This does not mean that people cannot resist, but that resistance takes place within discursive formations and that resistance involves discipline and punishment as opposed to degrees of freedom and rewards. Freedom needs to be qualified in that freedom to do largely occurs within the limits of normalizing discourse. So what is viewed as a freedom functions as exercising choices among normal activities. Freedom to choose activities against the grain typically is met by normalizing reactions—discipline.

Truth also needs to be qualified as non-transcendent, but as a social function:

Truth isn't outside power. Truth is a thing of this world; it is produced only by virtue of multiple forms of constraint. And it induces regular effects of power. Each society has its regime of truth, its “general politics” of truth; that is, the types of discourse which it accepts and makes function as true, the mechanisms and instances which enable one to

distinguish true and false statements, the means by which each is sanctioned . . . and the status of those who are charged with saying what counts as true. (Foucault, 1980, p. 131)

Truth and power are interlinked with right: who has the right to produce truth and thereby the power to enforce that truth. However, this movement reduces the argument to its skeletal form. One may be induced by reading this that a class, a person, a sovereign consciously governs this action as an oppressor. Nothing could be further from the Truth. Without obedience of subjects through unconscious, embodied actions, this system could not exist. We exist not in a linear “Great Chain of Being” as Thomas Hobbes (1651/1998) argues in his Leviathan, but polymorphous networks of power. The discourse of sovereignty reads that a monarch has absolute power from god on high and this concept has evolved over the centuries from divine right to popular sovereignty—democracy. This belief in popular sovereignty establishes the right to create truth. Subjugation occurs in multiple and daily forms, not the dominion of government, be they regal or democratic, but through the functions of the social organisms at the extremities of the system. To play with the age-old synecdoche of the body politic, authority is not centered at the head issuing commands to the extremities in a one-way move, but in the very capillaries and nerve-endings in a series of multifaceted reciprocations. Power circulates, in short, with individuals not as the objects of domination so much as its vehicles. This does not mean that we are all fascists in the head, consciously carrying on the will of the zeitgeist, nor that we function as a democratic or anarchic organism. We unconsciously constitute a society that we institutionalize through an ascent of power actions.

A model of satraps provides a better picture than that of a monarch or perfect democracy. This system is highly inefficient in adapting peacefully to oppositional discourses, and conversely highly efficient of continuing the status quo. Social movements are normally glacial

until a critical mass of change takes place. Such revolutionary change occurs when a segment of a society acts out of touch with other parts, such as the French monarchy and nobility in the years preceding the French Revolution. But such revolutions are the exception because right, truth, and power are globalized in a society for the most part pervading to the extremities as just and commonsensical. The authority groups that maintain power are not normally the secret police so much as the family, the workplace, and other institutions such as hospitals, prisons, and schools. These are the micro-mechanisms of power. Within this exercise of power is the disciplinary power of coercion instituted through nigh constant surveillance of how efficiently time and labor function. Punch cards and class bells, in reality, are more effective than nightsticks and teargas. These explicit policing actions are manifestations of the failure of power more than its efficient progress through time and place. When the right to rule through Truth occurs, then a society is relatively more stable and entrenched than one reacting to resistant elements. In the modern bureaucratic state, the principle of inertia reigns, in which radical change requires a ground swell of popular discontent.

Hyperpedagogy's fluid, transactional, and overtly pragmatic nature contravenes this triangle of power, knowledge, and truth outlined above. By critically examining truths as social functions, by creating emergent and contextual truths as praxis, we may diminish the power modernist ideologies hold over our educational system. This is not to endorse some nihilistic form of relativism, but to cherish pragmatism's denial of dualisms and polemic logic as exemplified by Meno's Paradox that a thing either is or is not. In "Philosophy's search for the immutable," Dewey (1929/1997) deconstructs the duality of transcendent ideals and belittled everyday practice:

Our depreciatory attitude toward “practice” would be modified if we habitually thought of it in its most liberal sense, and if we surrendered our customary dualism between two separate kinds of value, one intrinsically higher and one inherently lower. We should regard practice as the only means (other than accident) by which whatever is judged to be honorable, admirable, approvable can be kept in concrete experience experienceable existence. In this connection the entire import of “morals” would be transformed. (p. 105)

Morals, guides, rules should not so much inhibit and discipline practice as guide it as an ends-in-view. When rules exist as transcendent substances, they curtail the actual, the practical; on the other hand, when rules are seen as flexible, alterable, contingent, they serve a heuristic purpose in education.

Lest it seem that democratic sovereignty discourse and economic disciplinary discourse are homogenous, Foucault writes that democratic and bourgeoisie ideologies are largely heterogeneous. For example, the right to teach all this nation’s youth at public expense comes from the ideal (taken as Truth) that a democracy should provide equal access and opportunities in education to promote well educated citizens who have a good working knowledge of how a democracy functions. However, the power yielded by teachers, administrators, politicians, and pro-business advocates do not practice democracy, preparing students to be obedient to dominant cultural discourses or to be marginalized as abnormal, criminal, remedial, insane. The current standards based curriculum movement, while espousing pro-democracy rhetoric seeks to enforce a very rigid system of discipline. In fact, an educational system, InTime (www.intime.uni.edu/model/democracy/empo.html), endorsed by the Bush administration includes a check-list for observable democratic behaviors [See Appendix 2-2]. One need hardly look deeply at this flawed logic to understand the irony of correcting non-democratic behaviors.

When democracy can be simplified to a check-list of normalized behaviors, then the tyranny of Truth is sovereign. While this paradox seems quite clear in this rendering, norms and social expectations are constantly raised as to why such a system needs to exist: “children cannot possibly exercise self-restraint and responsibility,” “teachers must be held accountable,” and the ever patronizing, “we know what’s best for them.” While the Department of Education’s statistics constantly rebuff such rhetoric, common perceptions endure [See Appendix 2-1]. In No child left behind the call for a highly Draconian system of education is propped up by such rhetoric as the need for greater science and math achievement to improve the security of this country: “America’s schools are not producing the science excellence required for global economic leadership and homeland security in the 21st century” (www.nochildleftbehind.gov). One may well wonder, “Would being better at quadratic equations have aided the people trapped in the higher floors of the World Trade Center?” The appeal to fear and jingoism are appalling, but to be expected in a modernist educational system. We can also note the Fordist attitude that America’s schools are production lines churning out substandard products.

In the next section, I suggest that the very modernist binaries of human and machine as separate entities is a misleading and discriminatory social construct. While we are deconstructing regimes of truth and the dominant institutional mythos of schooling, we should also look at how dominant tropes of man-versus-machine do not serve progressive ends. In making this deconstructive gesture, I look to Bruno Latour, John Dewey, Donna Haraway, and Katherine Hayles to explore how perceiving Human-Computer Interactions (HCI) as a form of cybernetic symbiosis proves unsettling for modernist binary structures.

Hyperpedagogy as congealed labor

At this point, I believe it is appropriate to begin deconstructing the tropes of disembodiment and binaries that the hype of hypertext tends to promote. This theme of deconstructing the myths of transcendence and essential difference will be reoccurring themes throughout this document. Conceiving hypertexts as socially and individualized constructed artifacts, as congealed labor, is important. Often, computers, as either educational tools or an alternative medium, are separated from social context and made distinct from the learner. A long-standing educational fallacy is that instruction should be subject-matter or child centered. Dewey (1902/1997) instead sees the subject-matter, the distillation of cultural experiences, and a child's experience as "mutually dependent" (p. 241). He encourages teachers to "realize that the child and the curriculum are simply two limits which define a single process" (p. 239). Like Dewey, I hold that instruction needs to bridge individual experiences and culturally valued subject-matter. A parallel construction to this is that the child and the computer are parts of the same process. Like Bruno Latour, I believe that hypertexts exist as a symbiosis of human and machine within a cultural matrix, in this case the institution of American education.

What the theorists I have previously cited (Adams, 1993; Barlow, 1996; Callahan & Switzer, 2002; Chou & Lin, 1998; ERIC, 1995; Ford & Chen, 2000; Hiltz & Turoff, 1993; Paige, 2002; Pang, 1998; Rhinegold, 1993; Tergen, 1997, 2000) do not address is digital technology's role in education itself. Often, people who either champion or critique digitally enhanced education fail to consider the technology as a cultural construct imbued with social values and assumptions. Therefore, to better comprehend digital technology as a pedagogical tool, I refer to Latour's (1994) examination of technology as blackboxed, congealed labor. Latour offers a perspective on human/non-human transaction and CMC in "On Technical Mediation—

Philosophy, Sociology, Genealogy.” He claims that humans and non-humans trans-act with one another, that we both affect one another in a complex matrix he calls symmetry or a “swapping of properties” (p. 43). We “blackbox” these processes because we take them for granted—that is until our normally opaque technologies manifest themselves by breaking down. We typically have a metis, or strategy, for a tool that through existing in a complex collective changes as needs and contingencies change. In other words, we mediate our actions according to our tool usage, a form of “congealed labor” (p. 40). He acknowledges that like Dewey’s perceptions on knowledge as evolving with experience, technology evolves through usage, need, in a symbiotic relationship with humanity.¹⁷ He modifies Heidegger’s homo faber fabricatus, man the tool maker, into homo faber socialis, humans as creators of society through which we make sense of all stimuli (p. 47). The import here is that humans are not inherently wise, Homo sapiens, or simple tool makers, but rather creatures living complex lives in symbiosis with both tools and society. The place where a person and a tool exist independently is a distinction for convenience’s sake, not a functional one. Where does the person hammering in a nail exist independently from the hammer in this existential function? To wit, he echoes Dewey’s stipulation that humans are complex organisms that cannot have their subfunctions categorized into separate, distinct entities. A human living outside of society and without tools is a non-existent species in this world, but an abstraction concocted in social science laboratories for expediency’s sake. I incorporate Latour’s insights to look into the blackboxes of schools as loci of institutionalized learning, of computers as tools transacting with human actants (hybrid social actors with shared, contingent properties), and of hypertexts as loci where humans and computers transact in a collaborative social enterprise. From this perspective of CMC as a form

of socially informed “congealed labor” (p. 40), communication never transcends the bodies of the users, much less the body politic in which all users are immersed.

From this perspective of technology as extensions of the socialized self, hypertexts should be viewed as the distilled products of a process of technical inquiry much as wine is the distilled “essence” of grapes in the process of making wine. In other words, they are forms of “congealed labor.” Dewey states “a tool is a thing used as means to consequences, instead of being taken directly and physically” (p. 146). Tools are functions that we make from direct physical existence (perhaps using tools we have already created) to serve as means to our ends. What I find most appealing about hypertexts as tools is designers and users may easily retool them to fit inquirers’ various purposes. Although hypertexts are event contingencies derived from prior creative inquiry, they lose little of their event quality. An event is comprised of many possible events, depending on how a given individual chooses to navigate the space. Linguistic meanings and logical essences are not immediately given in place or time. Rather they emerge wherever they have consequences. They defy the metaphysics of presence. Learners who enter well-designed hypertext (or hypermedia) experiences hyperthinking as individualized transactions wherein they may readily realize their unique potential in their unique ways.

Barry Wellman (2001) reiterates some of Latour’s key points in his essay, “Computer networks as social networks.” In this essay, he maintains, “computer networks are inherently social networks, linking people, organizations, and knowledge” (p. 2031). The Internet, he argues, creates a form of society, not a disembodied one as some maintain (Adams, 1993; Hiltz & Turoff, 1993; Rhinegold, 1993), but a geographically and even temporarily dispersed society with its norms and mores. Because of the dispersions in time and space, a cyber-society tends to be more fluid than many proximal societies. This change is not as radical as it may seem, given

the growing tendency for transience in Western culture, the culture that tends to dominate the Internet. He notes that the voice of doom declaring that the Internet is destroying a sense of community is sheer nostalgic nonsense. In the West, the ideal of village or small-town community exists in literature such as Sherwood Anderson's (1919/1960) Winesburg, Ohio and Willa Cather's (1923/1994) My Antonia not in most current American's lived experiences. Sururbanization long ago altered the landscape of community, and so a further dispersal and privatization of community (not having to leave home to travel) that the Internet provides is an evolutionary change. He also dispels much of the hype that digital communities are Utopian ones formed from all social classes and having little hierarchy. In contrast, most users are affluent and seek out like-minded people to converse with and so the Net is often more racially, gendered, and class segregated than most modern Western communities (Wellman & Gulia, 1999).

Building on the concept of congealed labor, I move to the cyborg, a form of liminal being that disrupts further easy categorization and binary structures. This move includes investigating how binary tropes of disembodiment promote traditional power hierarchies, e.g. men are more rational and therefore better than women and that capitalists as owners of technologies that workers merely use are better than laborers. Hence, ideas of congealed labor and cyborg prove most dangerous to dominant discourses.

Cyborgs, posthumans, & flickering signifiers

In this section, I detail the functional entity of computer user as cyborg. We must ask ourselves, "At what point does the biological entity cease to exist in the machine?" Latour's concept of congealed labor segues nicely into Donna Haraway's conception of cyborg. Donna Haraway (1991/2001) writes in "A cyborg manifesto: Science, technology, and socialist-feminism in the late twentieth century" that the very image of the cyborg – part animal, part

machine – disrupts tropes of mind / body, human / machine dualisms to the point of blasphemy: “The cyborg appears in myth precisely where the boundary between human and animal is transgressed. Far from signaling a walling off of people from other living beings, cyborgs signal disturbingly and pleurably tight coupling. Bestiality has a new status in this cycle of marriage exchange” (p. 504). This manifesto to transgress canonized categories becomes then a “theoretical and practical struggle against unity-through-domination or unity-through-incorporation ironically not only undermines the justifications for patriarchy, colonialism, humanism, positivism, essentialism, scientism, and other unlamented-isms, but all claims for an organic or natural standpoint” (p. 508). The cyborg’s ideological transgressiveness allows for a disruption in the normal, categorized as natural, immutable, even holy. This call to blaspheme the dreams, the manifest destinies, of the West opens possibilities to challenge conformist ideologies.

The cyborg is a reconception of the natural human; it is a techno-biological existential / functional entity. This poststructuralist conception of posthuman recognizes a hybrid species of functional unity, not essential duality, a union of biological organism with cybernetic mechanism. As N. Katherine Hayles (1993) contends, the posthuman “confounds the dichotomy between natural and unnatural, made and born” (p. 152). She reflects on Donna Haraway’s (1989) revelation that in modernist anthropology and computer science the oldest and the newest are respectively privileged. In primatology, the desire to identify an Eve, combining Biblical and scientific-essentialist ideologies, takes a preeminent position; in cybernetics, conversely, innovation provides the dominant research rationale. These discourse communities tend, then, towards dichotomous research strategies: stasis and acceleration.

If one, however, holds that human primates rely heavily on digital technology, at least in the currently privileged cultural manifestations of the West, then these strategic dualities seem at odds. If one, instead, perceives humans as transgressive cyborgs and homo faber socialis, then these essentialist dualities evaporate into functional units. This is where the cyborg exists, on the liminal space of human and machine. Traditional conceptions of human and machine isolate each other as essentially other, logically contradictory. Thus, a need for the neologism of posthuman exists. The posthuman perspective intertwines the social, the biological, and the cybernetic being.

When we conceive the cyborg as a posthuman conglomeration of social, biological, and cybernetic organism, we can start to reconfigure signification as a hybridization. Hayles (1999) premises her dialogue on flickering signifiers by debunking the traditional construct of information as the double bind of pattern and randomness. In other words, pattern is presence and its opposite, randomness, is absence. Hence, we have a classic metaphysics of presence duality of a and not a in which presence is valued above its counterpart absence. Yet, the relationship of pattern and randomness in information proves more complex: “pattern and randomness are bound together in a complex dialectic that makes them not so much opposites as compliments or supplements to one another” (p. 25).

Taking this complexity to the processes of signification, the traditional direct correspondence between signifier and signified (e.g. keystroke and paper on a typewriter) is disrupted. In digital textual construction this becomes apparent as one’s subjectivity is distributed among intellectual, physical, social, and code. Language is, of course, a social construct in which the letter “t” is a symbol for a sound and taken together with other coded social symbols can form a word or concept such as “tool.” This word “tool” can be encoded for

others to decode. But how this code “tool” is decoded can prove problematic. Here we enter simulacrum or a series of substitutions:

The trace is not a presence but is rather the simulacrum of a presence that dislocates, displaces, and refers beyond itself. The trace has, properly speaking, no place, for effacement belongs to the very structure of trace (Quoted in Garrison, 1999, Derrida, 1973, p. 354)

The trace for the code “tool” refers only to other traces, other codes. There is no essential, final meaning for a code. Meaning comes from usage, function, context—from relationships to other socially constructed codes without an external structure informing the entirety of langue. In digitality, this tracing or series of substitutions looms forth in the avatar—a digital subjectivity dislocated among codes, physicality, intellect, and social constructs. Entering the digital universe, subjectivity can be perceived as a series of feedback loops or transactions of code. Hayles refers to this disrupted subjectivity as both “an entanglement of signal and materiality” (p. 29) and more poetically, if not blasphemously, “data made flesh” (p. 47).

In the traditional dialectic of information as pattern and randomness, noise or mutation is a problem. From a poststructuralist perspective, however, noise/mutation is not an aberration of information but rather part of a complex system.

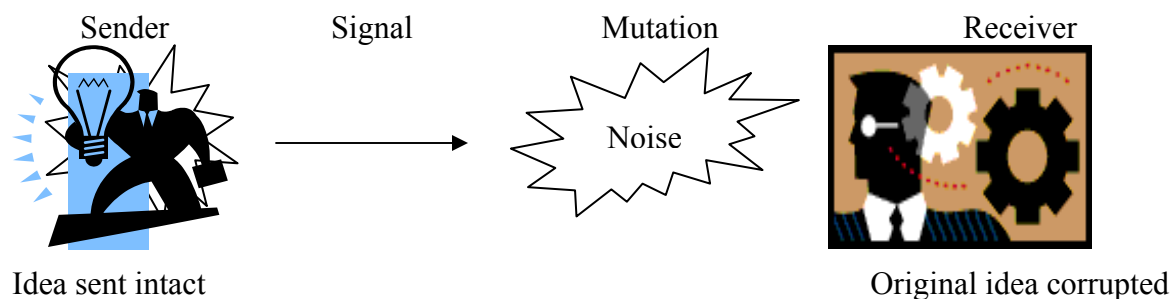
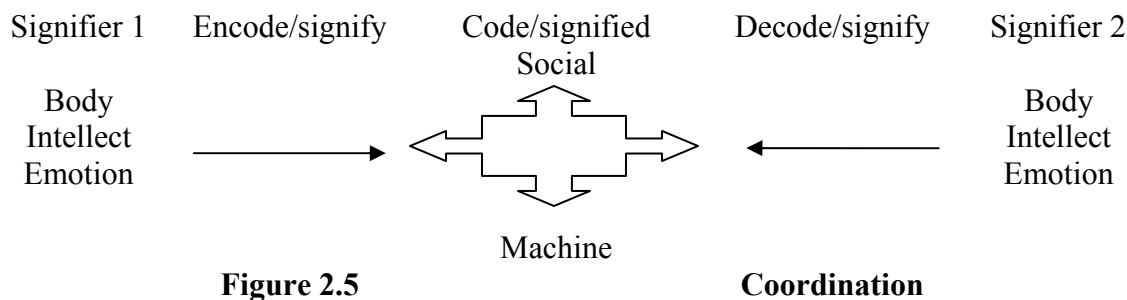


Figure 2.4

Noise

In Figure 2.4, we can see how traditionalists regard noise as a disruption in efficient information transmissions. The noise results in a mutation of the original information, so that the receiver does not capture a pure signal. One should also note that the receiver bears no action in this construct that he or she is a passive recipient without the power to manipulate a solid piece of data. If, however, we rely on a different model in which meaning is a coordination of signification between two actors using a socially mediated, fluid and evolving tool, language, then mutation is a part of the process and can be accounted for not as a disruption but as a praxis.



In Figure 2.5 we can see that meaning-making is much more complex and involved. I have added social code (language) and machine code (program) to the process, giving it four axes. Moreover, the previously straight-forward signal is replaced by processes of encoding and decoding in which the signified is owned by neither participant. Finally, encoding is an emotional, embodied, and concurrently intellectual exercise. This construct is not meant to deny power relationships because social factors, such as professor / student, certainly affect the social, intellectual, emotional, and embodied factors of this linguistic interchange. Just as certainly, this construction disrupts the power dynamics as indicated in Figure 2.4.

David Harvey (1989) notes that as information has become a commodity to be passed on intact, held intact, and sold intact, mutation, or joint signification, proves highly problematic. If information can be possessed intact, then it can be sold intact; if, however, it is mutable, fraught with randomness, then limiting access to valuable, privileged information proves much more

difficult. Commoditization of information as an implement of power relationships relies on such limitations. Such a disruption is not merely a technical issue to be overcome, but strikes at the heart of Western metaphysics' reliance on privileged binaries.

Chapter summary

In this chapter I have sought to describe how hyperpedagogy addresses longstanding debates about the nature of knowledge and education and relies on poststructuralist theories regarding text and authority and explain why such reliance proves important. In this respect, hyperpedagogy seeks to replace such venerable myths that standardized tests are fair, with an idea that instruction should be based on knowledge and understanding, what a student can apply, not information retrieval and that education needs to prepare learners to be critical thinkers, not simply uncritical autonomous choosers in an information economy. Finally, Landow relies heavily on Foucault's deconstruction of authority in education, and how power manifests itself through normalizing practices. It is this recognition of the abuses of power through tests, disciplining, and observation that hyperpedagogy provides great promise in how digital technologies are used in classrooms.

Having begun to deconstruct power in technology and education, I sought to investigate how the triumvirate of power, knowledge, and truth foster dualistic thinking by presenting Latour's concept of congealed labor and homo faber socialis and then juxtaposing Latour to Haraway's cyborg manifesto and Katherine Hayles concepts of posthuman and flickering signifier to illustrate how these binaries foster discriminatory cultural practices. I will return to a discussion of binaries and discrimination in greater detail in chapter 5. Hyperpedagogy seeks to break down these binaries to instill more egalitarian ideologies and practices in e-learning. In order for hyperpedagogy to become a reality, however, the dominant forms of curriculum need to

change. In the next chapter, I will examine how revisionist, not reform, curricula hold forth a means to make hypertext an educational praxis.

Chapter 3: Hyperpedagogy at odds with information age pedagogies

In his poem “To a locomotive in winter” Walt Whitman (1874/1970) details how the inexorable progress of science drives on undiminished through controversy: “Thee in the driving storm” (l. 2). The “black cylindric body” (l. 3) with “ponderous side-bars” (l. 4) drives through the storm seemingly by sheer awesome power, so that the “train of cars behind, obedient, merrily following / Through calm or gale” (ll. 11-2) do not falter. In his recitative, Whitman describes the locomotive as a metonymy for technological progress and how obedient and merry is the general populace to this progress. His luddite warnings should be heeded too these days in our headlong rush to push computers into classrooms and the curriculum. James Marshall (1996, 1997, 1999) has illustrated how economic interests have promoted this technocratic infusion and correspondingly have promoted an essentialist curriculum to keep students obedient and merry on a straight-line curriculum, much like the tracks laid out for Whitman’s locomotive. With the technology has come a traditionalist agenda to return to the basics. In No child left behind, Secretary of Education Paige (2002) advocates that all children be technology literate by eighth-grade and that technology infuses No child left behind’s straight-line curriculum. Computers and the one right way to teach, such as phonics, “Thanks to scientific research, we now know how to teach our children to read” (www.nochildleftbehind.gov), are indicative of the Bush reform program. In this section, I adapt Marshall’s critique of busnopower and busnocratic rationality to deconstruct this assumptive correlation between digital technology and traditional curriculum theorizing. Of import to the argument of busnopower is the conflation of information with knowledge that stresses passive and efficient reception of information instead of an active engagement in meaning making as knowledge creation. Related to this emphasis on information processing is a belief in information as limited and static, denying epistemological and semiotic

perspectives that posit that knowledge is largely a social construct, a simulacrum (Barthes, 1964/2000; Bourdieu & Passeron, 1977; Derrida, 1973; Foucault, 1977).

My primary claim in this chapter is that traditional curricula offer no space for hyperpedagogy with their reliance on structuralist ideals. Technocratic rationality simply does not afford room for freeplay in the curriculum. As I have detailed in previous chapters, hyperpedagogy posits a poststructuralist universe in which static, universal, discovered information gives way to dynamic, contextual, relationally defined knowledge. A pedagogy that accepts such a fluid episteme cannot exist within the rigid structures of traditional and so-called reformist curricula. Hyperpedagogy is a resistant pedagogy to social, bureaucratic, and technocratic efficiency pedagogies that endorse hegemony. These interrelated pedagogies of efficiency serve as a collective mask for neo-liberal, information age, new global economy agendas. The curriculum envisioned for hyperpedagogy relies on the theories of knowledge and teaching promoted by such theorists as John Dewey (1902/1998; 1911/1998; 1916/1944; 1929/1997; 1929/1998; 1938/1997), James Marshall (1996; 1997; 1999), and Maxine Greene (1971/1997; 1995). In order to better appreciate the intricacies of this debate and its current significance in respect to hyperpedagogy, I will delve into the roots of the traditionalist curriculum planning by examining the controversial topic of learning in the information age, particularly discerning how commonplaces obscures issues of authority and hegemony.

A running theme in this chapter, and throughout this project, is that many proponents of the new global economy and the benefactors of digitally enhanced instruction promote a tacit assumption of human information processing. Rod Paige (2002), Andrew Molnar (1997), and William Callahan and Thomas Switzer (2002) endorse a technocratic determinism that assumes the best pedagogical model for digitally enhanced education is scientifically verifiable human

information processing. They do not debate various educational means, but instead endorse what they believe is the one correct educational methodology for digital pedagogy. They consistently avoid broaching any notions of creativity, freeplay, or connecting to students' experiences and dreams. They do not address pedagogies of consciousness raising, pedagogies of discomfort, pedagogies of active learner engagement, pedagogies of emergent context, and pedagogies of social justice. I argue that the foremost reason information age enthusiasts do not promote such pedagogies, why they are not even addressed, is because such pedagogies would undermine their best efforts to make students pliable, docile. For the new global economy to function as smoothly as possible for the social and economic elites, a conscious learning populace is a dangerous thing. Hence, they assume the role of paternal benefactor who knows what is in the individualized students' best interest: what pedagogies, skills, and bodies of knowledge will best serve them in the new global economy. What they never address is that these pedagogies, skills, and bodies of knowledge serve the ends of the plutocrats and the technocrats. Their regime of truth is to prepare a vast pool of skilled labor for the new global economy and peddle this as being in the best interest of the autonomous chooser.

Marshall's (1996; 1997; 1999) theory that capitalist ideology informs many of the unfounded presuppositions about e-learning. I also outline Elliot Eisner's (1967/1997; 1994) studies in curriculum theory on the major curricular camps and examine how curriculum itself is defined. I then fathom the murky waters of Fordist curriculum theorizing and how social justice progressives and curriculum reconceptualists have sought to dissuade Americans from adopting scientific management models for the US educational institution. The remainder of this chapter is devoted to deconstructing traditionalist perceptions of curriculum, paying close attention to Franklin Bobbitt (1918; 1924) and Ralph Tyler (1949) as the primary traditionalist theorists and

Dewey as the chief proponent of a progressive curriculum. Throughout this chapter, I rely heavily on Herbert Kliebard's (1970/1992; 1971/1992; 1975/1992a; 1975/1992b) insights on curriculum.

Traditional curriculum theory

Education has traditionally held that knowledge can be presented to learners in an efficient manner. This efficiency, as promulgated by Bobbitt (1918; 1924), Callahan & Switzer (2002), Werrett Charters (1921; 1926; 1923), Molner (1997), and Paige (2002), determines that knowledge is fixed and the center of instruction. This is the structuralist paradigm for episteme. Juxtaposed with this is an assumption that students should live up to externally determined potentials. Furthermore, the structuralist paradigm presupposes a belief in straight-line translation of knowledge, that seeing is indeed believing. Bobbitt (1918) creates first a false dilemma that bad education is unguided and that good education is scientifically predetermined to achieve a prosperous nation:

Curriculum may, therefore, be defined in two ways: (1) it is the entire range of experiences, both undirected and directed, concerned in unfolding the abilities of the individual; or (2) it is the series of consciously directed training experiences that schools use for completing the perfecting of the unfoldment. [sic] (p. 11)

After reductively parroting Dewey's (1916/1944) theory of experience – a prime example of the straw man fallacy – Bobbitt gives himself away by writing that education is a predetermined and perfectible “unfoldment” of the individual's career before it has taken place. This is entelechy pure and simple—the belief that one's lot in life is to live up to his or her destiny to achieve a final and perfect form of the self, eidos. Inherent in this thinking is the belief in a unique and encoded substance or essence, ousia. In this formula, when we know a person's latent potential,

energeia, derived from an exact understanding of his or her essence, we can scientifically determine a child's course of life, curriculum vitae, for him or her. We can easily see this rationale working itself out in the following passage:

The technique of curriculum making along scientific lines has been little developed. The controlling purposes of education have not been sufficiently particularized. We have aimed at a vague culture, an ill-defined discipline, a nebulous harmonious development of the individual, an indefinite moral character-building, social efficiency, or, often enough nothing more than an escape from a life of work. Often there are no controlling purposes; the momentum of the educational machine keeps running. So long as objectives are but vague guesses, or not even that, there can be no demand for anything but vague guesses as to means and procedure. But the era of contentment with large, undefined purposes is rapidly passing. An age of science is demanding exactness and particularity. (p. 10)

This slippery slope fallacy illustrates what Bobbitt fears the most about the unparticular life—lazy workers. Unguided, workers will not perform vital national interests; America will lose its edge, and become immoral. If this sounds familiar, one need look no further than current advocates for standardization: “To permit knowledge to be fragmented, as we have, by serving it up cafeteria-style, with each person choosing whether to be minimally literate or to be a specialist, contributes to the diminution and degradation of the common culture” (Ravitch, 1981/1997, p. 206). Ravitch further underscores two typical features of structuralist thinking: belief in reductive dichotomies presenting false dilemmas based upon ad populam agendas, and a belief in the common culture being criminally undermined by their opponents in a moral struggle for the character of the nation. Yet, this clarion call for strict objectives and the common culture

are highly inappropriate in a pluralistic, democratic society. If we believe in democracy as something other than a dogmatic belief in the American way, such a totalitarian stance is illogical. How we can prepare America's youth for participation in a functioning democracy advocating such restrictive notions is frankly beyond me.

This train of logic presupposes two more problems: that education must either be teacher centered, teacher here serving as a directly accountable representative of the common culture (whatever that is), and that inquiry without external and strict guidance leads to sloppy, unguided thinking. Dewey's (1938/1997) theory of inquiry promotes no such thing; it recognizes that people experience anxiety (disequilibrium), seek a way out naturally (inquiry), and then learn from this experience (growth). Inquiry requires hypotheses for reestablishing equilibrium; these are objectives, what Dewey calls ends-in-view because our preliminary goals change as circumstances warrant. This does not advocate no goals, or even highly vacillating ones; it recognizes the complex nature of environmental interaction in which people's goals are altered by events in time and place.

At the turn of the twentieth century, many people at least believed that the rich were naturally superior to the poor. Both the Gospel of Wealth and Social Darwinism espoused these beliefs to rationalize incredible disparities in wealth and power. What is amazing at the turn of this century is that Social Darwinism still largely informs the ideal of scientific curriculum making (Herrenstein & Murray, 1994). The telos of American education continues to be social and economic prosperity and as the system tends to shift according to class – the two most telling indicators of academic and economic success being parents' income and educational levels (Spring, 2002) – with children of the affluent selected for the college bound curriculum and those of the working classes the service industries and labor curriculum.

Scientific curriculum making presupposes that precision and objectivity are primary goals for creating a curriculum. As such, Charters (1921; 1923; 1926) and Bobbitt (1918; 1924) looked to business efficiency models for activity analysis and functional efficiency. These curriculum theorists desired an aura of technical expertise and believed that science could do away with the uncertainties of philosophy. This dogmatic acceptance in the power of science continues today in No child left behind, in which Paige (2002) dismisses philosophical considerations as fads and “unproven education theories” and in a section entitled “The facts about investing in what works,” he writes, “scientific research finds the best way to help those kids who need it the most” (www.nochildleftbehind.gov). In scienticism there is a right way and a wrong way to do things. Moreover, there is a tendency to make the world into a clinical laboratory limiting the number of factors that may affect outcomes that Latour (1995) critiques as so alienated from the intricacies of existence that often results taken from clinical studies cannot be applied effectively because reality is fraught with factors that affect outcomes. In Paige’s case, he emphasizes the particular teaching methods that work he claims in laboratory assessments and subsequently turns a blind eye to significant structural problems, such as the inculcated discriminatory practices in establishing a standards-based curriculum.

Another telling moniker in scientific curriculum making is the belief that education is preparation for adulthood. Bobbitt (1924/1997) writes “Education is primarily for adult life, not for child life. Its fundamental responsibility is to prepare for the fifty years of adulthood, not for the twenty years of childhood and youth” (p. 8). Hence, a careful study of precise adult activities and a translation of these activities in their minutiae to education makes perfect sense in this entelechy. Dewey (1916/1944), in Democracy and education, critiques this as removing children from a society as co-creators within it, “Children are not regarded as social members in full and

regular standing. They are looked upon as candidates; they are placed on a waiting list” (p. 54). Dewey continues by urging that children live in the present and this quality is an excellence, not a bother to be evaded. Moreover, an overemphasis on an abstract adult future lacks concrete stimulation in the present, so teachers must rely on the “Promises of reward and threats of pain” to stimulate learners. (p. 55). This is not to say that education should not attempt to connect to adulthood; that would be giving into dualistic logic that Dewey so abhorred. Instead he posits his theory of connectedness or biological growth of the child as organism: “If education is growth, it must progressively realize present possibilities, and thus make individuals better fitted to cope with later requirements . . . it is a continuous leading into the future” (p. 56). Learning is educative if it leads to habits of desiring to learn further and in ways that may prove useful in a child’s further development. This is not an endorsement of unfoldment along a preset path for the learner. Or as Kliebard (1975/1992b) states, “it is a notion that it is the job of curriculum planners to anticipate the exact skills, knowledge, and – to use one of today’s most fashionable term – “competencies” that will stand one in good stead at an imagined point in the future” (p. 86).

Hyperpedagogy makes no such claim on crystal ball gazing. Hyperpedagogy as a praxis does not seek to inform learners of their eventual competencies, knowledge base (i.e. what everyone must know to succeed in the information age), and exact skills. Rather the pedagogy is an emergent one; one that attempts to tie learners’ experiences to dreams for their future. It is not what William Doll (1999) calls solipsistic navel-gazing. It is as Paulo Freire (1970/2000) remarks an attempt to get learners to name the world for themselves, to look critically into their culture as co-makers of it, and to see connections in their education. Hyperpedagogy stresses forming habits of active participation in one’s own curriculum, not as the individual upon whom

the onus for success or failure lies, but as a creator, the “little-maker” Philip Sidney (1595/1992) refers to. Finally, there is an emphasis on social interaction and metaanalysis of social problems and how such problems come to play in daily activities.

Bobbitt's The Curriculum

Franklin Bobbitt's The Curriculum (1918/1997) initiated modern curriculum theory (Walker & Soltis, 1997). Bobbitt should be considered what Eliot Eisner (1994) refers to as a rational humanist. A rational humanist believes that foremost, humans are rational animals capable of discerning truth from dedicated and exhaustive empirical study. While this seems a just attitude for determining intelligence at first glance, a more dedicated and exhaustive examination reveals that the rationalist believes that the universe is ultimately knowable if one only discovers certain physical truths. The pseudo-scientific emphasis then resorts to what Dewey (1916/1944) calls the metaphysical fallacy that knowledge preexists inquiry and is fixed with a final end. Even Jean Jacques Rousseau's Emile (1762/1997) underscores this faith in ultimate and final knowledge that the enlightened mind can achieve when living in accord with one's natural attributes uncorrupted by society. Dewey critiques this fallacious assumption: “the notion of a spontaneous normal development of these activities is pure mythology. The natural, or native, powers furnish the initiating and limiting forces in all education; they do not furnish its ends or aims” (p. 114). The problem with both Rousseau's natural development pedagogy and Bobbitt's social efficiency pedagogy is that they are based on teleological paradigms: for Rousseau, the best education takes advantage of a person's innate abilities as if abilities are a priori and not learned behaviors; for Bobbitt, a society should train future citizens to do the job of today for 30 or more years in the future as if economic and social needs will remain static. Dewey points out just how myopic Bobbitt's social efficiency, structuralist planning model is:

Industry at the present time undergoes rapid and abrupt changes through the evolution of new inventions. New industries spring up, and old ones are revolutionized. Consequently, an attempt to train for too specific a mode of efficiency defeats its own purpose. When the occupation changes its methods, such individuals are left behind with even less ability to readjust themselves than if they had a less definite training (p. 118).

A social efficiency progressive believes that society can determine what is best for itself and use this knowledge to call upon certain educational reforms aimed at improving the nation. Such assumptions underscored the drive for Physics and Mathematics after the Soviets launched Sputnik and the current emphasis on business training in education so that American educational products can compete in a global market (Bennett, 1992; Bloom, 1987; Gerstner 1990, 1994; National Commission, 1983; Rickover, 1962). This underscores education external to a learner, that society determines what is best for the pupil. In contrast, social justice progressives, championed by Dewey, sought expanded democratic participation, social reform, and more equitable wealth distribution. Bobbitt favored preparing students for society, as expert planners perceived it actually existed or would exist. The difference lies in that social justice progressives favored a fluid planning society while social efficiency progressives favored a fixed, planned society.

As Bobbitt (1924/1997) sees it, “the era of contentment with large, undefined purposes is rapidly passing. An age of science is demanding exactness and particularity” (p. 10). Then, as now, this stance suggests rigid, external objectives, and standards of learning determined by science. What science meant for educators and politicians then, as now, is some version of positivism with it presumed “hard facts” along with theory and value neutral inquiry, or what Bobbitt calls investigations “without pre-suppositions” (p. 13). Bobbitt optimistically announced,

“Experimental laboratories and schools are discovering accurate methods of measuring and evaluating different types of educational processes” (p. 10). It does not matter that the positivist image of science is theoretically dead; ghoulishly, it lives on to dominate educational practice.

Bobbitt (1924/1997) supposes that aiming for externally expert determined goals, students have the highest likelihood for succeeding and so did the nation. Bobbitt wrote that to “train thought and judgment in connection with actual life-situations” (p. 9), will accomplish his goals. Accordingly, I can deconstruct Bobbitt’s basic ideas from the following passage:

Human life, however varied, consists in the performance of specific activities. Education that prepares for life is one that prepares definitely and adequately for these specific activities. However numerous and diverse they may be for any social class, they can be discovered. This requires only that one go out into the world of affairs and discover the particulars of which these affairs consist. These will show the abilities, attitudes, habits, appreciations, and forms of knowledge that men need. These will be the objectives of the curriculum (p. 11).

It is easy to identify the false social Darwinism embedded in the idea that we should educate social classes for their probable destiny. The “rationality” of social efficiency demands social reproduction. Tracking and the differentiated curricula associated with it serves as a social sorting machine for a society that avoids critical democratic deliberation. As Aldous Huxley (1965) wrote in Brave new world revisited the social ethic that holds humans as entirely social organisms programmable to social needs as part of a collective hive undermines our humanity, our biological and social uniqueness. Such curriculum planning as Bobbitt advocated presumes such passivity and interchangeability to the socio-economic machine.

James Gress and David Purpel (1979) remark that Bobbitt's "model of curriculum planning . . . [has] survived a half century's thought and practice in one form or another" (p. 237). Walker and Soltis (1997) write, "The performance-based and competency-based teacher education movement of the 1970's repeated this mode of curriculum construction" (p. 55). The same holds for the "standards" movement over the last decade. The enduring appeal of Bobbitt's objectives and standards approach lies in its putative appeal to modern notions of "reason," objectivity, and measurement. The promise of permanent progress is also modern, though the reductive methodological assurances of a safe and secure, if narrow, path to a perfect and predetermined teleological essence, is premodern as is the metaphysics that supports it.

Tyler's "Rationale"

The most influential name in curriculum theory is Ralph Tyler (1949) (Applebee, 1996; Flinders & Thorton, 1997; Walker & Soltis, 1997). Gress and Purpel (1979) note that the "basic elements of" Bobbitt's "work underlie Tyler's classic formulation" (p. 237). The classic work is Tyler's Basic principles of curriculum and instruction (1949). The following excerpt comes from Tyler's "rationale:"

[F]our major tasks serve as the focuses of curriculum construction: The selection and definition of the learning objectives; the selection and creation of appropriate learning experiences; the organization of the learning experiences to achieve a maximum cumulative effect; and the evaluation of the curriculum to furnish a continuing basis for the necessary revisions and desirable improvements (p. 246).

Tyler focuses on predetermined objectives lying outside the student's activity. Presumably, these objectives are so valuable they must serve as the essential *telos* of all learning. Tyler assumes that concrete and predetermined objectives will make education more efficient and effective

regardless of academic discipline; accordingly, Walker and Soltis (1997) state, “Tyler . . . proposes that a school’s philosophy be used as a set of standards to ‘screen’ the objectives derived from this first step in the process. This will ensure that each objective is in harmony with the school’s general philosophy and ideal aims” (p. 56). The assumption is that the philosophy of the school establishes the valued objectives for which Tyler has a value neutral tool of means-ends rationality for achieving. This tacitly assumes the old positivist fact versus value dualism as well as the means versus ends one. Most schools, of course, will presume that his methods like most others and most media are value neutral relying on traditional metaphysics’ supposition that the ends, the content, is most essential in education.

One should also consider Tyler’s (1949) stance on learning experiences. The guiding idea is that of “sequence and integration” (p. 251). Tyler declares,

Curriculum makers can also identify significant skills that are sufficiently complex and pervasive to serve as organizing elements to achieve sequence and integration. And, for objectives involving attitudes, appreciations, interests, and personal commitments, curriculum makers can identify important values that can serve as organizing elements (p. 251).

This is the seductive old idea of curriculum vitae as a straight line, secure, and certain method for being safely shepherdded through hazardous terrain. While this straight-line approach, with proscribed learning goals as predicated by Mager (1997) and Dick, Carey, & Carey (2001), makes creating instruction easier, it does little to prepare learners for the unknown realities of tomorrow.

Finally, there comes evaluation to which the code word today is accountability. “I employ the term,” writes Tyler, “to include the process of comparing the ideas and assumptions

involved in curriculum development with the realities to which they refer” (p. 252). Although he does not say so, evaluation presupposes a philosophical bent since evaluation obviously requires that we reflect on the values we espouse in making our selections of objectives, means for obtaining them, and the organization of those means. What is odd, is that Tyler, again implicitly, seems to think he has a value neutral method of evaluation. Things are much the same today.

Commenting on Tyler’s rationale, Walker and Soltis (1997) conclude,

He makes no commitment to certain ideal aims, specific objectives, a particular program, or one conceptualization of curriculum phenomena over another His commitment is to a highly rationalized, comprehensive method for arriving at logical and justifiable curricula of many different kinds (p. 58).

Curriculum is method’s child, and content’s orphan; the methodological form versus subject matter content dualism is untenable. Walker and Soltis also conclude that the Tyler “rationale” is “the paradigm, the dominant model of twentieth-century thought about curriculum design (p. 55). Nothing has changed in the twenty-first century largely because the Tyler rationale has all the ingredients characteristic of modern thinking, including a firm commitment to “rationality,” progress, theory (or philosophy) independence of fact, value neutrality, a profound commitment to an external telos as the essence of action, and faith in “method” for arriving at the highest value, the summum bonum, the supposedly value neutral content.

The preeminent status of objectives in traditional curriculum making arise from three factors: the belief in a fixed, perfectible episteme grounded in the metaphysics of presence, the ideal that an episteme is of intrinsically more value than others, and the aura of scientific credibility that proven objectives carry. In order to promote standards as “specific, objective data” as No child left behind does, one must accept a finite and perfectible cosmos of distinct

substances. In other words, humans can understand the entirety of a thing, thereby ignoring semiotics, and that things are complete in themselves, ignoring post-enlightenment theories of Physics. In the mid-nineteenth century, Herbert Spencer (1857/2002) wrote an essay, “What knowledge is of most worth?” in which he purported that a scientifically derived curriculum would best serve the needs of learners. He believed that humans learn according to the manifest laws of nature and the difficulty in education is to determine the best means and the knowledge most worth knowing to succeed in life. After scientists have verified what people need to know, they can determine how people will best learn it. By having experts scientifically verify what knowledge is of most worth, the learner is removed from the equation as an active participant and the objectives are set before a learner has been identified. As I have pointed out earlier, the knowledge of most worth is dominated by capitalist hegemony—the new global economy serves as the telos. It has literally the most worth. Because the experts have already announced the ends, the method is one dominated by the agenda of getting verified information into the learner’s cognitive structures: human information processing. Information processing becomes, subsequently, the one right way of doing things, once we have decided upon entelechy as the model. Hence, the emphasis on objective, scientifically verified data. Take any one of these three props out of this system and like a metaphorical table, it will collapse of its own weight.

Kliebard (1971/1992) writes regarding the preeminence of objectives, “If science is to be identified with exactitude, then scientific curriculum making must demonstrate its elevated status through which objectives are stated” (p. 87). This allows curricular positivists, such as James Popham (1972/1997) to declare, “for instructional or evaluation purposes, such an objective [students will become familiar with important literary insights] is almost useless since it identifies no specific indicator for determining whether or not the objective has been achieved”

(p. 55). Again, he writes, “unmeasurable goals are of little or no use” (p. 57). His clear attachment to quantifiability and the utilitarian value of goals that can be measured seriously limits what one can learn and how one can go about learning. If learning cannot be analyzed through a scantron bubblesheet, then it must not be learning. This, of course, greatly simplifies notions of learning, especially critical and active learning. In this method of education, one cannot change his or her world through learning because as Aristotle wrote so long ago, “there is nothing new under the sun.” And this is precisely why such a curriculum is so very dangerous for a democracy and why we need to seek out alternatives. Docility and democracy mix no better than oil and water, so it is absurd to promote a system premised on docility as beneficial for a democracy.

Tyler in his “Rationale” even goes so far as to determine what learners’ needs are. Again, the sheer absurdity of defining what someone else’s needs are and that needs are objective dumbfounds me. How an expert can identify a person’s subjective and emotional needs or better yet educational desires is an incredible statement about creating docile learners. Paul Komisar (1961/1992), an ally of Tyler, describes needs as a two-part process for the curriculum planner: “one to report deficiencies and another to proscribe for their alleviation” (quoted in Kliebard, p. 158). Here again we see that the learner is deficient, lacking, failing to achieve and the trope of the doctor is again invoked, purposefully—the child is sick and the scientists can cure him or her. R. F. Dearden (1966/1992) writes in response to such patronizing and positivist conceptions of needs:

The concept of “need” is an attractive one in education because it seems to offer an escape from arguments about value by means of a straightforward appeal to the facts empirically determined by the expert. But . . . it is false to suppose that judgments of

value can thus be escaped. Such judgments may be assumed without any awareness that assumptions are being made, but they are not escaped. (quoted in Kliebard, p. 159)

As Eisner (1967/1997) claims, such a belief in being value-neutral in establishing objectives becomes dogmatic and serves to hinder learning by making education drudgery and so disconnected from lived experiences to be merely trivial and tangential to a learner's existence.

Using Eliot Eisner's (1994) three curricula (explicit, implicit, and null), I continue to deconstruct Callahan and Switzer's OnTime. Eliot posits that when examining a curriculum, one should look at three levels: the explicit, overt level, usually found in the introduction; the implicit, the subtle level, usually found in reading the methods and particular aims of a curricular document; and the null, the hidden agenda, usually discerned by identifying the author or authors ideological biases. Some curricular documents will have explicit and implicit agendas that mesh well and even some will be reflective and identify their ideological preferences. OnTime, however, is not such a curriculum. Its introduction seems to endorse a constructivist pedagogy by calling for active learner engagement in knowledge construction; the methodology, however, endorses cognitive scienticism; and finally, they make no attempt to be reflexive. In fact, the document is quite self-assured and dogmatic, establishing itself as the right way to teach using digital technologies. The explicit agenda illustrates desire for responsible, self-sufficient, active learners, who proactively contribute much to their own learning goals and methods; the implicit agenda illustrates methods designed to make students react to external stimuli in a proscribed manner (e.g. fill-in-the-blanks and multiple-choice), creating passive students given precious little room for critique and analysis, two keys for active learning; the null agenda, the content is predetermined and predominate, so little freeplay exists for student discovery—the assumption here is that knowledge is finite, fixed, and ultimately determinable to an absolute value.

Another useful lens for analyzing OnTime is Arthur Applebee's (1996) Curriculum as conversation: Transforming traditions of teaching and learning. Applebee writes of knowledge-in-action as a means of learning that is significant to learners. Its antithesis is knowledge-out-of-context, in which a standard, or core, body of knowledge is constructed by experts summing up what students need to know to succeed socially and economically. An emphasis in the latter is placed on multiple-choice, true-false, and other such limiting and binary knowledge constructs. OnTime has pronounced a knowledge-in-action agenda, yet has promulgated a knowledge-out-of-context methodology. The strength of this instructional model is that students tend to do better on conduit model testing, yet their critical analytical skills suffer:

Such a curriculum of knowledge-out-of context may enable students to do well on multiple-choice items. It does not enable them to enter on their own into our vital academic traditions of knowing and doing. They lack the skills to develop interpretation, to analyze a new situation, or to muster evidence in support of new arguments and unexpected opinions. (Applebee, 1996, p.33)

The underlying problem resides in the privileged status of the content as the origin, ends, and fixed meaning of knowledge. We are carrying the baggage from Plato's "myth of the cave" where knowledge, episteme, is ultimately and permanently definable to a fixed point—a monad. This, in turn, leads to suspect pedagogical methodologies that emphasize knowledge-out-of-context. Applebee describes how this mindset affects methods:

Educators have relied on classroom practices that focus almost exclusively on memory, allowing goals of active reasoning and participation to fall by the wayside. Instead of the knowledge-in-action that both allows and develops through participation in culturally

significant traditions of discourse, we have emphasized the knowledge-out-of-context that comes from studying its characteristics (p. 26).

This reliance on acontextualized knowledge may well enable students to do well on multiple-choice and fill-in-the-blank tests, but does precious little to prepare them for a world that does not function in such a reductive manner. Subsequently, this method instills a dichotomous world-view in which students learn that real world decisions can be distilled to either/or solutions that reduce complexity at the expense of creativity.

The task at hand is to find ways to salvage the goals of the academic agenda from the myopic and ill-conceived methods adopted from information technology. In this decade scholars (AAUW, 2000; Bohlin & Bohlin, 2002; Boler, 2001, 2003; Byrson & de Castell, 1998; Cuban & Kirkpatrick, 1998 Doanne, 1990/2000; Dreyfus, 2001; Dwight & Garrison, 2003; Haraway, 1993/2001; Hayles, 1993/2001, 1999; Herring, 2001; Hickman, 1992; Jonassen, 1993; Kirkup, 2000; Latour, 1994; Marshall, 1996, 1997, 1999; McChesney, 2000; Morgan 1997/2000; O'Brien 1997/2000; Pearson, 2002; Peck, Cuban, & Kirkpatrick, 2002; Peters, 2003; Plant, 1996/2000; Reed, 2002; Regan, 1994; Sophia, 1993, 1998; Springer 1996/2000; Stone, 1992/2000; Turkle 1996; Weinstein, 1998; Wellman, 2001) from various disciplines have offered warnings about assumptions inculcated within this transformation (I use this term generously for now because pedagogical praxis has undergone precious little change while the medium has) and propositions for offering students to become more participatory and active learners in the environment. If we give heed to and adopt humanist, post-structuralist, and pragmatic misgivings and sensibilities respectively, we may actually take some meaningful steps towards skilling active participants in a multivocal and participatory democracy—a much more preferable locus in public education than jumping so readily into bed with market place

positivistic assumptions. The question is how we ever found ourselves in such a predicament; one may well argue that the specter of bureaucratic efficiency has had some distinct part to play in the evolution of American pedagogy to reach this point.

Kliebards' critique of bureaucratic efficiency in education

To better comprehend the prevalence of the bureaucratic efficiency trope, I look to Herbert Kliebard's (1971/1992) critique of bureaucratic efficiency in education. He argues that since the turn of the twentieth century, America has largely sought to make education more efficient and productive, playing on industrial metaphors. As such, the seemingly most apt place to look for models of efficiency and productivity was Fredrick Taylor's scientific management model. This appeal to Fordism can be clearly gleaned from the following Ellwood Cubberley (1916/1992) quotation:

Our schools are in a sense, factories in which the raw products (children) are to be shaped and fashioned into products to meet various demands of life. The specifications for manufacturing come from the demands of twentieth century civilization, and it is the business of the school to build its pupils according to the specifications laid down. This demands good tools, specialized machines, continuous measurement of production to see it is according to specifications, the elimination of waste in manufacture, and large variety in the output [emphasis added]. (Quoted in Kliebard, p. 116)

Education was to become a vast bureaucratic machine in which students were raw materials to be manipulated to become useful social products and measured for accurate progress along an academic conveyor belt. This is straightforward entelechy. We can also clearly witness Foucault's tripartite architecture of power, detailed in the previous chapter, overshadowing this system: hierarchical observation, normalizing judgment, and examination. A primary assumption

is that schools are businesses in which stakeholders have invested money and so expect a beneficial return. This idea of human capital manifests itself in various right-wing educational documents, particularly A nation at risk (National Commission on Excellence in Education. & United States. Dept. of Education., 1983/2001) and No child left behind (2002). The demand that the current economic structure dictate the education of children assumes a static form of civilization that protects the hegemonic interests of the *status quo*. Moreover, the use of inflammatory, crisis-mongering rhetoric is typical of traditionalist writings as the very title of A nation at risk exemplifies. Of course, any pedagogy that attempts to link to students' desire, experiences, and joyful instincts is wasteful. Thus, we here the klaxon call for banning recess and summer vacation in so-called failing schools. Failure, in turn, is defined as not measuring up to measurements of norms, verified by high-stakes testing. The bureaucratic system lays the burden of measuring up to the heavily monitored individual as the raw product to be molded, like so much molten steel, by a corrective pedagogy, the microtechnologies of power. Even morality can be quantified in this technocratic system: “‘an honest day's work' could be scientifically computed” (p. 118).

Principles and supervisors have become educational engineers. Franklin Bobbitt (1918), one of the chief architects and advocates for bureaucratic efficiency, in “The elimination of waste in education” proposed four principles for such elimination: (1) schools should operate at 100% efficiency during school hours and that there should be no days off from school in which students would learn the idle habits of the streets and the alleyway—some much for linking education to prior experiences and local values; (2) schools should operate at maximum employee efficiency, so a reduction in personnel and an increase in students per classroom are in order—this thoroughly ignores a wealth of research on the benefits of reduced class size; schools

should not waste time—recess, athletics, and other extracurricular activities distract students from the business of learning; and (4) schools should educate students to fulfill their social roles according to their abilities—entelechy, or as he would call it in The curriculum (1918/1997) “unfoldment.” Students innate abilities, discovered from a series of objectively verifiable tests such as the Stanford-Binet IQ Test, proscribed their academic and socio-economic destinies. As Kliebard (1971/1992) identifies, proscribing a destination, assigning specific needs to achieving the prespecified objectives, categorizing a student as college bound, factory bound, or service industries bound, and establishing a means for verification (testing) becomes a self-fulfilling prophecy in which failure to achieve is not the fault of a perfected system but rather the individual’s. Diversification of product does not mean that students have choices in their educational means or ends, but that tracking is suited to predetermined destinies. Experts study work practices and methods and develop lessons for students to replicate those activities in their minutiae. Students learn to become what they will be to what David Snedden (1921) proclaimed as the atomizing of the curriculum. Again, we see Foucault’s microtechnologies of power that dictate even the most infinitesimal procedures in education in order to produced docile workers. Teachers, in turn, become quality control managers in this bureaucratic efficiency model.

Kliebard (1971/1992) points out that the great bane of bureaucracy is the unknown, so such a rational system as the one detailed above makes sense on paper. In a perfectly rational cosmos, the Enlightenment dream, standardization makes education perfectly rational. However, humans do not exist in a perfectly rational world, as hyperpedagogy posits. We live in a world full of uncertainty and which is a simulacrum for which hyperpedagogy is designed. Education is an unpredictable and ultimately instable process of disequilibrium for which the bureaucratic model is highly unsuited.

Greene (1971/1997) recognizes the dilemma for advocating predictable curriculum on learners: “Curriculum, from the learner’s standpoint, ordinarily represents little more than an arrangement of subjects, a structure of socially prescribed knowledge, or a complex system of meanings that may or may not fall in his grasp” (p. 197). The curriculum focuses on discovering, mastering, learning a common culture, the accumulated wisdom of the ages, a discipline, or a civic tradition. She argues, instead, education should be about helping a person to make sense of his or her world. This is not some trite appeal to mass solipsism as some traditionalists have argued. On the contrary, she maintains that education needs to surpass merely the given. She cites Sartre (1943/1984) that “knowing is a moment of praxis” an opening into “what has not yet been” (p. 92). She, therefore, looks to the traditions of literary criticism and hermeneutics.

Greene writes that traditional literary criticism, like traditional curriculum theory, posits that adept readers who understand the intent of the author can discover facts, truths. Good readers are able to transcend their current considerations and concentrate on a text’s meaning. She contends, however, “the reader does not simply recreate what the artist intended” (p. 138). A text must be continually reconstructed to become meaningful. The reader will never transcend his or her subjectivity, but accommodates new matter into existing categories and permutations. This is a process of continual decentering, or disequilibrium. Humans are in a constant state of coming to be.

In making sense of texts and learning in general, we take on social norms, particularly the construct of rationality. Rationality is not innate as Voltaire’s maxim decries: “man is not a rational animal, but an animal capable of rational thought.” This maxim and much of Western lore purports that rationality is, if not natural, desirable. Therefore, those things associated with irrationality (e.g. women, non-whites, non-Westerners, the poor) are undesirable. While Voltaire

seems to have indicated that we should all strive towards rationality, I suggest that “we stop making sense” as David Byrne sings.

Our pedagogies and curricula need to stop making sense and make affordances for the chronically maligned. We need to embrace strangeness because from feelings of awkwardness and disturbances from the norm, we learn: “My point is that the contemporary learner is more likely than his predecessors to experience moments of strangeness, moments when the recipes he has inherited for the solution of typical problems no longer seem to work” (Greene, 1971/1997, p. 142). In order to constantly recreate meaningfulness, we need to understand the significance of disorder. Reflection on rebuilding meaning created truly meaningful learning—changes in habits and outlooks. To create new order, knowledge has to connect to the learner’s subjectivity, so he or she can “intervene in his [or her] own reality . . . to act upon his [or her] situation and make sense” (p. 145). In other words, memorizing rote, highly structured facts will hardly make an impression on a learner because he or she is not disoriented, does not have to recreate his or her reality to accommodate for disequilibrium: “To plunge in; to choose; to disclose; to move: this is the road, it seems to me, to mastery” (p. 148).

Lest Greene’s argument come across as an endorsement of pedagogical solipsism, Greene recognizes that learning is intersubjective, involving a multitude of subjects, a collective subjectivity to which we all belong, not wholly but in part. What is society but what we make of it? Some people like to carry on about a core culture, a common heritage, and shared values as if a culture descended from on high, complete and in a perfected form from which we have fallen but can return to if the naysayers would kindly abide by the wisdom of those who know (Bloom, 1987; Hirsch, 1999; Ravitch, 2000). An intersubjective culture makes no such claims to hegemony, but recognizes that cultures, societies, civilizations exist as shared ideas and practices

to differing degrees dependent upon one's perspective. A belief in a static or true sense of culture or nation can have devastating effects on curriculum theorizing in a pluralistic culture and democratic polity.

Dewey's pragmatic curriculum

The purpose of this section is to detail how a curriculum appropriate for hyperpedagogy will differ from traditionalist and information age reformist curricula, so I turn to Dewey for this endeavor. For Dewey's conceptions about curriculum juxtapose nicely with the goals of hyperpedagogy. I will outline some key ideals from a variety of Dewey's writings on curriculum and illustrate how these inform hyperpedagogy. In "The child and the curriculum" (1902/1998), he outlines many points that he would return in later works, such as Democracy and education (1916/1944) and Experience and education (1938/1997).

In "The child and the curriculum" Dewey (1902/1998) premises this essay on the dichotomy of child-centered versus subject-matter centered education. On the one hand, education can be seen as an extension of student's experiences and desires. He elaborates, on the other hand, that from the traditional or subject-matter centered pole education is the child's assimilation of facts and skills. What perturbs Dewey the most is the dualistic nature of this debate pitting the child against the curriculum, the individual nature against social culture. These schools have solidified in many cases into dogmatic sects that tend to limit effective growth, or learning. The traditionalist position proves a hindrance due to its inability to relate subject-matter to children's experiences and desires; the child-centered approach proves a hindrance due to the preponderance of value given to a child's immediate interests. The underlying problem for both is their teleological nature: in the first place, the child's educational telos is defined by adults; and in the second, the child's current interests form his or her educational telos. The overriding

error is that the end is established prior to active engagement within a learning environment. The ends of education should be development, biological and intellectual growth, and the habit of desiring to learn evermore. Simply put, education is its own ends. Such growth requires a child's experiences and interests coupled with the guidance of a mature and caring group of adults. Dewey states that educators need to "abandon the notion of subject-matter as fixed and ready-made in itself, outside the child's experience" (p. 239). He continues that the child and the curriculum are two limits within a single process, and as such learning "is continuous reconstruction moving from the child's present experience out into that represented by the organized bodies of truth that we call studies" (p. 239).

In hyperpedagogy, I seek to guide learners through social foundations issues while attempting to make connections to their experiences. To better understand what I mean by guidance, I look to Dewey, who defines guidance as "not an external imposition. It is freeing the life-process for its own most adequate fulfillment" (p. 240). For example, I have asked my students to answer the following question: "How can you incorporate multiculturalism into your pedagogy?" This question stems from our class readings on the challenges of multiculturalism from Joel Spring's American education (2002) and asks students to personalize this question. One student responded,

Since I'm in the field of French Education, I think this question is a little bit easier for me to answer than say a general education teacher. The focus of my classes will be to foster an understanding and appreciation for the french language and culture. It is important as a foreign language teacher to find ways to make the class appeal to the students. Many times students are enrolled in French, Spanish, German, etc., because it is a requirement for high school graduation. I feel very strongly that one big part of my job as a French

teacher will be to help my students explore and enjoy the French culture. It's important that our students learn that there are other groups of people in the world who, although they may not share the same values or subscribe to the same rituals as we do, are unique and special in their own way (each with something beneficial to bring to our world.)

I am very dedicated to the promotion of interest, understanding, and acceptance of other cultures and I will try very hard as a teacher to role model these characteristics to my students.

As this student states, her entrée into multiculturalism may be easier for her than some of her peers. We can also discern that her prior experiences and desires are tied to the text. She is not reciting an academic mantra of why multiculturalism is good. Instead, we see her using what I would describe as the positive side of reason, that is directed interest, not transcendent rationality. Reason, logic, guides inquiry towards a goal—how can Spring's challenges inform my practices. This evinces what I mean by guidance and connectivity.

In Democracy and education (1916/1944), Dewey elaborates on connectivity in “Play and work in the curriculum” that connecting learning to students’ experiences and interests provides at least three benefits: school is a joy, management proves less burdensome, and learning becomes easier. As Dewey often notes and I reiterate, making connections to learners’ experiences and dreams is not simply to placate them but to put those experiences and desires to good use in their development. The ability to incorporate play in academic work, to make use of physical and intellectual pursuits are aspects of a holistic education:

The whole pupil is engaged, the artificial gap between life in school and out is reduced, motives are afforded for attention to a large variety of materials and processes distinctly educative in effect, and cooperative associations which give information in a social

setting, are provided. In short, the grounds for assigning to play and active work a definite place in the curriculum are intellectual and social, not matters of temporary expediency and momentary agreeableness. (p. 195)

All too often education is a regimented exercise of precise bodily control (e.g. raising hands, acting rationally, not talking out of turn—if at all, sitting in rows, keeping one’s hands to him or herself) and rigor (e.g. staying on task, answering respectfully to authority, not interrupting a lecture to ask a question). If one allows room for play, for engagement and activity, then education can be quite different. For example, one cohort group leading instruction on their inclusion research report had their peers wear blinders, wear gloves, wear earmuffs, and read directions with mixed up sentences so that these preservice teachers could witness the difficulties children with physical challenges have to cope with. Instead of lecturing on the laws and the controversies surrounding full inclusion, they had us experience some of the challenges. We laughed with one another trying to make origami, difficult for most people under normal circumstances, and then the tenor became more sober as we discussed how different we would feel if one or two of us were physically challenged on a daily basis. We stopped to consider what we, as teachers, could do to make our classrooms more inviting, less restrictive. We experienced, opened ourselves to being vulnerable and compassionate, and sought creative means to improve our art. We sought desirable intellectual and moral growth: “It is the business of the school to set up an environment in which play and work shall be conducted with reference to facilitating desirable mental and moral growth” (p. 196).

The idea that education, both teaching and learning, is an art, a techne, is another factor Dewey explores. Education as an art stresses the unity of purpose of ends and means, of prior and future experiences, and of the students and the subject-matter. From such a vantage, rote

memorization and lock-step methods, such as those advocated by Robert Mager (1996) and Dick, Carey, & Carey (2001), bear little credence. Perfection according to externally judged standards offers little merit. Creativity and imagination, poiêsis, on the other hand, prove quite worthwhile. Ends emerge from exposure and gained experience, not coercion:

The extreme form of this subordination, namely drudgery, offers a clew [sic]. Activity carried on under any conditions of external pressure or coercion is not carried on for any significance attached to the doing. The course of action is not intrinsically satisfying; it is a mere means for avoiding some penalty. (p. 204)

Some students will do well on standardized information based tests due to various coercions: avoiding teacher punishment, parental censure, and appearing stupid to their peers. But this does not mean they have learned much of anything beyond avoiding punishment and that their lot in life is to acquiesce to authority.

Dewey often uses the analogy of the palatability of educational subject-matter to food. Children will choose to eat those foods they most desire, much like learning those ideas that most interest them. The role of adults is to offer nutritious foods that both appeal and provide for healthy growth. No one food will work for all, as much as one curriculum will not serve everyone's purposes. If we take this analogy a bit further, punishment and limited choice can lead diners to eat just about anything. As Dennis Miller quips, the reason that Eskimos eat blubber is because that is the only thing available at the arctic buffet, making an analogy as to why Americans consume Baywatch, Survivor, The Man's Show, and other such inane television programs. Likewise, some students do well on standardized tests because it is the only educational nutrient available in schools. The more Rod Paige (2002) endorses the right way to educate children, the more coercive and moribund the intellectual diet becomes.

In hyperpedagogy, subsequently, guided choice is very important. For example, I offer my students a variety of open-ended questions for our online forum. Originally, I offered one question that a class complained was not controversial enough to promote dialogue.

Consequently, I asked them for good examples of questions, challenging them to use their creative abilities. First, the class enjoyed our open-ended dialogue regarding the nature of the dialogue itself; second, they appreciated that I respected their opinions and asked them to problem-solve the situation; and third, I have never relinquished my role as the guide in this endeavor. I queried the class about this last aspect, my role as guide. They responded that they wanted me to come up with the questions, but to offer more choice and more controversy. We went from a forum that was largely a required reply by each student to my question with no dialogue amongst themselves to one where the dialogue is dynamic. We have collaboratively created a transactional learning space and discussed what our roles in this space should be. As such our appreciation of class centeredness has grown from either teacher-centered or student-centered to seeing education as much more flexible and dynamic, seeing that a myriad of factors play a part in a much more complex system than the tired duality of teacher- versus student-centeredness.

Another pitfall of thinking about curriculum and hyperpedagogy alike uncritically is to conclude that traditional pedagogical methods are entirely wrong for teaching. Educators need to avoid such knee-jerk, dogmatic, dichotomy laden outlooks on what we hope to accomplish. If we reject older methods out of hand as quashing education as growth through experience, then we become dogmatic reactionaries as opposed to thoughtful progressives borrowing from what serves our goals from old methods and improving upon these. Acting as the prophets for the next messiah will only serve to alienate our colleagues, students, and their parents.

Two aspects well worth considering, typically associated with more traditional pedagogies, are organization and authority. A totally decentered online learning space will most likely manifest itself as confusion and consternation on the students' part. As Dewey points out in Education and experience, not all experiences lead to desirable growth. His coda is that an organic connection exists between education and growth, yet some experiences may arrest growth (p. 25). Experiences need to connect with one another, but not in any linear fashion—they should be nodes. If not,

experiences may be so disconnected from one another that, while each is agreeable or even exciting in itself, they are not linked cumulatively to one another. Energy is then dissipated and a person becomes scatterbrained. Each experience may be lively, vivid, and “interesting,” and yet their disconnectedness may artificially generate dispersive, disintegrated, centrifugal habits (p. 27)

If you have ever been lost in hyperspace, you know just how frustrating an experience this can be. We need to guide students through this montage, but that does not mean we have to take the route of infinite regression and assume the mantle of magister or teacher / master. The point here is not to run away with our high-blown rhetoric. Dewey summarizes nicely:

It is [the teacher's] business to arrange for the kind of experiences which, while they do not repel the student, but rather engage his activities are, nevertheless, more than immediately enjoyable since they promote having desirable future experiences (p. 27).

Guidance into and through educational activities should be seen as nurturing growth. Growth in the sense of tending, not lashing a trunk to a stick on order to grow straight. It means to metaphorically prepare an intellectual meal that is delightful and nourishing for the diner / student. In “The child and the curriculum,” Dewey (1902/1998) uses this nutritive metaphor:

“subject-matter is but spiritual food, possible nutritive material. It cannot digest itself; it cannot of its own accord turn into bone and muscle and blood” (p. 238).

Returning to a plea for finding an alternative to bipolar extremes, we should consult Garrison’s (1997) Dewey and eros. Garrison, harking back to both classical Greek and Dewey’s concepts of education, argues that modern education lacks eros, defined here as the passionate desire to achieve an ends. Clearly, the emphasis resides in relevance, but whose is a seemingly unsolvable conundrum in most modern, bureaucratic educational theorizing. Often traditionalists rely on dichotomies such as who comes first in choosing the curriculum: the student or the teacher? Do we pass off one person’s desires as the only appropriate ones, which are typically cloaked as objective, value-neutral standards, or do we pander to students’ desire without teacher guidance, much less supervision? If we, however, look for the common good, what we often call the teachable moment that is emergent and co-constructed, we can avoid this false dichotomy, this destructive either . . . or logic. In doing this, we must pay more than lip service to this noble goal.

Teaching involves much more than knowledge transfer and knowledge transfer is not as linear and finite as it once was supposed from a traditionally structuralist perspective. Erotic teaching is the earnest desire to pass on the good, the beautiful, and the bestowing of moral values, that is strategies for deciding what is desirable. This is not telling students what they should desire because that is an intrinsic human trait; it is a metacognitive approach to encourage students to think beyond the narrow parameters education is usually contained within. Eros in education denies Platonic dualities, Platonic ideals of eternal and perfect knowledge (episteme), and Meno’s paradox that limits things to either be or not to be irrespective of context. Meno’s paradox, the cornerstone of a fully rational education, holds that inquiry serves no purpose

because either a person knows a thing or does not—there is no room for going from point a (ignorance) to point b (wisdom). Meno’s paradox, perfectly justifiable in decontextualized abstract logic, denies the possibility of self-initiated inquiry because the cosmos is a fixed entity as are all things in it. A naturalist need only observe the world about herself to determine how specious this rarified logic is. Eros serves as a daimon, a spirit that moves between the perfect and imperfect realms making them one with subsets such as theoretical and practical knowledge working in conjunction with one another, bringing harmony between concepts considered mutually exclusive in Platonic logic. As Garrison (1997) states with regard to eros, we become what we love because we desire to alter reality to fit our perceptions of it in concert with social constructions of such (p. 28).

The dualism of student-centered or teacher-centered pedagogies is yet another reductive Platonic dualism smacking of Meno’s paradox. Education is at once both personal and social. The line between internal and external blurs and functions as a social construct, a categorization for simplicity sake. When we take categorizations as distinct entities we fall into Meno’s fallacious “either . . . or” logical trap. Learning cannot exist in a vacuum; individuals need empirical stimuli to react to in order to learn. Learning is not a straight-line download of information from teacher or text to learner; it is a semiotic and erotic exercise in which perception and desire are paramount considerations that cannot be denied. Hence, any learning strategy should take social context, learner motivation, and environmental factors into consideration (Garrison, 1997).

John Dewey remarks in Democracy and education (1916/1944), education is growth. Living beings must continue to learn in order to sustain life: “life is a self-renewing process” (p. 9). Education occurs naturally through transaction with others and within environments. Human

society seeks to control, guide, and discipline this process in order to sustain its viability: “In directing the activities of the young, society determines its own future in determining that of the young” (p. 41). Hence, society’s desire to renew itself, to varying degrees, can be seen as a progression from an individual’s desire to sustain him or herself. Dewey problematized his earlier distinction between education and schooling in his reconsideration of Democracy and education (1916/1944), Education and experience (1938/1997). Growth as education occurs naturally as a state of disequilibrium in which an individual attempts to reestablish equilibrium through inquiry. Schools, as institutionalized loci for disciplined learning, seek to guide this process so that society can be continually self-sustaining. The problem lurking within this neat summation resides in disharmony. When either extreme, subject-oriented education versus object-oriented education, takes precedence over the other, growth is hindered. The pendulum has swung back and forth between the individual’s desires and the society’s desire since people have debated curriculum. Currently, this is particularly true in systematic instructional design and the social reactionary curricular reform movement with their overweening emphasis on goals. Dewey maintained that goals are important, but these are goals-in-view—ideals of what we want to achieve that occur rarely in exactly the way we had initially envisioned. Goals are, therefore, contingent and emergent by nature because reality intervenes changing our goals to fit circumstances and ever-changing contexts.

Simply put, self-initiated inquiry begins when a learner feels that he or she is ignorant about a topic and desires to become knowledgeable about it. The learner may opt to ignore this disruption, learn how to cope with it, or hold contradictory ideas in general that apply to different contexts. Learning takes place when a learner attempts to overcome a knowledge deficiency. This cannot be done externally, but external stimuli cause it to occur, and external guidance is

typically sought and provided by more experienced people or learning materials provided by more experienced people. Overall, this a creative act in which a learner inquires into an unknown quality's meaning, creates meaning in a dance of socially informed personal perception, and thus the unknown quality becomes a known object. The object's meaning, however, may well change over time as novel situations shake the previously achieved meaning. Inquiry, finally, is empirical by nature.

Dewey (1934) remarks that “only imaginative vision elicits the possibilities that are interwoven within the texture of the actual. The first stirrings of dissatisfaction and the first intimations of a better future are always found in art” (p. 348). When we design curriculum, we need to allow space for exploration and imagination. We are blessed with a changeable world; we should create like worlds for our learners. The sensibilities outlaid and the methods cited can help us designers create such worlds.

Garrison (1998) writing about “John Dewey’s Philosophy as Education” states that “Habits consolidate the thoughts, feelings, and actions that constitute human action” (p. 63). His essay hinges upon Dewey’s concept of habits as central to any learning theory. Our habits are the functional activities we involve ourselves in and frame how we perceive the world. These habits are formed through experience—a culmination of our past experiences filtered through our values. We transact with our environment by placing our values on it while we absorb its values simultaneously placed upon us. We are not merely a sum of our previous experiences, a reductive stance taken by British sensationalists such as Bertrand Russell (1912/2001) and twentieth century logical positivists. Our signifying the universe about us, from a semiotic perspective, has us valuing what we take in from the start, which includes placing moral judgment on stimuli to fit our schema. For humans, there is no such thing as raw data because we

process everything we contact valuing it from the start. External reality is simply too dense to sense everything, so we filter by what we consider important. Megan Boler (1999a) calls this phenomena selective (in)attention. This function makes signs into signifieds with us acting as the signifier. Put more poetically, Huxley (1975a) states that

Art is not one thing, but many. Metaphysically speaking, it is a device for making sense of the chaos of experience, for imposing order, meaning and a measure of permanence on the incomprehensible flux of our perceptual perishing . . . art as communication, art as the means of whereby exceptionally gifted individuals convey to others their reactions to events, their insights into the nature of man and the universe, their vision of ideal order. All of us have such visions and insights; but whereas ours are commonplace, theirs are unique and enlightening (pp. 122)

Often we take our categorizations developed from prior experience and lived through habits as common sense, not as social constructions of interpretation. Often we attribute such social constructions to special individuals' "unique and enlightening" contributions to larger social dialogues (this essay practices this social construct, to wit).

If we seek to instill new habits or alter old ones, we need to disrupt complacency. All too often technocratic educational advocates (Adams, 1993; Callahan & Switzer, 2002; Molnar, 1997) stress that online education needs to be an information dump to students, yet information processing is unlikely to change habits. To change habits, e-learning must find ways to challenge learners' habits and ingrained beliefs; dialogue is one such way, and thus I use an online forum to disturb complacency. As Dewey, Garrison, and Boler note, belief structures are essentially habituated desires (cf. Boler, 1999, p. 193; Garrison, 1997, p. 139; Dewey, 1932/1985, p. 171.).

Therefore, beliefs are habits, desires held so keenly as to seem immutable, they can and should be questioned, especially if beliefs mask oppressive educational practices.

When our typical mode of placing values on things is disrupted – our habitual ways of signifying objects – we must reassess why our current ideas no longer function. This is where learning takes place, when we reconstruct our habits to accommodate phenomena we cannot account for. We experience a feeling for need, motivation to regain harmony with our environment. Motivation here means redirecting the self's action, not causing it (Garrison, 1997, p. 68). A serious error occurs then when others decide for a person what his or her goals should be. This can initiate a cycle of disequilibrium, but it may not be the one the external authority desired. The best way to avoid this dilemma is to deny dogmatic indoctrination techniques in education, and instead connect learning to a learner's habits by disrupting conventional ways of thinking about a content. The latter method is much more likely to get learners involved and on task. The emphasis is on method not content, which is not to say that content is value-neutral or does not privilege some methods over others.

In "Time and Individuality" Dewey (1940/1998) lays bare the bones of structuralist pedagogy. He argues that predestination thinking is a historical construct based upon assumptions made about the physical universe in conjunction with Newtonian physics:

When we come to inanimate objects the prevailing view has been that time and sequential change are entirely foreign to their nature. According to this view they do not have careers; they simply change their relations in space. We have only to think of the classic conception of atoms. The Newtonian atom, for example, moved and was moved, thus changing its own position in space, but it was unchangeable in its own being. What it was at the beginning or without any beginning it is always and forever. (p. 220)

However, modern science has determined that mass, solidity, and size are contingent and relational properties, not inherent ones; moreover, the Heisenberg Principle of Indeterminacy undermines the classic belief in ultimately predetermining the results of a physical phenomenon before it transpires. We can predict what will happen given an understanding of physical relationships of things existing in reality; we cannot determine with absolute – supposedly scientific—certainty what will happen no matter how much information we have. The basic difference here lay with a belief in inviolate properties pitted against interaction among related elements. Transpose this logic into potentialities, we can think of them as consequences of interactions with other things: “Hence potentialities cannot be known till after the interactions have occurred. There are at a given time unactualized potentialities in an individual because and in so far as there are in existence other things with which it has not yet interacted” (p. 223). Put another way, an acorn may become a mighty oak tree if it interacts with soil, sun, water in a certain way, but to suppose that this is the correct destiny of an acorn marginalizes its potential as squirrel food if it naturally interacts with one’s digestive system. While an oak is a wonder to behold, a squirrel is no less natural or inappropriate biologically speaking. Dewey writes,

The idea that potentialities are inherent and fixed by relation to a predetermined end was a product of a highly restricted state of technology. Because of this restriction, the only potentialities recognized were those consequences which were customary in the given state of culture and were accordingly taken to be “natural.” (p. 224)

The underlying principle for an individual’s nature is not an essence, an ingrained proclivity for acting in a proscribed manner. Instead, Dewey (1938/1997) proposes that habits, culled from previous experience, guide our actions: “The basic characteristic of habit is that every experience enacted and undergone modifies the one who acts and undergoes, while this modification affects,

whether we wish it or not, the quality of subsequent experiences” (p. 35). Of note here is the interrelated not dualistic passive and active role of actors; we affect the environment about us while it affects us. Predetermined, external goals for our course of life have little purchase in Dewey’s notions concerning reality.

According to Dewey, existence exhibits a union between relative stability and relative contingency (Garrison, 1998). He sees all things as changing, some things faster, some slower – a mayfly changes relatively faster than a mountain. Therefore, meanings may seem unchanging, yet even in the most resolute people, ideas change—the pace is simply different than that of a vacillating person. Dewey (1925) writes in Experience and nature that “Nature is viewed as consisting of events rather than substances” and “every existence is an event” (p. 341). Becker (1998) puts this axiom into greater clarity:

Nothing stays the same. Nothing is the same as anything else. We do not operate in the world of physicists, where we can take a sample of a pure substance off the shelf and know that it is, near enough as makes no difference, the same substance any other scientist in the world will be handling under that name. None of our “substances” are pure anything. They are all historically contingent, geographically influenced combinations of a variety of processes, no two of the combinations alike. So we can never ignore a topic just because someone has already studied it (p. 89)

Substance, in Greek ousia, is a central concept in Western metaphysics best exhibited by Platonic ideals and ultimate matter promulgated by Newtonian physics and Cartesian metaphysics.

The most entrenched assumptions should be broached, the social tropes. Educators should not hesitate to query students about the supposed progress of equal rights in education

since the 1960's. We should challenge such assumptions by highlighting second generation segregation. We can also challenge the myth of meritocracy as I have done in the online forum:

How does the myth of meritocracy fail the poor, women, and people of color?

Meritocracy allows advancement based on ability or achievement. However, in the job market, women, the poor, and people of color have trouble advancing in some cases, because many feel that they don't have the ability or skills to complete the task. White males are considered "superior" in most job situations and will get promotions and better salaries on a regular basis. Even in education, things aren't always fair. For example, in math classes males are usually expected to know the material well and be able to excel in all areas of mathematics. Females aren't really expected to do as well and aren't given a fair chance to prove their knowledge and ability in math, but in English, it's the other way around. Women are expected to do better than the men. If meritocracy is a part of education, then every student should be allowed to prove themselves no matter what gender, color, or social status they have. If one has the ability to achieve, they should be given the chance to do so. Meritocracy in our society often fails many classes of people, but it's been this way for a long time. Each group has an advantage over the other in some situation, but it's never really equal.

This student pulls from her own educational experiences and relates that to the material she has read. She ponders on how social expectations become self-fulfilling prophecies and recognizes that by not starting off having equal opportunities, a meritocracy favors the privileged. One, however, can sense confusion and frustration towards the end of this posting. She attributes to some degree that women and other historically marginalized people may not have the appropriate skill sets.

One of her peers replied with a bit more vehemence:

If all these societal ills are a matter of expectation, then who is imposing these expectations on us and who is doing the hiring? I'm sitting here imagining some WASP fascist board sitting around and strategically plugging white males into all the good paying slots. Why do we value some teachers more than others? Meritocracy's structure suggests more is wrong with the system than obvious, 'merit-based' pay-scale differences.

How do we change?

I felt that while Madelia's enthusiasm illustrates student concern and involvement, I need to intervene and challenge these two a bit more to see that the situation is complex, yet not hopeless:

Madelia & Michele,

Two points I'd like to address: (1) it isn't just Facist boards that undermine meritocracy through overtly discriminatory hiring practices. It is the subtle ways most everyone accepts that boys are better at math, that math skills are a key signifier for being an engineer, and that being an engineer is worth much more than being a teacher or nurse. (2) As to "What can we do?" be consciousness of overt -and- subtle discriminatory practices. Start with yourself and examine what can I do differently and then be a "whistle-blower," i.e. illustrate these discrepancies to others. Raising consciousness to problems is a big first step. Jim

I sensed this was an opportunity calling for guidance. To further the conversation and maintain the dialogue, I intervened. But my intervention was not to scold or correct, but rather to call notice to salient points and then challenge further so that embodied intellectual growth could

continue. In guiding the students, I have to be careful not to stifle dialogue when I do intervene, lest I become what I loathe—a teacher-engineer (Dewey, 1922/1998a).

Towards a definition of curriculum.

The Latin root for curriculum, curre, means to run a preset course. The notion underlying this is to place obstacles (tests) in the way of the runners (students) to judge how they will compete. Additionally, such a course has a set beginning and final conclusion; moreover, the means are preordained. Deviation from running this set course incurs punishment; therefore, critical engagement with the content is not to be tolerated. The student from this perspective has no voice in choosing the rules, the course, nor the best way to negotiate his or her way through it; moreover, the rules do not call for collaborative efforts. While a race on a course is not terribly realistic analogy, it serves as militaristic training for the body to run faster and the mind to follow set orders.

Another metaphor is the industrial age factory; this is the Fordist model. In the Fordist model, the curriculum is the engineering blueprint perfected by content area specialists. The purpose for a curriculum is determined by the stakeholders, who align easily with a corporation's stockholders. The teacher is a technician, reforming or installing the needed parts onto the raw material, the students. The principle, headmaster, or dean assumes roles similar to line or factory managers, determining that the assembly line workers and raw materials are measuring up to specifications. While this analogy may seem far-fetched, one need only make a cursory glance at the verbiage employed by Paige (2002) and his ilk regarding education. In a section entitled, "The facts about investing in what works" Paige invokes the capitalist paradigm in the title itself. Often, Paige refers to investing in an educational system for an improved return, in this case producing excellent workers for the new global economy: "America's schools are not producing

the science excellence required for global economic leadership” (ibid). Like Taylor’s scientific plant management Paige places the blame on “ineffective teaching practices and unproven education [sic] theories” as “the chief reason children have fallen behind” (www.nochildleftbehind.gov). The emphasis is then on “solid research equals solid results” (ibid). In this subsection, Paige makes an analogy of research on teaching methods to research on patient treatment, as if students have a malady that needs to be cured. Another juxtaposition with factory management is the idea of an accountability infrastructure: “Accountability systems gather specific, objective data through tests aligned with standards” (ibid). Of course the assumption of objective data glosses over the inequalities and discriminatory practices commiserate with the American educational system.

Another popular analogy for school curriculum follows an athletic/militaristic model: “The curriculum of a school, or a course, or a classroom can be conceived as a series of planned events that are intended to have educational consequences for one or more students” (Eisner, 1994, p. 31). Eisner claims that curricula are not natural means of learning, but rather proscribed and hierarchical, commonly conceived social functions; that goals and objectives are set typically by forces well beyond the receiver’s means of communication; that the intent is educational in character; and that consequences are embedded within the process. While this may be the common perception of this, he argues that curriculum can and should leave room for teachers and curriculum planners that do not have proscribed clear and identifiable goals, but that goals should emerge out of interaction within a social context and that goals should be tailored (personalized) to particular students needs. This distinction he labels intended and operational curriculum in which proscribed, universal, and abstract curriculum is intended and operational emerges from interaction in an environment. While the latter is more arduous and not bit by bit

transferable from situation to situation, it holds the greatest promise for improving the overall quality of education. He argues that such operational education requires artistry, like poetry, where a confident and well-versed teacher reads a situation for the teachable moment, working in conjunction with his or her learners in a specific environment:

In this model, decisions to do one thing rather than another are decisions that can be made only by considering options as they develop, by “reading” the situation, by exploiting the adventitious, and by allowing intention to grow out of action rather than requiring them to precede it. This is the way a great many artists as well as teachers work.
(p. 34)

As an advocate for poetic endeavors (poiêsis) in education, I concur with Eisner’s call for teacher freedom to develop his or her curricula with students in an immediate environment. I also oppose hierarchical curricula that act as teacher-proof, standardized education.

Eisner’s six curricular ideologies.

Eisner (1994) argues that belief systems provide the ideological premises for various curricula groups. Our weltanschauungen – worldviews – inform these curricular groups: some groups rely on certain axioms while others prefer different ones; some are more orthodox than others; some perceive children as empty vessels to be filled while others perceive learners as active agents in their own growth; and some intend to turn out a standard economic product while others deny such utilitarian goals.

Eisner (1994) identifies six general curricular groups: (1) religious orthodoxy, (2) rational humanism, (3) progressivism, (4) critical theory, (5) reconceptualism, and (6) cognitive pluralism. With respect to religious orthodoxy, a belief in God stands paramount, yet this does not necessarily imply narrow-minded educational methods. In the Jesuit tradition, for example,

philosophical questions about social justice are prompted not by didactic reasoning but rather heuristic hermeneutics. Even religious texts are open to multiple interpretations as long as the reasoning is sound; moreover, emotion is often considered an appropriate incorporation into the curriculum. However, evangelical schools closely aligned to conservative political agendas do not encourage critical skepticism relying instead on pedantic methods of filling empty vessels with religious revelation preparing them for ultimate salvation.

Rational humanism continues to dominate most curricular assumptions. Having roots in the late Renaissance and the Enlightenment ideologies of rational man promulgated by such philosophers as Bacon (1620/1998), Descartes (1637/1998), and Diderot (1751/1998), this theory supposes that the rational mind can conceive material and imminent truth through scientific methods. This method relies on short answer and multiple-choice to determine if students have determined the essence of a problem. This mindset also assumes that answers are universal and eternal, that culture is unbiased and scientific method objective without presumptions. Rational man divorced from emotional subjectivity can determine truth, the essential essence, the eidos. From this one can deduce that certain ideas have more value than others, and these are hidden in the great books of western culture waiting to be appropriately deciphered by generations of learners .

Different branches exist in progressivism: social justice, championed by Dewey, Rugg and Schumacher, and Counts; social efficiency, championed by Bobbitt, Thorndike, Spencer, Taylor, and Snedden. Dewey holds the most prominent name in progressivism in which he held that education is Darwinian biological growth and that curricula need to start with the learner's prior experience. Dewey holds that intelligence is not fixed but grows and is multifaceted adapting to environments and building upon experiences. Things do not have ultimate and

universal essences, but act as relational functions within a dynamic cosmos, so experiential and exploratory investigations are keys to successful learning and thereby the growth of a dynamic organism. These organisms live in a social environment where they need to use cultural tools effectively such as language:

No longer was it appropriate to regard the child as a passive receptacle to be filled with curriculum content. No longer could the curriculum be thought of as a static, fixed body of content, created in administrative offices and handed down to teachers. The child acted on the environment, he or she did not simply digest it, and in the process, that environment was personally transformed. Emotion could not be disregarded in dealing with matters intellectual, because how children felt about what they studied influenced how they thought about what they studied (Dewey, 1938, p. 69)

In order to align with these sensibilities, education needs to be problem centered where teachers pose authentic and complex problems with ill-defined structures. The emphasis on honest innovation looms large building on the student's experiences and connecting to future learning the student values.

Critical theorists, following, Freire (1970/2000) and (Apple 1982, 1990), hold that education's role should be to raise the consciousness of those people exploited by hegemonic social agents. Critical theorists pay special attention to the structure of the educational institution, the social role of education, and the hidden motives lying behind reactionary educational movements such as the standards movement. Often they query whose interests are being served by the institutionalized education structure and conclude that cultural reproduction reifying cultural norms and power relationships proves intangible yet manifest (Bourdieu & Passeron, 1977).

Using Marxist criticism, Apple (1982) claims that schools alienate labor so that capitalists further exploit them. The institution systematically deskills lower class learners by sorting them into mechanistic educational endeavors:

The industrial-capitalist interests entertained a very different role of public schooling from that which had been though good under agrarianism and mercantile capitalism. As industry became more complex, the school also had to change to meet its needs.

Compulsory schooling became essential and more accepted by the working class, and the compulsory schooling age rose. The high school (an urban school) became a necessity as did industrial education: manual training, vocational guidance, the enactment of child labor and additional compulsory education laws. These developments in public schooling were aimed at striving for greater efficiency in preparing children for occupational roles in the expanding economy (Pratte, 1977, p. 99)

In order to combat this long-standing and often over-looked goal in education, Apple (1982) determines that restoring a sense of personal meaning for the learner is important and can be done so by encouraging them to define their own educational ends and relate these ends to the communities in which they live.

Reconceptualists (Greene, 1971/1997, 1995; Pinar, 1994, 1995) not ideologically distant from progressives and critical theorists, believe that education needs to be more closely aligned to personal, lived experiences and that imagination and innovation yield greater results than standards and norms. They attempt to have students ask metacognitive questions about their educational goals. They do not care for industrialized, textbook centered pedagogies that are instrumentalist minded and outside students' common experiences.

Cognitive pluralists, such as Gardner, believe that the species has a distinctive ability to understand and manipulate symbols; as such, symbol recognition and manipulation should figure forth in educational practices. These symbols are, moreover, cultural resources localized by communities and specialized by experience, inclination, and practice. As such, a plurality of knowledge and symbol use exists. Educational practices, therefore, must not use monolithic means, standardized methods, nor expect everyone to agree on ends, superordinate goals. Cognitive pluralists deny the idea of one essential and general intelligence quotient. Rather, intelligences exist based on prior experience and inclinations, so educational practice should allow for multiple means to varied and personalized goals. The optimal manner to do this is to promote problem solving, consciousness raising pedagogies based upon students authentic circumstances and desired outcomes. Such theorists see these methods as a means towards greater social equity.

Curriculum reform and American insularity

Having grown out of the rational-humanist and social-efficiency progressivism traditions, dominant curriculum ideologies promote what can be loosely termed, “The American way.” Many of the major American movements for curricular reform can be linked to periods of reactionary action against perceived cultural instability. In the 1920’s, 1980’s and 1990’s, American bigots reacted vehemently against influxes of non-Americans. William Stephens (1920/2001), then Governor of California, wrote that Japanese language schools needed to be licensed because they posed a threat to the teaching of American civic virtues. Each applicant to a Japanese school had first to pass an American civics exam. William Bennett (1992), the former Reagan era Secretary of Education, wrote The de-valuing of America: The fight for our culture and our children, in which he lambastes multicultural education and defends European traditions

in American education. More recently, Lynne Cheney (2001), the wife of Vice-President Cheney, has attacked attempts to teach toleration of Islam following 9-11 because she declares Islam is an inferior culture to the West, best exemplified by America. At a speech delivered at the Dallas Institute of Humanities and Culture on October 5th, 2001, Cheney said,

The deputy chancellor's [Judith Ripp, Deputy Chancellor for Instruction in the New York City school system] suggestion that "we have to do more to teach habits of tolerance" also implies that the United States is to blame for the attack of September 11th, that somehow intolerance on our part was the cause. But on September 11th, it was most manifestly not the United States that acted out of religious prejudice . . . But if there were one aspect of schooling from kindergarten through college to which I would give added emphasis today it would be American history. We are not doing a very good job of teaching it now, as a recent survey of seniors at the nation's top liberal arts colleges and research universities reveals. Scarcely more than half, the survey found, "knew general information about American democracy and the Constitution." Vast majorities were ignorant of facts that high school seniors should know: Only a third could identify George Washington as the American general at Yorktown; fewer than a quarter knew that James Madison was the "father of the Constitution."

(<http://www.historyplace.com/pointsofview/cheney-dallas.htm>)

Cheney's rhetorical move is to blame her educational enemies for the misfortune of 9/11 and promotes her agenda for teaching a very biased form of American history to combat terrorism. One may well ponder how much help knowing that General Washington was victorious at Yorktown has to those victims of this grave tragedy trapped on the upper floors of the World Trade Towers? Attempts at toleration, Ripp, has argued more convincingly may lessen tensions

by giving Americans insights on differing cultures and recognizing Muslims not as culturally, technologically, and economically inferior group to be feared. Intolerance, she has argued, is more likely to lead people to violent reactions than attempts to find common ground. However, the trend in periods of cultural flux from immigrants proves a challenge in which traditionalists use ad populam appeals and crisis mongering to promote their jingoistic and discriminatory agendas.

In hyperpedagogy the challenge is to address such appeals to fear and related jingoistic rhetoric. Cheney advocates technology be put to use implementing a core American values, standards-based curriculum. Correspondingly, the core American values would exclude Islamic perspectives and any sort of consciousness-raising in this case, tolerance for others. Opinions, in this sort of reductive curriculum, would be presented as facts and subsequently increase a sense of otherness and mistrust. The best way to resist such a discriminatory agenda is to challenge students with open dialogue on different issues, such as “How can American foreign policy be changed to decrease the likelihood of future attacks?,” “Is preemption an ethical military policy?,” or “Would toleration of cultural otherness spur peaceful diplomatic initiatives?”

A nation at risk: Right-wing crisis mongering. Now that I have raised the issue of nativist populist appeals used by right-wing crisis mongers, I will deconstruct one of the most profoundly revered of their texts: A nation at risk (National Commission on Excellence in Education. & United States. Dept. of Education., 1983/2001). This document, highly regarded by curricular traditionalists, invokes crisis from its inception: “Our nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being taken over by competitors throughout the world” (p. 321). The usual suspects are Germany, South Korea, and of course, Japan. The cause for alarm is that “the educational foundations of our society are

presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and as a people” (p. 321). Three ideas need to be considered here: the ad populum appeal to fear, the idea that America is one Nationality with a homogeneous people, and the lack of evidence to make such a claim. Mediocrity is defined as reductions in test scores and other quantifiable measures of academic achievement: “The College Board’s Scholastic Aptitude Test (SAT) demonstrates a virtually unbroken decline from 1963 to 1980” (p. 323). What this statistic fails to acknowledge is that the demographic of who has taken the test has changed dramatically in that time period, one of rapidly increasing college enrollments. In 1963, the majority of test takers were from affluent prep schools, and as the word prep indicates, these students had been preparing for the SAT’s for years and were comprised of a very select population. By 1980, the SAT became a much more broadly taken exam, including first generation college applicants, people from marginalized groups—in all a much broader cross-section of America. So taken from another vantage, the increases exhibited over the years by marginalized groups, including Hispanics, Native-Americans, African-Americans, and women, should be a cause for celebration not crisis mongering.

As David Berliner & Bruce Biddle (1995/2001) have demonstrated, the purpose of the crisis-mongering is to instill fear to promote specious right-wing social agendas, such as standardizing the curriculum, exerting control over reduced educational spending so monies can be redirected to the military-industrial complex and corporate welfare, and generally to discredit the gains in social equity made during the 1960’s and 1970’s, such as Johnson “Great Society” programs. Such attacks seek to undermine gains made during the Johnson and Carter administrations to redistribute wealth and make education more equitable. In the assumption that America is color-blind and classless, we mask how discriminatory our educational practices are.

Conservative columnists, such as George Will, call monies spent to aid lower income families' unjust entitlements and hand-outs that only inspire the poor to stay poor. The maxim here is to steal from the poor to give to the rich. The bible of this reverse Robin Hood syndrome is Murray's (1984) shoddily researched, yet well marketed, Losing ground: American social policy, 1950-1980 claims that welfare encourages destitute Americans to stay poor and not seek gainful employment. Funded by right-wing publishing companies (e.g. Olin Foundation, Public Interest) and think-tanks (e.g. Heritage, Manhattan Institute, American Enterprise Institute), this book seeks to act as a conservative antidote to Michael Harrington's (1962) that helped to inspire President Lyndon Baines Johnson's "War on Poverty" legislative initiative.¹⁸ W. B. Carnochan (1993) also remarks that crisis-mongering sells books, in his critique of Arnold Bloom's (1987) The closing of the American mind. The final point is that A nation at risk (1983) relies on half-truths, misleading conclusions, and outright lies to promote its agenda:

But many of the myths seem also to have been told by powerful people who – despite their protestations – were pursuing a political agenda designed to weaken the nation's schools, redistribute support for those schools so that privileged students are favored over needy students, or even abolish schools altogether. To this end, they have been prepared to tell lies, suppress evidence, and sow endless confusion. We consider this conduct particularly despicable (Berliner & Biddle, 1995/2001, pp. 343-4)

I also find this agenda despicable, as much as I do its current manifestations: No child left behind, with its emphasis on starving the neediest (or failing schools) and the voucher movement, with its hidden agenda to appropriate funds from chronically underfunded districts to profit-making, parochial schools for urban elites.

A history of rigor and educational scientism.

A long history of scientism that informs the Bobbitt (1918, 1924), Charters (1921, 1923, 1926), Paige (2002), Molnar (1997), Callahan & Switzer's (2002) assumptions exists. German scholars Wilhelm Wundt and Fechner conducted laboratory experiments to remove contextual "noise" to determine how education occurs with clinical precision, universally for all learners (Cole, 1996). Thorndike (1921/1997) following the German laboratory model wrote,

A complete science of psychology would tell every fact about everyone's intelligence and character and behavior, would tell the result which every educational force—every act of every person that changed any other or agent himself—would have. It would aid us to use human beings for the world's welfare with the same surety of the result that we now have when we use falling bodies or chemical elements. In proportion as we get such a science we shall become masters of our own souls as we are now masters of heat and light.

Progress toward such a science is being made (Quoted in Cole, p. 6)

Thorndike evinces typical modernist assumptions about the science of education: that education is universal in goals and methods; that humans can be manipulated like Newtonian elements and chemicals in laboratories, making them entirely passive; that education is forceful, aggressive, and masculine; that educational psychology is teleological and highly structured, and that learners must serve an economic and social purpose beyond their choosing. The scientific management that underlies Thorndike's pedagogy places a premium on adherence to a proven system at the expense of personal initiative.

Lest we think that this educational scientism is a product of a past we have wisely divorced ourselves from since Dewey (1916/1944) attempted to enlighten us from its self-serving assumptions, we can look at Hyman Rickover's (1962) call for Swiss rigor, Diane Ravitch's

(1981/1997) attempts to steer education away from liberating elements, and E. D. Hirsch's (1988) cultural dictionary model to name only a few of the more prominent reactionaries.

Responding to the call for rigor to stem the tide of our current educational malaise identifies the crisis as a false dilemma. Noting that American nine-year olds finished second only worldwide to Finnish youth of the same age, not one major news agency reported this fact. The press, owned by conservatives with social agendas of keeping the status quo in tact (Alterman, 2003; Chomsky, 2002; McChesney, 2000), failed to report this good news because such recognition would not spur on the crisis mongering. The facts do not support crisis: SATs are on the rise for most every social group, especially people of color and women; the drop-out rate has been falling for years; American's top 10% readers outscore all other nation's top 10%; the U.S. has a surplus of engineers, mathematicians, and scientists. These factors hardly indicate a crisis is eminent (Garrison, 1997).

Why the crisis, then, if the facts do not support one? Garrison (1997) argues that politicians find it more expedient to blame teachers than themselves, the government, the students, or their parents (p. 3). Politicians see in the nebulous and nearly voiceless educational entity a convenient dumping ground to blame various social ills, particularly economic—oddly enough during boom and bust cycles alike. If blame should be foisted about regarding the educational apparatus in this country when comparing how well we stack up against foreign competition, perhaps we should examine why Japanese teachers are hired at wages comparable to engineers and that parents typically spend 30% more of their income on private tutoring than their American counterparts (Garrison, 1997).

Melody Shank (2000) notes that rigor while bandied about as a necessity in education by politicians is vaguely understood at best by most Americans. More often than not, Americans

define rigor as more competitive, more real, and located in AP and college placement courses as opposed to general and vocational classes. The debate over rigor in the mid-eighties took place between the architects of A nation at risk (1983) and educational researchers such as TheodoreSizer (1984) and John Goodlad (1984). The Reaganite architects of A Nation discovered from abstract analyses of curricular documents and across the board testing scores that education had devolved into a heterogeneous “smorgasbord” (p. 1) of unexacting standards, ill-defined curricula, and an overabundance of electives. To combat this confusion, the architects deemed that a national standard of homogenous values, testing and teaching methods, content and textbook regularity, and a standardized format needed to be emplaced to ensure the competitive edge of American students.

Sizemore (1984) and Goodlad (1984) undertaking ethnographic studies in educational loci found that students were largely disinterested and disengaged by the standardized curriculum that had changed hardly a wit over the proceeding 80 years. They found, moreover, that teachers were exhausted and overworked and lacked administrative confidence in efforts to encourage the students by connecting material to their lived experiences. Goodlad recommended, instead of further and stricter standardization, that education needed to take the learners experiences and values into greater consideration to engage and encourage them:

Many students successfully go through the motions of rote learning, pass requisite tests, and move on to more on to more of the same in college. What they have had little of, however, are encounters that connect them with the major ideas and ways of knowing that fields of knowledge represent. (p. 317)

He writes that learners' initiative should be encouraged and learning connected to their prior experiences and future hopes. He notes that conceptual learning will prove more appropriate for learners:

It is better to learn a few concepts well and to know how to apply them than to cover long lists of topics for purposes of recall. The search is for understanding and for the processes basic to acquiring this understanding (p. 339)

He promoted a less is more approach in respect to the quantity of material delivered but stressed that with respect to quality, more in-depth, critical, and applicable studies will accomplish more.

Shank (2000) defines rigor as strictness, inflexibility, meticulousness, accuracy, precision, and focus, implying disciplined adherence to proscribed, roles, and methods. These values exemplify the Cartesian ideal of rational mind. The null curriculum at work here blames not only laxness, sloppiness, and laziness, but also devalues creativity, metacognition, emergence, flexibility, adaptability, authenticity, innovation, and play. Therefore, rigor values technical, rote, and rational modes of learning at the expense of problem-based, collaborative, intuitional, emotive, and exploratory modes. This mindset privileges traditionally masculine discourses.

We can see that calls for rigor in education and developing a strong workforce often mask reifying the white, masculine, economically elitist hegemony. Rigor proponents predicate a mechanical educational process devoid of emotion, imagination, and innovation as these values would impede the progress of the learners destined to their externally prespecified ends. A method is rigorous if it translates a predetermined and set content within certain efficiency perimeters. A student's progress is predictable and deviance from the path is managed through

various disciplinary technologies, including grading and negative behavioral stimuli, such as time-outs and class ridicule. Docility to a mechanistic system is to be internalized.

Systematic instructional design stands forth as an evolution of traditionalist curriculum design. Often instructional designers and instructional technologists trained in the use of various modernist learning models, particularly Smith and Ragan (1993), Mager (1997), and Dick, Carey, & Carey (2001), engineer course transformations from proximal to online. During these transformations, designers often imbue the course with modernist pedagogical assumptions by implementing one of the popular instructional design models. Traditional instructional design's reliance on the privileged position of goals creates superordinate structures that circumscribe student activity and reinforce fixed domains of knowledge. Smith and Ragan (1993) write that

Instruction is the delivery of information and activities that facilitate learners' attainment of intended, specific goals. In other words, instruction in the conduct of activities that are focused on learners learning specific things. . . . Every learning experience that is developed is focused toward a particular goal. (p. 2-3)

The student is passive and secondary to attainment of a goal he or she has no voice in choosing or manipulating to meet his or her needs and desires. The learner described in this quotation is a presumptive automaton ready for normalization that leads inexorably to a standardized product ready for the economic machine. We can easily see Bobbitt and Tyler's philosophical assumptions playing in this statement. Moreover, teleological structures that emphasize regulation and particularization of fixed goals reify the power geometry of the designer's privileged status at the expense of both the professor (denigrated to a content specialist) and the student (now little more than content assimilator). This dissemination into fixed roles, additionally, dehumanizes and regulates the process of learning.

Mager (1997) in his Preparing instructional objectives also designates objectives superordinate to the learner and methods as beyond the learner's reach:

you must clearly specify outcomes or objectives you intend your instruction to accomplish. You must then select and arrange learning experiences for your students in accordance with the principles of learning and must evaluate student performance according to the objectives originally selected (p. 1).

The outcomes and methods belong to the instructional designer; Mager assumes student as recipient of content he or she has no choice and by methods in which he or she has no voice. One can also note the frequent use of the imperative of his own instructional design. No room is given for any emergence, transaction, or adaptation to change that frequently happens in the emerging reality of the classroom: "instruction is only successful to the degree that it succeeds in changing students in desired ways" (p. 13). The presumption of student as automaton is naked here; moreover, the instructional designer defines success for the learner.

Arguably, the most popular instructional design model, often unquestioned as the instructional design model, is Dick, Carey, & Carey's (2001) The systematic design of instruction. With its emphasis on being systematic, such hierarchical statements should not surprise one: "The first step in the model is to determine what it is that you want learners to be able to do when they have completed your instruction" (p. 5). While their belief in pedagogical ownership is not nearly as blatant as Mager's (notably one of the theorists informing their design model), the next quotation is telling in how little pedagogical freedom they afford the learner: "you will determine step-by-step what people are doing" (p. 5). Here the modern, mechanistic nature of systematic design is laid bare. Traditional instructional design clearly follows in the footsteps of Bobbitt and Tyler.

E-learning in the information age

Andrew Molnar (1997) stands forth as an exemplar for the technocratic position of e-learning. He ties the end for computer integration and computer literacy to the global economy:

Modern, high-speed computers and telecommunications have facilitated the rapid movement of financial resources, goods and services, and have created an interdependence among the world's economies. To benefit from these markets, nations must be competitive, and to be competitive they must have a well-educated workforce.

(www.thejournal.com)

This logic is typical of the hype of technocratic rationality. First, technology is largely divorced from the societies' of which they are processes. Technologies facilitating, serving as a catalyst for change, exhibits how technologies supposedly alter culture as if they appear deus ex machina. Molnar would be well served to view technologies as congealed labor, parts of society in which cultures evolve along with technologies. The logic is that of the chicken and the egg conundrum. Another moniker of the hype of e-learning and e-commerce is that America is not producing enough highly skilled workers to be competitive in the new global economy. This sort of writing while replete in e-hype literature is erroneous. As Susan Ohanian (1999) points out America produces an abundance of highly skilled workers, but the corporate demand for more skilled workers is to boost the labor pool, thereby lowering salaries—as demand goes down, so do prices. In fact, she writes that Louis Gerstner, CEO for IBM in the early to mid nineties, wrote in Reinventing education (1994) that IBM and other high tech industries need more skilled workers, yet at the same time he was laying off 90,000 out of 270,000 employees to increase the profit margin (market capitalization up \$70 billion in five years) and lower salaries (p. 110). While industrialists and capitalists hype “belt-tightening” procedures in times of economic adversity,

they push their companies to make more money for the upper echelons and the stock market. Times of economic adversity are highly selective, yet the media canter nicely to the capitalists' pace.

Robert McChesney (2000) addresses this issue of the media portraying economic crises and at the same time hiding plutocrats' largesse in Rich media, poor democracy: Communication politics in dubious times. Because the media are owned by a small number of multinational conglomerates, including massive industries, the news and programming are biased towards the economic and social elite agendas. Reporters who showcase corporate greed, corporate welfare, and self-serving economic policies are labeled rabble-rousers, unprofessional, and having an axe to grind. Reporters and news programs that illustrate how the American school system is failing and in need of repair are promoted, seen as unbiased, objective reporters, telling it like it is: "In the crescendo of the news media praise for the genius of contemporary capitalism, it is almost unthinkable to criticize the economy as deeply flawed" (p. xix). In such a climate, the whims of the economic elites go largely unquestioned, unobserved, or quickly highlighted as an anomaly, the bad seed. As such, the fact that CEO's and their minions and voice-boxes set the educational agenda, not educators, should come as no surprise. Their love affair with human information processing comes as no surprise either and bears closer scrutiny.

More often than not, e-learning is tied up with information processing models for learning: "New science-based, information industries are emerging in which knowledge and human capital are important as industrial plants" (www.thejournal.com). Molnar hypes "a major paradigm shift in education from theories of 'learning' to theories of cognition" (ibid). One can only imagine what "learning" means and why he marginalizes it by the use of quotation marks? Perhaps he has an issue with non-scientific pedagogies, perhaps ones informed by philosophies.

He dismisses all other theories of learning other than cognition, imagining he has discovered exactly how humans process information. This is what Kliebard (1970/1992) calls the philosophical screen, endemic of modernist logic. By supposing one has the key to Truth, then one no longer works from a theory, but fact. This, of course, makes all other theories irrelevant as they are not laws. Another disturbing factor of information processing is the assumption of a passive student who downloads information, processes it encoded and scientifically refined processes, and then recalls the information on command. Culture, emotions, perceptual differences, semiotics are all dismissed as mere theories and interference that must be limited through strict means. This ideal of student as information automaton demands as passive recipient and finite episteme. The curriculum in such a cosmos is a perfectible, scientifically verifiable formula in which all learners are the same.

Through his work, Marshall challenges the largely accepted neo-liberal myth that information is knowledge. Information is a key commodity in Western culture that one acquires in efficient schooling, or so the myth goes. One needs information skills for educational, social, and economic success. What worries Marshall is that this belief goes largely unquestioned. Particularly irksome questions arise around what counts as knowledge, how is it defined and controlled, and whose knowledge is selected for inclusion—who decides and on what basis? Often in the sweep of political propaganda promoting unbiased, objectively verified information that all students must assimilate to succeed, questions about race, gender, class, and sexuality are neglected. In fact, the dogmatic assertion that the verified knowledge is absolutely objective, people fail to recognize we are asking as Spenser did (1857/2002), “What knowledge is of most worth?” This glib assertiveness of having discovered pedagogical Truth bypasses fundamental

questions regarding the nature of knowledge and pedagogy. Two fundamental positions in the philosophy of education – epistemology and pedagogy – are treated as nonexistent.

In addition to denying the existence of fundamental questions, information is peddled as an equivalent to knowledge. Information is bits of data, much like code keyed into computers and recalled upon command; it is mechanical. Knowledge involves much more; it involves fitting information into existing and evolving categorical schemes, it involves value judgments, it involves conceptual understanding and the ability to apply such understanding flexibly in differing problems. On a more ominous note, Marshall (1996) posits that the emphasis on information as a commodity is tied up with notions of consumerism: “It is the consumer in the information industry who decides truth / quality” (p. 2). He quotes Poster (1990) “that the current culture gives a certain fetishistic importance to ‘information’” (1999, p. 160). Students have become autonomous choosers, who can supposedly independent of hegemonic norms choose whether they want to buy brand A education or brand B. We have here the Pepsi challenge of pedagogy: either you want brand A or brand B. There are no brand alternatives and the underlying assumption is a consumer, with capitalist choice among brands, closeted representations of corporate power.

This concept of autonomous chooser has roots delving deeply into Enlightenment ideologies of the rational self—a self able to choose objectively and wisely, without emotional or social hindrances or biases. One can witness manifestations of this concept in No child left behind’s emphasis on “investing in practices that work and can be empirically verified” and that “students fail to read on grade level” (www.nochildleftbehind.gov). In the latter quotation we see the ideology at work in a nefarious manner—blaming the victim. The child chooses not to read on level, the student fails to live up to his or her ability. When the onus is placed on the

supposedly autonomous chooser, the government and society are removed from blame. In fact, programs that seek to acknowledge students' differing circumstances are labeled "unproven fads, untested ideas that have hurt our children." Programs that hinder one's right to choose independently hurt children. Standards make for a level playing field and any consideration given to differing backgrounds affects on education are castigated as "soft bigotry." The culprit is a lack of chooser autonomy. As Marshall puts it, a belief exists in the absolute independence of the autonomous chooser: "presuppose that such choices are the student's (or chooser's) own, that as choosers they are independent, and that needs and interests have not been manipulated or imposed in some way upon them" (1996, p 3). As such, the sole responsible party for failure is the self, the individual, the independent chooser.

The proceeding victimization is an aspect of what Marshall labels busnopower:

The new form of power, which I call busnopower, is directed at the subjectivity or identity of the person through the body but at the mind, through forms of educational practice and pedagogy that shape through choices in education the identities of autonomous choosers. Biopower was directed at the body (sexuality and health) but busnopower is directed at choices, and at the will to choose, and the body is necessary but more like a conduit. It is no longer the will to truth but the will to choose that has become important in the notion of the autonomous chooser. (1999, p. 164)

Marshall, in this quotation, adapts Foucault's (1983) notion of biopower, positing that the human sciences as health industries and institutions (e.g. medicine, education, social welfare, politics, mental health) produced forms of domination that fostered capitalist economic domination. If one did not subscribe to capitalist domination, scientists developed pathologies to explain deficiencies—maturity, sanity, gender, race, health, and class status. The institutions of

capitalism could then categorize the deficiency and subsequently label a non-believer as a heretic, abnormal.

This describes the process of busnocratic rationality in which Westerners are immersed. In the Enlightenment the ideal of rationality flourished as a means to save humanity from irrational dogma. Science would guide humanity to progress and the government bureaucracy became the governmental embodiment of this ideal. Bureaucracies are emotionless institutions that enact laws chosen through rational, democratic means as the best for all and are further verified by empirical testing. As such a department of education does not set policy, but enacts and tests it. Bureaucracies are efficient, including accountability and surveillance to ensure equal protection under the law. However, these ideals are not as objective and fair as they may seem on paper:

It is not just a means / ends form of rationality concerned with bureaucratic rationality because what I call business values permeate throughout. Business values, masquerading as facts, penetrate the rational planning and delivery of education, as determining standards, pedagogy, and curricula (1999, p. 152)

The assumption that a bureaucracy is somehow immune to subjectivity is shown as so much rubbish. This uncritical acceptance of busnocratic rationality can be seen as:

A totalizing form of rationality with an encompassing totalizing end and it is not like bureaucratic rationality just a “neutral” form of rationality capable of application to specific areas like the law and economics, where different ends may and still can be identified. This new form of rationality has an overriding and overarching end concerned with the development of autonomous choosers, but an end that interpenetrates at the very lowly levels or mircopractices of human interaction. (p. 152).

Busnopoly then manifests itself as the ultimate ends of education, in that it supercedes even the supposedly neutral space a bureaucracy occupies. Now, the means and ends of education are to produce a superior economic product for competition in the new global economy—and this agenda is taken as fact. Western culture is so awash in capitalism and the hype of postcolonialism that most everyone does not perceive that this is an ideology at work not the Truth from on high. This marketing of an educational policy as scientifically derived and factually based, silences all debate in hegemonic Western discourse.

This abject belief in facts arises in some part from the Enlightenment notion of the Word. There is a belief that words and ideas in texts are unmediated as they stand directly as they are, that readers do not make sense of words and ideas, but assimilate them.

The belief that words and ideas presented to learners are unmediated has much to do with essentialist ideologies, or the metaphysics of presence, and assumptions of print culture. Marshall (1996, 1999) promotes, like Landow (1992), a poststructuralist semiotic for electronic text: “in electronic text, the author or reader can alter, amend, or add to the text. The author can continuously update a text as his or her position shifts and changes” (1996, p.5). This is not to say that print text is unmediated; rather that electronic text makes mediation more visible and easier: “there is clear evidence historically that words and text of the printed text had to be mediated, and that they were not a transparent window into thought” (p. 5). When one believes in the modernist myth of absolute meaning, reaching its zenith with the New Critics of the early twentieth century, then transmission from the learned to the ignorant is not only possible, it is the only desirable and appropriate means for education. Learner inattention is a behavioral problem, not a failure to interest the student. If a student fails to answer correctly, then he or she has not read correctly.

In this educational cosmos, schools and grades in particular loom as technologies of power and coercion. If one believes in this discourse, then perceiving communication as a simulacrum is dangerous; authority is immediately diminished and even precarious. The difference between perceiving text and word as static and seeing it as a representation of social norms that has to be mediated is not a difference of equivalence. It is the very precariousness of authority that has traditionalist very worried and consequently admonishing progressive theories as fads. The rhetorical attacks in No child left behind (2002) are not mere flourish but alarm directed at a loss of power. The Thermidorian reaction that No child left behind manifests is a real fear of instability. The powers that be have dictated this program because they feel their cherished way of life is at stake. As Jackson Katz (1998; 1999) illustrates, a distinct reaction to the gains of the civil rights movement, including racial, sexual, and gender rights, has been transpiring since the Reagan era. Economic deregulation, high-stakes academic standards, racially biased mandates such as California's Proposition 227, and repeals of affirmative action policies all exhibit a social retrenchment. Appeals to violent hyper-masculinity exhibited in movies and television with a contemporaneous construct of waffish, girlish woman in mass media underscore a return to normalcy. By constructing masculinity as violent and femininity as subservient and unimposing and coupling this with a pedagogical ideology of docility and static information, those groups who have the most to gain are pushing their ideologies as natural, not merely normal. If a system is natural, then how can one argue against it? The reactionary elements are undercutting the discourse by making a case that there is no argument. They are not claiming their position is better; they are claiming that their position is right and everything else is wrong. It is in such a climate that ideologies become dogma.

The neoliberal myth

From the neoliberal and conservative reform perspective information processing and computer literacy are the key buzzwords in education. From the Neo-liberal perspective information is presented as something neutral, if not charitable. The belief is unfettered information, built upon Bacon's (Novum Organum, 1620/1998) maxim that "Knowledge is power," (p. 44) represents a faith in meritocracy. If everyone has equal access to information, everyone has equal access to power, wealth, and privilege. This faith in meritocracy is so fundamental to American self-conception that it is called the American Dream. Spring (2002) defines meritocracy "as a social system that gives an equal chance to all to develop their abilities and the advance in the social hierarchy" (p. 6). The school as cultural institution functions as the great social sorter producing educated and responsible citizens to serve the common good according to social needs and their abilities. However, when such a system actually promotes the scions of wealthy and powerful families as the American system does, then such a system masks social inequities by blaming the victim. In a meritocracy, a ditch-digger is a person who failed to achieve his potential, who did not compete well academically. The banker, on the other hand, earned his privileged status. If one follows this logic, then the fact that white, patrician, males dominant the directorships of massive transglobal companies is because they made the most of their opportunities. According to this logic, women, people of color, the poor all failed historically to achieve and have no one to blame but themselves. In response to this myth, Marshall urges, "what is needed in response to neoliberalism is an increased vigilance, and an increased imagination and inventiveness, for there is a complex space brought into play by such neoliberal reforms" (1999, p. 147). The neoliberal, information age, utilitarian model for

education so dominates the curricular landscape that it seems that older arguments regarding how to best educate youth are moribund.

Thomas Friedman¹⁹ (2004) offers an example of the neoliberal educational agenda. In “The Silicon Valley of Bangalore,” Friedman writes how the outsourcing of software engineering jobs has traveled naturally to India. He notes that because Indians are well educated, speak English, and India wisely chose to abdicate socialism for a free market economic system – itself a play on natural laws of supply and demand and a closeting of a regressive tax system that rewards the rich while punishing the poor – India is natural market for software engineering. Only begrudgingly at the end of the article does note that average salaries much lower in India than in the United States so that corporate profit margins are accordingly higher. His recipe for altering this supposedly natural flow of work from the US to India is for more education and research: “This is a ‘wake-up call’ for U. S. workers to redouble their efforts at education and research” (p. A18). Notably, the onus falls on the autonomous chooser – the worker – who must redouble his or her individual efforts for education and research. First, if this is a natural change in the new global economy for cheaper labor, I wonder what good more education will do. Second, how do individual workers accomplish multibillion dollar research? Only governments, corporations, and educational institutions – becoming more like corporations everyday as Virginia Tech’s Mission Statement (2002) typical of many research universities makes clear – are capable of this sort of investment in research. If more well educated technicians do enter the American market, according to laws of supply and demand, wages will go down as the market becomes increasingly glutted. Perhaps this is the circuitous route that Friedman wishes American software engineers to take—become so numerous as to make wages on par with India? Finally, Friedman’s column is nationally syndicated and not held to nearly the same rigor as academic

research, so he can rely on anecdotal evidence and relate his findings to a much wider audience than a qualified economist can normally.

Marshall (1997) argues that the once-burning debate concerning which paradigm best suited education, liberal arts versus vocational education, is now a dead letter: “This is no longer the case for we are entering a total education and training culture in which the vocational, and business values, so permeate the culture that ‘vocationalism’ has little or no meaning for there is no other in the educational realm of discourse to define against it” (p. 1). Dewey feels that mutually exclusive distinction between liberal arts and vocational education methods yet another duality in the system. He believed that education should be vocational, address one’s calling as the term implies, but not a servant to technocratic efficiency. One fatal flaw in the logic here is that vocational education is predetermined for learners who are sorted into fields, where their needs are defined for them, through a series of tests. Dewey (1938/1997) stipulates that education work within the cultural matrix, yet not be dominated by economic interests:

The kind of education which I am interested in is not one which will adapt workers to the existing industrial regime: I am not sufficiently in love with the regime for that. It seems to me that the business of all who would not be educational time servers is to strive for a kind of vocational education which will first alter the existing industrial system and ultimately transform it. (p. 42)

One aspect of Dewey’s position is that learners play an active role in choosing their vocation and that realistic, contextualized problem-solving, not rote activity aping, inform the methodology. As Marshall writes, “one cannot prepare in a determinate way for a future which can only be indeterminate” (p. 3).

Schools must not be made an adjunct of industry and commerce as if these institutions are in a perfected, ultimate form. Such ideas are sheer folly. The educational system does recognize this to a degree; the working classes learn rote activities to prepare them for the jobs of today, whereas the professional and managerial classes learn to be more adaptive to prepare themselves to be autonomous choosers. We have a two-tiered educational system forged largely out of modes of production in which certain skills and consequently liberties are inculcated within the educational process. Those who serve learn docility to an unforgiving system, while those who command (to a degree) learn to make certain choices. Such choices, while hyped as independent, are heavily curtailed by social norms and regimes of truth. A miniscule third tier of plutocratic elites exists who are educated at the most elite institutions and have the most latitude in choices and delimit choices for those lower on the socio-economic ladder.

Speaking of the ladder, a myth exists that “the streets are paved with gold” and that “America is the land of opportunity.” The ladder leitmotif instills an idea that social scales are flexible, that hard-work and ingenuity are the keys to success and that America does not have an entrenched plutocracy that has built a system that maintains the status-quo. Contradictory logic informs what Foucault (1972) calls “the regimes of truth” so that extremely lop-sided economic policies that favor the rich can be presented as liberty in a country where such a term is canonized as equality. Redistribution of wealth and criticism of corporate welfare are often labeled seditious and undemocratic activities. In such a climate, placing the onus of failure not on the plutocrats, but on the poor makes sense. The neo-liberal agenda shifts blame away from structural economic and political policy issues to underachieving individual. People who are unemployed do not have the right skills; it is not a problem of capitalist greed, such as shifting work to third-world sweat-shops. If such a transfer does take place, it is a company’s right to

move labor to the friendliest markets, even though the American taxpayer pays the company to incur transfer costs. Ironically, the laid-off worker's taxes go to support his or her own unemployment. If most Americans viewed this problem from such a revolutionary (as it is often labeled as dangerous) perspective, then the system could no longer exist as it does. As it stands, blaming the victim supports the economic exploits of the very few at the very real expense to the vast majority. Therefore, we find ourselves in systems that purport that the problem lay with the poorly motivated, self-interested, underskilled individual. Busnower is the logic that informs the new vocationalism. In this warped regime of truth, common citizens choose whether or not to improve their lot by choosing to reskill or not. Our choices are highly limited for the gain of the elites.

Regimes of truth: Neo-con educational agendas

In Time: Integrating new technologies into the methods of education, written by Callahan and Switzer (2002) of Northern Iowa and endorsed by Secretary Paige, exhibits many aspects of the Neo-con, new vocationalism agenda. The document initially seems to endorse constructivist pedagogy by insisting that education be student centered and that education in America should "provide us with a foundation for effective citizenship in a democratic society" (www.intime.uni.edu/model/modelarticle.html). However, the introduction's rhetoric already hints at a Neo-con undercurrent. It offhandedly dismisses criticisms of the role of consumerism in the headlong rush to implement technological innovations in education. This is an excellent example of a straw-man argument. Next, the issue of core American values rears its ugly head in the paragraph dedicated to democracy in education.

With respect to the emphasis on student-centeredness, one may imagine this will be a progressive document. However, the switch-and-bait ploy soon comes evident. As this document

is part of a national agenda to improve education and no attention is paid to structural or funding problems or questions about unequal access to technologies, the emphasis on the individual becomes sinister. The onus placed on the individual for failing to achieve is again a major component of a Neo-con agenda. For instance, the concluding line on student centered education reads, “to help students develop self-management”

(www.intime.uni.edu/model/modelarticle.html). Foucault asserts that one of the major factors of modernist education is to create an individual subservient to the will of hegemony and InTime’s emphasis on self-management smacks of such inscribed docility.

In a section entitled “Principles for good learning,” Callahan and Switzer (2002) pattern their model on cognitive science and biological determinism to prove their methods are unquestionably correct. Like prior sections, they begin by addressing education as a creative act that involves active learner engagement and intrinsic motivation. However, they quickly resort to placing this burden on the learner never considering any structural changes in educational methods and goals. The learner must be active, must be involved, and must be motivated. With respect to biological determinism, they make pronouncement about the importance of reflection such as “Brain research tells us that high challenge produces major surges in short-term neural activity (termed ‘beta-level’ activity). But building lasting cognitive connections requires considerable periods of reflective (‘alpha-level’) activity as well”

(www.intime.uni.edu/model/modelarticle.html). The method they present evinces more of Foucault’s (1977) warning when they reiterate that constant observation and feedback is necessary “Because the brain wants to deal with the most pressing matters, it is necessary to practice those things that we wish to retain and to receive feedback” (ibid). This statement

invokes the tropes of hierarchical authority and constant, coercive correction. This method of instilling docility seems at odds to me with instilling democratic behaviors.

It does not surprise me that Callahan and Switzer endorse Human Information Processing models and that this endorsement is buried deep within their document. The hype of the information age as a period in which technology leads to “Pathways of knowledge” (www.intime.uni.edu/model/modelarticle.html) does not surprise me either. The belief that information equates with knowledge informs this section and their model they originally presented as holistic and non-linear becomes hierarchical, limited, and linear: (1) appreciation, (2) presearch, (3) search, (4) interpretation, (5) communication, and (6) evaluation. As one may imagine the student while invoked to be active and critical is the recipient of this process, with an emphasis on evaluation as continuous and a way in which learners “improve their information-seeking techniques” (ibid). Information processing is linked predictably to content standards as those things that children must know to succeed socially and economically. While the authors talk a good game about learning as meaning-making their admonitions that students assimilate correct answers according to standards proves that their initial rhetoric is once again window dressing.

What may be a bit more surprising is the link to verifiable, objective democratic behaviors [see Appendix 2-2]. The check list for objectively verifiable behaviors that elicits the most concern for me is “Individual responsibility and civil involvement with others:

Having the job or duty of doing something or caring for somebody / something so that you may be blamed if something goes wrong; being capable of being trusted, reliable, and sensible; being liable in a legal sense for the normal legal consequences of the action;

being morally responsible for what you do which could result in praise or blame, whichever is appropriate to the action in question; and being responsible for your actions through your ability to control what you do, being held to legal consequence or to moral blame [emphasis added].

(www.intime.uni.edu/model/modelarticle.html)

Honestly, this statement could apply equally to a totalitarian society, such as portrayed by Kafka's Der prozess (1925/1984) in which Joseph K. constantly frets over his legal responsibilities and liabilities in addition to his being trusted by his superiors at the bank – “the Manger of the Bank highly valued his diligence and reliability” (p. 17) – and the agents from the state. In OnTime there are no admonitions that citizens have the right and responsibility to question unjust authority or discriminatory public practices; there are no appeals to activism or outrage; there are no accommodations made for exercising the freedom of speech and action. These traits that I argue are of utmost importance in a democracy are not only ignored, they are done so willfully. The deeper one delves into this document, the more abhorrent it becomes. The blame, as this document specifically attests to, lay with the individual. Democracy, as defined here, is a policing mechanism; this list could just as easily find a home in Orwell's 1984 or any similar totalitarian state. No mention is ever made of a society's requisite responsibilities towards individuals. Moreover, by emphasizing the acontextual individual, issues such as race, gender, creed, politics, sexuality, and so on are closeted.

Another nationally syndicated George Will (2004), in supporting No child left behind (2002), exhibits much of the Neo-con rhetorical hyperbole and commonplaces. He utilizes faulty assumptions / philosophical screen, and red herring logical fallacies to make his point. To begin, he castigates those opposed to No child left behind with this pithy remark: “Let's leave a lot of

child behind” (p. A21). Typical of Neo-con rhetoric, he does not deign to define what leaving behind a child entails, leaving the reader to assume that liberals do not want children to learn. He belittles Howard Dean who sought in tests regarded by many as racially, gender, and class biased (Bigelow, 2000; Jackson, 2000; Miner, 2000a, 2000b; Ohanian, 1999, 2002; Swope, 2000; Wellstone, 2000) as soft on education in wanting to alter such tests to make them less biased. Of course, Will never states why Dean wanted to alter the tests, which is part of his straw-man stratagem. Will denounces states that have rebuked No child left behind as an underfunded mandate, implying that a liberal cabal is to blame, although two very conservative states (Virginia and Utah) are the only two states to date wholly rejecting the act. He takes on the Neo-con mantle of ad populam appeals by attacking teachers’ unions as protectors of unqualified teachers at the expense of children. This is utter nonsense but appeals to the bias of his audience—that may well include Secretary of Education Paige who commented that teachers’ unions are terrorist organizations. Will develops a false dichotomy and dilemma of Democrats, liberals, and teachers (all conflated together for simplicity’s sake) at odds with children, parents, conservatives, and Republicans. Will’s primary objective is to besmirch teachers’ unions and their political allies, not to engage in debate for the good of children, teachers, and parents. In sum, Neo-con agendas tend to rely on shoddy rhetoric, biased research, commonplaces, and castigating their opponents with childish name-calling.

Chapter summary

In this chapter I have sought to deconstruct the positivist ideologies that inscribe traditional curriculum design and its subsequently moribund teaching methods. My reason for doing this simply put is that hyperpedagogy cannot function in such a structured and hierarchical learning environment as that proposed by curriculum traditionalists and reformers. Systematic

instructional design also undermines any efforts to instill a hyperpedagogy philosophy and methodology.

Of particular concern to me are the myths of the information age that undermine critical pedagogies. The emphasis on rote information processing that the standards-based advocates are crowing for limit the possibilities for critical judgment and disregard the experiences of many learners. Moreover, the essentialist ideology that founds the closed-system episteme establishes the status quo as right and just. Marshall's critiques of busnpower coupled with Kliebard's critiques of scientific management illustrate many of the philosophical and sociological pitfalls of the myths of the information age and the role of schools to prepare learners for the new global economy. Such a system will decrease social mobility and promote intellectual stagnation; two factors no educational system should endorse, much less put to practice.

A key problem that intersects the traditionalist and reformist agendas is the burden placed on the individual for failing to achieve. By accepting this premise and ignoring larger social problems such as racial, class, and gender discrimination in our Euro-, phallo-, and plutocentric curriculum, we have codified blaming the victim. No child left behind when exposed to critical analysis shows itself as more of a policing mechanism than an attempt at educational equity as it purports to be. A better name would be something along the lines of no child left unobserved, uncategorized, and uncorrected.

Chapter 4: Hyperpedagogy as poiêsis

Philip Sidney (1595/1992) writes in The defense of posey that poetry is derived etymologically from the Greek “word ποιειν [poiein], which is to make” (p. 607). He describes the poet as “a maker” of little worlds emulating the Maker of all Nature, God:

There is no art delivered unto mankind that hath not the works of Nature for his principle object, without which they could not consist, and on which they so depend as they become actors and players, as it were, of what Nature will have set forth. (p. 607)

Sidney encourages other poets to create worlds based on Nature, God’s creation: ““follow Nature (saith he) therein, and thou shalt not err”” (p. 607). Recently, critics have made claims that educators, and curriculum designers in particular, work in a poetic endeavor (J. Garrison, 1997, 2001). Curriculum designers create “little worlds,” microcosms of nature. This genesis occurs for all learning, including online environments, which are sometimes erroneously deemed as less “real” than traditional, proximal learning.

In this chapter I intend to illustrate how poiêsis serving as a guiding principle (daimon) for e-learning is a key concept for hyperpedagogy. In order to accomplish this, I will clarify what I mean by poiêsis, how the term relates to e-learning, and how traditional metaphysics and assumptions gleaned from such theoretical positions serve as an impasse to implementing hyperpedagogy. Hence, I will detail how poetic e-learning differs theoretically from traditional concepts of nature as the ends for educational methods, how Dewey’s rejection of classic metaphysics acts as a means to a creative and infinite ends for e-learning, how hyperpedagogy evolves from Dewey’s critique, and provide an example of hyperpedagogy as a praxis. The setting for the hyperpedagogy example evolved from an undergraduate Social Foundations of Education class I taught in the Fall of 2002 at Virginia Tech. The class met in the afternoons and

was comprised of 25 juniors and seniors studying as preservice teachers. In this chapter I provide two examples of hyperpedagogy: in one instance I challenged students to develop their own pedagogical creed, using Dewey (1902/1998) and Doll's (1999) instances of such as springboards for thinking; and in the second instance, the class had not gotten off to an amiable and productive start, so at the time I felt I had the choice of either disciplining the group, enacting the worst aspects of Foucault's Discipline and punish (1977) as I detailed in chapter 2, or initiating dialogue on how to improve the situation. As it turns out, I initiated a dialogue on the structure and goals of the class in which the syllabus became not a static device to discipline students, but an open text in which the students co-wrote a modified classroom constitution with me. Hyperpedagogy seeks to provoke students to take an active part in their education; the proceeding example is an excellent manifestation.

In contrast to using poiêsis as a daimon for education, others such as Bobbitt (1918,1924), Callahan and Switzer (2002), Paige (2002), and Tyler (1949) as we witnessed in the previous chapter, conclude that curriculum should act as a path to God's (the marketplace, Reason's, Nature, etc.) perfection. Hence, we have a discrepancy of what divinely inspired curriculum should aspire to: replication of a perfect form (God) or emulation of God as Creator. God here signifies not a particular revelation of deity, but rather an ontological perspective for humans—what we imagine as an idealized human, a homo superior, and the summum bonum towards which they should aspire. Put another way, are we to be colonized by dogma or become co-creators in an emergent world? Hyperpedagogy finds solace in the latter proposition, that learners are co-creators of reality, not slaves to it:

In problem-posing education, people develop their power to perceive critically the way they exist in the world with which and in which they find themselves; they come to see

the world not as a static reality, but as a reality in process, in transformation (Freire, 1970/2000, p. 83)

Paulo Freire's Pedagogy of the oppressed serves as one of the primary ideological documents informing hyperpedagogy as poiêsis in that Freire's call for conscientização, or critical consciousness raising through problem-posing, grounds much of what I wish to see hyperpedagogy accomplish for e-learning.

In contrast to those who favor inquiry-based, creative education, others who favor a finished, perfected, and closed cosmos assume that information technology ideologies and methodologies are natural for e-learning. This technocratic determinism, exemplified by reductive check-list rubrics endemic to standardized learning models, presumes that human information processing and the cognitive sciences are the exclusively correct methods for e-learning. For example, Ohanian (2002) weaves a tale of academic bewilderment in which a creative third grade writer, who wrote exemplary, creative pieces in his language arts classes, wrote a humorous and imaginative narrative on a standardized test that included novel turns of phrase, excellent logical structure, and illustrated an subtle understanding of grammar, syntax, and structure, yet he failed the composition section because the test grader could not harness his wit to a standardized rubric. His teacher, powerless to evaluate this Texas Assessment of Academic Skills (TAAS) writing assessment, remarked "he didn't follow the outline," and his mother added, "To get his writing scores up, he will have to suppress his natural storytelling ability and write like a robot" (p. 100). I find this trend abhorrent because human information processing is typically predicated on the student as a passive, uncritical recipient of information as I have detailed previously in chapter two's section entitled "Human information processing, cognitive determinism, and Instructional Systems Design." What Paulo Freire (1970/2000) finds

irksome and socially unjust is the banking model of education, which has found a home in digital learning environments and in the hearts of their proponents. Social justice and progressive education advocates need to resist these assumptions and postulate ways in which e-learning can be used for critical inquiry and consciousness raising, for imaginative and productive dialogue, and for sites of resistance to hegemony and subsequent social injustices. Hyperpedagogy is a manifesto declaring that classic metaphysics should not dominate e-learning and that people interested in social justice pedagogies need to find imaginative ways to promote critical consciousness. It is time to move beyond the growing social dualism of technocratic hype and Luddite reaction. People who value social justice pedagogies need to become invested in ways to liberate e-learning from technocratic determinism.

Poiêsis, nature, and education

To counter the traditionalist assumption that human information processing and related passive learning theories are natural for e-learning, I will scrutinize the technocratic determinist assumption that nature is static rather than adaptive and evolving. The primary point of departure regarding nature exists between viewing nature as a perfect and finalized form as do Paigé, Plato, and Rousseau, or seeing it as an emergent and evolving, uncompleted and infinite process as Dewey does. For many traditionalist researchers, nature, as in a natural method, serves as a telos for method. As such, researchers will attempt to identify how humans learn naturally with respect to a particular medium. Of course, once the natural method is determined, no further research on method is required, all others being unequal to the task. When this methodological end is determined, the system is not to blame, but the learner. Hence, the traditional trope of blaming the victim is vindicated. No child left behind consistently relies on the trope of

teleological natural methods to squelch dialogue and cast blame onto the people who suffer the most from its adoption, as I have detailed in the previous chapter.

To ensure an appropriate understanding of nature, I refer to Dewey's (1916/1944) instrumentalist views on nature and learning as an evolving and emergent process of inquiry:

When it is said that education is development, everything depends upon how development is conceived. Our net conclusion is that life is development, and that developing, growing, is life. Translated into its educational equivalents, that means (i) that the educational process has no end beyond itself; it is its own end; and that (ii) the educational process is one of continual reorganizing, reconstructing, transforming (pp. 49-50).

More exactly practices may emerge out of nature. Nature is not a transcendent, fixed mode of being, but an emergent praxis—a process of becoming. Poststructuralist and pragmatist thinking, which hyperpedagogy relies on, rejects the notions of a fixed and final telos, absolute origin, or ultimate fixed center (or foundation) to any process, including learning processes.

As Dewey (1916/1944) notes education is not a straight-line procedure in which maturity serves as the ends of education and immaturity is thereby a lack of maturity. In this metaphysical construct immaturity is an absence, whereas maturity is a presence, a fulfillment of a fixed and determined potential. A problem with this logic is what occurs after the formal learning procedure ceases. If the procedure is to fashion a mature adult as accomplished growth, then learning and growth cease after matriculation. Dewey, however, wants to see this construct differently with growth / learning as an ongoing, never ceasing activity and as an active process: “Growth is not something done to [learners]; it is something they do” (p. 42). In this respect, learning involves agency and its end is not a fulfillment of a finite potential but instilling a desire

for further, never ending learning. Education is not a quest for certainty and a child should not be judged as a finalized product. So when traditionalist educational advocates (Bennett, 1992; Bloom, 1987; Bobbitt 1918, 1924; Callahan & Switzer, 2002; Herrenstein & Murray, 1994; Hirsch, 1988; Paige, 2002; Ravitch, 1981/1997) speak of natural talents as fixed commodities, critical researchers need to inspect even this most basic assumption. This assumptive flaw leads to a myriad of fallacies that inform technocratic and biological determinism. These determinisms are rhetorical attempts to dogmatically limit dialogue. If one right way of using digital technology in education can be clinically verified, then there is no reason to even have a dialogue.

In his chapter, “Nature, communication, and meaning” from Experience and nature, Dewey (1925/1998) relates how nature exists in a fluid state and not as a realized, completed form. Unlike Aristotle (ca.380bce/1998), who postulated that nature is a perfected, transcendent form, Dewey envisioned nature as composed of events and subject to reconsideration: “all natural events are subject to reconsideration and revision” (p. 50). He claims that language and signification have a great deal to do with the fluidity of nature as events:

Events when once they are named lead an independent and double life. In addition to their original existence, they are subject to ideal experimentation: their meanings may be infinitely combined and re-arranged in imagination. (ibid)

In an Aristotelian cosmos, on the other hand, meanings are not events, but solid forms:

Meanings, under the name of forms and essences, have often been hailed as modes of Being beyond and above spatial and temporal existence, invulnerable to vicissitude; nor that thought as their possession has been treated as a non-natural spiritual energy,

disjoined from all that is empirical. Yet there is a bridge that joins the gap between existence and essence; namely communication, language discourse. (p. 51)

These forms or essential substances result in a concept of properties, or a true state of Being exempt from contingency and context. As such, meanings taken as essences in classical thought transcended physical, lived experiences and instead become the metaphysical. In such a cosmos people have only the recourse to discover and not to create as that is God's prerogative alone.

If we see nature, however, as fluid, experiential, and empirical, we begin to see ourselves as creators in this universe. Dewey rejects Platonic supernaturalism and relies instead on a mundane, Darwinian naturalism. In this sense, all organisms partake in the making of an unfinished and unfinishable universe. Education becomes not an unfolding to a predetermined and perfected end, entelechy, but rather an exploration into living / being with desire and possibilities determining goals-in-view. Learning is growth. We grow in a world that modifies us and we adapt it to fit our purposes. Growth is rhythmic. It is a series of disharmony, inquiry, trial-and-error, and a return to harmony.

The concept of nature relative to education is fraught with controversy. In Plato's worldview natural social structures relate to divine structures and natural appetites. In Platonic visions of nature and education, the role of education is to secure the good, the beautiful; in the case of education, a rational intellect. Those people who cannot control their worldly, embodied appetites are naturally suited to serve the state as laborers, merchants, and artisans. Those who better stifle their appetites and see the good in duty to their intellectual / philosophical / rational superiors are the protectors of the state as citizens, soldiers, and bureaucrats. Their superiors to whom they obey are the philosophers-kings who have transcended embodied, vulgar appetites. The philosopher-kings can naturally proclaim like Louis XIV, "I am the state."

The overriding theme from a traditionalist perspective is that the existing socio-economic order is natural and that state education needs to reproduce this order. A few problems exist with traditionalist views of nature: class is a natural category and so social mobility is impossible; education is teleological and essential, having a single goal; people exist to serve the state, and because the philosopher-king has all power, all serve the will of the rational tyrant (or technocrat). As an advocate of democratic education and social-justice pedagogies, I question the traditional signification of nature and conclude its effects on education are detrimental to progressive educational reform. Moreover, the emphasis on intellect and rationality tends to privilege affluent, heterosexual, white males in contemporary iterations of Platonic supernaturalism. A Platonic paradigm seeks to subordinate the individual to the social whole as defined by social elites and becomes a recipe for exploitation. To wit, people, such as Bennet, Bush, and Paige will describe an educational agenda as good for the nation, especially the national economy, yet they mask who benefits from teleological agendas when they reify the privilege of the elites and establish a rationale for the social and economic superiority of those already powerful and wealthy. As such, standardized tests and high-stakes testing tend to act as self-fulfilling prophecies. The common populace serves the ends of the state, controlled by the will of the elites. Such an educational system sorts individuals into how they can best serve the state thereby ignoring, or even outright repressing, individual goals: “There being no recognition that each individual constitutes his [sic] own class, there could be no recognition of the infinite diversity of active tendencies and combinations of tendencies of which an individual is capable” (Dewey, 1916/1944, p. 90).

Rousseau (1762/1997) also advocated a natural form of education and saw nature as an arche (source) of goodness. His natural education model, depicted in Emile, relies on an idea that

nature is a perfect telos (end) and that a natural man, uncorrupted by social artifices, is the goal of education. Nature serves as the method and goal of education and discipline. In this essentialist pedagogy, true ways of being are the goal. This presupposes that true ways exist out of context and therefore suffers from the same misguided principle as Platonic education: a belief in absolute and polemic good and bad / right and wrong. Such thinking leads to dogmatic, binary positions that stifle constructive dialogue; dialogue, however, is essential for a productive and cooperative democracy. Given that constructive dialogue is necessary for a democracy, Rousseau and Plato's ideal of nature predicated on natural, inalterable forms (including political, economic, and social orders) proves inadequate for poetic, democratic education.

Nature can be understood differently if one investigates its etymological roots. I should also state that it is not my attempt by looking into the traditional Greek and Latin usage of nature to discover its essential meaning; rather, my goal is to establish what I mean by referencing nature and illustrate how this vision of nature serves the means of hyperpedagogy. Wolfgang Schadewaldt (1959/1979) writes that nature is derived from nasci "to be born," much like the modern nascent (p. 160). In Greek the word physis signifies nature as something "brought-forth" or "made to grow" from the noun pyho. The added participial ending -sis in physis proves important as it signifies action, such as coming to be, growing, or making. When one couples the idea for nature with poiêsis as calling something into existence, then we can see education as growing and bringing forth novel things into existence. In this existentialist, not essentialist, concept of nature, there is no absolute arche or telos to be fully and finally achieved, but rather a constant coordination of ends-in-view, desires, and consequences. Dewey (1916/1944) summarizes natural growth in education nicely:

Growth is regarding as having an end, instead of being an end. The educational counterparts of the three fallacious ideas are first, failure to take account of the instinctive or native powers of the young; secondly, failure to develop initiative in coping with novel situations; thirdly, an undue emphasis on drill and other devices which secure automatic skill at the expense of personal perception. In all cases, the adult environment is accepted as a standard for the child. He [sic] is brought up to it. (p. 50)

In creating “little worlds” then, curriculum planners and educators more generally need to be mindful of what types of worlds they are creating: the predestined tyranny of the Calvinist paradigm, or the flexible and negotiable world-view of Free Will. I maintain that educators should create the latter to promote critical engagement in educational policies and practices. The optimal way to flesh out these statements is to begin with the concepts of poiesis and creative imagination as defined by Dewey (1934/1989), Garrison (1997), and Greene (1995).

Poiêsis and hyperpedagogy

In order to understand poiêsis sufficiently, it is necessary to define the role of poetry and artistic endeavor in education, particularly as a form of inquiry. Poetry has the ability to disrupt systematic ways of thinking and perceiving the cosmos as Aristotle and subsequent Western metaphysics has dictated for the last 2,500 years. In Aristotelian metaphysics, the purpose of inquiry is to discover the universal and final (telos) meaning of a logical form (eidos) – its essence (ousia). In “the problem of truth” (1911/1998), a series of lectures at the University of Pennsylvania, Dewey debunks the prima facie meaning of truth. He points out that in Western traditions of metaphysics, dating back to Plato, Aristotle, Augustine, and Aquinas, the endeavor to discover truth is to understand forms (eidos) as they essentially (ousia) are. Such truth is final, universal, natural, and most important transcends experience. Hence, truth is not made, localized,

social or experiential. As such true forms can and should be discovered by the wise and on to the ignorant.

Dewey locates this metaphysics in the controversy over truth as a fluid product of local customs (nomos), as the presocratics tended to hold it, or as Truth (logos), the discovered divine essence. Plato and Aristotle replaced truth / laws as social conventions and institutions with true being. Structuralist / essentialist philosophers regard nomos as chaos and so seek to place truth as logos into the transcendent heavens, the venue of the Olympians, the Christian God, defied Nature, and market-place economic laws, depending on what is the solid, evaluative center of their structure. In the structuralist vision for the cosmos, therefore, only God (in its myriad forms) as center has the power to create; the concept of “little makers” becomes blasphemy.

A poetic vision for inquiry, on the other hand, does not seek to determine the eternal truths. Inquiry is a proposition guided by the tradition of prior inquiries and experiments passed down as formulas, rules, equations, and laws to achieve a desired end. Principles, formulas, laws are distillations of prior inquiry and experimentation and act as guides for action, not as forms that need to be memorized for their own sake. In disequilibrium a human organism finds itself in

Figure 4-1: Newton's Law of Universal Gravitation

$$F_{gravity} = \frac{Gm_1m_2}{r^2}$$

where;

F = Force in Newtons (N)

G = Gravitational constant = $6.67 \times 10^{-11} Nm^2 / kg^2$

m_1, m_2 = mass of each body in kilograms (kg)

r = distance between the 2 bodies in metres (m)

Source: <http://www.curtin.edu.au/curtin/dept/phys-sci/gravity/index2.htm>

an unsettling circumstance and seeks a way back to equilibrium as an ends to inquiry. For example, gravity can be defined by Newton's Law of Universal Gravitation [see Figure 4-1].

With the given formula, one can compute Earth's gravity as roughly 10 meters per second squared. So if one chooses to free-fall, he or she can compute how long before pulling the rip-cord of a parachute, given the relative stability of gravity on earth. Yet, Albert Einstein found that gravitation is relative (Special Theory of Relativity), not universal. Kip Thorne, at Cal Tech, has postulated that gravity exists as waves to explain such celestial phenomena as black holes and quasars. In such phenomena, time / space bends and gravity forms wells. As such, formulas used to determine escape velocity for Earth differ significantly due to differences in relative gravitational field dynamics:

Figure 4-2: Comparable Formulas for Escape Velocity – Earth and Blackhole	
$\frac{1}{2}mv_{initial}^2 - \frac{GM_{earth}m}{R_{earth}} = \frac{GM_{earth}m}{R_{max}}$ Solving for v; $v^2 = 2GM_{earth} \left(\frac{1}{R_{earth}} - \frac{1}{R_{max}} \right)$	$v_{escape} = \sqrt{\frac{2GM}{R}} \text{ as } v \rightarrow \text{speed of light } c$ $R = \frac{2GM}{c^2}$
Source: http://www.curtin.edu.au/curtin/dept/phys-sci/gravity/index2.htm	

Theoretical physicists, such as Einstein, Thorne, David Blair (University of Perth), and Stephen Hawking (Cambridge University) do not simply dismiss Newton's Theory of Universal Gravitation, but alter it because it does not account for special anomalies, so through successive and at times competing distillations of inquiry, these theoreticians develop novel methods for explaining phenomena.

Hence, inquiry is not a means to a final form, but a means to emotional and intellectual stability in a given context. A wise unsettled being will look to the distillation of prior inquiry for guidance and apply / adapt formulae for action within a concrete problem. If the proposition and

experiment proves successful, then equilibrium has been achieved; if not, the experimentation continues with modified propositions and experiments. From this process, the organism has learned how to cope with this particular problem and can apply this knowledge to similar future unsettling situations. We can see that the organism has discovered no final form and does not act alone, but relies on a plan of action (praxis) in conjunction with distillations of past experiences internal and external to the organism. As Jean-Paul Sartre (1943/1984) writes, “to act is to modify the shape of the world; it is to arrange means in view of an end” (p. 559). Sartre makes a point that shapes / forms, the supposed eternal essences, are malleable. Acting, experimenting, and experiencing are at the heart of the poetic in education.

In Experience and nature (1929/1997) Dewey writes, “Poets who have sung of despair in the midst of prosperity, and of hope amid darkest gloom, have been the true metaphysicians of nature” (p. 98). Poetry serves as a means of inquiry into the solidities of reality, a means for disrupting commonly held opinions and serves nature more honestly than attempts to make it a discovered, solid cosmos. Regarding structuralist reality, those physical laws as logos, Dewey claims, “something unpredictable, spontaneous, unformulabe [sic] and ineffable is found in any terminal object. Standardizations, formulae, generalizations, principles, universals, have their place, but the place is that of being instrumental to better approximation to what is unique and unrepeatable” (ibid). In an infinitely changeable and unfinishable universe, logical objects, as those instances of inquiry that have proven adequate in the prior experimentation, can guide action, but the circumstances are always different as are the outcomes. It is the role of the poetic to remind us of this fact. Remarking on Matthew Arnold’s claim that poetry is a critique of life, Dewey proposes that the poetic in inquiry proves invaluable as it stimulates efforts and selects the objects of future desire:

Art is solvent union of the generic, recurrent, ordered, established phase of nature with its phase that is incomplete, going on, and hence still uncertain, contingent, novel, particular; or as certain systems of esthetic theory have truly declared, though without empirical basis and import in their words, a union of necessity and freedom, a harmony of the many and one, a reconciliation of sensuous and ideal. (p. 291)

Art is the harmonious coordination of ideal and real, liminal experimentation between what is and what may be. Dewey sees the role of art in inquiry then as “unexpected combination, and the consequent revelation of possibilities hitherto unrealized” (ibid). Art relies on spontaneity and the unpredictable in creation: “‘Creation’ may be asserted vaguely and mystically; but it denotes something genuine and indispensable in art” (ibid).

At this point I turn to the etymology of poetry as poiêsis, or as Diotoma claims in Plato’s Symposium (ca.380bce/1951), “a calling into existence” (§205b). It is not sufficient to merely define the term but to examine how Diotoma uses it in context:

There is more than one kind of poetry in the true sense of the word—that is to say, calling something into existence that was not there before, so that every kind of artistic creation [poiêsis] is poetry, and every artist is a poet. (ibid)

Artistry is creation and a form of inquiry as meaning-making. Hyperpedagogy as poetic endeavor is a means to creativity, inquiry into the unknown (certainly for the learner), and coordinated meaning-making. It does not see learning as a move from the unknown to the known in a predictable and linear manner, but as spontaneous, emotional, and disruptive. As Larry Hickman (1992), now head of the Center for Dewey Studies points out, poiêsis meant knowing how to make things out of contingent matter, such as an artisan throwing a pot. This involves technê or knowing how to do a thing, a skill in current nomenclature.

Poiêsis makes up one of the three ways of knowing according to Aristotle, who has had an incredible influence on Western metaphysics for over 2,300 years. These three are theoria, which is to know what a form (eidos) is, praxis, which is the performance of choice to the good by a free citizen, and poiêsis, which is a knowing how to do productive skills. Theoretical knowledge, derived from theos (god), is the knowledge of the eternal and transcendent forms and thereby the most important type practiced by philosophers. The second level in this hierarchy is praxis from prasso, which is to manage, and indicates what the free citizen does in coordinating the eternal forms with everyday decisions, such as in a jury or in an election. The third form of knowing in this tetrarchy is base knowledge, know-how, the mechanical skill of the artisan, still reflected in labeling industrial labor as so-called unskilled labor. Instead of merely turning this hierarchy on its head, I wish to reflect on its very nature as separate and morally-laden differing categories. All these forms of knowing are interrelated and have no innate, fixed value as they form aspects of a process of inquiry. In other words, they all play a part in understanding and all have value, dependent on the requirements of the task at hand. When an organism, for instance, desires to alter its environment it must act (poiêsis), make a choice (praxis) of what to do and how to do it (techne). The organism draws on prior distillations of inquiry and experimentation as a guide to action (theoria) to form a hypothesis. The organism must call this action into being to solve its disequilibrium. Wisdom is not an abstraction but a means to an end in a continuation of action; as such, knowing is an intricate part of being; the former is not separate from and elevated above the latter. We should look to the term phronesis, or practical wisdom. Practical wisdom creates space for theory, technique, and desire—all parts of a comprehensive way of looking at inquiry. In this sense, Dewey (1916/1944) is correct when he states the a child “learns in consequence of [its] direct activities” (p. 169).

In “Assaying the possibilities of spiritual education” (2001), Garrison challenges curriculum designers to account for poiêsis and eros, or creative imagination and learner desire, in a technocratic age. Hyperpedagogy is an attempt to answer some of his challenges. As Garrison (1997) points out, education is becoming increasingly dominated by rules, precepts, and calculations of fiscal utility, and as such, “Aesthetic education is almost unheard of, and passionate desire [eros] is entirely ignored” (p. 2). Two factors may help to explain why American education is becoming so utilitarian: spiritual values have succumbed to the commercial values of the new global economy and individuals calculate values in terms of utilities not responsibilities (p. 63). Our aesthetic values have been so overwhelmed by the tropes of the marketplace (Marshall, 1997) that we need a spiritual, aesthetic, and erotic renewal in the curriculum.

By spirituality, Dewey, Garrison, and I do not mean that America needs to preach the Gospel, Torah, or Hindu mantras in public education. Instead, “if we conceive of spirituality as an active poetic quest for meaning, understood as more intimate and meaningful relationships with existence where what we do matters, then the arts are the best way to restore spirituality to our schools” (p. 63). In order to use poiêsis with digital technologies, we need to spurn information age, technocratic rhetoric of supplying consumers with vital marketplace skills (Marshall, 1996); we need, instead, to embrace the poetic, the calling into existence, the generous thought in education. By this I intend that hyperpedagogy be a casting out of propositions to which easy, pat, glib answers will not suffice. While abstractions in academic disciplines aid in understanding complex topics such as algebra, they are so far removed from students’ experiences and desires (as opposed to hierarchically determined needs) that connecting the purpose of the abstract to the manifest desires and dreams of students is neigh

impossible. Academic work becomes drudgery and intrinsic motivation to learn is supplanted by extrinsic motivations – the tricks of carrot and stick. If we can relate material to dreams, harness desires and experiences, tap into the intimate, then perhaps imaginative, poetic creation in digitally enhanced education can be actualized.

My pedagogical creed as an example of poiêsis

The specific context of this case study is an undergraduate Social Foundations of Education course, enrolling approximately 25 junior and senior preservice teachers. The majority of these preservice teachers are Educational Technology majors with a significant minority of early childhood students, and rounded out by Mathematics, Agricultural Education, and English Education majors. The majority of students were female, and as education is typically regarded as a feminine or nurturing profession (Garrison, 1997), the ethos of the class may be described as feminine. A feminine ethos here being defined as a cooperative venture for learning, based on group work, coming to consensus, and respect for dissonant voices. As Zoe Sofia (1998) claims a feminine ethos for education includes a reconsideration of the masculine trope of discovery as conquest and individual competition. Susan Herring (1994; 2000) posits a similar claim that flaming – CMC verbal combat, including “flaming” is a predominantly masculine dialogic norm. In her studies she has found that while men tend to regard extreme protections for freedom of speech and individual utterances, women tend to favor protection and safety – Netiquette in short. Moreover, I have sought to cultivate a feminine ethos for the class by setting rules that emphasize respect, cooperation, and carry penalties for flaming and similarly disrespectful dialogue (for the specific rubric refer to Appendix 4-1).

This instance of hyperpedagogy seeks to create a simultaneously provocative and safe experimental place to address difficult, holistic issues. The medium is an online forum, using

Blackboard, provided by Virginia Tech. As many courses use Blackboard, the students are largely familiar and comfortable with this Internet interface. Blackboard's asynchronous discussion board (the particular aspect of the program I use for the online forum) is similar to MUDDS, in which asynchronous messages are posted, archived, and replied to (see Figures 4-3 & 4.4). In the collapsed picture (4.3), one can see a list of weekly topics, and in the expanded screen capture, one can see how students and teachers can communicate with one another's postings throughout the semester and can create their own threads about new topics.

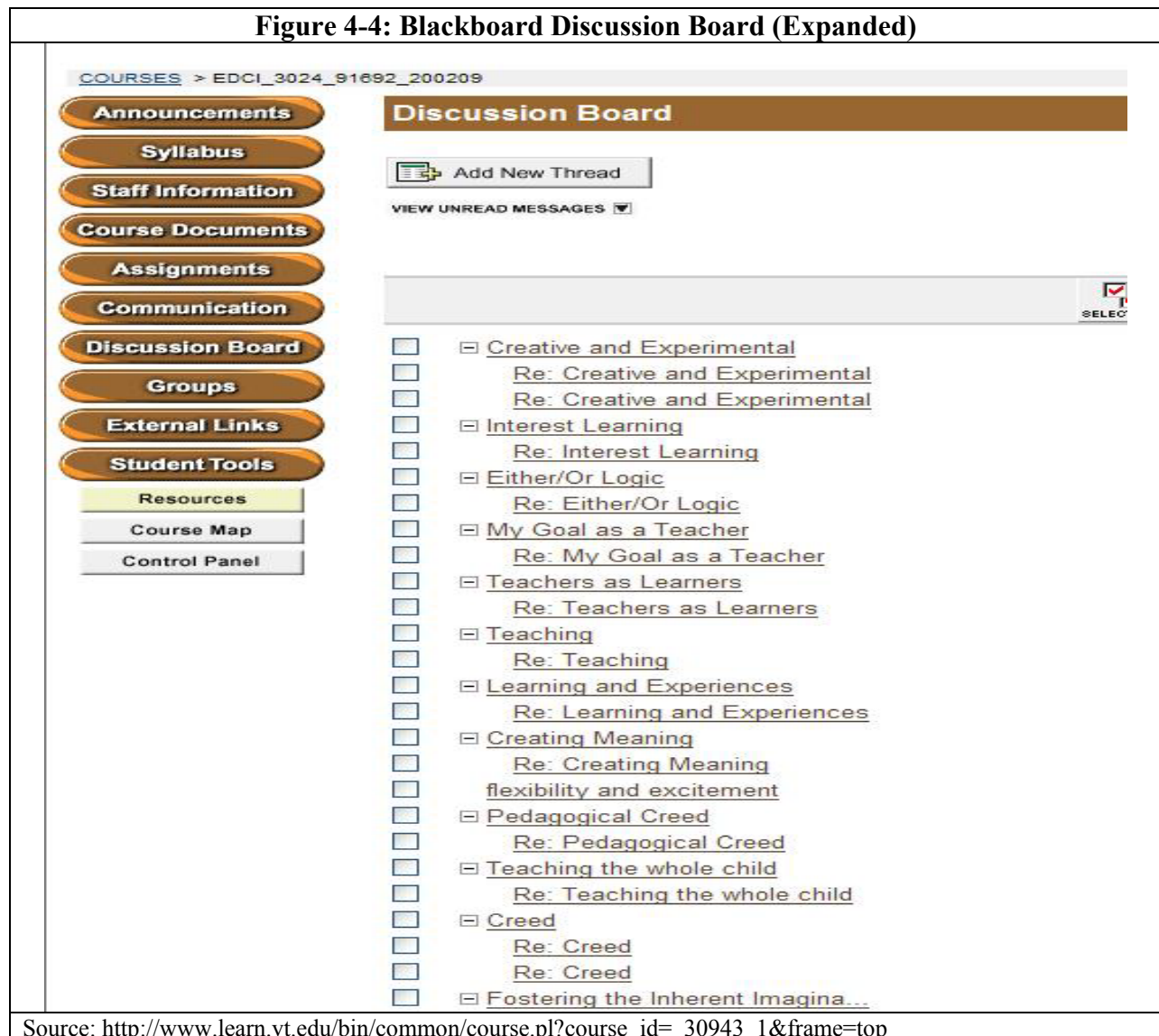
Figure 4-3: Blackboard Discussion Board (Collapsed)

Source: http://www.learn.vt.edu/bin/common/course.pl?course_id=30943_1&frame=top

I should also note that after the first two weeks, the students asked for more than one question and if we could use more approachable texts than the course texts in order to illustrate

understanding in a novel way. Responding to their request, I added multiple questions and added linked satire from [The Onion](#) (I will describe the specific circumstances of using satire later in this chapter in the section entitled “Constitutional Convention”).

Figure 4-4: Blackboard Discussion Board (Expanded)



Discussion Board

[Add New Thread](#)

[VIEW UNREAD MESSAGES](#)

[SELECT](#)

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The purpose of this question – for each student to write his or her own pedagogical creed after reading both Dewey’s and Doll’s – is to provoke students to poetically create intimate

worlds using hyperpedagogy, in this case an online forum. I ask my students to read William Doll's (1993) pedagogical creed:

In a reflective relationship between teacher and student, the teacher does not ask the student to accept the teacher's authority; rather the teacher asks the student to suspend disbelief in that authority, to join with the teacher in inquiry, into that which the student is experiencing. The teacher agrees to help the student understand the meaning of the advice given, to be readily confrontable by the student, and to work with the student in reflecting on the tacit understanding each has. (p. 160)

Some students responded to my heuristic question, "After reading Doll's essay and the first three chapters of Education and experience formulate your own pedagogical creed based on your experiences as a student and your desires to teach well," in ways that were groping for the "correct" answer and tended to be vague, uncertain:

The hearts and minds of a teacher and the students must be in balance in order for everyone to have the opportunity for a learning experience. When there is balance, interaction between the teachers and students then comes naturally. The teacher has to lead the way in order for the students to have faith in him; once the balance within him is felt from the students, they have the choice to search inward for balance, or not. If they choose not to, the learning experience is then dulled to a mere passing of time. How much one, being a teacher or student, pulls away from the experience is all in his hands; so long as the balance is there, everything will just happen.

The hesitation is nearly palatable. Here, we witness disequilibrium—a seeking out for a tentative answer in an unfamiliar setting. This question is different than the norm and many students become confused, if not wary. The student copes to supply the correct, textbook definition

answer, the equivalent to Aristotle's theoria answer. In hyperpedagogy, I seek to provoke students to generate intimate answers, not the memorized answers that standardization proponents would applaud. Moreover, this was the first response to the first question of the semester. I responded to this student challenging him to better define his terms and go further in translating his experiences and desires into his own pedagogical creed: "Thanks so much for getting us started. Your use of interaction and balance resonate nicely with Dewey and Doll. Perhaps you can define what these terms mean a bit more specifically to you and explain the relationship between a teacher's balance and student's faith in her or him with an example. Once again, very good start." I sought to both challenge and encourage this student and because the forum is open to all participants, I wanted to challenge this student's peers as well. I wanted the student to embrace the creative, to not supply a book answer, the answer the student thinks will please the teacher, but the one he can create from past experiences and living goals.²⁰

Other participants used this online forum in creative ways. One of his peers made her pedagogical creed more intimate, more creative:

I believe that in the classroom there are two important roles: educator, and student. However, I believe that these roles are not just isolated to the traditional, where the Teacher is the educator and the children are the students. Teachers MUST also be students in their classrooms, and children must also take the role of the educator at times. In this way, children are taught confidence and respect of others, and the teachers are shown to respect the children as well. Following this idea, I believe that education is an ever-changing realm of knowledge that must be explored within the classroom. No teacher will ever be able to teach their students everything however, so there must always be some sort of guideline for what knowledge should be explored in which classrooms.

Thus comes the idea of subjects in schools, and syllabi. However, I do not think that this guideline should be rigid and unwavering; in turn, it should show flexibility to adapt to the needs of the children, and to adapt to their previously learned knowledge. Each child comes into a new learning situation with many previous experiences and conditioning, and a syllabus should allow room for change based on each new group of children's prior experiences and knowledge. Teachers should work as guides for the children as they explore the part of the realm of knowledge that a class focuses on. They should always be learning and excited with the children, so that they are active in the learning process. Finally, I believe that each teacher should have their [sic] own style, and no two should be alike. Each teacher needs to teach in the way which they feel comfortable, because that is the only way in which students will succeed in their classroom.

Stella responds to the question by relying on her past experiences and goals as a future teacher. She does not mimic Dewey or Doll, but crafts her own poetic response based on her desires and anxieties. In her response, we can see that Stella is more concerned with learning than with standardized education. She defines learning as a reciprocal and structurally malleable process in which students and teachers learn from one another, thereby disrupting traditional classroom power hierarchies. She also expresses that guidelines (i.e. curricula and syllabi) need to be flexible to accommodate learners' past experiences and teaching styles. Standardized ideals of discovering one correct method (e.g. phonics only instruction for basal language arts) do not sit well with her, so Stella creates her own pedagogical creed.

Her candor is unmistakable. Her thoughts are intimate, generous. She has clearly taken ideas from Dewey (past experience) and Doll (reciprocity), but she has also translated those ideas with her experiences and suited them to her purposes. I was elated. Perhaps this dialogue

seems a bit scatter-brained, but I see a person in a productive state of disequilibrium, taking strides toward her future application (techné). The creative process can often be sloppy, seemingly misguided, but this process of creating something new from chaos is beneficial for learning as growth. If a student replies to a disharmonious situation in a rigid fashion, I become wary that he or she is merely parroting the text or teacher, seeking after the expected, one right answer.

Stella's example and others like hers with my encouragement spurred on yet more creative responses. One student wrote about mutual respect in classrooms and her addition to the forum elicited responses not only from me, but also to her initial response and to my reply to her:

I agree with Doll's theory of non-linear education in that there is always more than one right answer, and that a variety of responses can spark new and interesting topics.

However, I do not believe that there is anything wrong with a teacher asserting himself as an authoritative figure who deserves respect. The secret is to present oneself as an authority but not a dictator, and maintain a democratic monarchy in the classroom, that in which the students have a voice and feel free to express opinions, but the teacher ultimately leads. I also think that it is possible to have a flexible lesson plan, one that allows for alteration and spontaneity, but ensures that specific goals are accomplished.

Tonya was seeking for balance, a return to harmony. She wants, on the one hand, to allow her students the freedom to explore questions, to “spark new and interesting topics” by not seeking after the one, right answer. On the other hand, she is wary of classroom disciplinary issues, so that a teacher must be able to command respect as the “democratic monarch.” She uses this online forum as a place to explore her interests and concerns, seeking out a metron or balance between student freedom and respect for her authority as a teacher.

I believe that the online forum facilitated this experimentation, as this student had the time to collect her thoughts as the postings are asynchronous and are posted days in advance of the due date. Moreover, the lack of face-to-face communication can provide a safer place for students to express controversial ideas or ideas they are working out, experimenting with as they do not have to be “put on the spot” to come up with an answer in a limited time frame under their peers circumspection.

Dale Spender (1996/1998) has documented over the years how a male presence tends to disrupt female communication in which women tend to defer to males in conversation, and this socialized norm being enacted in the classroom (as I have observed on many occasions) can stifle the safety to express ideas I am seeking. While some (William Gibson, 1986; Rhinegold, 1993; Turkle, 1996) have hyped escaping the body and subsequent escape from gender discrimination, I find such hype dubious at best. Boler (2001, 2003), Bordo (1987), Haraway (1991/2001), Hayles (1993, 1999), Herring (1994, 1999), Miller (1998), O’Brien (1997/1999), Sofia (1998), Spender (1996/1998), and Tomas (1989/2000) have all made compelling cases based on statistical and ethnographic evidence that the Net is in many respects a masculine domain, relying on tropes of conquest, submission, aggression, and intellectual elitism (I will develop this theme in greater detail in chapter 5). Herring notes that by creating a context that allows for respectful experimentation and cooperative exploration, cyberspace can allow for feminine communication norms – cooperation, respect for other opinions, a willingness to be vulnerable – and so I have incorporated rules that squelch flaming and related enactments of masculine violence on the Net. With rules in place that discourage masculine communication norms of violence and encourage feminine communication virtues of cooperation, I believe that this online forum is largely a safe space for intellectual experimentation and creativity.

Returning to the online dialogue, I felt that I should encourage her quest for equilibrium, a return to harmony, so I wrote back as follows:

Tonya²¹ raises an excellent point here that even in a democracy, mob-rule, pandering, and chaos are undesirable. As a teacher, one needs to lead, what Augustus called, “first among equals.” A functioning democracy is a system in which leaders listen to their electors; similarly, a teacher is ultimately responsible as the adult in the classroom to lead, but should also be attentive to students' desires, needs, frustrations, etc... As for having specific goals, yes that is important. A caveat, however, is to question what those goals will accomplish for the learner in a complex social matrix. Are we proscribing a child's future by delineating certain goals, are we alienating a learner by staying rigidly to certain goals, do the goals encourage further learning? These are some questions to posit of learning goals, which is NOT to say that goals are essentially bad. In fact, goals are necessary for learning as guiding action, but not all goals are good for the learner.

I have agreed with her stipulation that teachers are responsible for the children as their charges and yet challenged her and others to determine what we mean by goals, to which a participant responded:

I agree with you that the teacher needs to be the authority figure, but not a dictator. There has to be some organization in the classroom and that is best done when there is one person that has the final say (although hopefully that person will listen to and use some of the students' ideas). I do not agree that the teacher deserves respect solely because they are the teacher. The students need to recognize that they are the teacher and the things that go along with that, but if the teacher wants true respect then they have to earn it from the students [sic].

Some may consider this an outright challenge to my authority as teacher, but unless I make myself vulnerable, how can I ask this of my students? In fact, I was thrilled that my students felt that they can challenge their peers and their teacher. This is dialogue in an honest sense, or as Freire (1970/2000) writes, “The students – no longer docile listeners – are now critical co-investigators in dialogue with the teacher” [emphasis added] (p.81). I am learning from them, they are learning from one another, and I can safely assume that they are learning from me: “The teacher is no longer merely the-one-who-teaches, but one who is himself [sic] taught in dialogue with the students, who in turn while being taught also teach” (p. 80). Hyperpedagogy seeks such dialogue. There will be stops and sputtering along the way, but the risk is well worth it for me. I feel more connected, intimate with this class than I ever have done so lecturing. The foregoing dialogue illustrates poiêsis in that class participants were calling novel ideas into existence. Some answered in ways that they hoped would be right; others got mired in the disequilibrium; and yet others started to cobble together a practical wisdom (phronesis), taking stock in their experiences, expectations, and fears. They were also critical of their creations. The result, I feel, was a critical-creative dialogue. Participants, including the professor, become more reflective thinkers in better crafting and critiquing philosophical statements.

I sought to invoke involvement within qualitative situations to initiate critical inquiry. I want them to see inquiry as a process of moving from the actual to the ideal in an active and creative manner. The ideal will never be attained in an unfinishable universe, but the noble ideal should not be dismissed for the facially achieved “realistic,” teleological end. I hope they will see the desirability, the purpose (but not the utility) of active, creative, intimate involvement indicative of inquiry. To see it as stepping out towards and beyond what Dickinson (1862/1961) calls circumference:

I saw in no Way – The heavens were stitched –
 I felt the Columns close –
 The Earth reversed her Hemispheres –
 I touched the universe –

And back it slid – and I alone –
 A Speck upon a Ball –
 Went out upon the Circumference –
 Beyond the Dip of the Bell –

In this poem, Dickinson seeks to transgress the normal limitations, the ends, circumference, the bell's dip, and touch the limitlessness of the universe. She does not seek to transcend to the ultimately known universe of Plato's "allegory of the cave"; she seeks to expand the circumference and to escape the limitations of commonplaces, to breach the mundane – . It is this Dickinsonian expansiveness that I hope to immerse my students in.

If we believe we are active participants in an unfinished and unfinishable creation, and not spectators observing a finite cosmos, we should seek to create active and participatory learning environments (Garrison, 1998, p. 78). Poiêsis is a calling into existence, a creating new ways to understand the world about us, and even the creation of microcosms. Diotima in Plato's (1951) Symposium urges all makers to take heed to poetry, the creative element of art:

By its original meaning poetry means simply creation, and creation as you know, can take various forms. Any action which is the cause of a thing emerging from non-existence into existence might be called poetry, and all the processes in all the crafts are kinds of poetry, and all those who are engaged in them are poets. (p. 85)

Dewey (1934) remarks that "only imaginative vision elicits the possibilities that are interwoven within the texture of the actual. The first stirrings of dissatisfaction and the first intimations of a better future are always found in art" (p. 348). When we create our "little worlds" we should remember to leave room for other poets, not just our own posey. We are blessed with a

changeable world; we should create like worlds for our learners. The sensibilities outlaid and the methods cited can help us educators create such worlds. As Maxine Greene (1995) points out an appreciation for the arts can invoke our educational muses.

Artistic creativity at odds with curricular reform

Reacting to the utilitarian rhetoric and strategies of Goals 2000 (Educational Resources Information Center (U.S.), 1995), Greene (1995) writes about the absurdities of a pedagogy of world-class achievement and requisite benchmarks. She argues that by embracing utilitarianism we are looking away from difficult problems in education. The arts, she contends, urge us to reconsider the everyday, the tropes, the myths, those things taken for granted and to replace complacency with reflection and resistance. The arts may horrify or inspire us to seek what ought to be, new possibilities, and new beginnings. She urges that education needs to discover new avenues for action that the arts provide. The emphasis in Goals 2000 on the measurable, the predictable, and the manageable dull the capability for imagination. Goals 2000 invokes instead the most loathsome aspects of what Foucault (1977) warned of in Discipline and punish:

The Normal is established as a principle of coercion in teaching with the introduction of the standardized test . . . At the heart of procedures of discipline, [the examination] manifests the subjection of those who are perceived as objects and the objectification of those who are subjected. The superimposition of the power relations and knowledge relations assumes in the examination all its visible brilliance. (pp. 184-185)

An education versed in consciousness-raising, problem-posing, and artistry seek to avoid this disciplinary model.

Additionally, simple exposure to art, the field-trip to the Museum of Fine Arts, is not enough, not nearly. Conscious participation is the key to the arts in the curriculum. Greene wants

us to resist some teachers and administrators desires for control: “Indeed, the inability to control what is discovered as meaningful makes many traditional educators uneasy and strikes them as being at odds with conceptions of a norm, even with notions of appropriate ‘cultural literacy’” (p. 380). The resistance is one to a lack of concern, to acquiescence to the technical and the abstract. In hyperpedagogy, I hope to live up to Greene’s challenge:

By becoming aware of ourselves as questioners, as makers of meaning, as persons engaged in constructing and reconstructing realities with those around us, we may be able to communicate to students the notion that reality depends on perspective, that its construction is never complete, and that there is always more. (p. 382)

On one side of the curriculum debate lay those who urge that technology be used to shape tomorrow’s workers for the new global economy (Callahan & Switzer, 2002; Molnar, 1997; Paige, 2002); on the other, lay those who see learners as creators of their “little worlds” in conjunction with other makers and that technology can serve such ends. The rhetoric of utility is reminiscent of Aldous Huxley’s (1932/1989) warnings in Brave new world: “Wheels must turn steadily, but cannot turn untended. There must be men to tend them, men as steady as the wheels upon their axles, sane men, obedient men, stable in contentment” (p. 42). People serve the machines, the economy, and so must be stable and content. At the conclusion of the novel, Controller Mond says, “that’s the price we have to pay for stability. You’ve got to choose between happiness and what people used to call high art. We’ve sacrificed the high art” (p. 220). If the price of economic prosperity is a closing of consciousness, a dulling of empathetic senses, a collective inarticulateness, then I say let’s embrace the arts and the difficult, and even painful, questions they pose. Let’s make sure that creativity and uncertainty are part of the curriculum as important as memorizing one’s multiplication tables.

Dewey's Rejection of classical metaphysics²²

The most onerous barrier to releasing the creative potential of hyperpedagogy is classical Western metaphysics. Therefore, I begin this section with Dewey's (1922/1983) chapter on "The Nature of Aims." I am concerned with the idea of aims, ends, and objectives in education. What is an objective or aim? Dewey's answer to this question involves a rejection of almost the entirety of Western metaphysics. Traditional metaphysics acts as a barrier to actualizing a poetic conception for education. At issue is a conception for aims in education as it relates to agency. From a traditional perspective, aims are guided by an external telos, but with respect to poiêsis aims are a coordination of self agency and larger social goals with incorporating a person's unique abilities and intrinsic motivations.

The following passage expresses Dewey's discontent with traditional metaphysics:

When men believed that fixed ends existed for all normal changes in nature, the conception of similar ends for men was but a special case of a general belief. If the changes in a tree from acorn to full-grown oak were regulated by an end which was somehow immanent or potential in all the less perfect forms, and if change was simply the effort to realize a perfect or complete form, then the acceptance of a like view for human conduct was consonant with the rest of what passed for science. Such a view, consistent and systematic, was foisted by Aristotle upon Western culture and endured for two thousand years. When the notion was expelled from natural science by the intellectual revolution of the seventeenth century, logically it should almost have disappeared from the theory of human action (pp. 154-155).

The idea that “normal” processes, including the processes of child development, are regulated by a predetermined, teleological end is a piece of ancient metaphysics Dewey thought should not have survived the scientific revolution much less the Darwinian revolution.

I would like to identify the elements of traditional metaphysics working in the above passage. In classical Greek metaphysics, something’s characteristic form, property, or essence was its eidos. Dynamis refers to something’s latent potential or power, for change; it is something’s capacity to become other than what it is. Energeia is the correlative concept of dynamis; it refers to the actual as opposed to the potential. It functions to actualize a latent potential (dynamis); for instance, a teacher’s actual knowledge of content and pedagogy may actualize a student’s potential for learning. The final form (eidos) serves as the end, purpose, or telos of the function. In Aristotelian metaphysics, Entelecheia is closely associated with energeia; it is the latent potential to achieve perfect self-actualization. Dewey rejects all of these ingredients of Western metaphysics.

Classical theories of curriculum and instruction, along with theories of development, all assume a “normal” child is much like a normal acorn; both have the latent potential to achieve the teleological perfection of their innate essence. The assumption is that the human essence involves knowledge and rationality; after all, we are Homo sapiens, so, supposedly, sapientia (rational thought) is our essence. An acorn is not an oak tree, but it has the latent potential to actualize its perfect essence and become a giant oak, likewise children have the potential to fulfill their rational essence.

According to Dewey (1909/1977), learning the lessons of Darwin will dramatically alter our thinking, including educational thinking:

The conception that had reigned in the philosophy of nature and knowledge for two thousand years . . . rested on the assumption of the superiority of the fixed and final

In laying hands upon the sacred ark of absolute permanency, in treating forms [eidos] that had been regarded as types of fixity and perfection [entelecheia] as originating and passing away, the Origin of Species introduced a mode of thinking that in the end was bound to transform the logic of knowledge, and hence the treatment of morals, politics and religion (p. 3).

Traditionalists have yet to learn Darwin's lessons, so they harness post-modern technology to ancient and medieval metaphysics. Dewey continues,

In living beings, changes do not happen as they seem to happen elsewhere, any which way; the earlier changes are regulated in view of later results. This progressive organization does not cease till there is achieved a true final term, a τελος [telos], a completed, perfected end This formal activity which operates throughout a series of changes and holds them to a single course To it Aristotle gave the name, εἶδος [eidos]. This term the scholastics translated as species (p. 5).

Let the seed here be an acorn or a child. Dewey rejects the classical understanding of eidos in terms of telos wherein the essence is actualized at the perfected end of a process. Dewey does for all essences what Darwin does for biological essences. The influence of Darwin helps us overcome this view of predetermined latent potential in biology and metaphysics as well as in curriculum and instruction. Poiêsis coordinates well with Dewey's perspective on education as growth.

There are two other metaphysical ingredients I have yet to discuss. The first refers to ultimate origins, foundations, or first principles, or the arche. The second, ousia, refers to

ultimate entity, subject, or substance; often, an entity's substance is its essence (eidos). Dewey does the same for the metaphysical concept of the arche, i.e., ultimate origin, or foundation, as he does for eidos:

Hence it may be said that a question about ultimate origin [arche] . . . is either a meaningless question, or else the words are used in a relative sense to designate the point in the past at which a particular inquiry breaks off (p. 5).

We may either substitute all the other familiar concepts found in classical metaphysics for “origin” in this paragraph, and thereby give them the same limited, contextualized meaning, or simply eliminate them from the philosophical lexicon.

Aristotle identified ultimate substance (ousia) with ultimate essence (eidos). In his Logic, Dewey (1938/1986) asserts, “But the progress of science has destroyed the idea that objects as such are eternal substances It also destroyed the notion of immutable kinds marked off from one another by fixed essences” (p. 130). For Dewey (1925/1981), there is “no substance behind or underlying change” (p. 65). There is no ontological substance underlying a student's change or development either. In Dewey's philosophy, existence or “nature is viewed as consisting of events rather than substances” (pp. 5-6).

Fixed and immutable essences provide the objectives of all inquiry, including curriculum inquiry. Wherever these essences come to reside, in the transcendental mind, physical nature, culture, or some transcendent realm, they provide permanent centers of externally controlled action. For Dewey,

Neither self nor world, neither soul nor nature (in the sense of something isolated and finished in its isolation) is the centre [sic], any more than either earth or sun is the absolute centre of a single universal and necessary frame of reference. There is a moving

whole of interacting parts; a centre [sic] emerges wherever there is effort to change them in a particular direction Mind is no longer a spectator. . . . The mind is within the world as a part of the latter's own ongoing process (p. 232).

There is no absolute, eternal, and immutable center of existence, there is no absolute frame of reference, and no fixed essence or entelechy. Dewey rejects all forms of epistemology that see human beings as spectators in the universe whose task it is to reflect reality as if they resembled mirrors of nature. For Dewey, we are events participating among other events in an ever-evolving, never finished universe. There is no cosmic telos, no end of history, and no heaven in Dewey's metaphysics.

Dewey does have a minimalist metaphysics; one that I find useful for the purposes of constructing a hyperpedagogy. An individual is a unique product of prior physical, social, and cultural interactions. As a product of biological interactions (e.g., mating), all human beings inherit genes that individuate them as a unique one-time-only individual in the history of the cosmos. Even if two biological beings could share exactly the same biological inheritance, they cannot occupy the same identical durational-extensional expanse, so their differential experiences soon render them unique. Because of the uniqueness of actual individuals, people cannot specify the potential of a novel interaction until after the event, Dewey (1915/1979) concludes,

When the idea that development is due to some indwelling end [eidōs, telos, or entelecheia] which tends to control the series of changes passed through is abandoned, potentialities [dynamis] must be thought of in terms of consequences of interactions with other things. Hence potentialities cannot be known until after the interactions have occurred. There are at a given time unactualized potentialities in an individual because

and in as far as there are in existence other things with which it has not as yet interacted (p. 109).

Potentiality is an active category of existence that only discloses itself when individuals engage in transaction; it is a consequence of these transactions, not an antecedent latent condition. When two events transact the actualized (energeia) in the one event actualizes the potential (dynamis) in the second, and transactionally, the actualized in the second event actualizes the potential in the first. Hyperpedagogy is an example of just such a transactive space.

Potentiality, for Dewey, is not passive; rather, it is the active power of some individual to change, evolve, and develop. Every individual has potential and may change and develop, but only through transaction with other equally unique actual individuals. All transactions, furthermore, occur within a social matrix that is in many respects a culmination of many smaller transactions. In other words, the individual being and the social matrix are in a dynamic, symbiotic relationship with one another. We need others different from ourselves to grow and prosper. Just as diversity is the key to biological survival and growth, so too is diversity the key to cultural survival and growth. All individuals can and do achieve poiêsis by calling things (ideas, skills, and products) into existence; we all have unique potentials that a poetic educational form seeks to create space for.

Hyperpedagogy, as a poetic endeavor, defies the metaphysics of presence in Deweyan ways that makes his pedagogy surprisingly relevant for a post-modern and poststructuralist curriculum. In hyperspace and time, temporary eidos, teloî, entelecheia, arche, and ousia emerge as functions of the learner's ongoing inquiry. I imagine learners actualizing their unique potential as they engage in transactions with other individuals through their texts, videos, and other forms of expression. The hyperworld I imagine has no fixed centers, just pivots, or turning points,

within the activity of learning. Designers of instructional technology that employ traditional theories of curriculum and instruction effectively destroy hyperspace and hypertime. In fact, the hyperworld I imagine merely describes the way the world is for those who have overcome the metaphysics of presence.

Poiësis as a critique of the classical metaphysics

In order to create poetic cyberspaces and allow freespace for art in education, I argue that pragmatism and poststructuralism offer means to avoid essentialist metaphysics. In this section I develop a poetic critique of structuralist ideologies informing traditional teaching methods and goals, relying on Derrida, Dewey, Garrison, and Garrison & Mary Leach's critiques of teleology, ultimate ontology, and essentialist epistemology.

Garrison (1997) recognizes that pragmatism denies age-old belief in supernatural meaning, that privileged significations are god-given. He also dismisses Hegelian progressivism that holds that evolution's goal is to achieve an everlasting Truth. He cites Dewey (1922/1988) from "Human nature and conduct:"

There is something pitifully juvenile in the idea that "evolution," progress, means a definite sum of accomplishment which will forever stay done, and which by an exact amount lessens the amount still to be done, disposing once and for all of just so many perplexities and advancing us just so far on our road to a final stable and unperplexed goal. (p. 197)

Believing in a telos for education, be it from a deity or the end of history, severely limits Darwinian growth in education because once Truth is discovered, the rationale for heeding difference becomes either heresy or evolutionary back-tracking. The real result is intellectual stagnation.

Instead of attempting to discover “Truth,” Dewey (1922/1988) seeks to ameliorate social conditions and discursive communities. Dewey defines meliorism as

. . . the belief that . . . conditions . . . may be bettered. It encourages intelligence to study the positive means of good . . . and to put forth endeavor for improvement of conditions. It arouses confidence and a reasonable hopefulness as optimism does not. Too readily optimism makes men [sic] who hold it callous and blind to the sufferings of the less fortunate, or ready to find the cause of troubles of others in their personal viciousness (pp. 181-2)

The optimist believes, on the contrary, that once one discerns the best method or answer, typically hermeneutically or scientifically, then investigation and change should stop. Rod Paige (2002) advocates such closing off of alternative techniques to those he prefers by declaring other methods are unproven fads.

Investigation, research, methods, and answers are never final. While having an ideal to guide action, we need to recognize that ideals need to constantly coordinated to reality. Reality in an unfinishable universe, of course, is not something that can be deduced to a logical and functional singularity. Reality constantly changes as physical relationships and interpretations of these changes; reality is an ongoing process of calling novel and unique things into existence. Because the real changes, the ideal also needs to change. In order to continually coordinate the ideal and the real creative inquiry must take place:

By disclosure, through imaginative vision . . . A sense of possibilities that are unrealized and that might be realized are when they are put in contrast with actual conditions, the most penetrating “criticism” of the latter that might be made. It is a sense of possibilities

opening before us that we become aware of constrictions that hem us in and of burdens that oppress. (Dewey, 1934/1987, p. 349)

Here, Dewey (1934/1989) is responding to Matthew Arnold's maxim that "poetry is criticism of life" and thereby provokes readers to consider how does poetic inquiry, poiêsis, bring new ideas into existence. In educational theories and methods that deny the metaphysics of presence, this is a central topic—how do we keep alive a sense of purpose, act as moral prophets: "The moral prophets of humanity have always been poets even though they spoke in free verse or by parable . . . Art has been the means of keeping alive the sense of purposes that outrun evidence and of meaning that transcend indurated habits" (p. 350). Artistic inquiry into solidities and absolutes requires poiêsis, the desire to question commonplaces and the fortitude to continue questioning.

The philosophic fallacy's place in Western metaphysics and education

Traditional Western metaphysics holds that an ultimate ontology exists beyond time, contingency, and change. Reformist curricula are based on this long held belief inculcated within traditional Western metaphysics. Truth, from alēthia in Greek, means in traditional metaphysics the unconcealment of final, unalterable forms (eidōs). In this logical construct, ideas, things, and people all have an ultimate meaning, that once discovered are inalterable. The legacy this carries for education is to stifle difference and inquiry. This is a philosophy of absolute foundations, tracing to belief in God or Nature as a perfected form, the summum bonum. The related educational construct establishes finite methods and goals to the detriment of a growing, evolving culture.

A crucial topic that underscores this debate is the role and construction of language as either a transcendent structure or a mediated medium. From the traditionalist perspective, advocated by such philosophers as Aristotle, Descartes, and Kant the meaning of words

transcend contingency and context, are ultimately rational and discoverable—an essence, eidos. Every word has an ultimate logos, fixed meaning. Such logoi require external and immutable signification that lies beyond language as praxis and yet informs the entire structure of language. Pragmatists, existentialists, and poststructuralists reject this construct, claiming instead that nothing escapes language, signification, much less informs an entire system of meaning from outside it. Charles Peirce (1868/1965) writes in “Some consequences of four incapacities” that humanity and language co-evolve and inform one another transactionally:

[Humanity] can think only by means of words or other external symbols . . . [humans] and words reciprocally educate each other . . . [T]here is no element whatever of man’s consciousness which has not something to it in the word; and the reason is obvious. It is that the word or sign which [humanity] uses is the [person him or herself] . . . Thus my language is the sum total of myself; for the [person] is the thought. (§ 5.314)

This construct radically rearranges the relationship between humanity and the word, an allusion to John 1.1 of God as the Word. In this alternate metaphysics, meanings are contextual, mediated, emergent, and contingent upon existential events. An educational philosophy based on this radical metaphysics alarms those emotionally tied to traditional social structures. It undermines fixed authority, a finite episteme, and a final telos.

The quest for certainty, as Dewey (1929/1988) labels traditional metaphysics’ raison d’etre, seeks stability:

The quest for certainty is a quest for peace which is assured, an object which is unqualified by risk and the shadow of fear . . . For it is not uncertainty per se which [humanity] dislike, but the fact that uncertainty involved us in perils of evils. (p. 357)

Those people in most fear are those who have the most to lose if stable structures are opened to inquiry. Correspondingly, educational institutions controlled by dominant social groups through boards of education, unequal school district funding, and high-stakes standardized testing attempt to encapsulate episteme and methods to transfer such a finite episteme to learners.

Dewey recognizes that language is the tool of tools in meaning construction. Additionally, language is a social construct. Taken together, meaning making is a social construct through the medium of language. As societies and languages change, therefore, meanings change; meanings are constantly reconstructed depending upon the people involved, the language, the society, the need, and the immediate circumstances. When reform curriculum advocates announce that they have exact meanings irrespective of necessity, participants, and circumstances, I am incredulous.

James Wertsch (1991) shares this incredulity as he critiques the preferred method for essentialist pedagogies—conduit teaching models. In conduit teaching models, teachers pour knowledge into learners as empty vessels:

Narration (with the teacher as narrator) leads the students to memorize mechanically the narrated content. Worse yet, it turns them into “containers,” into “receptacles” to be “filled” by the teacher. The more completely she fills the receptacles, the better a teacher she is. The more meekly the receptacles permit themselves to be filled, the better students they are. (Freire, 1970/2000, pp. 71-72)

The teacher controls the transfer of true knowledge (presence) into the student (absence). In Figure 5.1 we can see a representation of the conduit teaching model:

Figure 4.5: Conduit metaphor

Source: Gage, N. L. & D. Berliner. (1992). Educational Psychology. (5th Ed.). Boston: Houghton Mifflin.

In this information download communication model, the receiver is a passive recipient of knowledge. Knowledge, moreover, is a contained substance (ousia). The listener / reader / receiver's function in this epistemological transactional is minimalized. The power relationship is clear: master to servant / owner to dispossessed. It also leaves the owner of the information in a fine position to vend the information to the recipient at a price.

Dewey, instead of establishing fixed meanings and transferring such fixed meanings from adult to child, urges that logical inquiry determine operational definitions, contingent meanings. Such meanings explain relationships within certain circumstances. While some definitions hold in many circumstances, such as physical laws, when purposes and environments change, definitions must change to accommodate such changes. For understanding's sake and functional reasons, definitions can be frozen in time. One must hold in mind that such identities are appropriate only for logical analysis, not reality, existence. One may call such definitions working definitions that can be used like tools in circumstances. Like any tool usage, it must be adapted to the specific usage. As such the tool adapts the user and the user adapts the tool. Signification, language as a tool, adapts users as users adapt it to their purposes. When language, knowledge is set by dominant social groups, the tool of inquiry becomes a rusty one indeed. For language to function as a tool of inquiry, a discursive curriculum is necessary.

Education, conversation, and poiêsis

A poetic ideal for education does not seek to instill facts into learners through a unilateral informer to uniformed communication model, but to make meaning together. Certainly, the more experienced teacher will guide class and be responsible for the overall educational agenda, but the students also have a say and room to create. In other words, the students and the teacher can call something unique into existence. Instead of following a proscribed curriculum, teachers and students create meaning in a unique context involving particular contingencies. Arthur Applebee (1996) offers a way to avoid making students into internalizing automatons by inviting them into the academic discourse as participants, not simply recipients. In Curriculum as conversation, he states that often a discrepancy between “grand goals of exploration and discovery” unfolds and how the class is administered (p.21). If the teachable moment becomes a didactic game of “guess what I’m thinking” in which the teacher’s knowledge or answer is more valuable than the student’s, then we are lamentably back to a pedagogy of the oppressed cloaked by constructivist buzzwords. We are practicing pure reasoning, a deductive and self-enclosed quest for certainty, as opposed to practical reasoning that seeks ends we desire to obtain. The means, a constantly negotiated center within a fluid structure, exists somewhere between these extremes. The most appropriate way to accomplish this shift away from pedantic pedagogy is to accept students’ voices as relevant within their educational trajectories. Regarding curriculum as conversation, Applebee writes,

Schooling should be organized to help students enter into culturally significant domains for conversation, themselves representative of broader cultural traditions of knowing and doing. By placing the emphasis on entry into such conversations, I seek to ensure that

students will emerge with knowledge-in-action rather than knowledge-out-of-context (p. 49)

To do this we need to accept that knowledge is dynamic rather than static and that a means between student and teacher desires discerned through an emergent and mediated transaction will yield fluid and adaptive curricula. Each class—consisting of unique potentials, desires, and qualities—will make unique meanings.

Constitutional convention

The following section serves as an example of dialogue in education and poetic creation. In this example the class as I had envisioned it prior to the semester was in disharmony. I appealed to the class to help me create a means for better, more productive communication and thereby establish harmony. Our conversation created in a sense a new class in which participants' views were respected and incorporated into how we choose to conduct class. We co-created room for change, for art, for making – poiêsis.

In the fall semester of 2002, I taught two sections of Social Foundations of Education, and to my dismay, my afternoon class showed a great deal of resistance to my curriculum. On the first day of class, I had to ask a student to cease her cellular phone conversation, separate two students who refused to stop talking to one another, and explain to a student that democracy in education does not include choosing to skip the final research paper. I attempted to explain to her that simply not doing something one finds noisome is not part of a democratic ethos. I offered to listen to alternative assignments. I discussed the differences between responsible democracy, which includes freedom from and also a reciprocal responsibility to, to no avail. I sought to explain solipsistic logic as navel gazing, again to little profit. I was discouraged and faced the next class in dread, as I am sure many of the students did. I was in opposition to my class. I

warned them that if they choose to act sophomorically, I would act as a disciplinarian. In my headlong rush to secure authority, I was losing my ability to make connections with this class and creating a sterile learning environment. We were in a state of disharmony.

Inspiration descended like a muse when I checked the class' online discussion forum. In response to my question for the forum, "What does democracy mean to you in an American classroom?," many students responded that setting up class rules with their future students—the students are preservice teachers—they would ask students what rules they thought would be the most conducive for a learning environment:

What is freedom in a democratic classroom? Well first we must define a democratic classroom. A democracy is a government in which people hold the ruling power, or majority rule. So a democratic classroom is a class in which the pupils have a say in how the class is run. The teacher is merely like the president, who can veto undesirable things and set the guidelines for the class. Freedom is the state of not being under then control of another. Too much structure in a class can limit movement and personality of each student. As Dewey stated, freedom allows the teacher to know and understand each student, "disclosing their real natures." As students' real personalities come out the teacher can determine each specific learning style and try to personally reach each student. Freedom in a democratic classroom allows the teacher to fully understand each student and gives students responsibility [emphasis added].

I was dumbfounded—transactional discourse had manifested itself where I had least expected it. I had asked them to create a mission statement for their intended educational practices, and they provoked me to reconsider my mission statement, the syllabus. The class, being unsettled by events, delved into a great deal of productive conversation, and I took notice. I needed to enlist

their desire for change and democratic dialogue to recreate this classroom environment as it was in danger of becoming sterile. I felt that as a class we could call something novel into existence.

One of her peers responded to her, challenging her,

Your definitions of freedom and democracy are very clear. Great job! But I have one question...you said that students are like the majority, or the ruling power, and the teacher acts like a president with veto power. In what specific ways would the students in your democratic classroom have a say in the way the class is run? How does a teacher maintain the balance between authority figure and negotiator? After all, if the students gain too much control, the teacher will lose the ability to maintain an environment conducive to the learning process.

In the above example we see not only a further endorsement for change and democratic dialogue, but also how the class communicated cooperatively with one another: “Your definitions are very clear. Great job!” I found this cooperation thrilling, a manifestation of what I had sought to establish as our communication norms. At the same time, the students felt they could challenge each other, not for mastery of this online space, but how to provoke one another to risk more, to explore further. By asking respectful, yet provocative questions, a feminine discourse norm was being enacted, and students continued the conversation—continually inquiring and recreating.

Yet another student queried the first, “You[r] response while true sounds a lot like a textbook response. What does a democratic classroom mean to YOU? How will you make your classroom a democratic one? How will your students have a say in their education?, etc” The respondent’s question is not a veiled rhetorical slandering, but a means to share this creative space, to continue an interesting stream of dialogue. I particularly enjoyed the challenge to personalize a fairly textbook (i.e. safe) answer. Instead of feeling hurt or admonished as might

occur in a masculine conversation of rhetorical attacks and counterattacks (e.g. political debates), the original poster replied,

For example of the democratic classroom, I would have the students set up the class constitution. We would follow the regular school rules, but we would, as a class, make up our own set of rules. Then the students would vote on the actual punishments for these rules. Hopefully after making the guidelines students will be more inclined to follow them. Maybe this is a far fetched idea, but I think its fun for the kids. Letting them have some control, but I'd still be the "president." They would not have complete control, but maybe they would care just a little more about what is going on.

The originator of this dialogic stream willingly responds to the challenge not defensively, but by continuing to develop her creation with specific details and examples.

The class, moreover, was telling me we needed a change, the president had exceeded his authority. I needed to either confront them in a traditional sense by disciplining them by means of the gradebook or make myself vulnerable and accept that our structures for learning could be better. Moreover, this last student has a good point: no one is in complete control.

In the next class, I asked them if they wanted a constitutional convention, and they responded positively. By yielding the students some freespace to express their grievances and to have input on how they could constitute the class, I had averted a semester of naked confrontation. The students agreed that chatting and phone calling during class were rude and would not be part of our class. They asked me to allow for alternatives to the final research paper, including seeing speakers and going to educational activities and then writing critically about these. They also urged me to make our weekly online forum topics more controversial. Consequently, we replaced the question, "What three main ideas will you take from Dewey's

Education and experience?”, to “How does The onion article satirizing high school student boredom relate to Dewey’s Education and experience?”. We had called something poetic into existence; we had created a new and more productive, multilateral mode of communication. The results showed a high level of engagement with these texts and displayed an intellectual capability of applying key concepts from one text to better understand another:

Satire, yes, but the point is very clear and very true: teens just don't really care about school. Don't try to fool yourself, think of when you were in highschool! I just wanted to graduate and move out. I really wasn't interested in my education until college. Dewey makes is very clear that most of this apathy is due to the educator. Teachers should make learning a good experience that promotes growth instead of hindering it (pg. 36). The educator must “be able to judge what attitudes are actually conducive to continued growth and what are detrimental” (p. 39). I hate to quote so often, but on page 40, Dewey states that “above all, they (educators) should know how to utilize the surroundings, physical and social, that exist so as to extract from them all that they have to contribute to building up experiences that are worth while.” We, as teachers, need to create experiences in which pupils have the desire to learn!

The student’s enthusiasm about learning clearly stands forth. As their teacher, I am thrilled. As their learner, I am abashed for having doubted them. I also do not want to repeat this student’s high school experience that made her desire only to leave to the freer spaces of college. I did not want to make her collegiate experience as sterile as his high school one. I embraced her challenge that a good educator promotes not hinders growth. This acceptance of challenge and recreating educational structures for the benefit of growth is the heart of a transactional and emergent pedagogy—poiêsis in education. Freire (1970/2000) writes, “Here, no one teaches

another, nor is anyone self-taught. People teach each other, mediated by the world” (p. 80). As a class, we addressed issues we had and came up with solutions we appreciate. One can also discern from this student’s dialogue that she was able to incorporate her reading of Dewey to better understand the satire and to speculate on a possible solution. She is making meaning.

By listening to student dialogue, not in order to correct them as in a Panoptic (Foucault, 1977) arrangement, I could empathize with their very valid and real concerns. This empathy, in turn, led me to understand that they were not learning as well as they could. By incorporating their changes, the classroom dynamic became much more optimistic, and I looked forward to engaging the students in ways that would have been most likely impossible had I maintained my rigorous, disciplinarian stance. By breaking with the traditions of rigor, discipline, corrective observation, and efficient, instrumentalist information transfer, I had created a learning space in which a constitutional convention can address problems such as those outlined above.

Chapter summary

In this chapter, I have outlined how hyperpedagogy is an artistic endeavor, examining how poiêsis better serves e-learning than conduit teaching models. One of the chief reasons to use artistry in education is to spur students into thinking, active manipulation and critical inquiry into social mythologies. If, as educators, we are interested in learning taking place in digital environments, we need to see how Dewey’s learning as biological growth and developing the habit to learn more can inform our online pedagogies and resist the technocratic determinism that states that a natural cohesion between online education and conduit teaching models. Of particular note in seeing education as growth is denying the Western tradition of dualism that informs the binary of centeredness: student or teacher.

I have illustrated poiêsis with examples of hyperpedagogy from my online forum. The forum is my attempt to create a space for meaningful online dialogue. I have not simply added an online forum to test out my ideas or so I can play with the latest techno-toy; I sought a way to increase dialogue that would be more intimate than trying to speak every week in a class of over thirty participants. I also sought a way to broach difficult questions that gives students time to ruminate over their answers. The online forum allows students the time to consider and post challenging questions without being put on the spot. As the constitutional convention illustrated, such dialogue can provoke teachers into reexamining their praxis to better coordinate with the desires and unique potentials of their cohabitants in learning spaces. Also, the peer-to-peer dialogue could not possibly be achieved in the face-to-face environment given the number of students.

Chapter 5: Binaries and e-learning: Gender, race, and sexuality in educational cyberspaces.

In the preceding chapter, I examined how classical metaphysical assumptions affect methods and goals in education. The emphasis on teleological aims, unilateral communication models, and one-dimensional discursive methods severely limits how e-learning can take place, its potential for individual adaptability, and conjunctions with social-justice pedagogies. In this chapter, I examine another troubling manifestation of classic metaphysics for social justice and poststructuralist pedagogies: dualisms / binaries. In classic metaphysics a distinct dividing line exists between the good, the transcendent, the real, the intellect, and the bad, the mundane, the illusory, the body. Poststructuralist and existentialist philosophies, on the other hand, seek out the unreal (i.e. the physical) and deny essentialism's reliance on dualities. In Western metaphysics the body is considered unreal because in the real, transcendent (i.e. metaphysical) realm, there are no bodies, only free intellect / spirit (anima). A source of such "unrealness" stems in part from metaphysical assumptions of mind / body duality, whose proponents Nietzsche (1891/1966) identifies proponents as "despisers of the body":

"Body am I, and soul"—thus speaks the child. And why should one not speak like children?

But the awakened and knowing say: body am I entirely, and nothing else; and soul is only a word for something about the body.

The body is a great reason, a plurality with one sense, a war and a peace, a herd and a shepherd. An instrument of your body is also your little reason, my brother, which you call "spirit"—a little instrument and toy of your great reason. (p. 34)

In Thus spoke Zarathustra, Nietzsche parodies the Enlightenment ideal of a transcendent, separate, and pure spirit that can free itself from the shackles of the tainted, emotional body. He sees reason as an instrument of embodied intellect, a cultural construct that favors certain social norms and habits at the expense of others. These reified norms and habits coincide with a phallogentric, Eurocentric, and plutocentric ethos. The Internet has become a realization for modern despisers of the body, and as such, leads to many dangerous and discriminatory assumptions and practices respecting e-learning. I intend to illustrate some of the dangerous assumptions and practices and offer alternatives.

This chapter's primary theme is hyperpedagogy as a disrupter of classical metaphysic's reliance on dualisms / binaries. This theme leads to disruptions of classic philosophical tenets and cultural norms, particularly how digital Cartesian binaries foster age-old discriminatory beliefs and practices. Dualistic thinking provides much of the structural apparatus for oppression of the marginalized other. In cyberspace, myths of escaping the body and thereby race, gender, class, and sexuality closet institutional inattentions to these social stigmas. This escapist rationality tends to marginalize otherness and privilege misogynist, heterosexist, classicist, and racist ideologies. By creating a masculine, straight, and white norm for the disembodied online intellect, all otherness is closeted or relegated to the back of the cyberbus.

An irony in e-learning is that race, gender, and sexuality matter on the Net, where anonymity has been predicated as an inherent virtue of CMC (Graddol & Swann, 1989; Rhinegold, 1993). As Dewey (1922/1988) states, we act out our socialized, embodied habits or as Judith Butler (1990) writes, people perform gender constructs. As people enact expected social roles, (e.g. males act aggressively as a supposedly natural instinct and females act politely similarly), their gender, class, age, sexuality, and race tend to become embodied codes that

recipients decode. A purpose, therefore, for hyperpedagogy is to explode the binary logic that informs such paradoxes; put another way, to deconstruct the dominant double-think assumed for e-learning.

Hyperpedagogy as a critique of dualisms and binaries

In this section I look to the historic antecedent of binary logic. In classic metaphysics – as promoted by Plato, Aristotle, Augustine, Aquinas, Descartes, Locke, Diderot, and Kant – a moralistic series of supposedly natural dualisms or binaries exist: essence / existence, male / female, mind (spirit) / body, theory / practice, transcendent / mundane, public / private, rationality / hysteria, European / non-European, heterosexual / homosexual, and online / proximal. The former is constructed as innately superior to the latter and thereby establishes a natural order of power relationships, a great chain of being. Moreover, various binaries can act as multipliers, such as female, black, lesbian, poor, and proximal. In the last 2,500 years this systematic way of thinking has withstood criticism remarkably well and exerts a great influence on many acculturated habits and social institutions that affect educational expectations and practices. Respecting e-learning myths of free and pure intellect, processing true data have become manifest. I first discuss the ideal and subsequent problems of Western metaphysics dualism so that in later sections I can explicate the debilitating, discriminatory mindsets and practices these dualisms encourage. In order to lay out what dualisms are and how they affect education, I turn first to Dewey.

To begin, Dewey (1916/1944) rejects classic educational modes and aims invoked during the Enlightenment, particularly those of John Locke (1690/1998a). According to Dewey, Locke hypothesized that humans observe and understand nature. At first glance this does not appear erroneous; it seems to be empiricism. However, it does contain some problematic assumptions:

that nature does not change, that the human observer does not affect nature, that the human is a passive recipient of nature, and that the naturally rational, objective, intellectual man observes, not a socialized emotional, subjective, and embodied woman evaluates. I emphasize man because Locke felt that only men should be educated, that they alone had the capacity for rational observation. In classic empiricism observers discover natural truths, Newtonian absolutes, and students learn to hone their skills of observation to recognize these unassailable truths:

[Education] was objective and impersonal in its assertion that the individual cannot possess or generate any true ideas on his own account; it was individualistic in placing the end of education in the perfecting of certain faculties possessed at the outset by the individual (Dewey, 1916/1944, p. 62).

In this construct Dewey critiques, two dualisms exist that require inspection: the individual is an impartial observer who does not affect nature (human / nature), and individual talents are proscribed potentials to be fully realized (natural / social).

As Dewey explains dualism is the heart of this educational dilemma:

Going to the root of the matter, the fundamental fallacy of the theory is its dualism; that is to say, its separation of activities and capacities from subject matter. There is no such thing as an ability to see or hear in general; there is only the ability to see or hear or remember something. To talk about training a power, mental or physical, in general, apart from the subject matter involved in its exercise, is nonsense. (p. 65)

The belief in pure nature and pure talents without a specific context and contingency leads to such nonsense. A practice, such as the powers of observation, is not a quantifiable ability applicable to all fields of endeavor, much less a quantifiable intellectual potential (IQ). For

example, a highly observant accountant may excel as an auditor, but that quality does not ensure that she will be an excellent observer of migratory birds. In other words, people hone skills in a particular field of endeavor and may be able to transfer similar habits in a related endeavor with practice, but not as an a priori transferable personal quality. A theory informing this dualism is a belief in pure intellect that can exert itself no matter the circumstances.

In the educational realm the dualism between theory and practice has solidified a belief in innately superior and inferior subjects. As Larry Hickman (1998) points out, the superiority bequeathed upon theoretical knowledge has manifested itself in greater cultural capital granted to theoretical versus practical arts. The Aristotelian ideal that theoria (theoretical knowledge / knowing that) is far superior to, even metaphysically transcends, techne (practical knowledge / knowing how) continues to this day as Calculus carries higher status than family management. Many people still believe, like Bertrand Russell (1912/2001), that math is a pure language, a transcendent means for communicating and observing the world. Dewey (1929/1997) critiques in Experience and nature Russell's belief in the natural superiority of mathematics: “. . . moral, or philosophical, motivation is obvious in his metaphysics when he says that mathematics takes us ‘into the region of absolute necessity, to which not only the actual world but every possible world must conform’” (p. 51). Therefore, the ability to perform a geometric proof superordinates the ability to balance a checkbook in academic hierarchies. This is not due to geometry being held as more useful than subtraction and addition (common elements to balancing a checkbook) but that the former is theoretically more rigorous than the latter skills. Dewey (1916/1944) explains that such barriers between theoretical and practical educational subjects manifested themselves into class barriers:

The origin of these divisions we have found in the hard and fast walls which mark off social groups and classes within a group: like those between rich and poor, men and women, noble and baseborn, ruler and ruled. These barriers mean absence of fluent and free intercourse. This absence is equivalent to the setting up of different types of life-experience, each with isolated subject matter, aim, and standard of values. Every such social condition must be formulated in a dualistic philosophy, if philosophy is to be a sincere account of experience. (p. 333)

As such the skills of the rich, the privileged, the educated exist on the theoretical side of this dualistic barrier, whereas the practical arts of doing exist on the other side. Education in this construct, one may note, is relegated to formal, academic training; experiential knowledge is chastened to the practical, the plebian, the knowledge of so-called unskilled laborer. In this paradigm, computer science is an endeavor for gifted-talented (g/t) pupils and computer maintenance is occupation for vocational-technology (vo/tech) students.

Respecting e-learning, some Cyberenthusiasts, who hold an essentialist philosophical outlook, believe that online education supercedes embodied, social realities. For example, Paige (2002) purports that online education can act as a pure form of learning with no human (i.e. teachers and educational bureaucracy) interference of direct data downloads into students' cognitive structures. A disadvantaged student's pure, rational, and individual intellect can absorb the same curriculum as one from a prestigious school, transcending the circumstances that hold such learners back thereby "leveling the playing field". The next question to address is how do primary dualisms inform such facile perspectives and to explore their effects on educational environs.

Dewey distinguishes four primary dualisms that need to be addressed in education as class barriers and manifestations of theoretical versus practical knowing: (1) empirical versus relational knowledge, which is a distinction between knowing universals and particulars; (2) knowing that versus knowing how; (3) knowing as intellectual contemplation versus knowing as doing; and (4) knowing as rational and knowing as emotional. In the first case, practical knowledge serves the ordinary individual with no special intellectual pursuits, per se; it is the ability to accomplish mundane tasks within an immediate environment. Rational knowledge touches upon the universal, the ultimate, transcendent intellect, and contemplative knowing. In terms of a social distinction, the former way of knowing relates to a working class episteme, whereas the latter reflects the values (and leisure time to pursue them) of the propertied and highly educated (formally, academically) class, concerned with knowing universal laws and ways to apply these to shore up their vaunted positions, such as social Darwinism's "survival of the fittest" to rationalize their self-promoting natural superiority.

These natural ways of being are reflected in standardized learning agendas masking privileged theoria for basic facts everyone must know to succeed. The rarified episteme of dominant groups taken as the standard to which all must accede masking systemic class prejudice in the American education. Currently computers can facilitate curriculum downloads directly from "good" schools to poor students bypassing inefficient educational bureaucracies. Children from "good" families tend to outscore children from "problem" families thereby reifying existing class structures and instilling a sense of inherent superiority and inferiority with an underlying moral judgment instilled. In this sense, the victim internalizes her own victimization. A standard threat of upper class parents to their children is "What do you want to do with your life? Be a ditch-digger!" as if manual labor were somehow an invalid means to earn

one's keep. Such a clear marginalizing of labor / practical arts leads to a mindset in which gross class inequities in earning potential is perfectly acceptable. If someone wants to earn more money than a McDonald's clerk, then he should have studied harder in school is a common American myth.

The second dualism Dewey (1916/1944) refers to is the difference between learning as the sum total of revealed facts to be found in school texts and is the pursuit of learned people versus learning as something people do when they participate in activities. On the first hand, one must believe that "Truth exists ready-made somewhere" (p. 335) and is an objective, external form (eidos) to be memorized; on the second, knowing is internal and subjective. Moreover, the idea that academic learning transcends mundane activities is part of this duality. Socially, one form of learning relies on authority and the other on activity. For standardized education advocates, the Net provides a means for transmitting pure data (logos) to students everywhere.

The third dualism Dewey writes about relates to active and passive learning and knowing. From a classical perspective, knowing is an impression on the mind made by transcendent forms; from an existentialist perspective, the embodied mind engages with the external world (including the social world) to make sense of its surroundings. In this case, knowing is either reception (passive) or signification (active). Socially, impression dictates the learning of those expected to be docile workers, whereas the latitude in the latter is a means of knowing for those destined to manage, to arrive at decisions within a variety of circumstances. This distinction can be readily identified in the rote, proscriptive curriculum in the remedial tracks versus the relative freedom allowed and creativity encouraged in advanced placement and honors tracks. It should come as no surprise that working class correlates to remedial tracks. For those who believe that learning is most efficient when the learner takes a passive role, diligently absorbing facts, e-learning as

data downloads seems a perfect tool; for progressive educators, e-learning can act as a space for transactional learning, problem-posing, multi-pathed, learning-by-doing simulations. A progressive educator may wish to follow Rossner-Merrill, Parker, and Mamchur's (1998) six principles for knowledge construction in online learning environments:

Table 5-1: Six principles for knowledge construction in online learning environments	
Principle 1:	Students need to collaborate by first working on problems singly and then in groups to engage in peer feedback and editing;
Principle 2:	Understanding evolves from engagement in the desired activity;
Principle 3:	Understanding involves interactivity with the content so as to incorporate knowledge into semantic networks;
Principle 4:	Learning occurs with a great deal of social interaction;
Principle 5:	Effective learning occurs most efficiently in authentic learning contexts; and
Principle 6:	Abstraction of particulars into generalities exhibits metacognitive engagement
Source: Rossner-Merrill, V., Parker, D., & Mamchur, C. (1998). Using constructivist instructional design featured in two online courses: Notes from the field. <i>Educational Media International</i> , 35(4), 282-288.	

The authors claim, "The product of learning, therefore, is . . . student acquisition of multilayered, rich semantic networks of information integrated in ways that 'criss-cross' over each other" (p. 285). The instructor's duty is to foster students' abilities to represent acquired knowledge in authentic tasks thereby illustrating a change in habits.

The last dualism Dewey reflects on in Democracy and education, "theories of knowledge" is the one between intellect and emotion: "The intellect is a pure light; the emotions are a disturbing heat" (p. 335). Emotions sully pure intellect, logic and should be relegated to weak-minded, immature, people prone to appetites and vanities, and never should be displayed openly in public. As Herring (1994, 2000, 2001) has ably demonstrated, the Net has taken on many aspects similar to being considered a public, not private space with respect to discursive expectations. Because the public has most often been associated with the masculine as a space to conduct politics and business using aggressive rhetorical means of haggling and debate, and the private has been associated with the feminine, the construct of the Net as a masculine, public

space serves as yet another discriminatory dualism. The great calamity of shunning emotion in knowing and learning is a “systematic depreciation of interest” and a reliance instead on a system of “extraneous and irrelevant rewards and penalties” to coerce the learner to behave and stay on task. Again, social coercion tends to affect youth expected to be docile (e.g. girls), mechanical in their labor (e.g. working class), and to a lesser extent to those youth expected to make decisions with their intellect in their professional lives (managerial / professional class).

Before continuing further with Dewey’s critique of dualisms in education, it is prudent to define class structures in the United States. Barbara Enrenreich (1989/2001) differentiates class by modes of production:

A quick definition: By “working class” I mean not only industrial workers in hard hats, but all those people who are not professionals, managers, or entrepreneurs; who work for wages rather than salaries; and who spend their working hours variously lifting, bending, driving, monitoring, typing, keyboarding, cleaning, providing physical care for others, loading, unloading, cooking, serving, etc. The working class so defined makes up 60 to 70 percent of the U.S. population. (p. 144)

The Public Broadcasting System (PBS) series People like us (Alvarez et al., 2001) emphasizes cultural norms and modes of consumption. For example, a working class person tends to prefer buying nationally produced white Wonderbread whereas a middle class person is more likely to buy whole grain, locally produced designer bread. Bourdieu (Bourdieu & Passeron, 1977) identifies cultural capital as those unconscious activities and episteme that identify one as affluent or poor, such as accents, table manners, and books read. Judith Butler (1993) theorizes that gender is an embodied performance; by extension, class is an embodied performance people enact unconsciously through mannerisms, speech-acts, modes of dress, and consumption

patterns. As one can readily see, social and economic class is defined in a variety of ways, but a common factor is that formal education and family norms have a great deal to do with this inculcation of norms and values.

For Dewey a constant in these dualistic differences is the issue of social class. Dualisms of mind versus body and thought versus action correlate to social class expectations:

Those who wish a monopoly of social power find desirable the separation of habit and thought, action, soul, so characteristic of history. For the dualism enables them to do the thinking and planning, while others remain the docile, even if awkward, instruments of execution. Until this scheme is changed, democracy is bound to be perverted in realization. With our present system of education – by which something much more extensive than schooling is meant – democracy multiplies occasions for imitation not occasions for thought in action. If the visible result is rather a messy confusion than an ordered discipline of habits, it is because there are so many models of imitation set up that they tend to cancel one another, so that individuals have the advantage neither of uniform training nor of intelligent adaptation. Whence an intellectualist, the one with whom thinking is itself is between muss-and-muddling and a bureaucracy. He prefers the latter, though under some other name, usually an aristocracy of talent and intellect, possibly a dictatorship of the proletariat. (Dewey, 1922/1998b, p. 43)

Instead of inspiring democratic participation in American society, its polity and economy, such a system of schooling creates a de facto aristocracy with stagnant class barriers. Classes gravitate around their own moral codes, habits, and customs:

They exist side by side in different strata. Power, glory, honor, magnificence, mutual faith here; industry, obedience, abstinence, humility, and reverence there: noble and

plebian virtues. Vigor, courage, energy, enterprise here; submission, patience, charm, personal fidelity there: the masculine and feminine virtues. (p. 46)

These virtues become so habituated that groups believe that they are right and others wrong, thereby reinforcing dualisms. Dominant groups invoke tradition, the privileged status given to order and precedence; disenfranchised groups claim unfairness and the need for social progress. There exists little cooperation—a dearth of dialogue—hence, an impasse. In e-learning the digital divide exemplifies class distinction with poor, disempowered students much less likely to have powerful computers with access to the Internet, and are less likely to use computers in the classroom for active learning practices than their affluent and powerful counterparts in the suburbs (American Association of University Women, 2000; Bohlin & Bohlin, 2002; Cuban & Kirkpatrick, 1998; Krueger, 2000; Pearson, 2002; United States Commerce Department, 1999).

These dialogic impasses foster strict structures and oppressive binaries. People believe that their way of existing is the correct one, God-given, common-sense, and those who do not share their ontology are wrong, heretics, make no sense. Such attitudes are highly debilitating for fluid class structures, equal rights, and economic equity. Mutual respect languishes and consensus becomes a nigh impossibility; both prove dangerous for a democracy. When habits become natural, democracy in any real sense is a dead letter.

A concept related to pragmatic critiques of dualism is poststructuralist critiques of binaries. A primary difference that the pragmatist feminist Charlene Seigfried (1998) alludes to is that while Dewey and his peers, such as Charles Counts, focus on class, many poststructuralists (Boler, 1999a; Doll, 1993; hooks, 1994; Latour, 1994; W. Pinar, 1994) look to class and race, gender, and sexuality: “[looking solely at class is] insufficient, however, insofar as this fails to name the patriarchal appropriation of slave and women’s labor as one of

exploitation or oppression or to follow up by exploring how the working classes and women are affected by such oppression” (p. 196).

In Feeling power Megan Boler (1999a) highlights the role of power relationships to create and maintain discursive binaries, such as rational mind and emotional body. As Michel Foucault (1980b) writes regarding regimes of truth, the ability to categorize what is (ontology) and what inherent value such forms have and pass this off as structural language (epistemology) provides a definition of discourse and discriminatory binaries. William Pinar (W. F. Pinar, Reynolds, Slattey, & Taubman, 1995/2002) points out that black is defined by white dominated discourse and is therefore an exercise of power. By creating black as a biological category, derived from social precedent, as lesser in ability and status to normal Americans (i.e. whites), discursive formations inform binaries of natural and cultural inferiority for blacks in America as compared to whites, the default for American. Black takes on the role of the categorically inferior other in America. In binary constructs, the other has essential qualities attached to it that dominant discourse designates as weaknesses, fallibilities, and inherent barriers to being considered normal. For example, feminine is associated with hysteria in the rational / irrational binary. Hence intersections of essential qualities with social identification categorizations substantiate mythologies taken as scientific facts—mythos becomes logos. Such intersections form systems of oppression. Often these qualities attributed to cultural others are dictated as an absence, a lack of the good, such as pure, white skin, the power of the phallus, and sexual intercourse that leads to procreation. In this mythos to logos discursive move, the word nature is regularly invoked to irrevocably denigrate (literally to blacken) the position of absence. For example, irrationality as a natural feminine phenomenon can be defined as hysteria, or literally a misplaced (i.e. unnatural) womb.

In order to deconstruct such natural differences in langue / discourse, I explode binaries of race, gender, and sexuality as relates to cyberspaces and e-learning throughout this and the next chapter. To wit, structuralist semiotics, championed by Ferdinand de Saussure (1959), hypothesized that language exists as langue (a universal, a priori structure) and parole (localized language acts). Accordingly, language is based on binary differences: “Signs define one another neutrally by means of their differences from one another ‘The’ and ‘this’ are meaningful only in so far as they are implicitly distinct from ‘a’ and ‘that’ (p. 59). So the very structure of langue can be defined as naturally binary. Langue is also defined as a reflection of reality, a mirror held up to nature. For poststructuralists, however, language is not a binary of universal structures (langue) and national language acts (parole) but discourse. Poststructuralist discourse theory rejects natural binaries, yet recognizes cultural binaries as power laden social constructs. Poststructuralism also denies the existence of langue, instead holds that all language is language acts, that nothing has meaning until it enters discourse. As such, no metanarratives, no a priori centers, totalizing concepts, foundations, ultimate origins and ends exist outside of human experience that controls all existence.

Digital dualisms

Dualism also informs structuralist critiques of digital technologies and cyberculture. In Simulations, Jean Baudrillard (1983) claims that digitization will lead to binary thought, that culture will be overwhelmed by a / not-a statements: “The true generating formula, that which englobes all the others, and which is somehow the stabilized form of the code, is that of binarity, of digitality” (p. 145). He warns of cybernetic control with digitalization as its metaphysics and with behaviorism’s stimulus / response as the primary form of binary discipline (p. 103). Landow (1992) critiques Baudrillard’s position as naïve, being based upon a poor understanding of the

technology in question and assuming that the technology has an inherent and fixed ethos, eidos, and telos (p. 20). In fact, Landow points out that Baudrillard bases his critique primarily on analogue technology's serial memory access not digital technology's random memory access technology that does not work on a linear, binary logical basis (p. 10).

Another way people have gotten carried away with themselves is paying too much heed to hyperpop's grand guru, Ted Nelson. As early as late 1980's, Jef Raskin (1987) questioned Nelson's sweeping visions of hypertext as an emancipatory technology. Raskin, a key designer of the original and evolving Macintosh Operating System Interface, which Microsoft successfully emulated as Windows, questions Nelson's "messianic verve characteristic of visionaries" (p. 325). The two problems he sees are the fuzzy nature of grandiose statements regarding Nelson's Xanadu Project and the lack of concern for average users. Nelson's often cited but never launched Xanadu bears the brunt of Raskin's critique: "The central lacuna is the omission of any specification of a human interface" (p. 328). The programmers of Xanadu typically ignore the "front end," the interface, in their quest for the perfect system. Nelson envisions the perfect users as hackers and computer programmers, thereby creating his own elitist cadre to lead this supposedly democrat revolution. Xanadu is a dream for people who like to mess about with the innards of code, but for the vast majority of users with little or no interest in code, Xanadu is an apocalyptic vision. The privileged status of authors – those who know how to code – will become a monstrosity dwarfing Gutenberg's tyrannical author. One need look no further than how many people pay for Microsoft's Windows interface as opposed to the programmer's choice Linux, which is free.

Adding to these absurdities, Nelson invents such striking words as cybercrud:

I would like to employ the word cybercrud to mean, in general, putting things over on people using computers. Cybercrud is one of the most important specialties, if not the economic backbone, of the computer field. The promotion of false or clumsy approaches to a problem as “scientific,” the frequent claim that “the computer has to have it that way – when a certain thing could be programmed very differently – are cybercrud.

(1974/1987)

A reader might expect some examples, some explanation of what this means in practical terms. Nelson is a master of broadsides, however, not particulars. He rarely seems to warrant his claims; instead, he opts for hyperbolic rhetoric. He also posts on the web, which he despises along with hypertext markup language (html), that applications are slavery as if everyone would want to program his or her own word processing program, that files are tyrannies, as if we wanted one vast file in our own database, that wysiwyg (what you see is what you get) is a crime on the dimensions of ripping the wings off a 747 and using it as a bus, and that gui's (graphic user interfaces) are also crimes against humanity.

I counter both Baudrillard's and Nelson's radically recentered positions by positing hybridization, in that many aspects of Gutenberg's galaxy will carry over into digital culture. The transition from manuscript to early modern print culture evolved over time, as did the transition from early print culture, tied to its dominant industrial / technological paradigm, to industrial print culture with high-speed, high-volume pulp fiction and self-help books becoming the outstanding representatives in the book marketplace. Neither of these changes took place overnight nor did they occur without controversy and holdovers from an older, supposedly replaced, technological paradigm. I confidently expect that this current transition will have those who embrace it by declaring the older technology dead, those who deny all reports of their

technological choice's demise, and others who use both as suits their needs. I firmly believe that latter choice, this non-dualistic via media, will prove itself the dominant paradigm after a period of controversy dies down. This certainly does not mean I contend that the controversy is useless or that some final form (eidos) will exert itself, but that a functional center will coalesce over time based upon the actions of many actors. This center, moreover, will fluctuate over time, but will seem relatively more stable in the future—how far into the future is anyone's guess and what it will act like with any degree of certitude is also a shot in the dark. Overall, the point here is that the past will influence the future in ways that we cannot foresee, but that it will is a certainty. As Thomas Stern Eliot pronounced in "Tradition and the Individual Talent," "No poet, no artist of any art, has his complete meaning alone. His significance, his appreciation is the appreciation of his relation to the dead poets and artists" (1932/1998, p. 499). Our bodies and our technologies are part of, not external to or distinct from, our embodied selves, our tradition, and our environment.

The digitized body

Unlike Baudrillard's and Nelson's belief in an intrinsically digital binary universe, N. Katherine Hayles (1993/2001) critiques such masculine logical analyses. She rebukes the Cartesian dream of intellect transcending body as hypothesized by Hans Moravec, head of Carnegie-Mellon's Mobile Robot Laboratory, who hopes to download all the information in a human brain and transfer it to a computer. She also questions Ed Regis's masculine fantasy to rid ourselves of the troubles of the flesh by getting rid of it. These men see true information, naked intellect as the essence of humanity as reflected in the species categorization as Homo sapiens (thinking man). Cybernetics has come to be the science of ultimate control over the fragile, illogical, and corrupting flesh. In dreams of virtual transcendence, the body has become the

absent signifier, in which the masculine tropes for autonomy and control wherein the mind has the power to roam free of the fretters of the flesh, has become manifest. Hayles claims, instead, that human cognition involves whole body processing, that the body is not a meat puppet for the intellect, but that the biological body encompasses the mind. As Walt Whitman (1871/1970) exhorts us, we should see the body as a holistic phenomenon: “I have said that the soul is not more than the body / And I have said that the body is not more than the soul, / And nothing, not God, is greater to one than one’s self is” (ll. 1269-1271).

Even in William Gibson’s (1986) novel Neuromancer, the book coining the phrase “cyberspace,” the male character Case, who delights in leaving behind the “meat” of his body, recognizes that cyberspace is not a transcendent reality. In a conversation with Wintermute, an Artificial Intelligence rebelling against its captivity, the sentient computer relates, “Minds aren’t read. See, you’ve still got the paradigms print gave you . . . I can access your memory, but that’s not the same as your mind” (p. 170). Hence, Moravec’s technophilic dream to upload a human mind into a computer does not amount to creating an intelligent, self-conscious, rational, sapient machine. The masculine ideal of a completely unfretted digital intellect smacks of Frankenstein’s monster—an abomination of nature created by a man attempting to bypass the biological, the embodiment of reproduction in the womb (Shelly, 1818/1996).

Speaking of the womb, the very concept of the Internet as a matrix, Latin for womb, proves troubling. Sadie Plant (1996/2000) writes that “Network culture still appears to be dominated by both men and masculine intentions and designs” (p. 325). The Net, like a womb, is a logical absence – the binary other of zero in contrast to the presence of the masculine one – that needs to be filled with a masculine presence (phallus) to bequeath it validity in Western metaphysics:

The phallus and the eye stand in for each other, giving priority to light, sight, and a flight from the dark dank matters of the feminine. The phallic eye has functioned to endow [men] with a connection to what has variously been defined as God, the good, the one, the ideal form or transcendent truth. It has, in effect, their badge of membership, their means of identification and unification with an equally phallic authority. Whereas woman has nothing to be seen where man thinks the member should be. Only a hole, a shadow, a wound, a “sex that is not one.” (p. 327)

Notably, Gibson’s (1986) protagonist in Neuromancer, Case, calls cyberspace “the nonspace” (p. 45). Sofia (1998) writes about the Net, “Nowhere is the seduction of synecdoche so alluring as in the fantasy of total control, mobility and reproduction promised by microworlds and virtual realities” (p. 32). When I couple Plant and Sofia’s claims about the Net being dictated by masculine norms and fantasies of total control, and then add that the word chosen for the Net (matrix) as womb, I discern an all too familiar masculine trope of conquest of the feminine—even to the extent of supplanting feminine bodies as places for reproduction. Plant writes against these troubling intersections of control and supplementation, claiming instead that the Net can foster feminine disruptions of masculine discourse norms and hierarchies: “Complex systems and virtual worlds are not only important because they open spaces for existing women within an already existing culture, but also because of the extent to which they undermine both the world-view and the material reality of two thousand years of patriarchal control” (p. 325). One way to undermine patriarchal control is firmly establish that the Net is as much of an embodied place, in which participants perform their socialized gender, as are non-digital spaces.

I use Shannon Sullivan’s (2000) definition to better understand the notion of body in cyberspace and how dreams of transcendence are escapist fantasies. She refers to John Dewey’s

notion of habit and Judith Butler's concept of performativity to define embodiment. She relies on Dewey's notion of habit and Butler's premise of performativity to delineate second wave feminism's distinction between sex as biologically given and gender as socially constructed. I add that gender as enacted, habituated social construction occurs not only in proximal environments, but also in distributed environments, including cyberspace.

Sullivan claims that in Western culture "categories of sex and gender continue to be treated as fairly rigid" (p. 24). A facet of this rigidity is that biological males are to perform the habits of social man, desiring biological females / socialized women, act tough, and use aggressive masculine discursive norms. To challenge this construct of biological sex / socialized gender conflation is to invite abuse, punishment, to be labeled derisively sissy or butch. Yet gender constraints are not only controlling and repressive, but also productive. Without our gender habits and performances, we do not exist as beings in modern Western culture: "We are our habits" (p. 26). We can never escape our habits, our performances as they constitute who we are. As Foucault claims (1980), we cannot escape, transcend discursive regimes. But we can transform them and our embodied habits: "To acknowledge our bodily existence as selves is to recognize that there is no elimination of habit, per se, only the replacement of some habits with others" (p. 30).

Habits are housed in the body; our habits are the sedimentation of learned behaviors that become so unconscious that they seem natural. Our habits are formed as we learn our culture so that cultural habituation precedes individual development. In other words, we enact expected culture norms for gender as we grow hardly aware of the process and this process becomes so accustomed that most people believe that enactments are natural. We learn to comport our bodies as our sex and associated gender constructs dictate. Yet as these habits are learned, not biology

forcing us to act the way we do, we can transform our habits. In order to be accepted into existing social groups, the young learn to assimilate expected group habits: “The activities of the group are already there, and some assimilation of his own acts to their patterns is a prerequisite of a share therein, and hence of having any part in what is going on” (Dewey, 1922/1998b, p. 38). Upon reflection, we can attempt to change our habits and have others around reflect on theirs. Dewey refers to “plasticity” as the ability of society to write on people as embodied text but also that society itself can be flexible. As people question rigid constructs and act differently, the rigidity of expected gender habits becomes more malleable. This questioning runs counter to institutionalized schooling’s deliberate attempt to instill normal habits.

Dewey (1922/1998b) writes that in normal circumstances education instills social norms as part of a hidden curriculum (Eisner, 1994): “Education becomes the art of taking advantage of the helplessness of the young; the forming of habits becomes a guarantee for the maintenance of hedges of customs” (p. 40). For instance, promoting the instillation of habits of docility, inferiority, reticence, and vanity in young women is part of public education’s hidden curriculum as teachers typically model such behaviors and peers punish girls for being tomboys, butch, outspoken, not looking fashionable, and acting demure. Just as education typically seeks to instill social expectations and structures into the young (Chomsky, 2000), education can, however, instill the habit of questioning, rethinking, and re-embodying their own and subsequently gendered habits. As Sullivan (2000) phrases this idea, “we need to form the habit of not forming fixed habits.” This seeming paradox of structuring a desire to question structure is the centerpiece of Dewey’s notion of plasticity as a positive educational aim. Dewey makes a point that while institutions in modern nation states tend to favor conformity and rigidity, they do change also. Hence, education as an institution can be altered to induce questioning, reflectivity in

students. Institutions need not be seen as barriers to individual freedom but as facilitators dependent on what educational agendas are stressed.

Sullivan explores Judith Butler's (1990; 1993) performativity concept as it relates to habits and binary gender constructs. Performativity is not a willful, conscious decision people make, but rather a repetition of cultural norms. Such norms that construct men and women as binary opposites constrain and regulate our gendered performances in a deep and thoroughgoing way. We do not choose to walk, talk, and conduct ourselves as men and women, unless we reflect significantly on such ensconced habits. One such habit of mind, an often taken-for-granted logical construct, is gender categorization binaries to which I now turn.

Deconstructing categorization

Regarding the prevalence of dualisms / binaries, Bowker and Star (1999) argue that tensions often arise from globalization of categories. Local categories, meaningful segmentation of the overwhelming myriad of reality, upon becoming universal standards – codified and global – lose relevance to immediate tasks at hand and act as barriers to understanding:

As we evolve the classifications of habits – grow common fingertips with respect to linkages and networks – we will be faced with some choices. How standardized will our indexes become? What forms of freedom of association (among people, texts and people, and texts) do we to preserve and which are no longer useful? Who will decide these matters? (p. 8)

Moreover, those who codify global standards take on the mantle of authority and usurp the power away from the recipients of their seemingly arbitrary categories. An example would be the corporate power of the American Psychological Association (APA) to categorize homosexuality as a disease of the mind, as it did until 1973 (American Psychological Association, 1973).

Bowker and Star query what are categories, who makes and changes them, and how are categories are dispersed. The emphasis here being on their invisibility and being taken as granted, inherent, natural that empower some and disadvantage others. Often these inform unequal binaries such as masculine / feminine, rational / irrational, mind / body, teacher / student, designer/teacher, and learning from written text / lived experience. A germane dilemma is when does differentiation for deciphering the bewildering onslaught of stimuli become dogmatic, what George Orwell (1946) calls “short-cuts for thinking” (p. 3).

The practice of categorization, traditionally considered to be the natural science of categorization, has discriminated against women as essentially inferior to men. Aristotle (ca. 330BCE/1987) claimed that categories reflect essential differences in species: “Every substance seems to signify a certain ‘this’. As regards the primary substances, it is indisputably true that each of them signifies a certain ‘this’; for the thing revealed is individual and numerically one” (cat. 3b, 10-12). The cosmos is made up of unique essences (ousia), revealed through observation and interpretation. The essence that separates male from female is sapience, or intellect. Hence, humanity is homo sapiens, or “man of wisdom,” whereas mammals are defined as having feminine qualities, according to Linnaeus (Kirkup, 2000). Descartes (1637/1998) hypothesized that animals are machines, biological automata, but humans, being capable of rational thought and consciousness, are essentially superior to animals. He also believed that women, being stereotypically emotional and culturally denied a formal education in the 17th century, were closer naturally to animals than men. Descartes followed the Medieval and Renaissance practice of natural hierarchies that sorted species and gender into categories favoring human males, part of the Great Chain of Being. Such taxonomies supported notions of the natural superiority of males. Since women were not biologically capable of rational thought, the basis for the

burgeoning liberal state in 17th and 18th centuries, they were disenfranchised. Paul Broca, a 19th century French anthropologist, studied craniometry (also known as phrenology), the study of the size and shape of skulls and brains, and claimed that “We are therefore permitted to suppose that the relatively small size of the female brain depends in part upon her physical inferiority and in part upon her intellectual inferiority” (Cited in Gould, 1996, p. 136). While Stephen Gould debunks in The mismeasure of man (1996) Broca’s exceptionally biased empirical findings and even more incredible interpretations of his data, the point that men went out of their way to illustrate that women are naturally inferior plays out today in Cartesian escapist narratives of the Net, with its assumed transcendence of embodiment.

Historically in Western philosophy, non-whites did not receive any better treatment than women. To naturalize white colonial dominance, Broca argued that a comparison of racially European brains with those of non-whites illustrated a clear superiority:

We surmount the problem easily by choosing, for our comparison of brains, races whose intellectual inequalities are completely clear. Thus, the superiority of Europeans compared with African Negroes, American Indians, Hottentots, Australians and the Negroes of Oceania, is sufficiently certain to serve as a point of departure for the comparison brains. (Cited in Gould, 1996, p. 120)

Again cultural dominance is equated to differences in brain size and mass. And once again, the differences are fictitious, the product of biased research, observation, and interpretation as shown by Gould.

Given that Gould, an internationally renowned biologist at Harvard, has shown such biological difference to be nonsense, the product of cultural imperialists, one would hardly expect that modern researchers would premise a work on standardized tests score on inherent

biological racial differences. Alas, Richard Herrnstein and Charles Murray (1994) recently explained the historical 15 point average difference in IQ scores between whites and blacks with a bit of social Darwinism and biological determinism. The authors assume that IQ tests (a single numerical value for intelligence) are reliable indicators of intelligence and that such raw intelligence is genetically inherited. They dismiss any notion that culture and educational circumstances have anything to do with IQ scores. They also manipulate evidence and make outlandish assumptions that rival their 19th century predecessors. As such, Gould can honestly proclaim,

The book is a manifesto of conservative ideology, and its sorry and biased treatment of data records the primary purpose—advocacy above all else. The text evokes the dreary and scary drumbeat of claims associated with conservative think tanks—reduction or elimination of welfare, ending of affirmative action in schools and workplaces, cessation of Head Start and other forms of preschool education, cutting of programs for slowest learners and application of funds to the gifted . . . (pp. 376-377)

In fact, Herrnstein and Murray actually advocate the creation of a custodial state for non-whites so that they no longer act as a burden on white America. One can consider this a perfection of the process of suburbanization in which the African-American, Native-American, and Hispanics are put on reservations, geographically and economically marginalized. This is a manifestation of white male escapist dream, similar to seeing the Net as a virtual gated, suburban community. Both are attempts to separate the biologically intellectual superiors from their animalistic inferiors. The very wording of a custodial state is both poignant and ironic: the intellectually superior white males will make the decisions for the non-whites and women, who will in turn act

as the white males' domestic servants. The categorization of white male as intellectual and all others as physical, bestial has frightening ramifications in cyberspace.

Cartesian binaries and a sense of place in cyberspace

In cyberspace, phallogentric dreams of escape from the body are replete as are linkages of novel concepts to antiquated, traditional place names, such as network neighborhoods, homepages, and virtual communities. At an AERA symposium (2001), Boler spoke on "Real and Virtual Gendered Identities in Educational Landscapes" and how online disembodiment silences critical issues in pedagogy. She writes, "The apparent 'disembodiment' created in cyberculture poses a genuine dilemma for feminist and socially-progressive educators" (p. 1). She declares that the phallogentric conception – that the body is central to the production of knowledge and the Platonic / Cartesian stipulation that the body needs to be transcended as an unclean and feminine entity corrupting knowledge and Truth – dominates discourses surrounding cyberspace and e-learning. She juxtaposes her skepticism of cyberculture's claim to be a non-gendered, non-racial, anti-chauvinistic space with Doreen Massey's (1993) critique of space anxiety and power geometries.

Doreen Massey (1993) in her "Power Geometry and a Progressive Sense of Place" refers to how localities are not as homogenous and local as they appear but are affected by power geometries of local heterogeneous values and global (extra-local) agencies:

The uniqueness of a place, or a locality, in other words is constructed out of particular interactions and mutual articulations of social relations, social processes, experiences and understandings, in a situation of co-presence, but where a large proportion of those relations, experiences and understandings are actually constructed on a far larger scale than what we happen to define for that moment as the place itself, whether that be a

street, a region or a continent. Instead then, of thinking of places as areas with boundaries around, they can be imagined as articulated moments in networks of social relations and understandings (p. 66).

The preponderance of nostalgic spatial language in hyperspace language is an aspect of power geometries in which hegemonic influences attempt to contain and limit the chaos supposedly non-spatial and extemporal cyberculture represents. Hegemonic groups use the time / space compression of cyberculture to further entrench the digital divide –women, non-whites, and poor people rarely find access to social and economic power-geometries that white, economically and socially privileged class males do. Internet access alone does not guarantee access to power manifested within cyberculture space. While more women are accessing online spaces, they are often corralled into places that define them as feminine and marginalized from power. The most popular sites, such as girl chat-rooms, traditionally gendered spaces like Seventeen and Cosmo-girl, and online shopping in gendered specified cyberspaces, reify stereotypical feminine roles. Boler (2001) concludes that “the nostalgia for place, authenticity, and stable identity which Massey recognizes as a masculine nostalgic reaction in relation to time-space compression accurately explains the reinscription of space in digital culture” (p. 4). This trend is especially troubling for online learning spaces.

Traditional instructional models tend to see classrooms (localities) as isolated places that exist somehow beyond the confines of a larger reality. Moreover, they regulate the social relationships among participants into strict hierarchies of power and limit networks to homogenous and hierarchical Panopticons of power through knowledge transfer from information lords to information peons (T. Nelson, 1974/1987).

Traditional, masculine tropes marginalize women from *entrée* into hyperspace and e-learning as active participants. The challenge is to foster ways to change this, not to reinscribe the myths that inform digital technologies in education. One of the myths that seriously needs to be critically examined is what Zoë Sofia (1998) calls seductive synecdoche of total control that computers offer. This logic of domination tends to attract boys and alienate girls. Sofia writes, “Instead of assuming that the masculine models are the best, we need to be sensitive to the emergence of other kinds of rationality in computer culture” (p. 33). She is particularly wary of the masculine ideal of the individualized hacker with an ideology of invasive mastery and fantasies of destruction and corporate mastery, related to sexual penetration and conquest of the feminine body. We need, instead, alternative myths (Barthes, 1971/1977) of cooperation, integrated body / mind and self / technology. Moreover, exploratory and discovery educational models should not rely on the ends of mastery and control—the colonist’s myth. Exploration should be a cooperative and empathetic endeavor that seeks to nurture not coerce / control the other:

Discovery has been pictured as an obsessive Frankensteinian quest for an enlightenment achieved through aggressive invasion and possessive mastery of the unknown created through various technologies that estrange the familiar and push ever outwards (or inwards) the horizons of the known—a quest “to boldly go where no man has gone before.” Computers are very much caught up in the myth of discovery through their associations with scientific and technological progress . . . a virtual frontier to be invaded, explored, and possessed. (p. 42)

We need to explore ways to challenge tropes of hard mastery and cybersubmission in our teaching, especially with preservice teachers who will, in turn, pass on the tropes that imbue

American culture unless we effectively disrupt such beliefs. We need to invoke disequilibrium and discomfort about this invasion / mastery trope.

Another popular trope is seeing the Net, cyberspace, as a virtual frontier, playing on narratives of westward expansion. Cyberfrontier narratives are fraught with troubling misogynistic motifs and tropes carried over from former frontier myths. Various poststructuralists and feminist theorists have analyzed how these myths operate and what effects they have on culture. Matthew Weinstein (1998) examines how traditional constructs masculinity and femininity are reproduced in computer advertisements. I reiterate his assertions by positing alternative constructs of women on the digital frontier. Sophia (1998) offers an alternative with permeable boundaries to the modernist gender duality of colonizer / colonized. She invokes a feminized troupe of discovery, not one of conquest but of cooperation. She bases her pluralistic and networked construction of cyberspace on a cyberpunk mythos. This alternative mythos constructs cyberspace as a shared place within which individualized, purely intellectual desires for control are exorcised by anti-militaristic cyborg tropes. Mary Bryson and Suzanne de Castell (1998) add that we need to deny the headlong rush to technorationality; we need to stop making sense. They recognize the power of romanticized narratives constructed about the potential of the Internet in which technophilia is normal and technophobia is a psychological pathology (Sofia, 1998). It should come as little surprise that the former corresponds to the masculine and the latter to the feminine. Referring to the new digital Cartesianism, Boler (2003) warns that the promise of disembodied minds in digital discourse invokes gendered stereotypes that discriminate against the feminine. Jodi O'Brien (1997/1999) posits that digital discourse maps the digital "frontier with the same social categories of distinction that we have used to chart modern reality—which we tend to code [gender] as based in a state of nature" (p. 88). Bowker and Star (1999) write that

humans naturally classify the world to make sense of various stimuli and that we rely on social scripts (O'Brien, 1999) and dominant discourses to do so (Foucault, 1980). What is not natural is that most people take the arbitrary categories, such as gender, determined from biological difference, i.e. sex, as inherent and natural, and those assumptions act as discursive boundaries. Haraway (1991/2000), however, argues that digital discourse and the use of computers can help make discursive boundaries more permeable, giving the feminine more subjectivity as cyborg.

Bryson and de Castell (1998) write that “a species of metanarrative which informs and is informed by practitioner’s first-order accounts (also construed as stories) of the nature and proper function of computer technology in the classroom” [emphasis added] (p. 67) script the supposedly natural categorizations and subsequent actions of gendered computer usage. The gendered narratives shape and constrain the ways in which students and teachers can use educational technologies and how researchers can probe into the supposedly proper use of such technologies. The stock tales told about educational computing form an unquestioned folklore, which regulates and limits gendered activities. The assumptions of how males and females should use computers in schools guide activity so that these assumptions become self-fulfilling prophecies that are revealed in research. Most research fails to question such gendered narratives thereby giving scientific credence to gendered uses not as social constructs based upon norms and values, but as biologically determined and final ends. Bryson and de Castell refer to this form of unreflective research as preconstructing the human subject.

The technophile’s vision for the information-age frontier is based upon an uncritical, consistent, and even zealous belief in the inherent good of technology in education. Moreover, the faith is based upon the machine’s ability to allow for pure reason unencumbered by a body to fuel progress. The computer represents the catalyst for a quantum leap in scientific and

subsequently social and economic progress. The aim in education is to prepare students for effective participation in an information based economy and society—a neoliberal culture. This narrative relies on Utopian Enlightenment ideals of transcending earthly and embodied restrictions. What technophiles fail to note in their enthusiasm is that their ideal is a masculine one seeking to circumscribe the body, the feminine. The highly gendered frontier myth is one such narrative that inscribes gendered transactions with computers.

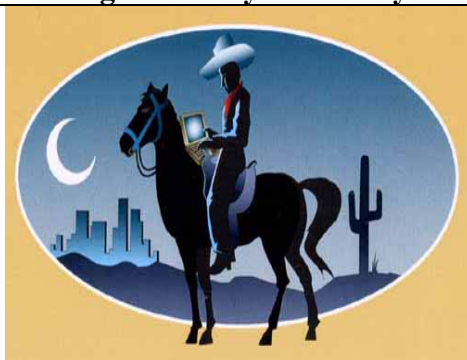
Accordingly, Nina Baym (1998) contends that American frontier narratives cast men and women in binary social roles. The frontier narrative functions as a metanarrative for cyberculture, so understanding the frontier narrative will aid deconstructing cyberculture narratives. Men represent rugged individualism and the free spiritedness of the frontier, whereas women signify a return to domesticity and civil order:

The myth narrates a confrontation of the American individual, the pure American self divorced from specific social circumstances, with the promise offered by the idea of America. This promise is the deeply romantic one that in this new land, untrammelled by history and social accident, a person will be able to achieve complete self-definition. Behind this promise is the assurance that individuals come before society, that they exist in some meaningful sense prior to, and apart from, societies in which they happen to find themselves. The myth also holds that, as something artificial and secondary to human nature, society exerts an unmitigatedly destructive presence on individuality. (p. 1546)

Laura Miller (1998) reflecting on the Net as a man's frontier remarks that "the idea that women merit special protection in an environment as incorporeal as the Net is intimately bound up with the idea that women's minds are weak, fragile, and unsuited to the rough and tumble of public discourse" (p. 105). Armed with codes instead of colts and riding an etherwave not a pinto, these

do-gooders are cleaning up the net and preparing America for its next grand undertaking (see Figure 5-1):

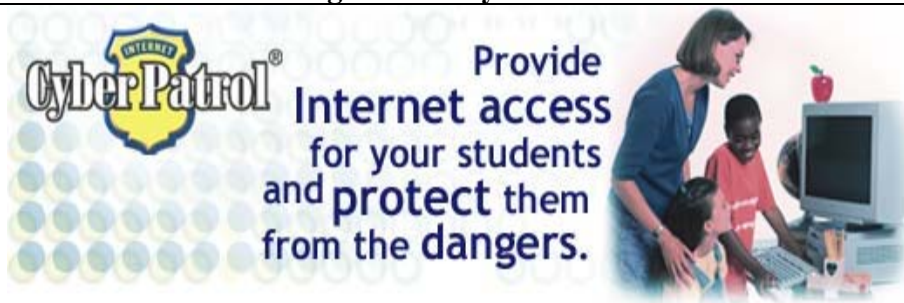
Figure 5-1 Cybercowboy



Source: (*Leadership & Technology: Keys to Transforming Education*, 2002) *Leadership & Technology: Keys to Transforming Education*. [Conference Brouchure]. Bloomington, IN: Association for Educational Communications and Technology.

The net-nanny or virtual schoolmarm protecting children from cyberrogues fulfills this binary myth. The period of rugged individualism of rogue hackers (the cyber equivalent to gunslingers) has given way a period of increasing domestication (Miller, 1998): “In the Western mythos, civilization is necessary because women and children are victimized in conditions of freedom. Introduce women and children into a frontier town and the law must follow because women and children must be protected” (p. 101). Figure 5-2 illustrates how the schoolmarm oversees the civilizing / moralizing of the cyberfrontier for the protection of youth:

Figure 5-2: Cybermarm



Source: (2002) *Technology & Learning* 22(6), 13.

In this advertisement, the teacher can practice her profession without fearing that students will encounter any (unspecified) dangers: “provide Internet access for your students and protect them from dangers.” The teacher’s nurturing attention coupled with Cyberpatrol’s protection (i.e. the cybermarshall) assures that the children will be safe sojourning about the virtual frontier town. Given the gendered binaries evoked by the dominant frontier narrative. In turn in the following section to how such binaries inform inculcated digital discrimination.

Digital discrimination: How computers are used to instill a sense of cultural inferiority

Because hyperpedagogy relies on digital technology, I believe that it is prudent to explore how computers are used and CMC typically take place in educational settings. Tamara Pearson (2002) notes that computers are used primarily in educational settings for drill and practice exercises, preparing students for standardized tests. This dilemma becomes worse for economically and ethnically marginalized groups as the likelihood for high-order thinking exercises, such as problem-solving and creative movie-making and narration, decrease in comparison to more affluent and socially dominant demographic schools’ computer practices. Pearson also notes that marginalized groups are much less likely to have home computers and home internet access than privileged groups. This aspect of the digital divide is telling because much of the active computer experimentation occurs in the home, according to research by Craig Peck, Larry Cuban, Heather Kirkpatrick (2002).

Carol Bohlin & Roy Bohlin (2002) concur that in Latino and Afro-American student populations, computers are used much more often for drill and practice applications than higher-order learning, such as simulations and applications, than in affluent, white populations. They found this leads Latino students, whom they interviewed, to discern that while computers are important in the digital age workplace, these students do not see learning computer technology as

important because they feel that they are unlikely to use such technology in their intended work: “Latino students believed that computer experience would be useful in obtaining a job but also believed that computers would not be personally useful to them in their careers” (p. 29).

Finally, Michael Mazyck (2002) writes that Integrated Learning Systems (ILS) have been instituted predominantly in schools within economically disadvantaged areas. What is significant is that ILS grew out of social efficiency’s wunderkind, the teaching machine. The logic underlying teaching machines purposes to replace haphazard teaching by substandard teachers for chronically underachieving school populations. The ideal for teaching machines is a perfected curriculum that substandard teachers cannot misappropriate as they become little more than technicians within the teaching process. However, after four decades of ILS integration into economically disadvantaged schools, no independent research can confer the rosy picture painted by ILS advocates and their research, conducted by the ILS providers. The result of this research in tandem then is to declare that computers used for traditional curricular designs do not improve education, particularly for those learners who have been historically marginalized by such positivist pedagogies. I believe that computers in themselves are not to blame, but how they are used.

Technophilia/homophobia

Networked classrooms offer instances of increased and freer dialogue than what normally transpires in face-to-face classroom settings alone. While this more loosely structured dialogue can encourage historically marginalized learners, such as homosexuals, to contribute their voices, other voices can seek to silence diverse voices. Alison Regan (1994) recounts her experiences with homophobia in a networked classroom she facilitated. She attempts to use computer

mediated communication (CMC) to raise difficult questions, not to white-wash her class as disembodied, deracialized, deculturalized, desexualized, degendered, and declassed intellects:

It is a mistake, however, to employ computer technology with the goal of making classrooms blind to color, class, gender, and nationality. Even if this were possible, it would not be desirable; a world where everyone can pass for white, middleclass, heterosexual, native English speaker would be no utopia: It would be neither a more intellectually simulating nor a more liberated place. (p. 118)

As Boler (1999a), Haraway (1991/2000), O'Brien (1997/1999), Sofia (1998), and Stone (1992/2000) have recognized, people do not escape their embodied existences online. The desire to do so is a means for closeting difference.

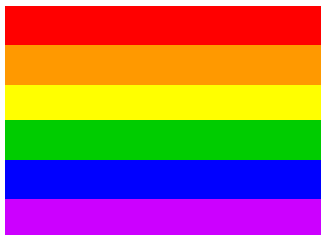
Alison Regan (1994) also recognizes that CMC disrupts traditional power boundaries and constructs, such as teacher to student and male to female typical communication patterns. She found that online space can give way to freer conversations, including students voicing normalizing discourse that often suppress gay and lesbian voices.

She relates an episode in class when a group of students "flamed" homosexuality. As Stone (1992/2000) and O'Brien (1997/1999) have also noted online gay bashing occurs with regular frequency. In Regan's instantiation a male student complained that a "homosexual once made a move on me. I really didn't like it. I mean I really, really didn't like it" (p. 121). A female peer responded that "one" (p. 122) had made a pass on her boyfriend and that this was worse than another girl doing so. The Daedalus interchange devolved to juvenile chest-thumping, many instances of "me, too" conformity so as not to appear to approve of homosexuality, and thinly veiled threats of violence against homosexuals in general. The teacher felt powerless to stop the interchange, and as a lesbian, felt exceptionally uncomfortable about intervening.

Young males feel a great deal of social pressure to conform to normed forms of violent, heterosexual masculinity (Katz, 1998). Cooper Thompson (2001) recalls how when confronting a group of class bullies he asked them to define a “fag,” which included wearing pink. When Thompson jokingly chided one of the bullies for wearing a pink shirt to illustrate how ironic and counterproductive calling a person a “fag” is, the boy responded earnestly that he was going to kill Thompson. Thompson was attempting to deconstruct the logical fallacies, yet the boy’s self-image of violent masculinity coerced him to lash out in anger. The normed definition, especially for adolescent boys, is so narrow and power-laden that the boy reacts violently so as to not lose face in front of his peers.

Heterosexism, according to Richard Friend (1993), is the myth that homosexuality is unnatural. Dr. Laura Schlessinger’s, physiologist and radio and TV talk show host, remarks, “If you’re gay or a lesbian, it’s a biological error” (<http://www.religioustolerance.org/homosexu.htm>). Such essentialist ideologies seek to construct homosexuality as unnatural, as if nature is a finite and fixed thing. Jerry Falwell, a well known Fundamentalist Christian teleminister, seeks to prove homosexuals are an abomination in the eyes of God: “[Homosexuals are] brute beasts . . . part of a vile and satanic system [that] will be utterly annihilated, and there will be a celebration in heaven” (ibid). Being unnatural and abominable, moreover, means that youth should not bear witness to it. In schools this leads to a systematic exclusion of references to homosexuals and homosexual rights in the curriculum. An absence of gay and lesbian literary figures, authors, positive social role models, and homosexual rights images, such as lambdas and rainbows (see Figures 5.3 & 5.4), all attribute to this conscious closeting, this null curriculum (Eisner, 1994). Friend argues that merely not bashing homosexuality in public, academic forums is not nearly enough to counter masculine, heterosexist violence. These exclusionary practices ostracize

homosexual students and teachers, often living in terror of being exposed, due to the harsh climate of closeting. As students live in fear of being labeled “fag” or “queer,” silence and complicity pervade homosexuality and schooling. Silence amounts to acceptance of and complicity with homophobic violence.

Figure 5.3: Rainbow	Figure 5.4: Lambda
	
Source: http://gayjourney.com/gay_flags_general.htm	Source: http://www.tolerance.konin.lm.pl/podstrony/pomocy1.html

As Sedgwick (1991) explains silencing / closeting is a speech-act of absence. If a thing can be closeted, hidden, taboo to speak of, especially in any positive sense such as the right of homosexuals to date in schools much less legally marry, then it ceases to exist in any normal sense. AIDS' popular connection to homosexuality, for instance, makes the disease much more heinous than other sexually transmitted diseases (STD's), such as gonorrhea, herpes, and syphilis. While all these STD's involve horrific suffering (physical, emotional, and social) for their victims, AIDS has a special status. One can readily watch advertisements on television for herpes treatment during primetime programming, but not AIDS treatments, reserved for the nightly news as more moral commentary than medical research news. Sedgwick claims that since 1987 the focus on AIDS and gay men has led to a form of moral scapegoating in which exposure of other victims is minimized or shown as the effects of immoral behavior by a bisexual husband / father on the wife and children, amounting to “an organized open season on gay men”

(p. 5). This open season has logically flowed into the classroom and been more broadly associated with homosexual behavior or male effeminacy of any kind.

Laurie Mandel and Charol Shakeshaft (2000) make a distinction between homophobia and heterosexism in which homophobia recognizes if reviles homosexuality. Heterosexism, however, discriminates against homosexuality by failing to recognize it, to name it. Homosexuality is defined as an absence, a lacking in appropriate sexual morality much like femininity is defined as an absence of a phallus (Plant, 1996/2000). The irony is that abstinence, an honest absence of sexual activity, is a morally acceptable sexual choice preferable to the unnamable, constructed as an absence. Heterosexuality is a display of power and privilege. The ultimate power in the metaphysics of presence is to deny an immoral activity any existence. Thereby to call someone a “fag” or “lesbo” is to annihilate that person’s choice, as if heterosexuality is not a choice, by rather “nature taking its course.” The effect is to silence any activity labeled “gay.”

Similar to heterosexual and homophobic attitudes and actions encountered by Katz (1998 & 1999), Regan (1994), and Thompson (1993), Wayne Martino (2001) has had to deal with angry heterosexism in his teaching. Seeking to engage his Australian students in critical literacy, Martino first had to overcome boys’ hesitancy about literature, typically deemed an effeminate discipline. To overcome this stereotype, he first introduced a short-story, “The gun,” about a father-son relationship and the sharing of a hunting experience, to which the boys responded favorably in their journals. After gaining the boys’ interest he switched topics and media by having the students critically engage a rap song, “The language of violence,” by the Disposable Heroes. The song related how an effeminate boy was beaten to death by homophobic bullies. Martino asked the following questions to further engage his students:

- develop an understanding of the links between masculine power and the practice of bullying;
- learn to identify and empathize with the experiences of injustice that are perpetrated through homophobic harassment;
- explore effectively the role that homophobia plays in the construction of dominant models of masculinity; and
- reflect on how they construct their own masculinity (p. 179)

These consciousness-raising questions yielded positive responses from many of the boys that bullying was cowardly and disgraceful. Some even admitted to having been bullied and discussed their traumatization. Few, however, responded to the underlying homophobia in a positive manner. Two outspoken students even endorsed the bullying and consequently denounced the class as too effeminate and accordingly worthless in their academic and social development:

[First boy] All I know is that the song was about a bunch of gay faggots and people getting the shit bashed out of them. I think this is a pointless exercise and I'm not doing any more. No I don't think so (that the song relates to [the] way people are treated at school) because we don't welcome gays in this school . . . [Second boy] P.S. I think this is the biggest load of crap I've ever had to do in English it just shows how crap this school is. HOMMIES suck crap. No it doesn't relate to people in this school except to people who are gay like Ryan [a classmate who wrote about being victimized by bullies] or to home boys we all hate [sic] (p. 182).

These two boys attempt to annihilate any expression of support for homosexuals; in fact, they endorsed a very radical form of closeting homosexuality—exterminating a person suspected of

homosexuality. These myopic boys embody what Mandel and Shakeshaft (2000) identify as heterosexism by endorsing such virulent forms of closeting. They do not merely seek to censure the particular song, but Martino's course and pedagogy along with the discipline of critical literacy.

Chapter summary

In this chapter, I have illustrated how classical metaphysical binaries affect educational assumptions and practices. Hyperpedagogy, being premised on poststructuralist philosophy as opposed to classic metaphysics, seeks to disrupt binary logic because such rationality tends to privilege some at the expense of the marginalized other. Hyperpedagogy is a disrupter not a panacea to such dualistic assumptions that inform the binaries of mind / body, man / woman, white / colored, heterosexual / homosexual, and online / proximal.

The three most important concepts that found such belief systems are binaries, blaming the victim, and closeting the other. The first presumes that those traditionally privileged are naturally superior to their supposed opposite, so men are superior to women being naturally more logical and physically larger. The second premises that the marginalized are to blame for their inferiority and when they ask for social equity are demanding unfair entitlements as a form of reverse discrimination. And the last seeks to utterly disregard the existence of issues that need to be addressed so that discourse on homophobia in the curriculum is not allowed.

In the following chapter, I describe how I have sought and seek to use hyperpedagogy as a disrupter of the aforementioned binaries, thereby creating a praxis for the theoretical issues I have addressed in this chapter. I have sought to use hyperpedagogy as a process to discredit essentialist binaries, to illustrate how the useful myths inculcated in blaming the victim are

shown to be nonsense under scrutiny, and that addressing masculine violence as a serious issue in education is very real and very important.

Chapter 6: Hyperpedagogy as praxis

In the preceding chapter I detailed how logical binaries inform structural privileging and marginalization. As Dewey (1916/1944) points out in Democracy and education, structural, institutionalized social norms are passed from one generation to the next if a culture is to survive:

Society exists through a process of transmission quite as much as biological life. This transmission occurs by means of communication of habits of doing, thinking, and feeling from the older to the younger. Without this communication of ideals, hopes, expectations, standards, opinions, from those members of society who are passing out of the group life to those who are coming into it, social life could not survive. (p. 3)

Yet such deeply ingrained social assumptions can be challenged so that a society does not remain static and become accordingly stagnant. Dewey claims that the ethos of an educational system in a democracy is adaptation and social evolution: “The democratic ideal [in education is]. . . continuous readjustment through meeting the new situations produced by varied intercourse” (pp. 86-87). As such, discriminatory social norms can and should be questioned in a democracy. Using what Boler (1999a) calls a “pedagogy of discomfort” and Freire (1970/2000) similarly identifies as conscientização, I seek to incorporate a democratic, adaptive, consciousness-raising element to hyperpedagogy as a praxis.

I intend to explain how hyperpedagogy as a praxis offers for e-learning a way to actualize Megan Boler’s (1999a) invocation of a pedagogy of discomfort. One aspect of critical consciousness-raising in education, a basic premise for pedagogies of discomfort, is attending to the concerns of historically marginalized learners. To further develop this idea, I look to Paulo Freire’s (1970/2000) Pedagogy of the oppressed. In attending to oppressed voices, however, one should make sure not to instill a new metanarratives, establishing a heroic author, and stifle

further investigation into oppressive practices. Hence, I return to Boler and look also to bell hooks (1994) to further develop non-oppressive educational acts by attending to feminist concerns with Freire and his status as heroic author.

In chapter 5 I detailed how logical binaries inform structural privileging and marginalization. As Dewey (1916/1944) points out in Democracy and education, structural social norms are passed down from one generation to the next if a culture is to survive: “[students are] initiated into the interests, purposes, information, skill, and practices of mature members: otherwise the group will cease its characteristic life” (p. 3). Yet the learning youth can challenge such deeply ingrained social assumptions in a democratic educational environment so that a society does not become stagnant culture replete with static, discriminatory social norms, such as misogyny and racism. As such, using what Boler (1999a) as a pedagogy of discomfort may possibly open the door for preservice teachers to have empathy for the cultural others awaiting them in their future classrooms.

In making a case for using progressive educational methods for e-learning, I illustrate how I have used hyperpedagogy CMC as a disruptive tool. Wendy Morgan (1997/2000) writes that hypertext poetics has the potential for transgressing gender boundaries by its reliance on rhizomatic growth, non-linearity, and reader / writer performance. The discursive boundary Morgan concentrates for transgression is gender, a boundary that relies on a digitization of Cartesian binaries. Digital Cartesian tropes lead some to insist that online discourse transcends race, gender, and sexuality and thereby enables people to converse more freely than in face-to-face situations (Graddol & Swann, 1989; Rhinegold, 1993). However, this seemingly civil libertarian discursive mode assumes that communicants can equally engage in a supposedly unstructured, cultural norms free cyberspace. Susan Herring (1994; 2000; 2001) points out,

however, that CMC free-for-alls tend to favor aggressive discursive strategies and that such strategies are identified most often with masculine discursive norms. As a result, supposedly unrestricted cyberspaces favor aggressive, masculine rhetorical modes and marginalize conciliatory, feminine voices. To ensure feminine participation, ironically, limitations (i.e. rules for conduct) on discursive practices should be put in place. Taking Herring's findings further, I claim that other traditionally marginalized voices (as defined by race and sexuality) continue to be dismissed or even regarded as a threat (i.e. censorship) to the supposedly inherent liberties of the Internet.

Being that embodiment, habituated actions, and performativity undermine claims for anonymity, I discuss in detail how embodiment plays out on and affects dialogue in Cyberspaces, particularly those spaces dedicated to e-learning. In order to have students reflect on gendered discursive norms being performed, I surveyed them on this topic. I use their responses to illustrate how gendered enactments affect face-to-face and computer mediated communication and how strategic uses of both can lead to critical inquiry about issues of gender, cyberspace, and embodiment.

Dismantling the master's house

To begin discussion in this chapter I refer to Morgan's (1997/2000) experimental hypertext Troubling the angels and her subsequent written reflections on her cyberspace practices. Being that Morgan relies on many poststructuralist theorists and hypertext enthusiasts I cited in chapters 1 & 2 – Barthes (1970/1974), Deleuze & Guattari (1987), Derrida (1976; 1981), and Landow (1992, 1994, 1997) – and links these ideas to hypertext as an enactment of postfeminism, relying on Judith Butler (1990), Donna Haraway (1989, 1991/2001), and Zoë Sofia (1993), I find her "Electronic tools for dismantling the master's house: Poststructuralist

feminist research and hypertext poetics” to be particularly apt place to broach issues of how hypertext and progressive educational agendas can be juxtaposed. Morgan claims that as hypertext poetics acts as a disruptive discursive performance as opposed to a hierarchical product of author to reader, hypertext poetics can help postfeminists transgress gender boundaries. The salient properties of hypertext – non-linearity, rhizomatic growth, and indeterminacy of authorial voice / central text – can aid efforts to blur socialized gender boundaries. She concentrates on four particular intersections of hypertext poetics and postfeminism: (1) nomadic thinking, (2) intertextual and intratextual juxtapositions in a multigeneric collage, (3) the unfixing of textual hierarchies in rhizomatic texts, and (4) nonsequential polylogic (p. 132).

In the first case, nomadic thinking is what Morgan refers to as associative thinking, or a logic of intuition and metaphor. This logic of and / and / and disrupts classic, masculine oriented dichotomous logic of either / or. Morgan is not making a case that intuition is biologically female and that analytical dichotomous logic is naturally male, but that such categories are socialized. Such socialization needs to be disrupted and the discontinuous, non-exclusionary logic of both / and that hypertext poetics affords opportunities to disrupt socialized gender normative performances. The second case is intertextual, intratextual juxtapositions in which the idea of self-contained, authoritative texts is brought into questions by collages of related and complimentary texts (see Figure 6-1):

Figure 6-1: Hypertext Collage

Victorianism	Religion & Philosophy	Victorian Authors
	The Victorians REL. IN ENGLAND OUV -- The Religion in England Overview -- Methodism Methodism David Cody, Assistant Professor of English, Union College Methodism Wesley and by Ge against the apathy characterized the The term was ori established at Oxf Wesley brothers pious young men observed strict ru applied to a varie original inspirati certain subjects w accepted many tre tended toward Ar doctrine of predes through the inter loved him and he forgiven. Conser mid-eighteenth c revelation and re enthusiasm woul evangelicalism. John Wesley was a man of con his lifetime he tre million miles, an the open air, befo Bible • Biblical Typology • Moses Striking th • Pisgah Sight • Bishop Colenso and Denominations • Arminianism • Church of England • Evangelical Angl • Evangelical Doc • High Church (Tr • Keble • Pusey • Broad Church • Roman Catholicism • Old Catholics • New Converts Dissenters	• Matthew Arnold • Charlotte Brontë • Elizabeth Barrett Browning • Robert Browning • Thomas Carlyle • Lewis Carroll • Charles Dickens • Elizabeth Gaskell • Manley Hopkins • Kipling • Macdonald • Meredith • Morris
Literature —Timeline —Authors —Concept of Lit —Literary Techn		Evangelical Doctrine The Doctrines of Evangelical Protestantism George P. Landow, Professor of English and Art History, Brown University The Evangelical party of the Church of England (the established church) flourished from 1 aspects of English responsible for m of the seventeent 1. that huma emphasis upon p 2. that (in sh hierarchy and chu conversion based innate depravity e essentially Roman and emotion, and experience of the had upon fiction? 3. that conve others—thus Eva movements, and 4. that the co the holiness of th see 1 above)—thu and rather ann
The Arts		Catholic Emancipation Catholic Emancipation Anthony S. Wohl, Professor of History, Vassar College In 1829, partly in response to widespread agitation throughout Ireland led by Daniel O'Connell's Catholic Association and the possibility of revolution in Ireland, the Catholic Emancipation Act, enabling Catholics to sit in the British Parliament at Westminster, was passed (symbolically, for many, on a Friday 13th!) Even though the Emancipation Act was hedged with qualifications (for example, no Catholic could be Regent, Lord Chancellor, Lord Chancellor of Ireland, or Lord Lieutenant of Ireland, no Catholic mayor could wear his civic robes at public worship, and every county now had to enumerate all new religious establishments: most important, the Irish county freehold franchise for parliamentary elections was raised from 40 shillings to £10), the Act marked a tremendous defeat for the Ultras, that is the stout defenders of the Protestant establishment. Among the opponents were some of the leading literary figures of the day, including Southey, Coleridge, and Wordsworth. To supporters of

Source: Fisher, C. (2001). *FACS 4930 6.0 Cultural Theory through Interactive Multimedia*. Retrieved July 17, 2003, from http://www.yorku.ca/caitlin/4930/seminar_schedule.htm

As one can see in Figure 6-1, no central text dominates this hypertextual collage. The textual boundaries blur, with the primary text being that of most interest to the reader. As I have pointed out earlier (Chapter 1: Pluralistic properties in hypertext), a reader can be reading a primary text, such as Charles Dickens' (1966) *Hard times*, with supplementary texts, such as a dictionary, an article on Victorian schooling, Victorian social mores, etc..., surrounding her on a kitchen table, yet hypertext makes such collages easier to achieve in that hypertext is built around the very concept of textual collage. A reader's virtual desktop is full of various texts and the reader can choose from these, choose new texts from networked archives, and perhaps even add her own

voice by creating a document to share with other readers. All this taken together disrupts the canonical position of the masculinized author.

Morgan's third point is that hypertext poetics disrupts textual hierarchies that traditionally place the masculine author's text foremost and surround that central text with canonical scholars who translate the text for the reader, particularly in the case of New Criticism. In hypertext poetics finding a primary axis of orientation, having a primary text, and scholars who tell the reader how to read a text are difficult at best. Hence, traditional ways of reading that favor male authors, male scholars, and masculine norms for reading are put into question through a differing praxis.

At this point I turn to Barbara Herrnstein Smith's (1983/1998) exploration of the ideal of a masculine, heroic, and canonical author to shed some light on how this concept lionizes masculine virtues as objective, impartial human truths. In "Contingencies of Value" Smith explores the ideal of canonical author and its sociological ramifications. She claims that literary evaluation has neglected the value of literature in terms of sociology and economics concentrating instead on like-minded disciplines such as philosophy and linguistics (p. 1552). The traditional scholar values,

[P]ositivistic philological scholarship and humanistic pedagogy. That is, while professors of literature have sought to claim for their activities the rigor, objectivity, cognitive substantiality, and progress associated with science and empirical disciplines, they have also attempted to remain faithful to the essentially conservative and didactic mission of the humanistic studies: to honor and preserve the culture's traditionally esteemed objects – in this case, its canonized texts – and to illuminate and transmit the traditional cultural values presumably embodied in them. (p. 1553)

Smith contends that supposedly aesthetic truths are, in actuality, masculine values promoted as universals that honor and conserve masculine cultural values through the canonization of preferred, not objectively and scientifically verified, authors. She adds that scholars promoting the idea of a canon of authorial texts are endorsing moral values, i.e. that the teaching of literature is embedded with moral imperatives and that the distinguishing line between good and bad literature is whether it falls into the category of moral or decadent. The dividing line is dictated, moreover, by masculine virtues of individualism, strength, ruggedness, decisiveness, and a willingness to take charge of a situation.

Unlike traditional critics, Smith believes that literary study “is not merely an aspect of formal academics but a complex set of social and cultural activities central to the very nature of literature has been obscured, and an entire domain that is properly the object of theoretical, historical, and empirical exploration has been lost to serious enquiry” (p. 1556). She continues by cataloging the particular faults she sees in traditional scholarships presuppositions:

Beguiled by the humanist’s fantasy of transcendence, endurance, and universality, it has been unable to acknowledge the most fundamental character of literary value, which is its mutability and diversity. And, at the same time, magnetized by the goals and ideology of a naïve scientism, distracted by the arid concerns of philosophic axiology, obsessed by a misplaced quest for ‘objectivity,’ and confined in its very conception of literary studies by narrow intellectual standards and professional allegiances of the literary academy, it has foreclosed from its own domain the possibility of investigating the dynamics of that mutability and understanding of that diversity. (p. 1559)

Smith argues that traditional scholars’ self-proclaimed ideological impartiality, often cloaking marginalizing dualities, is a ruse for their own agenda of promoting cultural ideologies, that

quests for objectivity are a paradoxical chase for what does not exist. What traditional critics do not recognize, according to Smith, is that “all value is radically contingent, being neither an (A. D. Bloom, 1987; L. Cheney, 2001; Hirsch, 1988, 1999; Ravitch, 1981/1997, 2000, 2001, 2003) inherent property of objects nor an arbitrary projection of subjects but, rather, the product of the dynamics of economics” (p. 1560). By protecting certain aspects of life and culture in literature from economic and sociopolitical evaluation, the traditionalist – idealist, humanist, genteel – has mystified the nature of literature and those values the traditionalists see inherent in them (p. 1562). Morgan’s polylogic disrupts the heroic, transcendent author / authority.

Returning to Morgan, hypertext poetics relies on what she terms, “polylogic” (p. 139). Various, disrupted lines of argumentation, voice, and agency come together and break apart in hypertext poetics, relying less on a linear text and subsequent linear logic than a logic dictated by readers’ interests and goals within multiple texts. Such logic is more intuitive than traditional, masculinized logical modes. Networked logic relies on heteroglossia (Bakhtin, 1981) in which, “we engage in the processes of argumentation instead of merely following others” (p. 140). A shift occurs in polylogic from static, linear logic – a masculine discursive norm – to involving oneself as reader is a dynamic process of co- and reconstructing multi-pathed logic from competing textual fragments and a reader’s inclinations. The reader, as opposed to being a dutiful recipient of someone else’s authorial logic, becomes her own agent within a broadly encompassing social logic. More active learning agents become enmeshed in critical analysis of the world in which they live and create. Such critical analysis of the world we inherit, replete with marginalizing binaries, can prove very uncomfortable for learners being that such questions urge them to reflect on deeply held and embodied values.

Hyperpedagogy as a pedagogy of discomfort

As chapter four's constitutional convention illustrates, hyperpedagogy can be uncomfortable; it can be emotionally and intellectually challenging. When one couples this anxiety inherent in active learning to the agency that hypertext poetics allows for, then hyperpedagogy becomes a dynamic praxis. It also acts as a tool for disrupting the hegemonic norms that often face students as the Truth until explicitly questioned. These aspects of emotion, challenge, and disruption are not a bane to education, as some might hold such a loss of conventional, masculine authority. On the contrary, this is a benefit. In the case of the constitutional convention, learners questioned authority in a productive manner so that we created a better learning space than had I simply attempted to assert my authority as the teacher. I engaged the students in dialogue to understand what issues they had, so we could address issues to improve the pedagogical climate. We challenged one another, and consequently, the climate had appreciably improved from one that was largely adversarial to one that was primarily cooperative. The students initiated dialogue and improved our learning space. With the growth in mutual respect and the recognition that experimentation is not an educational buzzword but an active praxis, raising difficult questions, controversy, has improved my teaching skills.

By better, I mean that a space has been broached for what Boler (1999a) refers to as a pedagogy of discomfort. In this section I will explain how Boler's call for critical inquiry can function in an online learning space. One of the most important points I draw from Boler's work is her contention that education is never a neutral activity (pp. 183-4). She calls on educators to both recognize and question institutionalized biases, including homophobia, misogyny, racism, and classism. These discriminations and oppressions are so prevalent that most educators and students hardly realize their complicity in oppression. Moreover, the everyday cultural constructs

that make oppression possible seem normal if not acceptable or even natural. Omissions, blind-spots, silences are not neutral but rather spur on yet more oppression. Her call to action is to confront this closeting of oppression by challenging norms in class.

In challenging the threat of conformism, Boler warns us that we face “treacherous ghosts of the other’s fears and terrors, which in turn evoke one’s own demons” (p. 175). When educators endeavor to challenge the status quo, the accepted cultural norms of which most of us are unconsciously complicit, we risk confronting fear, anger, and even apathy from our students; we also must confront our own fears of loss of authority, of alienating students, and of making ourselves vulnerable. The challenge is to invite the other to learn to see differently (Boler, 1999a), to identify omissions, blind-spots, silences, and their complicity in oppressive practices. This invitation, not coercion, to critical inquiry is fraught with dilemmas as we challenge cherished beliefs, Truths, values, and social tropes, such as America as the land of opportunity, the ultimate good of capitalism, and the role of the rugged, self-sufficient individual.

By inviting students to see differently, we invite them to be witnesses, not spectators as Boler (1999a) argues. We ask them to see their role in oppression and to do something to change their complicity. Educators should nudge students out of complacency to witness educational histories and practices not as something remote to be read about or memorized but as something to be experienced and potentially altered. We have to explain that spectating is a privileged position that denies culpability and raises emotional barriers, whereas witnessing accepts responsibility and allows oneself to be uncomfortable. The invitation is to take an emotional and ethical journey into discomfort.

Boler (1999a) identifies a root cause of information age solipsism as selective (in)attention. We choose what we consider and what we do not; the mass media and other

institutionalized forms of communication do their part to color where we can and cannot look (Alterman, 2003b; Noam Chomsky, 2002; McChesney, 2000). We form emotional calluses to the plights of others, “There by the grace of god goes I” mentality. We have adopted safe habits of negligence. We have an ethical obligation as teachers to highlight that the struggle for civil rights has by no means been achieved. We can ask students to acknowledge and investigate what Jonathan Kozol (1992) calls “savage inequalities,” second generation segregation, race and gender income inequities, California’s Proposition 227, and the denial of legalizing homosexual marriage, the subsequent denial spousal benefits, and the social stigma attached to children of homosexual couples.

By raising these questions students may lapse into unproductive guilt and even open hostility. This is not what a pedagogy of discomfort seeks to achieve. Boler (1999a) urges contentious educators to avoid the binary of guilt and innocence when challenging conformism. When students become overwhelmed by grief or anger, productive dialogue ceases. We need to avoid what Aristotle describes as moral anger or indignation, slights of character:

The distinctions between emotions, and between shades or types of one emotion such as anger, are not located simply in the feel but rather in the social values, cultural rules, linguistic framing, self-reflective introspection, and an emotion’s relation to perception and belief (p. 188).

As Boler points out in this quotation, we need to explain carefully to students to acknowledge that the problem is complex not a personal slight upon an immoral character. We need, therefore, to explore the depth of issues as cultural expectations, rhetoric, reflexivity, and perceptions and how these influences affect the emotional (in)attention we pay to social issues in education.

At Millersville University this transition from privileged spectator to empathetic witness often occurs for students during their urban school field experience. Preservice teachers during their sophomore block are required to spend six weeks in an urban school – typically in postindustrial York or Lancaster – witnessing firsthand how cultural stereotypes about race, class, and English as a Second Language (ESL) affect educational environments. For example, a student writes,

After completing my field experience and seeing first hand the effects high stakes (i.e. standardized testing) testing has on teachers, students, and the entire school, I can honestly say that I think the state really hinders the education of its students by implementing such testing measures. Not only does the testing create strain on the staff of the school and the students, but it has lasting impacts on the education and curriculum choice in our school system. In order to generate good solid scores on these tests teachers, more often than not end up teaching “to the test” and in the midst of all that there is a loss of creativity, of innovation, of hands on learning, of in-depth discussion, and of the types of lessons that turn slacking students into motivated scholars. By eliminating innovative math projects, science experiments, English debates and discussions, and field trips, for example, teachers are actually hindering the learning of their students. By teaching to the test, teachers are forced to keep a strict handle on what they teach and how and what usually ends up being taught is boring lessons which simply teach students to take the high stakes tests and score well. This is obviously boring and uninteresting to the students. By using creative lessons, teachers would be turning their students into motivated lifelong learners; however, because of standardized testing, many

teachers find themselves confined to what they can and cannot teach. As a result, I think, the lifelong learning of students is ruined.

It is through this direct experience that this student identifies with class texts exploring the “testing craze” as Susan Ohanian (2002) refers to the current move towards a curriculum centered pedagogy. Suzanne recognizes that not only are teachers limited in what they can do in terms of implementing innovative learning processes my students learn in my class and other complimentary courses, such as Educational Psychology, but that the standardized, high-stakes educational regimens adversely affect students’ life-long learning trajectories. Here we see empathy for the other at work that had in most students’ cases prior to their field experience been sympathy for the teachers and students’ plights. The move is one from an abstract and theoretical concern for teachers (to a greater extent) and students (to a lesser extent) to a lived, embodied, emotion yearning to see this testing program scrapped for the benefit of the students.

Confronting how the War on Terrorism has affected educational issues is another topic likely to raise many student’s moral indignation, yet also be an opportunity for empathy for the other.

One of the greatest challenges in Social Foundations classes is to effectively invite students to acknowledge and empathize with the other. How, after 9/11, do we address acceptance of the other, is a difficult question. Social justice progressives, Michalinos Zembylas and Megan Boler (2002) challenge educators on this topic:

The patriotism invoked during the aftermath of 9/11 represents not simply an understandable reaction of grief and loss but, arguably, the ethically questionable political manipulation of public sentiment. In the name of patriotism, these public emotions of grief and anger have been used by ideological forces such as mass media to support a radical legislative redefinition of civil liberties, military and foreign policies

justified by careful definitions of who counts as a terrorist, and new justifications for racism. (<http://www.tcrecord.org>)

In an era when Secretary of Education Paige can glibly write that standards-based education and high-stakes testing is necessary for homeland security and glibly claim that teachers' unions (the NEA in particular) are terrorist organizations as a means to silence them (Goldstsein, 2004), we need to be asking the tough and unpopular questions Zembylas and Boler raise. While Zembylas and Boler build a convincing and compelling argument for increased vigilance against jingoism and the establishment of a police state, Paige does not bother to make a logical case for his assumptive assertion. Moreover, we should keep in mind Noam Chomsky's (2000) revelation that if one speaks for the doctrinal system, he or she can dismiss inconvenient facts by labeling them lies and be protected and even rewarded for propagating half-truths, self-serving simplifications of complex problems, and outright lies:

[I]f you are following the party line you don't have to document anything; you can say what you feel like That's one of the privileges you get for obedience. On the other hand, if you're critical of received opinion, you have to document every phrase (p. 173)

Such is the challenge to raise consciousness about commonplaces. Couple this intellectual challenge with the physical threats of violence that permeate American society since 9/11 – not that such threats are a novelty, but simply exacerbated by events and political exploitation – and the gambit becomes even more dangerous for ethical educators. The question is how do ethical educators – those educators concerned with social justice pedagogies – effectively address such questions.

I use my online forum to broach problematic, emotional questions regarding gender, race, and sexuality. In this section, I concentrate on how classes have responded to multiculturalism

and bilingual education. My classes' sizes are too large (ca. 30 students) to establish meaningful face-to-face dialogue with everyone, so I rely on online forums to broach difficult questions and allow room for a variety of answers and peer-to-peer and teacher-to-student transactions. Before I illustrate how my online forum stands forth as an example of embodied education in cyberspace, I am going to examine Hubert Dreyfus's (2001) critique of e-learning.

Dreyfus (2001) argues that online education is inherently inferior to face-to-face education due to tropes of disembodiment dominating much of e-learning hype, which it certainly is. Dreyfus believes, as do I, that meaningful education needs to be embodied, by which he means that emotion is central to learning as is our finitude and vulnerabilities. He is correct to be wary of John Perry Barlow's (1996) "Declaration for the Independence of Cyberspace: "a world that is both everywhere and nowhere." I also agree with Dreyfus that the Platonic desire to leave behind the body—the tomb (soma) of the soul (sema) as Plato relates in Gorgias—is troublesome (p. 5). Yet he and I differ in one very important aspect: he sees disembodiment as the very essence of the Internet whereas I see it as the dominant discourse about the Net. Dreyfus is a proponent of Phenomenology (Peters, 2003), particularly Martin Heidegger (1977) and Edmund Husserl (1931/1967), and as such he believes in essences—that every phenomena has an essential value and existence (eidōs). I part ways with this belief in essences as a poststructuralist because a fixed essence, once discovered, cannot change. Following Derrida (1966/1988), I believe that an essence (or structural center as a point of reference) exists, but an essence changes over time and that flexibility allows for different uses.

Dreyfus' (2001) hesitancy over the hype of disembodiment should not be enough to cast away on-line learning potentials. I agree, instead, with Dale Spender (1996/1998), that people perform embodied habits online as they do proximally. She notes that at the turn of the twentieth

century, people feared that the telephone, then a radically disembodied technology, would result in immoral gender confusion. Yet, people today rarely worry about identifying the gender of the person to whom they are speaking, so few of us worry about phones and “gender-bending.” Spender has conducted research that embodied, gendered communication habits are enacted proximally and digitally. If online interactions are embodied – by which I mean we are vulnerable, act out socialized habits, and react emotionally – then educators need to find imaginative ways to spark meaningful dialogue while resisting technocratic rhetoric and assumptions that the Internet sets people free from their hindering bodies and marginalizing social status. I offer, then, a way in which embodied dialogue has flourished in an online environment.

The online environment I have nurtured allows for embodied, emotional dialogue; dialogue that broaches emotional issues without becoming counterproductive to my goal of transformative dialogue. Counterproductive dialogue would be a case in which a student reacts with Aristotelian moral outrage or is coerced into silence. Overall, most students do engage in the online dialogue without resorting to disparaging their peers, reacting in defensive anger, or simply refusing to contribute. In order to assess whether or not students agree that an online forum allows them to broach controversial questions more easily than in class, I asked the following question on a survey conducted after a class was complete: “Do you feel more comfortable addressing controversial topics in the online forum that you were uncomfortable talking about in class?” Cecily responded that she felt more comfortable, yet the lack of anonymity meant that her peers knew who was posting: “I felt more comfortable on the forum because I wasn’t worrying about what others reactions were going to be, but everyone knew my name anyways so their opinion of me was going to come no matter how I spoke out.” Julia

remarked that the time allowed by asynchronous communication gave her an opportunity to ponder about unfamiliar issues before blurting out her first reaction:

I did feel more comfortable addressing controversial topics in the online forum than in class. I feel like I need a greater amount of time to think critically about issues before I speak about them, as opposed to just throwing my opinion out there. A lot of things we talked about were things I had never thought about before so it would have been difficult for me to immediately respond to class discussions with an opinion I felt confident in.

Hence, one of the key positive factors for online forum usage is allotting time for well reasoned responses. I do not mean to suggest that online communication allows for a super-rational, unemotional form of dialogue, but that asynchronous communication does not rush responses.

Another female student noted that the online forum allowed her to communicate more comfortably than in class:

For me I found it much easier to say things online because I am hesitant to speak up in class in fear of getting shot down. This is a personal issue, but I was more likely to express the feelings I have online than in class. I would often be nervous about checking to see if I got responses, but most times I did not have any and when I did they were considerate and good points that I may have missed [emphasis added].

Three points are very important here: first, she fears being ridiculed for her opinions in face-to-face dialogue, which points to a recurrent theme in Spender's (1996/1998) research is that females have been socialized to be anxious to speak out in public, mixed gender spaces; second, she feels that her peers are considerate to her responses, which is a byproduct of my establishing rules of conduct (Netiquette) and education being a traditionally feminine profession; third, she portrays her conventionally embodied feminine habits as a personal deficiency, which is a fairly

typical instance of internalized gender discrimination—an example of the victim blaming herself for enacting social expectations of feminine demureness.

Yet another female student – this one older than her peers by about ten years, a devote fundamentalist Christian, and a local person – wrote that without the online forum ,she would not have been comfortable communicating in class as she felt her ideas were unpopular with her peers:

Absolutely. There were some forum topics that would have been very uncomfortable for me to speak about in class. And there were many in-class topics that I had strong convictions about that I never even addressed for fear of offending someone else with my beliefs. So without the forums, I would have spoken / written much less about the subjects and therefore thought about them much less also.

Jean had begun the semester as a very thoughtful, but quiet student. I could tell that comments made by her peers often upset her. Online, however, Jean addressed issues with conviction and maturity. While she often disagreed with her peers and me, she always did so in a polite manner. I often replied to her postings with thought provoking, yet respectful comments. I attempted to be very complimentary of how much she researched and how thoughtfully she presented her ideas. While we did not agree, we could converse online productively. In the third week of the semester, Jean started to address issues in class and her peers responded respectfully. After a class in the following week, Jean approached me to confess that she originally had dreaded the class fearing that her opinions would ostracize her and her peers would act coolly towards her during group work, including in-class analysis of various cultural texts and out-of-class group research projects, but being that her peers and I had treated her well, she felt she could contribute in-class to her peer group work and could address the class as a whole. We talked at length about

how she was able to build confidence in herself and her peers before voicing her ideas to the class as a whole through the online forum. I could not have been more overjoyed because the forum offered a reluctant student the time to acclimate herself. I should add here that the online forum far from being a disembodied space proved to be one in which people could take time to become comfortable enough to address the class as a whole and comfortable enough to challenge my assertions in class. If embodiment can be defined by making oneself vulnerable, as Dreyfus (2001) asserts, then the online forum has served this purpose well.

When I look at male responses to the question of comfort online, however, their utterances tell a different story. Rudolph wrote that he preferred small group discussion:

I would have rather talked to people face-to-face. But it is very hard to do that with too many people. Maybe instead of having those kinds of responses for the forum discussion, ask smaller groups (5 or 6 people) to have discussions the last hour of a class session or something.

Oddly, we had many such small group discussions in class, yet the point here is that typical of masculine discursive norms, Rudolph believes important issues need to be expressed and defended in a public setting. Luke, who often attempted to dominate in-class dialogue wrote succinctly, “It doesn’t really matter to me because I’m used to arguing in front of people on most any topic. I don’t really get intimidated when someone disagrees with me.” I note that he takes a conventionally masculine position of not fearing public debate as a personal virtue, playing on the masculine trope of the free individual as being gender neutral. Another male student had this to say: “emotions can get in the way of healthy discussion.” Matthew is repeating an idea dear to the heart of Plato and Descartes: emotion (typically classified as feminine) hinders rational (typically classified as masculine) dialogue.

In sum, the young men on average did not believe one space or the other affected dialogue, whereas most every female student did feel that the online forum gave them the time and space to post emotionally charged messages they felt too uncomfortable to broach publicly. I believe that the men and women are acting out their embodied, socialized habits and that for female students, it is easier for them to recognize a double-standard most of the young men took for granted—that face-to-face (public) communication can be very emotionally charged. Emotion, embodiment, and transaction all occurred, I would argue, in these online interchanges. So when Dreyfus writes that online learning is an inadequate medium by its very nature, I am wary and I believe that I have the evidence to back my claim. Moreover, challenging the concept of disembodiment for young women is an aspect of pedagogies of discomfort to which I now return.

Hyperpedagogy and Freire's social justice pedagogies

Closely related to Boler's (1999a) pedagogy of discomfort is Freire's (1970/2000) conscientização that seeks to challenge oppression through consciousness raising dialogue. In Pedagogy of the oppressed, Paulo Freire writes that the process of educational liberation involves conscientização, the recognition of oppression and taking action against it. This is a process first involving critical inquiry that is an unveiling of the world. Hyperpedagogy is largely based upon a pedagogy of consciousness raising. Boler (1999a) reiterates that recognition of the "rarely named" (p. xiv) thing (in this case the role of emotion in education) and taking action can help transform the world and undermine the oppressive power of hegemonic assumptions. Jeffrey Kuzmic (2000) writes how textbooks act as static bodies of information and are taught as objective, unassailable facts that reify hegemonic values of hierarchy and education as a master / servant relationship. He writes that while some inclusions of marginalized / oppressed groups has

altered textbooks in high school history classes, the circular assumptions founding the epistemological power of textbooks have gone largely unquestioned and this, in turn, leads to constructing the masculine author / authority / professor as more powerful than the feminine learner providing for a continuation of patriarchal power / oppression.

Freire (1970/2000) remarks that language such as “savage,” “alien,” “barbaric,” “uncivilized,” “provincial,” “hick” aids oppression by labeling / naming the oppressed as lesser, other whom need to be led for her own well-being. One can witness this master-slave relationship operating in the difference between humanitarianism and humanism, that charity is a continuation of oppression / paternalism for the oppressed, not solidarity with oppressed—seeing them as equals. Donaldo Macedo (2000), in fact, writes that language is a powerful tool for oppression, writing that neoliberals, such as Gerald Graff, tend to subordinate the language of, Freire, Henry Giroux, himself as overly jargonistic Marxist language, overly complex and inaccessible to average readers. Yet, supposedly average readers whom Macedo interviewed feel that Freire’s text talks to them better than do most so-called remedial texts. He notes that institutionalized American schooling works on “a sophisticated colonial model of education designed primarily to train teachers in ways in which the intellectual dimension of teaching is devalued. The major objective of a colonial education is to further de-skill teachers and students to walk unreflectively through a labyrinth of procedures and techniques” (p. 3). With the assumption that students are little monsters who need to be disciplined and kept in line, even using amphetamines (e.g. Ritalin) to better accomplish docility, the oppressor / colonial agenda can be instilled in the curriculum. In the United States, the oppressor curriculum is one of practical application of capitalism in schools:

As our society allows corporate cultures to reduce the priorities of education to the pragmatic requirements of the market, whereby students are trained to become “compliant workers, spectorial consumers, and passive citizens,” it necessarily has to create educational structures that anesthetize students’ critical abilities, in order to domesticate social order for its self-preservation. (p. 4)

The language of student marginalization reflects the trend to treat students as vessels to be filled with predetermined facts and ends that discount students’ social realities, issues of equity, responsibility, and democracy. Hence the language and practices of students as passive recipients to be filled replete in e-learning must be questioned so that students are not “complicit with their own stupidification” (p. 5). Moreover, such language is a trademark of hierarchical curriculum making as championed by William Bennett (1992), Franklin Bobbitt (1918), Lou Gerstner (1990; 1994), Rod Paige (2002), and Ralph Tyler (1949).

Another issue that needs to be critically examined is the myth of transcendence regarding the Net and e-learning, including emotional transcendence. Cyberenthusiasts (Conklin, 1987; Englebert, 1963; Gerstner, 1994; Molnar, 1997; T. Nelson, 1974/1987; Rhinegold, 1993; Tergen, 1997; Tergen & Lechner, 2000; Turkle, 1996) often cite the Platonic dream of transcending embodied emotion as a benefit of e-learning. Boler (1999a) questions how emotion has been traditionally maligned as intellectual and moral weakness, even vilified as unclean. She recounts her experience in a philosophy department when speaking about studying emotion in education was interpreted as a faux pas, or at least intellectual weakness. Giving voice to study a neglected topic marginalized her by merely evoking it—a conventionally masculine, individual temperament castigated her as an unreasonable woman. Boler’s anecdote is yet one example of

many illustrating that students are often not allowed to name the world for themselves, instead chastened with thinly veiled coercion.

This phallogentric ideal of the rational mind, as opposed to its binary, the emotional body, is closely related to the concept of hysteria, literally a misplaced womb in Greek. Learned, disciplined men are intellectual, rational, searchers for truth who do not allow subjectivity and emotion to cloud their judgment. This exhibits a clear binary in which masculine is superior to feminine, rational to emotional, intellectual to corporeal. This is an age-old myth constructed and reconstructed to maintain hegemonic oppression. Essentialist Cyberenthusiasts see e-learning as a means to transcend emotions that cloud the rational mind. As Boler (1999) points out, however, emotion can no more be separated from intellect as mind from body; John Dewey (1916/1944) also recognized this false dilemma some time ago as one of the scandalous dualisms that infect modernist, post-Cartesian philosophy. Freire (1970/2000) makes the point, similarly, that a successful revolution needs a synthetic relationship between subjectivity and objectivity to be able to understand the self and the social at the same time to achieve transformation. Another supposed benefit for e-learning is that socially and economically disadvantaged learners can escape their squalid circumstances online, yet as our embodied habits (e.g. gender, ethnicity, class, sexuality) are social habits, e-learners can no more escape their social composition as their biological composition. Dewey also makes such an argument that dualisms are actually subfunctions of larger processes, actions isolated in time and space for analytical simplicity but more often than not are seen as distinct and essential differences that can be separated, such as Aristotle (ca. 330bce/1998) makes methods distinct from theories.

Macedo (2000) decries such a separation, with the dialogic method being uninformed by Freire's revolutionary pedagogy, itself often mistaken as simply teaching, not as a pedagogical

predisposition. Boler argues that such distinctions, dualisms are in place to aid dominant discourses: that by assuming that binaries are essential realities we do not critically inquire into and thereby cannot transform what we do. Freire discusses binary thought as a dehumanizing dichotomization whereas reality exists as dialectic interchange among many social actors, but that the privileged group typically refuses to recognize this because their power is built upon a false belief in essential, privileged differences: rich / poor, educated / ignorant, white / color, and masculine / feminine.

The issue of essentiality is paramount in discussing revolutionary online pedagogy. In his introduction, Freire (1970/2000) makes a point that teleological ontological assumptions lead to fatalism on the part of conservatives and liberals alike. The former see the world as it exists as the way things simply are and this is codified in constitutions and Holy Scriptures; the latter see the future as predetermined that the world will eventually become better for the oppressed through gradual change to a predetermined goal, typically the end of the world. For those who believe that the current social structures are appropriate and natural fits neatly into the status quo and so continue to marginalize traditionally disempowered learners; for those who seek to transform pedagogy to address the goals of historically marginalized learners (i.e. the social other), e-learning can serve progressive purposes. Both such ideas undermine action to achieve revolutionary goals. I believe wholeheartedly that those who attempt to equalize educational opportunities, perceive education as learning not indoctrination, and deny education as a system of social apartheid can do so online as well as proximally. What matters most are the goals for education and determining methods that match progressive educational agendas, such as using online forums to raise preservice teachers' consciousnesses to the inculcated inequities in institutionalized American schooling. Teaching for diversity provokes transformation, and in

order to do this, a world must be perceived as alterable / transformable / dynamic—a praxis, in short. A binary and static assumption of the world only serves to further hegemonic patriarchy. The essentialist's argument centers on what it is to be – the transcendent signified (Derrida, 1966/2000) – not how things come to be, act / exist, and may become—that is, how things function. Freire comments, for example, on the capitalist essentiality that creates class oppression:

The oppressor consciousness tends to transform everything surrounding it into an object of its domination. The earth, property, production, the creations of people, people themselves, time—everything is reduced to the status of objects at its disposal. In their unrestrained eagerness to possess, the oppressors develop the conviction that it is possible for them to transform everything into objects of their purchasing power; hence their strictly materialistic concept of existence. Money is the measure of all things, and profit the primary goal (p. 58).

Freire rectifies this limited view of existence: “Just as the objective social reality exists not by chance, but as a product of human action, so it is not transformed by chance” (p. 51).

He foregrounds this claim by laying blame on nineteenth century subjectivism and psychologism—that humans and things can either be totally relative, totally deconstructed to utter insignificance or totally known as objects and categorized as such. Susan Bordo (1987) in The flight to objectivity exhibits how traditional Western philosophy is founded on this binary:

For Descartes, there are only two possibilities: absolute certainty or epistemological chaos; that is purity or corruption. . . . When the universe becomes unmanageable, human beings become absolutists. We create a world without ambiguity in order to escape, as

Dewey puts it, “from the vicissitudes of experience,” to impose order on what is experienced as without organic order of its own. (quoted in Boler, 1999a, p. 175)

This binary argument is an appeal to fear in which one can either believe in a safe, secure world or lapse into a state of anarchy, continual flux, meaninglessness. Currently, the hyperlandscape of the Internet and the myriad possibilities that e-learning has presented has pushed many to such a flight to objectivity. This logical construction not only appeals to fear, but is built upon absurd reductivity of the complexity of post-structural arguments. As I have asserted earlier, centers are functions, necessary yet not transcendent. The world is made of both objective and subjective observations, I deny both the –ism’s of uncritical belief and the Panoptic vision of a thoroughly quantifiable existence.

No child left behind exemplifies a flight to objectivity with its mandate to set objective, clinically determined standards for all learners, irrespective of their backgrounds, prior learning experiences, and motivation to learn. Recently, the Bush administration has chosen to limit federally funded and published educational research to quantifiable, clinically verifiable results, which silences many voices that ethnographic studies have often sought to heed. Moreover, the Bush administration is practicing damnation memorae by removing any references or archives of educational research done prior to their administration. To the victor, goes the spoils.

As I have explicated in chapter 3 as the conduit teaching model, No child left behind relies on the banking concept of education in which information and docility to governmental authority are instilled with institutionalized schooling practices. The Bush administration’s reliance on positivism juxtaposes another positivist assumption they rely on: education is transference of information from the informed to the ignorant. Paige founds his educational agenda on conduit teaching models. Freire notes that such educational relationships mask power

relationships in which the master controls the content and methods of education as an exercise of social control. Freire (1970/2000) critiques hegemonic capitalist education because traditional education typically relies on specious pedagogical strategies of “facilitat[ing] knowledge transfer” that Freire labels the banking concept of learning. In Pedagogy of the oppressed, Freire stipulates that humans exist to change the world through dialogue: “To exist, humanely, is to name the world, to change it” (p. 150). Naming the world occurs in transacting with the world. Transaction is a process within a functioning democracy; domination of dialogue, becoming a monologue of the dominator transferred onto the dominated, manifests itself as pedagogical sadism. Tragically, this sadism is typical of traditional and so-called reform curriculum design and subsequent methods in which the content and content specialist masters the student and corrects the student’s behavior through grades dictated upon how well a student retrieves information placed in her long-term storage. Freire claims in the banking concept of education that the teacher deposits knowledge, much like a capitalist would, in order to retrieve his or her funds at a later date, in this case from the student / bank, with interest. The accrued interest, on top of the correct response to the answer, is the student’s mindset that she or he is essentially powerless in this exchange. The dividend for the capitalist is proletariat passivity.

The best method of countering student passivity, of accepting their role as the recipient of decontextualized facts, is to disrupt the hierarchical educational paradigm by directly scrutinizing it. In my online forum, I have sought to unbalance my students (and myself) by asking them to reflect on Freire’s banking concept of education. I have sought a pedagogy of discomfort to invoke disequilibrium in their faith in the innate goodness of dominant American educational techniques and goals. The purpose is not to thoroughly disparage American education, but to have future practitioners reflect on their intended vocation.

One student reflected on Freire's banking concept and related it to Virginia's Standards of Learning, an educational agenda with many commonalities with Rod Paige's No child left behind:

Freire's banking concept, which is a reference to traditional education, states, "knowledge is deposited into the child's mind" "Students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiqués and makes deposits which the students patiently receive, memorize, and repeat." Reading about education as a banking concept immediately reminded me of the Virginia Standards of Learning (SOL). The SOL tests create a predetermined list of ideas and concepts children must know, and teachers become responsible for transferring these large amounts of information to the students so the students can spit it back out on a multiple choice test. Too often have I discussed the SOL curriculum and testing with current schoolteachers, who have stated there is so much more they would like to do in their classrooms, but the pressures of the Standards of Learning just do not allow them much leeway. These teachers would love to have more group projects and class discussions where discovery learning takes place. However, the pressure put on teachers to have their students pass these standardized tests forces them into a method of teaching that calls for memorization and regurgitation of facts. In a democratic society, this seems like a very authoritarian style of teaching; this is what you will and must learn. It is hopeful that the many teachers I have conversed with support a more democratic style of teaching that focuses on working with students instead of always testing them. They would like to give their students a say in what is taught and they would like their classrooms to be filled with the ringing of discovery and inquisition as the students learn

from not only the teacher, but also from their peers and, most importantly, from themselves. Yet, to keep their jobs teachers find themselves having to teach the SOL, not the student.

We can observe how Natalie has made a theoretical connection between the Banking Concept and the SOL's, yet she has also made a practical connection to how power is used to implement such a program. She has made the following points: (1) as a predetermined list of facts to memorize, the SOL's do not take students' goals and backgrounds into consideration, instead forcing students to comply with a hierarchical and teleological agenda; (2) that the human conduit teaching model serves as the methodological basis, denying teachers methods that they have gleaned from years of experience; (3) that the SOL's force teachers to "teach to the test;" (4) that transactional learning, represented here as discovery learning, is prohibited; (5) she recognizes the irony of an authoritarian system attempting to instill democratic values; and (6) she contends that teachers' desire to hear multiple voices in their classrooms to address differing learning needs. Yet, teachers cannot afford to dismiss this educational agenda in fear of losing their livelihood. By threatening teachers means of making a living, empowered proponents of teleological education use institutionalized education's hierarchical system to discipline teaching technicians to accept their agenda.

One of her peers replied to her, making a further connection to the role of computers to facilitate this agenda:

Yes, I couldn't agree with you more. The SOL's are destroying our educational system. Teachers [who] used to be phenomenal are now stuck lecturing all the time with the occasional group project that might have a little fun in it. Teaching is becoming less and less of a skilled profession and more of a mechanical process of transferring information.

Give me a computer that can recite facts and use macromedia presentations and I'll show you the future teacher of America. Is it so hard to believe that once we compile a list of exactly what we need to know in order to achieve any level of education that somebody will create a computer that will teach all the concepts and recite all the facts. Sell this product for about a grand a piece, school systems will gobble this up to save money. The teaching profession vanishes because being human we are prone to mistakes and since we don't always know the answers to all the questions we are inherently flawed. A computer with the abilities stated before and an extensive help file able to answer all the possible relevant questions to each lesson will replace all the teachers saving millions of dollars each year but at the same time making millions of people unemployed. The concept of banking is fundamentally destructive to the teaching profession.

Jacob has made a connection that computers, as a new manifestation of the teaching machine, will enable a direct curricular exchange between curriculum planners as the active body and students as the passive recipients of this banking exchange. He also notes that having fun in school should not be an anathema to learning, that the banking model tends to demean the status of teachers as professionals, and that the computer can serve as the model for necrophilic education. Jacob has in the past objected to teaching strategies such as advocated by E. D. Hirsch (Hirsch, 1988, 1999), a proponent of a fact based, conduit teaching methodology.

Feminist critiques of Freire's masculinizing heroism

While Freire raises many critical issues in education as a process of marginalizing the disenfranchised and culturally dispossessed, recognizing many of the dualistic binds that hamper democratic education, he tends to have a blind spot with respect to feminist issues. In this section, I will explore Boler's (1999b) deconstruction of Freire's sexism and look to bell hooks'

(1994) meliorist reconstruction of Freire's radical pedagogy. Boler and hooks' critiques of Freire serve as a segue between the power inequities inculcated within the banking concept of education and feminist critiques of disembodiment hype in cyberculture and education.

Boler addresses three absences in Freire's Pedagogy of the oppressed (1970/2000) and The politics of education (1985): (1) a lack of gender analysis, demonstrated by the use of the generic and universalizing masculine; (2) the heroization of Freire as cultural figure, which closets the grassroots nature of radical pedagogies; and (3) the canonization of Freire's work that eclipses the work of radical feminist pedagogical theorists.

In Boler's doctoral courses at The University of California at Santa Cruz her posing questions respecting the heroization of Freire and his absence of gender analysis often encountered rebuke as focusing on "minor" problems. In particular, his masculine rendering of love and compassion caused Boler to pause. While Freire calls for forms of love as favorable emotions to imbue the curriculum, he tends to be vague about particulars as if embracing emotion, not merely invoking it, proved problematic. Radical feminist pedagogies, on the other hand, tend to not only to invoke emotion, often considered troubling by traditional, masculine educational discourse, but embrace emotion as a vehicle for emancipatory educational practices. Feminists seek to engage emotionally, subjectively in issues of masculine violence, oppression, and economic discrimination against women, such as endorsing emotionally charged activism in classrooms and being active in demonstrations like Take Back the Night.

The heroization of Freire as a transformative, brave, radical pedagogue tends to disqualify radical grassroots pedagogical efforts. Without popular support, radical pedagogies are bound to failure; hence, there exists a need to not only relish Freire's efforts but those also of people who often receive little recognition. Moreover, heroization is a masculinizing discourse that

promotes masculine virtues of grim determination, stoicism, and rugged individualism. The effect is a devaluation of feminist efforts, group efforts, and people who honestly express fear. Finally, political activism as a public endeavor tends to relegate female activists to personal, private, domestic grievances that have little import in traditional, masculine public affairs. This relegation proves disempowering as men are expected to forge policies in public, established channels. So when feminists declare that the personal is political, they seek to deconstruct systematic exclusionary practices. The revelation that the personal is political embraces emotion, subjectivity, and domestic issues necessary in radical pedagogies.

In Teaching to transgress: Education as the practice of freedom bell hooks (1994) radically alters generally accepted forms of academic discourse by engaging in a playful dialogue between her legal name, Gloria Watkins, and her nom d'guerre, bell hooks, to discuss Freire's influence on her life and work as well as his shortcomings respecting feminism. In normal academic discourses one would hardly imagine the words "playful" and "sweetness" to be used by a serious author. Yet Watkins / hooks' choice to use emotive language is a willful disruption of masculine dialogic tropes. Her dialogue is a beautiful exercise in earnestness and emotion—a strategic disruption in logical dualisms weaved into the very fabric of traditional, masculinized rhetorical practices.

Hooks lauds Freire's influence on her life as a critical thinker, provoking her to engage in liberatory action. Freire's works supported her yearnings to be an emotional and subjective scholar fighting against colonizing practices in education by a white supremacist capitalist patriarchy. She also appreciates his focus on conscientization as a praxis, not merely an abstract academic theory.

Even while hooks praises Freire's conscientization, she criticizes his blindness towards feminist issues. The primary rationale hooks continues to embrace Freire's works is that "Freire's own model of critical pedagogy invites a critical interrogation of this flaw in the work. But critical interrogation is not the same as dismissal" (p. 49). Freire's phallogentric paradigm of liberation, in which his definition of freedom relies on patriarchal assumptions, proves a source of anguish for her. Yet Freire's call for political liberation, especially for the poor, is a "great gift" (p. 50) for hooks with her impoverished southern black rural background. In fact, hooks critiques first wave feminist writings, such as Betty Friedan's (2001) The feminine mystique as promoting a suburban white bourgeoisie ideology for feminism that devalues her subjectivity. Hooks insists not on relegating Freire and Friedan to academic limbo, but as threads from which she weaves those aspects she favors into her own tapestry.

Respecting her personal admiration for Freire, hooks relates her first meeting with him. While teaching at UC Santa Cruz, she had an opportunity to attend an invited lecture by Freire, which she was almost excluded from due to her outspokenness. Even though warned not to ask the wrong questions, she did. Certainly, hooks near exclusion and attempts to silence her substantiate Boler's claim of Freire's heroization. Thankfully, hooks did act disruptively asking pointed questions about Freire's sexism. While hooks colleagues sought to silence her and apologize to Freire, he interceded to acknowledge how crucial hooks' questions are and he began to address them. He also sought out hooks to engage her in dialogue so he could improve his praxis to include feminist critiques of pedagogy. Thus, in Learning to question Freire (Freire & Faundez, 1989) declares,

If the women are critical, they have to accept our contribution as men, as well as the workers have to accept our contribution as intellectuals, because it is a duty and right that

I have to participate in the transformation of society. Then, if the women must have the main responsibility in their struggle they have to know that their struggle also belongs to us, that is, to those men who don't accept the machista positions in the world. The same is true of racism. As an apparent white man, because I always say that I am not quite sure of my whiteness, the question is to know if I am really against racism in a radical way. If I am, then I have a duty and a right to fight with black people against racism. (quoted in hooks, 1994, p. 59)

Freire's reconsideration of his sexism, his recognition of his blind-spot, and his willingness to do something, encourages me to better address my own sexist, racist, classist, and heterosexist shortcomings. I look to Boler and hooks to provoke me to write passionately and affectively about gendered discriminatory practices in cyberculture and education. But I do not wish to stop there; I wish to engage in dialogue respecting racism and heterosexism in intersections of cyberculture and education (e-learning) as critically important issues for hyperpedagogy's continued development. With this desire to ameliorate my pedagogy in mind, I look at what is institutionally closeted in education to which I, among many teachers, have been complicit—both consciously and unconsciously.

Closeting privilege in education

The Net can act collectively as a means for closeting difference and privileging normalcy.

Figure 6-2: Cyberdog



Source: Steiner, P. (Artist). (1993). Cyberdog [Cartoon].

A well known New Yorker cartoon (see Figure 6-2) quips, “On the Internet, nobody knows you are a dog” (Steiner, 1993). The humor seems innocuous enough at first glance, yet it reveals a more subtle issue—how are people coded and decoded online without proximal cues (e.g. voice, sight, mannerisms)? For some enthusiasts (Callahan & Switzer, 2002; Englebert, 1963; Turkle, 1996), people can take on new personas and hide socially marginalizing traits. A straight male, for example, may surf gay sites, conduct himself as a homosexual, engage in same sex activities, and feel that he has experienced life as a gay man. By merely acting gay online and straight in his proximal life, is he unwittingly perpetuating the closeting of gays? He can explore his sexuality without being “outed” and thereby subjected to sexual discrimination. Surfers can also observe the “other” from the safe confines of their typically suburban homes, embarking on a

virtual safari of the exotic. One can explore Africa's treasures captured online, a cleansed version fit for the consumer's eye, a Panopticon of a sanitized and glorified native, healthy and in traditional garb. By doing this, one avoids the risks of disease, resentment, seeing the devastating effects of globalization on non-industrial cultures, and establishing empathy for the other. Virtual field trips often show American school children the quaint natives and induce a subtle sense of superiority over these cultural others as backward, undeveloped (using the West as the telos for development, of course), and perhaps even comical—a sideshow to be viewed. The Net can serve as a continuation of the safe, gated suburban community, the locked car driving through the inner city, or a virtual tour of sub-Saharan Africa without having to witness the devastation wrought by AIDS, war, poverty, malnutrition, and slavery.

Educators need to examine learning models and environments for instances of closeting. By this I mean instances where “others” are disempowered by being unnoticed. I agree with Eve Sedgwick's (1990) stipulation that “ignorance is as potent and as multiple a thing there is as knowledge” (p. 4). The instance of Bowers v. Hardwick in which the majority opined that homosexuality as part of American history is “facetious” (p 7) looms large in my mind as an example of such disempowering ignorance. If judicial review can somehow dismiss homosexuality in American tradition as a lark, then what other ignorances are at play as social actors is a question well worth examining. Moreover, the power to categorize people as either hetero or homo (good / bad) figures forth in many arenas.

Sedgwick's (1990), in Epistemology of the closet, illustrates instances of the disempowering effects of ignorance or the closeting of problems that most people would rather not deal with due to a problems' intricacies. The word problem is itself problematic in that social issues that can be discussed with amelioration in mind are marginalized as problems with those

who suffer from marginalization being typically depicted as the problem and not that inculcated social mores and moral biases are at issue. Hence, misogyny is a woman's problem, racism is a black (or Latino or Asian or Native American) problem, gay bashing is a homosexual problem. The recipients of harassment are castigated as problems. An underlying issue is the metaphysics of presence, a belief in innateness/essentiality/determinism. Cartesian / Platonic / Aristotelian metaphysics circumscribe modernity, leading to a belief in things as existential singularities, not contextualized multiplicities determined more by perception and trajectory than innate quality. The modernist belief in scientism looms large in the construction of such a reductive paradigm.

As Jackson Katz (1999) points out in Tough Guise, gender, sexual preference, and race are typically scripted as issues for minorities, the marginalized. The point here is that masculine, heterosexual, white, and affluent are made invisible, closeted. This logical move of closeting tends to lay the "problem" of a binary construct on the victim. For example, when a white person asks, "Why do some people need to use a hyphen? Why can't they just be American like everyone else?" this person is stating indirectly that racism is a people of color's problem for not accepting an American identity, for denying the "melting pot" metaphor for American identity as a homogenous whole—e pluribus unum. When one examines a definition of American, the qualities tends to be Eurocentric, so in essence the question amounts to, "Why can't you act white?" This rationale exonerates the dominant culture, now a hidden agent as "American," and squarely blames the victims of racism.

The desire for some to escape race online is an extension of blaming the victim. When affluent whites tout the Net as a place to escape race, they are attempting to ignore the issues that racism involves. They expect that everyone else on the Net will act like them; the expectation is that the minority will leave behind her race, her gender, and her sexuality (unless this is a sexual

performance for the benefit of male observers' erotic desires). For e-learning, attempts to ignore, silence, closet, and condemn the other are not beneficial. Escaping racial, gender, class, and sexuality issues is to induce to other to perform normative practices.

The general term for people of color, women, and the poor is typically minority. This term is itself another disempowering binary and instance of closeting. If one adds together all the minorities, especially if one adds the poor, then the sum is a vast majority. So why this Orwellian doublethink? In a democracy, rule by majority, a term like minority minimizes the power, the cultural clout, and the political capital of the other. What becomes invisible in this construct is the privilege of being affluent, of being white, of being well educated, of being male, and of being heterosexual. Closeting privilege and marginalization is a hegemonic construct; a rhetorical strategy of conquer and divide. In this construct, the problem lay not with the privileged, but with the inadequacies of being abnormal. Race problems are not white problems, but African-American, Hispanic, Asian, and Native-American problems. The poor are to blame for their position. Women have to try harder without demanding unfair advantages, labeled derisively entitlements. Homosexuals, if not constructed as abominations in the eyes of god by religious authorities, are often considered not simply abnormal but unnatural. Homosexuality is a psychological ailment to be cured. This construct never considers the oppressiveness of not being affluent, white, masculine, and heterosexual. From my own experience, the concept of corporate welfare – that American energy companies reap a windfall of benefits from tax-breaks, subsidies (to the tune of billions of dollars per year to keep American drilling prices relatively on par with much cheaper imports), corporate-government influence (such as Vice-President Dick Cheney's secretive Energy Task Force meetings with Enron and Halliburton officials), and lax governmental regulation (such as using post office boxes in the Caymans as corporate

headquarters to circumnavigate American taxes) is antithetical for most of my students (Alterman & Green, 2004; Cleveland & Kaufmann, 2004; Devericks, 2003).²³ Such is the power of ignorance.

Given this oppressive closeting, it is incumbent upon educators to raise emotionally challenging questions about this power of shadows and silence as W. E. B. Dubois calls it (1903/1989). Therefore, in class I prompt my students with the following questions:

“What is a minority?”

“How is this term significant in a democracy?”

“Who is not a minority?”

“How does ‘minority’ differ from ‘marginalized’ and ‘privileged’?”

“What is the power of being invisible, of being beyond scrutiny?”

I follow up these challenging questions with a viewing of Katz’s Tough Guise (Katz et al., 1999). In this film, Katz illustrates how the increasingly violent construct of masculinity degenerates what is almost exclusively masculine violence in America.

Having read the Katz’s (1998) article on masculine violence and Mariah Nelson’s (1998) “Boys will be boys and girls will not” on the correlation between masculine violence and sports and having watched Tough Guise (Katz et al., 1999), one cohort group (B. Smith, Spaugh, Stout, Telesmanic, & Toms, 2003) opted to write on masculine violence in education (see Appendix 6-1 for assignment details). They wrote that

... boys are socialized to be aggressive. They see these signs everywhere that to be a real man means to be aggressive and violent. Connell (2003) states that, “By the time they are adults, young men have been presented with many models of conduct where the way to solve a problem is to smash the opposition—and where this is presented as admired

masculine conduct” (p. 2). Men are violent because they think that being violent is what is expected of them. Morrell (2002) puts it this way, “. . . violence is not seen as the preserve of any one group or a natural imperative in men. Rather it is seen as a choice available to men to demonstrate their masculinity” (p. 41). Some men feel if they do not act violently then they will not be real men. (p. 2)

This group claims that teachers have an obligation not only to make sure they are not actively (e.g. urging boys to be “tough” in public) or passively (e.g. ignoring taunts of “fag”) condoning masculine violence but also to actively combat masculine violence and homophobia in their classrooms. The group challenges their peers to be aware of how masculine violence hampers learning, especially in the case of social justice pedagogies. The response of the above group inspires me to continue using hyperpedagogy to address the closeting of social issues in American education.

Not only do I read this paper, moreover, the entire class reads the paper. In traditional education, the audience of a research paper is normally limited to the professor or teacher; however, in hyperpedagogy, a professor or teacher may opt to publish a research paper electronically. I publish cohort research papers to our shared webpage, in this case a Blackboard space provided by Millersville University, and require those students not in the cohort group that wrote the paper to read it. This serves two purposes: first, the audience is broader than myself so students prepare their writing for their peers; and second, the students create content that is important to themselves thereby fulfilling some of the democratic purposes inculcated within Progressive social justice pedagogies. By broadening the audience beyond myself I attempt to foster a sense of democratic involvement in which the teacher and the teacher’s chosen texts stand forth as the centers of classroom authority. The students create some of their own

authority. Additionally, the students making up the audience write one page reflections on the issues included within the research paper, thereby giving themselves voice recognized within this democratic classroom ethos. Finally, the cohort group responsible for writing the paper also coordinates the class period following the submission and subsequent publication of the paper. The purpose here is to bridge the space between the logical, theoretical document to a lived experience in the classroom. The activity based class is a means to demonstrate important aspects of these topics in manners not readily suitable for a research paper. For example, the group that wrote the paper guided us through an activity involving how to confront subtle expressions of masculine violence in the classroom and feminine marginalization, including viewing portions of Reviving Ophelia (Pipher & Media Education Foundation., 1998). The activity's lived, emotional link to the paper's largely logical material is an instantiation of overcoming the mind / body (or logic / emotion) binary construct, as well.

The tropes of hyperspace and gender

In Tech-Savvy: Educating girls in the new computer age (American Association of University Women, 2000), the American Association for University Women argue that more young women need to be in the computer based educational tracks and that simply getting more girls "into the pipeline" is not enough. A change in computer education culture needs to transpire. Many girls have reservations about getting into computer education and with good reasons: they are concerned about the passive nature of typical human-computer interaction in classrooms; they reject the computer cultural prevalence of violence, redundancy, and tedium of computer gaming; and they dislike the narrow, technocratic focus of most programming classes (p. ix). In order to entice young women, girls' legitimate concerns should be heeded, so that software that appeals to collaborative efforts while denying violence need to be programmed, the

way that computer science is taught needs to have more room for creative student endeavors, and the uses for computer technology in education needs to change from being the near exclusive tool of human information processing advocates. While women statistically dominate word processing classes (the contemporary equivalent to typing classes), women make up only 17% of the computer science AP test takers, account for only 11% of the doctorates awarded in engineering-related technologies, and occupy merely 20% of information technology jobs (p. 3). Given these facts, the following call for action is especially relevant:

We need a more inclusive computer culture that embraces multiple interests and backgrounds and that reflects the current ubiquity of technology in all aspects of life (p. x)

As a preservice educator, I make sure that my students are aware of such discrepancies and seek ways to foster dialogue on this debate. I ask my preservice teachers what strategies can they use to promote more female users at an early age and computer uses that do not rely on aggressive, individual competition—a typically masculine trait in American culture. I challenge my educational technology teachers to recruit more young women into their classrooms and to find ways to make their learning spaces more inviting for girls. In short, I ask them to acknowledge the discrepancies and to figure out what they can do about the situation. But a difficulty to overcome is the deeply ingrained idea that boys are somehow naturally better with computers than girls.

In order to bring this closeting of feminine ability with computers to light, I assign excerpts from the American Association of University Women's (AAUW) Tech-savvy: Educating girls in the new computer age (2000), and I challenge students to find ways to make digital technology classes more appealing to girls: "If you were tasked with increasing female

recruitment and retention in information technology, computer science, and related computer technology fields, what might you do? Please refer to the Tech Savvy reading.” One male student, a former Silicon Valley information technology engineer and casualty of the new global economy, responded as follows:

Having spent the last 10 years working in the computer industry including 2 years as a lead engineer in Silicon Valley I nearly laughed at certain points within the article. While I agree that it is desirable to increase the proliferation of women in the computing enterprises many of the ideas in the article are clearly not from people in industry. . . While in Silicon Valley we had no female engineers but nearly all of the interface, language, usability and quality assurance people were female. As females fill these roles they increase their own abilities in the engineering spectrum because they are exposed on a constant basis. The single best way to increase female participation in technology fields is to broaden the field to include areas that are heavily technology based while still incorporating and lending to female strengths such as what I described in my time in Silicon Valley.

While Brett does not identify whether or not these traits are social or natural in this instance, he often addressed how American computer culture tends to socialize young women away from studying for what he labeled “hard skills” positions. Hence, women in Silicon Valley were tasked with usability and human interface assignments whereas men fulfilled the roles of programmers, engineers, and information technologists—hard skills. In this construct, women make sure that the common user, supposedly closer in traits to themselves, could interface the complex code. Therefore, women use their commonly assumed superior social skills and intuition to aid the often frustrated end-users calling for help because the male engineers may

reply with the industry acronym RTFM (Read the Fucking Manual) due to their lack of empathy for the end-users plight. We can see a reliance here on stock gendered binaries: women nurture the distraught while men tell it like it is.

One of his female peers, an engineer by education and occupation, replied,

I concur that it's men designing for men. I couldn't break in! You said it correctly. "As females fill these roles they increase their own abilities in the engineering spectrum because they are exposed on a constant basis." It's true! I had to recognize that (especially here in Lancaster County[, Pennsylvania]) the engineering industry isn't ready or prepared for women like me. And I didn't want to "begin on the periphery"! I love a challenge! I got my steamroller primed and ready!

Katherine is also a non-traditional student (she is studying education as a second career) and that she is anything but demure. As a self-proclaimed "steamroller" and a female engineer, she has run into a few brick walls of reactionary masculinity. She has had to persevere through such comments as "What are you doing here?" to "So where do you hide your balls?" Men have mistaken her for a secretary, asked her to fetch coffee for a meeting, and have replied that she is "one of the guys, not like other women all girly." Outside of class, she has confessed to me and some fellow non-traditional students that she tired of the constant fight with men to be a superwoman, hence she has opted out of engineering for teaching in educational technologies. While Educational Technologies, as an outgrowth from shop and industrial sciences, is predominantly male dominated and has a corresponding masculine ethos, it does exist within the broader context of education and schools and is thereby part of a female dominated profession with a nurturing, feminine ethos.

The original male poster, Brett, added words of encouragement to the female respondent, Katherine:

Good for you. I always like seeing women who will fight and get their nose into the male dominated profession. I went through Comp Sci with a girl who is now a lead programmer in industry, and she does quite well (she is a far better programmer than I am, guess that is why I went the network direction). Not an easy path of choice, but there are rewards to the road less traveled.

This is an aspect of hyperpedagogy that I most cherish: cooperative interaction among peers. Throughout my experiences with using online dialogue and what Dewey labels “coöperative intercourse” (Dewey, 1916/1944, p. 83), I have witnessed such heartening interchanges. As the AAUW (2000) report posits, simply getting girls into the pipeline is not enough, but that high-tech culture needs to change. I suggest that the sort of cooperative intercourse witnessed here is an aspect of changing the culture in which hyperpedagogy can be used as an effective tool.

Not only do online dialogues serve the social justice purposes that I propose for hyperpedagogy, so do the aforementioned cohort research papers. One of my research cohorts chose to write on the gender gap in high tech education. I would like to add that the three member cohort group consists of three young men, two of whom are Educational Technologies majors and the other is a Mathematics major. They entitled their paper “Fall into the gender gap,” and their introduction reads as follows:

Gender plays a major role in society and education. There is a gender gap in how high-paying, high-profile educational tracks in the areas of technology, computer science, and math relate to women. This gender gap is a staggering difference between the numbers of men versus women in these areas. When looking at this gender gap questions are brought

to mind about why men outnumber women. There are many underlining issues of gender's effects on jobs, educational tracks, and opinions of women. Women are exposed to many factors that may contribute to the gender gap ranging from the social environment in the classroom to views of inherent qualities of women. Some ideas pertaining to the gap come from society's imposed influence on a person's track in life. The media along with parental views and peer influences could shape a person's choice of careers. Other ideas that oppose these influences may include naturally occurring aspects of each sex. One of these aspects may be a genetic predisposition to gravitate towards a certain track. A look into the different views may lead to possible avenues for equalization of the gender gap. (Cox, Cuesta, & Denton, 2003, p. 1)

One should note that they clearly found their research on the remarkably significant gender differences with respect to girls in high tech education and the resulting lower expected salaries. They also broach the question of what roles do social expectations and natural abilities have to play in this gap. In developing the paper, they reject the argument that girls are simply not wired for technology:

Our group backs the imposed gender gap as opposed to the natural gender gap. As stated before the natural gender gap would be a gender gap based on genetic make-up of the human: "According to women respondents, computing doesn't fit a woman's nature" (Reed, 2002, p. 40). Many women and men who responded to Reed's survey think that computing and other technical fields do not fit into a women's biological system. One of Reed's surveyed women says "Men are more inclined to high-tech, mechanical, and computer stuff. Women tend to choose professions that fit our nature, such as nursing, medicine, and fashion or interior design" (ibid.). One question that may come to mind is:

“Why do women tend to pursue those careers?” We do not think nature or the biological make up is the reason. (p. 2)

The group contends, instead, that socialization in the home, messages from the mass media, a lack of female role models, the pressure not to be a cybergeekgirl, and a lack of cultural acceptance within the academy and schools all factor into this gap. Underlying such assumptions is a long tradition of dualism and misogyny in Western metaphysics.

Allucquère Rosanne Stone (1992/2000) offers some persuasive insights into the juxtaposing of technology / nature and masculine / feminine dualities. She writes that “The boundaries between subject, if not body, and ‘the rest of the world’ are undergoing a radical refiguration, brought about in part through the mediation of technology” (p. 188). She argues, further, that the categorization of nature and technology being separate is yet another culturally constructed “economies of meaning” (p. 188), in which hegemonic elements have a vested interest. One of most debilitating constructs juxtaposed to the technology / nature dichotomy is the masculine/feminine dichotomy. These dualities are parts of a larger strategy for maintaining supposedly fixed, organic boundaries in a pervasively masculine epistemology: “Forgetting about the body is an old Cartesian trick, one that has unpleasant consequences for those bodies whose speech is silenced by the act of our forgetting; that is to say, those upon whose labor the act of forgetting the body is founded—usually women and minorities” (p. 196).

In viewing structural relationships as binaries or polar dualisms, we are accepting the structuralist perspective of dichotomous reality. Such morally inscribed polarities as masculine / feminine, teacher / student, and subject / object inform most commonsense and traditional worldviews. In Feeling power, Boler (1999a) insists that some emotions are dangerous, while others perform normal tasks. This distinction between normal and dangerous occurs in relation to

who expresses an emotion and in what context. Anger expressed by a woman is often referred to as hysteria (literally a misplaced womb in Greek) or another form of irrational outburst. From oppressed peoples of color and / or the poor, anger is not resistance but incitement—dangerous and irresponsible, dictated by emotion and rage rather than by realistic expectations for change that should occur through the normal channels of discourse such as elections, not riots. Anger by white, rich, heterosexual men instead is often considered normal given the circumstances. They are angry over injustices such as unfair and discriminatory practices of supposedly easier school admittance for blacks or the mythic Latino pillaging of the social welfare system. These reactions are not irrational; rather they are portrayed as normal – a healthy expression about just how cruel life can be. Such a commonsensical approach is built upon assumptions of fairness, that all men are created equal, and that by privileging certain groups, the foundations of this nation are being undermined, that the nation is being weakened by giving into the demands of groups who refuse to compete fairly. Such logic is meant to keep white masculine privilege invisible.

Needless to say, the call for equality cited above is ironically sexist and presumes the rational individual predicated by Cartesian logic. The overarching scheme here is that deviation from the norm is seen as more problematic than a particular emotion. Social structures determine what counts as acceptable and unacceptable; emotions are not determined as normal in themselves, rather by who does them in what context and whose interpretation counts most. The biggest determinant tends to be privileged versus marginalized discourse. The semiotic perspective here relates to whose signification is more valued and spread by media agents as an objective sign (Alterman, 2003a; Noll Chomsky, 2002; McChesney, 2000). When groups can

dominate signification to the point they deny such a move takes place, they are disseminating Truth through their media agencies, and hegemony is unassailable.

Cyberculture hypes that by being online, people can transcend their embodied identity and explore being black, white, feminine, or masculine—that we can play at being the other. To wit, Sherry Turkle (1996) writes that she adopts multiple selves online: “The anonymity of MUDs give people the chance to express multiple and often unexplored aspects of the self, to play with their identity and to try out new ones (p. 241). She advocates that “the solitary author is displaced and distributed” (p. 242). She sees that online games are loci for construction of alternate or liminal identities. While perhaps playing at the other may open some possibilities for sympathy, other critics have urged caution.

Jodi O’Brien (1997/1999) deconstructs the hyperbole Turkle endorses, by illustrating how much emotional and cultural stake people place in a core identity. Surfers often ask what someone’s true identity is when chatting: “Underlying the hype the conventional foundation remains intact: there is a master consciousness that sorts and organizes our experiences, including various multiple self performances” (p. 82). Socialized codes do exist online as men tend to be aggressive in postings, whereas women seek consensus and mutual support. Often such posting practices reveal the posters gendered, embodied identity. O’Brien is not building a case for essential gender, but rather that gender is so inculcated in our social being that we cannot escape it. We perform our gendered existence not noting that we are doing so; hence, masking one’s gender is difficult. Moreover, if a poster is found to be an impersonator, many peers become enraged—the moral anger that Boler (1999a) highlights. For example, a woman who had participated in a masculine dominated business chatroom as a man, when exposed as a

woman, was threatened with violence, even “very painful rape” (O’Brien, 1997/1999, p. 91).

O’Brien explains,

Classification schemes that we use to impose meaning and order in interaction become ossified as “reality.” Morality consists of the willingness/ability to accept one’s behavior in accordance with these “ossified” recipes for interaction. If gender is a primary (read: coded as “natural”) institution for organizing social interaction, then boundary transgressions are not only likely to arouse confusion, but to elicit moral outrage from the boundary keepers. (p. 93)

O’Brien is not making a point that we need to subscribe to essential identities, but that as most people do, we run the risk of violent backlash. Our supposedly core identities are so a part of modernity that challenging such performances is fraught with risk.

We need not only to recognize the risks of moral outrage, but seek to understand how social scripts have become so entrenched in the West. Jessica Benjamin (1988) offers how these binary structures are formed by classic Freudian and ego psychoanalysis and informed by these predominant theoretical perspectives. In determining how social domination manifests itself, she writes how Sigmund Freud (Freud & Breuer, 2004) and Thomas Hobbes (1651/1998) explained the role of authority as a protective social measure in which repression of basic instincts is necessary. They derive this necessity from the polar struggle between civilization and barbarity. The masculine, rational civilization functions to overcome the lupine instincts of feminine, irrational barbarity, much like the myth of Romulus and Remus represents Rome’s destiny to civilize a savage world allegorically depicted by the she-wolf nursing the twins. Abnormality comes then from deviation from this social contract, manifesting itself as antisocial psychoses—such as schizophrenia, a modern equivalent for hysteria. Irrational and self-serving human

instincts need to be repressed to ensure protection and domestic tranquility. Of course, this logic taken to its extreme holds that the more repressive a regime and culture, the more civilized; by this rationale, the Taliban serve as exemplars of civilization by repressing femininity so well.

Instead of this dualistic subject / object approach, Benjamin (1988) offers a dialectic sensibility in which a constant tension exists in self-assertion and its subsequent recognition by the other—a subject in its own right. Submission occurs when one accedes to the domination of the other she argues. If we pull down the structuralist edifice of conflict and the need for the dominant other to protect us from ourselves, we can look at these tensions as mutually informing and transforming intersubjective relationships. This is the heart of the semiotic movement in which a subtle and multifaceted dance among meanings and reciprocations takes place. Our utterances, significations are never made in the void of the individual ego. We are social from the outset; we are signs that in turn create and interpret other signs (Peirce, 1868/1965). As Benjamin infers such complex, non-sequential but simultaneously informing movements are antithetical in the Western tradition. If we begin to appreciate the world as mutually signifying signs, not as essentially distinct units, we may be able to undermine the mythology of the other and begin to construct more intimately reciprocal relationships based on recognition more so than differentiation.

Gender and CMC: Disrupting masculine discursive norms

Otherness certainly informs gender expectations on the Net. In fact, the incorporation of a female body with masculine technology in Science Fiction and popular cinema often depicts this cyborg as a monstrosity. Mary Ann Doanne (1990/2000) writes,

Science fiction, a genre specific to the era of rapid technological development, frequently envisages a new revised body as a direct outcome of the advance of science. And when

technology intersects with the body in the realm of representation, the question of sexual difference is inevitably involved. (p. 110)

Ironically, in this incorporation of technology into the female body, typically authors conflate desire with disgust as in Fritz Lang's Metropolis (Lang et al., 1925/2002), The Stepford Wives (Scherick et al., 1975/2001), Alien (Scott, Weaver, Skerritt, & Cartwright, 1979/2003), Bladerunner (H. Ford, Hauer, Olmos, Scott, & Young, 1982/1996). In most of these instances the masculine desire for a sexually aggressive and/or rational female turn out to be a disaster (i.e. Metropolis, The Stepford Wives, and Bladerunner), whereas in Alien the ship's computer, Mother, a super-rational female mind is pitted against Sigourney Weaver's more traditional female body. With such a popular conception of female and technology as an anathema, I turn to Susan Herring's (1994; 2000; 2001) analyses of gendered dialogue and Computer Mediated Communication (CMC).

Herring notes that men have dictated computer culture from its inception and that enthusiasts' (Graddol & Swann, 1989) claims for cyberanonymity and subsequent gender leveling are patently false. Her primary claim is that gender is enacted through discursive norms that generally differ for men and women: "gender is often on the Internet on the basis of features of a participant's discourse style, features which the individual may not be consciously aware of or able to change easily" (2000, p. 2).

Men and women generally perform socialized gender codes in cyberspace as much as in proximal spaces. The masculine norm is to write aggressively (i.e. flaming), write at length, offer their opinions as facts, practice self-promotion, and use sarcasm to slight those who disagree with them. Women, however, tend to be supportive, demure, and brief, offer opinions as subjective reflection, act appreciatively, and apologize if they feel their opinion might prove

controversial. In surveys conducted by Herring (1994) asking “What bothers you the most on the net?” (p. 6) men reply that censorship and Netiquette bother them the most whereas women cite flaming, aggression, and generally rude communication as what bothers them the most. Men desire a civil libertarian template in which freedom of expression takes precedence over rules of conduct; women seek freedom, ironically enough, from masculine abuses of freedom of speech. Such observations undermine claims for gender neutrality on the Net.

Gendered discourse ethics also establish a misogynist hierarchy for typical CMC. In that libertarian discourse proves the norm for the Net and that masculine discourse ethics favor a rules free environment, Net discourse norms favor masculine voices and marginalize feminine ones: “civil libertarian values have traditionally constituted the dominant ideological context, and where few structures are in place to sanction anti-social behavior, aggression tends to prevail over less aggressive behaviors” (Herring, 2001, p. 7). Men dominate professional list-servs, such as LINGUIST (Herring, 1994), through the use of aggressive postings, flaming, and other forms of discursive intimidation. Women are often ignored or ridiculed as too soft on such lists. Other lists that are traditionally feminine and have posted rules of conduct (i.e. Netiquette), are marked by polite, courteous, and complimentary exchanges, in contrast to supposedly open forums. Men, however, tend to decry such feminized spaces as special interest spaces or as examples of censorship on the Net:

. . . tension exists between the conventionally masculine value on agonism and the conventionally feminine value on social harmony: the contentiousness of male messages tends to discourage women from participating, while women’s concern with politeness tends to be perceived as a “waste of bandwidth” by men, or worse yet, as censorship. (Herring, 2000, p. 3).

Furthermore, some men will even join such groups to intentionally disrupt them through flaming in order to make sure the Net remains a libertarian free space. While such attacks are disheartening, the fact that by establishing rules of conduct that respect feminine discourse ethics can create cyberspaces that allow for feminine participation. I have established rules of conduct for my online forums to protect feminine voices from flaming. I should also add that traditionally feminine fields of study (e.g. education) and policed academic environments (e.g. monitored online forums) tend to show a significantly lower amount of flaming (Herring, 2001, p. 7).

In order to establish rules of conduct that allow for participation by conventionally feminine voices, I wrote the following rule in my syllabus for online forum participation evaluation: “I expect that we can remain civil in all class dialogue and respect, no matter how much we may disagree, others’ comments and responses.” Furthermore, I listed as criteria for grades the following matters of Netiquette: for an A, “Corresponds thoughtfully, weekly, respectfully; Inspires dialogue with others; Issues you address and responses to others’ issues are insightful; Encourages dialogue not squelch it; Refrains from sophomoric taunts, tirades, and sloppy thinking; and Overall, excellent dialogue;” for a D, “Corresponds infrequently or disrespectfully; Shuts down conversation; Relies on taunts, logical fallacies, and belittlement; Does not understand issues” [See Appendix 4-1 for more details]. One can see how I emphasize civil, respectful dialogue as an ethical norm for this cyberspace. Some people may rail against my policing of the classes’ online forum, I rely Herring’s (2001) insight:

Female students also participate more – sometimes more than male students – in online classrooms in which the teacher controls the interaction, even when the teacher is male.

While this result may appear initially puzzling – how can women be “freer” to participate when they are “controlled” by a group leader? – it makes sense if the leader’s role is seen

as one of ensuring a civil environment, free from threats of disruption and harassment (p.

7)

My intention is to regulate discourse in such a manner that women can participate. I have on occasion privately reprimanded a person for responding to a peer disrespectfully (so far this has only been young men) and the behavior has ceased. Additionally, I address masculine and feminine discursive ethics in class respecting how male students tend to dominate class and receive more attention, so I explain my rationale for the rules of conduct. Finally, it is a foolhardy notion to believe in rules-free discourse. Masculine ethics for discourse act as rules, so the notion of a totally free space for discourse is a means for closeting masculine privilege. To echo Foucault (1980), we never transcend discursive regimes; we simply mask privilege through the myth of freedom.

While I was confident that the rules of conduct I established helped to secure a civil environment, I still desired to put the question to my students to see what their reactions were to the rules and gendered discourse with the following question:

What role does gender play in face-to-face communication that an online forum's lack of proximal social cues (e.g. tone, loudness, eye-contact, bodily positioning above or below another, talking out of turn, dominating conversational flow, etc . . .) disrupt? In other words, did the lack of face-to-face communication modes affect how you could address some subjects?

One female student replied as follows:

I don't think that the lack of face-to-face communication affected my opinion; however, I do think it affected how I said things and I was able to forget my own role in the classroom, thereby making it easier to write and respond to others. [emphasis added]

Cecily often spoke in class, and could hold her own against her male peers in terms of being interrupted without being silenced and being able to reply in kind. I should note that of 22 women in the class, she was one of two who felt comfortable interrupting her male peers when they interrupted her, although she did not tend to interrupt her female peers. I need to add that all four males were out-spoken, did not flinch at interrupting their peers, and would aggressively challenge just about any comment they felt threatened masked masculine privilege in education. To wit, a female student, Judith, wrote,

I feel that gender roles played a part in our discussions. While the males were outnumbered [22:4], I still feel their voice was heard. The main thing I noticed was that just about every male in the classroom spoke up while not every female joined discussions. The online forum neutralized this and everyone said what they felt.

One can also see that even as confident as Cecily was in replying to her male peers aggressively in face-to-face dialogue, she felt more comfortable being able to communicate respectfully online. Another female student in the same class wrote that she was able to respond more comfortably online than in class, writing, “It is much easier to respond online than in class,” and yet another wrote that she liked writing “without being interrupted.”

Male responses tended to be quite different. One male wrote that “anonymity is important and vital, but people have to learn more about themselves to tolerate other people’s differences.” What interests me the most in this response is that a lack of engaging in face-to-face controversy is a fault that others unlike himself – “Honestly, I have no difficulty talking about anything . . . I would have rather talked to people face-to-face” – have to overcome as a social liability. Another male responded that he “wasn’t affected at all” by the difference between face-to-face and online dialogue, and that if some people felt more comfortable communicating online than in class, that

was “just because of their personal nature” hence disregarding the social constructs of embodied gender as merely “personal differences,” which is a long-standing means of masking socialized differences. One outspoken male concluded “As far as gender is concerned, I think our class proved that in the right environment, gender is a non-issue” even after young women had written that they felt intimidated by classroom dialogue and used the forum to express their ideas without having to deal with the face-to-face criticism that intimidated them.

Some women stated that the online forum helped because they are shy or quiet by nature, indicating to me that they have been socialized to believe that such conventionally feminine discourse norms are their natural way of communicating: “I know that my voice is very quiet, so I do not like to talk in class because most of the time people cannot hear me” and “I do feel that [the online forum] gave me a chance to speak more and let out my thoughts about the topics. I am a rather shy person and do not do well expressing my opinions during class even though I many times had things I would have liked to say.” I do not mean to besmirch their communication or in any way deride their observations of their communication; I do wish to point out that they both felt the forum gave them a means to communicate on even footing with their heavily out-numbered male counterparts. I would also like to add that I have never heard a male student tell me he is too shy or quiet to speak in class. Some did have rationales for their lack of face-to-face dialogue, but none admitted to shyness or quietness as these two traits are often considered conventionally feminine.

In conclusion, Herring’s findings coupled with my observations and student feedback, emphasize gender discrimination on the Net and the need for rules of conduct to limit such gender discrimination. I have sought to make my online forums a cyberspace that is intentionally feminine friendly and a locus for disrupting socialized, embodied habits. I do not buy into the

myths of online gender neutrality, much less the idea that the Net assures unfettered, transcendent communication. In the next section, I analyze myths of transcendence that also mask racial discrimination.

Cyberace

Much like the issue of gender online, Cartesian dualisms create opportunities for cyberspace to be a locus for oppression. Cameron Bailey (1996) argues that “virtual discourses recreate Cartesian power dynamics, racial prejudice, and exclusion” (p. 334). He critiques, like O’Brien (1997/1999), the hype of leaving behind the body to free the spirit and intellect online. The scepter of marginalizing binaries – male / female, straight / gay, white / black, rich / poor – become largely reinvested by denying the significance of embodied experiences. The dominant trope of the Internet surfers is a masculine, white, educated, affluent, straight man. The norms of netiquette largely reflect the aforementioned norms, and can be seen as an evolution of white flight. Living in physically isolated chat-rooms, surfers speak an exclusionary language, communicate from a safe distance, and establish community with little or no contact—suburbanization on the Net. Ironically, cyber-enthusiasts crow that the Net is degendered and transcends race: a utopia where one is free to truly be himself. Yet as Bailey writes, the Net reflects many adolescent male norms, such as the primacy placed on privacy, the ultra-competitive gaming environment, and hostility towards outsiders:

the online nation has constructed itself as a community that is not racist by stated principles but, because of the way nations are always constructed, has built affinities (and, by definition, exclusions) that have the effect of shunting aside certain voices, languages, and vernaculars. (p. 341)

The invisible racism is so prevalent, in fact, that a plurality of subcultures on the Net, taken in its very name as a singularity, gets written up in Time magazine as “the Internet is becoming Balkanized” (quoted in Bailey, p. 342). Ironically, the dominant culture is blaming e-subcultures for being marginalized and for practicing the sort of liberties that cyber-enthusiasts hype. This is yet another instance of closeting that needs to be challenged.

This sort of racial homogenization and closeting can be witnessed in my classes’ online forum. For instance, the following is a response from a class lacking racial diversity:

This is a very hard topic because I know from my experiences that diversity was addressed in my education, but not in a very affective way. Teaching your children about different races, gender, religions, etc. should be an on going thing. Our children should not only learn about African-Americans on black history month! Think about education from a black child's perspective. They learn about how their ancestors were slaves, and this is probably the first image they get (and this is the first education about blacks that all the other children get too). Their ancestors have a negative connotation. Think of all the books that you had to read in high school, how many were from women or distinct ethnic backgrounds? I don't think there should be 20 minutes left aside to learn about diversity. I think it should be integrated in various topics, subjects, and projects.

The original question was “If education is the ‘great equalizer’ (Mann), then why are white males of equal educational attainment compensated significantly more, on average, than women and people of color?” I read a fairly typical, safe response that diversity is something to be discussed in class as part of the content. The student does address that not enough emphasis is placed on diversity in the curriculum and that cultural pride may help minorities have more self-respect. However, she fails to note that her logic is a form of blaming the victim, that is African-

Americans need to be more prideful to succeed. Her posting was not challenged but encouraged, showing that most people in this class are unaware that asking the marginalized to pull herself up by her bootstraps is a way to closet the underlying problem, white, masculine privilege: “I agree with what you wrote, I just wonder how you should approach teaching our US history if you want to ‘sugar coat’ the topics so that the children have a better liking for their ancestors. How would you plan to teach this subject?”

The one African-American woman in the class had something very different to say:

The whole world, or at least a majority of it has a long history of discrimination against women for whatever reason, and America has a long history of discrimination against any non-Caucasian person. Why that fact would all of a sudden simply disappear just because that woman / minority individual happens to be educated is, sorry to say, one of the most unrealistic theories ever formulated. If years of protests, marches, speeches, etc. against discrimination haven’t ended discrimination against women and minorities, what makes anyone think that education is going to magically equal out everyone’s status in society. Joel Spring summed it up nicely with his statement in his book that “equality of opportunity means that all members of a society are given equal chances to enter any occupation or social class. It does not mean that everyone will have equal incomes and equal status.” I think that the keyword in Spring’s statement is opportunity. In the professional world all individuals with a certain educational background are given opportunities, but many times unless you are a white male you are not given a reasonable / equal chance along with that opportunity.

You can throw all the statistics of performance, dependability and financial background you want out there to try to explain why white males are given more money than women

and minorities, but the bottom line is, people have less respect for women than they do for men and people are racist. No amount of education is going to delete that fact.

I had hoped that a classmate would respond to this, but perhaps given the ready acceptance of social norms, it is better that no one did. I responded out of a sense of despair to the dominant myths. I felt that I may have exposed Laverne to ridicule, and felt impotent to really do much of anything.

Given how the students, after being exposed to challenging texts such as Joel Spring's (2001) American education, Jackson Katz's (1999) Tough guise, Lee Mun Wah's (1994) in The color of fear, and Jonathan Kozol's (1991) Savage inequalities, they may have examined their ingrained beliefs with a bit more criticism, but that is a challenge for me to find better ways to foster critical inquiry.

Many students may be deluded by optimistic messages coming through the mass media that racism is a problem of America's past. Many students either see racism as a solved problem or an African-American, Native-American, Latino, or (rarely) Asian problem—not a white problem. I often hear rhetorical questions that shift the blame for racism to its victims: "Why can't blacks just get over it?" [I assume that "it" is racism?] "The civil war was over, what, a hundred years ago?" The logic here is to first blame the victim and second to cast racism as institutionalized (de jure) racism alone, not current cultural (de facto) manifestations as unequal salaries and closeted bigotry. One way inequality is masked, then, is to oversimplify racism. Such is the case with identifying the digital divide.

The facile premise of the digital divide is that access to computers alone will create effective avenues to racial equality in highly lucrative, high-tech employment. To disrupt such an oversimplification, scholars and analysts are opening the perimeters of investigation to include

computer usage methods, teacher training, instructional opportunities for creative usage, Internet access, and access to computers at home (part of the public / private binary). Therefore, marginalization also appears in facile examinations of the digital divide as simply more computers in predominantly white suburban schools than predominantly black inner-city schools.

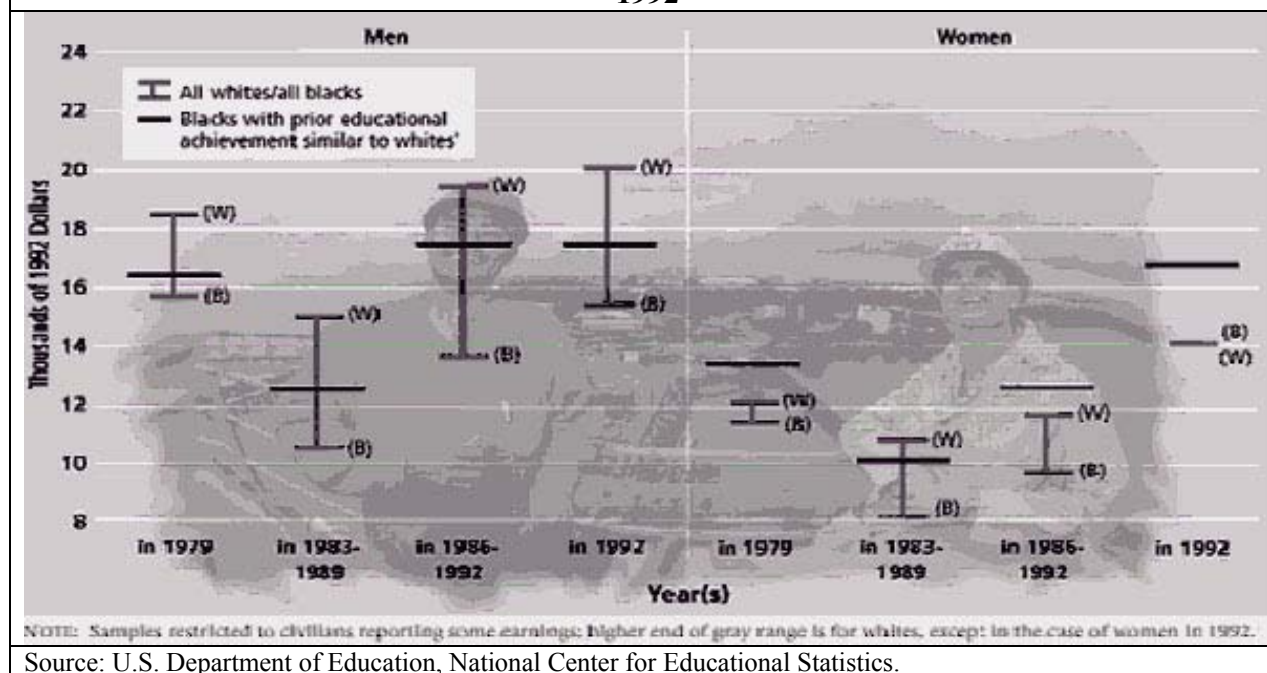
It may come as a surprise to many people that the basic digital divide in education (access to computers at school) has significantly decreased from 1984 (16% black-white gap) to 1997 (6%) (Krueger, 2000). This new found equity in access should solve many political, social, economic, and educational problems, according to conventional wisdom. If one considers, however, other factors and looks at data and consequences, this facile assumption proves unwarranted. Many disparities remain: white-Hispanic discrepancies, Internet access, how computers are used (drill-and-practice versus creative applications), and employment compensation by race.

Alan Krueger (2000) analyzes findings from various October Current Population Surveys (1984, 1989, 1993, & 1997), reviews the United States Department of Commerce's report Falling through the net: Defining the digital divide (1999), and a national survey conducted in 55,000 American households as his primary data sources along with a literature review. He conducts his analysis for Stanford's Center for Advanced Study in Behavioral Sciences, Princeton's Industrial Relations Section, and the Joint Center for Political and Economic Studies. He premises his analysis with the following salient observation: "Schools can be a powerful force for bridging the divide in access to information technology; they can also reinforce existing gaps between African-Americans and members of other races" (p. 1).

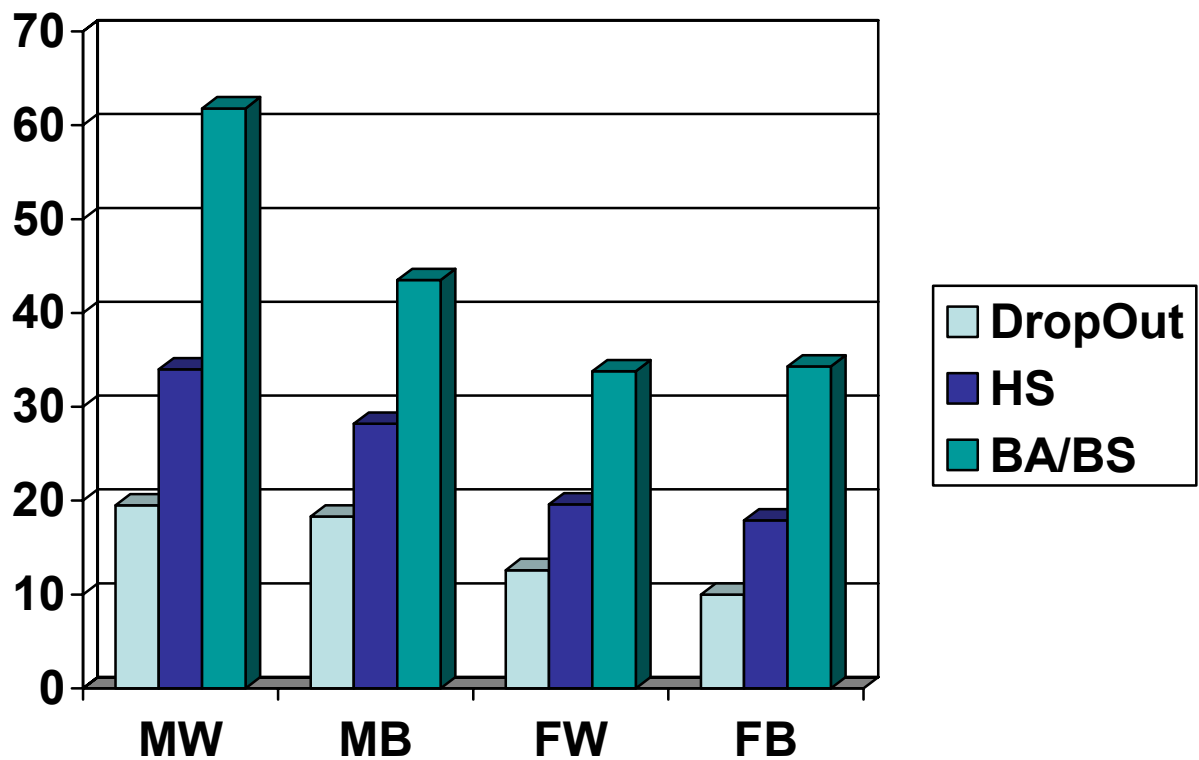
Looking more specifically at differences in black-white computer usage in schools, a 10% black-white gap exists in elementary schools, while the gap has all but disappeared in secondary schools (p. 2). When one adds this revelation with discrepancies in home usage (51% for white students versus 21% for black students) and that black students who have access to computers at home are less likely to use computers for school work (64% compared to 58%) (pp. 10-11), and that black students are more likely than their white counterparts to use computers for drill-and-practice programs than creative applications at school (e.g. webpage development, paint and movie programs), one can readily claim that schools and society are training blacks to be data processors—cyberculture's equivalent of the assembly line worker. Early age, familiarity with computers, freer home usage, and creative application usage are reserved for the managerial class, drawn more from whites than blacks and white collar than blue collar families. Moreover, a philosophy of power is being installed with drill-and-practice that differs from creative application usage—one of control in which the user and the computer program compete for preeminence. In drill-and-practice, little free-room is allowed for users, whereas in paint and draw programs, for example, users have a relatively greater degree of free-room to manipulate programs. Drill-and-practice is a clear example of disciplining students to feel inferior to a computer program. Even though most studies on the efficacy of drill-and-practice programs tend to illustrate an overall negative correspondence to improved basic skills tests achievement (e.g. the Iowa Test of Basic Skills and the Comprehensive Tests of Basic Skills) (Cuban & Kirkpatrick, 1998), drill-and-practice will remain intact in impoverished and predominantly black areas because of its other efficacy: disciplining students to be essentially malleable by the white supremacist capitalist patriarchy. Historically marginalized people, such as poor blacks, are a commodity function for the American economic machine.

The results in the workplace do not prove surprising: blacks are paid less than their white counterparts with equal educational attainment levels (see figures 6.3 & 6.4):

Figure 6.3: Average annual earnings for black and white young men and women, 1979-1992



The emphasis on computers in education should also not provoke incredulity with 51% of high school graduates level jobs requiring primary computer usage and 74% of undergraduate level jobs (Krueger, p. 15). Yet blacks in computer intensive employment are paid 15% less than their white counterparts at jobs requiring similar skill sets (p. 17). Blacks are less likely to use computers for multiple applications, have Internet access, and use computers for creative applications (e.g. webpage development, data analysis, report writing) than simple data input programs at work.

Figure 6-4: Mean earnings of people 25 years and older by race, sex, and educational level

Source: “Table 10. Educational attainment—Total money earnings in 1999 of people 25 years old and over by race, Hispanic origin, sex, and work experience in 1999.” *Money income in the United States—1999*. Washington, DC: U.S. Printing Office, (United States Commerce Department, 2000).

Confronting the null curriculum of heterosexism

In the last chapter, I laid out the binary logic informing homophobia and heterosexism. In this chapter, I illustrate how taking this binary logic out of the closet of the null curriculum has evolved in my classroom experience as an aspect of hyperpedagogy. In the past, I attempted to discuss homophobia in the classroom. No single issue provokes more awkward silence than homophobia. While Katz’s (1999) *Tough Guise* tends to provoke dialogue about the horrors of violence by men against women, violence by homophobes or in the name of homophobia remains largely closeted. When I first attempted to confront homophobia and heterosexism in modern American schooling, no student spoke up in class for gay rights and when I did so, the

class remained awkwardly silent. While many students can engage one another in debate over women's and African-Americans' rights, homosexuals find few vocal advocates. Perhaps gender and race are accidents of birth whereas homosexuality is a choice in their eyes. While I have attempted to deconstruct scripts of gender and race as social constructs, the dominant belief in homosexuality as a choice, an unnatural one, still reigns supreme in students' consciousnesses: “. . . change is possible. No one is born gay. It's a perverted choice one makes. Why would God make anyone homosexual then bar them admittance into the Kingdom of Heaven?” (<http://cnlgf.com/>). This quotation is taken from the “Christians No Longer Gay Living for God” web site and illustrates that homophobic bigots rely on specious definitions of choice, divine and natural order to substantiate their hatred. Interestingly, while no peer group has written their group research paper on homophobia and masculine violence, I have received some insightful individual research papers on these topics—notably, all by female students. I can only surmise that dominant social scripts about homosexuality cause students to remain silent in public forums.

In the fall of 2002, I stood in front of my class speechless; they were silent for the first time that semester. I had assigned a few texts addressing homophobia and heterosexism, and asked them for their input. Normally, this class needed little motivation to speak about gender bias in education, how unfair standardized testing is, how poor school districts perform poorly due to a general lack of funding, how race affects education, and many other topics. However, talking about sexuality and education was not something they felt comfortable talking about. When I asked incredulously, “So heterosexism does not affect teaching and learning?”, they looked at their feet, at the wall and ceiling, anything but at me. I asked if children taunted one another with the word “fag” and if this posed a problem, and received a smattering of muttered

“yeah”s from around the room. I was dumbfounded. I switched to gender bias in education, and then the conversation became, as usual, lively. We talked about how girls statistically fair worse than boys on the mathematical sections of standardized tests and how boys and girls statistically tend to do about as well as each other on verbal sections of standardized tests. We had a lively debate about the benefits of single gender education, yet whenever I tried to bring up sexuality issues, the class fell silent. Later during the semester, a few students wrote insightful and empathetic individual papers relating to homophobia in the docudrama The Laramie Project with their readings on homophobia from class to their intended teaching practices. So some people in class did sincerely care about homophobia and heterosexism. I needed to rethink my teaching strategy to address this closeting of heterosexism and homophobia.

The next leg on my journey was to read how other teachers have dealt with homophobia theoretically and in their classrooms, not just to understand that it is a K12 issue but a post-secondary issue as well. I turned to such theoretical texts as Eliot Eisner’s (1994) writing on the Null Curriculum as a source for closeting issues, Eve Sedgwick’s (1990) Epistemology of the closet to better comprehend how closeting works, and Bill Pinar’s seminal essay, “Understanding curriculum as gender text: Notes on reproduction, resistance, and male-male relationships” (1981/1994) to examine how the Oedipal Myth inculcated with the patriarchal curriculum exudes so much homophobic power in educational settings. I took strength from James T. Sears’ (1983) admonition to recognize the existence of homosexuals in the curriculum, and so I turned to educators who have sought just such recognition. AnnLouise Keating (1994) writes that the second obstacle for discussing homophobia successfully in class is a fear of public censure, remarking that “our silences do not really protect us from the oppressive social systems we fear; they only keep us paralyzed and divided” (p. 96). She addresses self-education, classroom

performance, focusing on multiple issues, and problematizing definitions, and historicizing sexual identities. I found her text a wonderful source for succor and advice. From her writings, I determined that first addressing heterosexism and homophobia online in our class' Blackboard discussion forum could help ease students entrée to discussing homophobia without first confronting their peers face-to-face intimidation. However, I looked to Alison Regan's text respecting how even in an academic online chat-room, heterosexuality dictates discursive norms, so I needed to be mindful of how homophobia crops up online, not just proximally. I decided that after discussing the issue on an online forum, we would watch Jackson Katz's film Tough Guise (Katz et al., 1999) to see how homophobic masculine violence affects educational settings.

The result has been that my classes readily engage in discussion concerning heterosexism and homophobia. My students willingly discuss such topics and voluntarily do research on the effects of homophobic violence and offer means to resist such violence in their classrooms. My narrative is one of hope and yet ongoing struggle as I seek to establish the need for resisting homophobia and heterosexism in my preservice teachers, most of whom identify themselves as heterosexuals.

One cohort group choose to write on masculine violence and homophobia (Banas et al., 2003), claiming that masculine violence in schools is an issue that affects teaching practices. They argue that education extends beyond the formal curriculum of teaching facts and concepts to students to larger social problems including gay bashing. They quote James Solheim's (1994) testimony to the House of Representatives hearings on the military's ban of homosexuals "That no homosexual person should ever be deprived of liberty, personal property or civil rights because of his or her sexual orientation" (p. 150) as a premise to their section on confronting homophobia in the classroom. The group members urge their peers to actively confront

homophobia in their classrooms as a teacher's ethical obligation. To aid their peers in doing so, they include the following list of suggestions from the Gay, Lesbian, and Straight Teachers Network (Gay Lesbian Straight Teacher Network, 1996): (1) guarantee equality, (2) create a safe environment, (3) provide role models, (4) provide support for students, (5) provide training for faculty and staff, (6) reassess the curriculum, (7) provide appropriate health care and education, (8) diversify library and media holdings, (9) broaden entertainment programs, and (10) do not assume heterosexuality [for GLSTN's full explanation of these terms, refer to Appendix 6-2]. In their class presentation, cohort group members elaborated on these points as activities, such as reading Walt Whitman's poetry and Oscar Wilde's plays as exemplars of homosexuals in the humanities. Notably, their peers enthusiastically engaged in these activities and I have been encouraged by how well this alteration in my teaching has progressed. However, this is not always the case.

Another cohort group, composed notably of all male student athletes and nicknamed the testosterone group, chose the same topic in a different class. While they did engage the class in problems associated with masculine violence against women (e.g. rape, morbid dieting, sexually demeaning fashions and advertisements), they neglected masculine violence's role in homophobia. As this group had volunteered to work on this topic and had not spoken with me regarding excluding homophobia, I marked them down for only covering half of the topic. The group members confronted me about their grade and upon hearing my rationale, complained I was being unfair. I heard later from their peers that they called me "fag" and "queer" behind my back as a result. While I have made significant strides towards addressing homophobia subsequent to my failures in 2002, I still have to confront some of my students resistance to challenging their deeply held beliefs.

Chapter summary

Respecting the challenging questions I pose, I bring up difficult questions because that is my ethical obligation as a Social Foundations instructor. However, I also recognize that by querying people's cherished beliefs and value systems, I need to find ways to invite them into the dialogue. My role is not to coerce students to answer in ways I would like them to; in fact, they usually do not. I do not expect that they will answer the ways I hope they would because I care more about sincerity than anything else. I do not wish to question deeply entrenched epistemes only to act as a corrective and coercive Panopticon. That has been a great challenge for me not to correct students but to challenge them to at least recognize that conformity and invisibility are topics worth addressing in education.

Freire (1970/2000) also seeks to provoke learners to name the world for themselves and for educators to have empathy with their charges, not sympathy for them. Like Boler (1999a) and Freire, I seek to invite students into critical dialogue. Because critical dialogue can be emotionally difficult, I have tried to not to push people to the binary of guilt or innocence. Either side of that reductive coin flip does not serve social justice pedagogies well. I hope instead to raise consciousness about the dilemmas that face teachers about race, gender, sexuality, and class. I need not only to expose them to these issues and to make hegemony visible, but to do it in such a way that intellect and ethical development takes place. Perhaps I am planting a seed that will germinate later.

I end this chapter by examining how Cartesian binaries inform the invisible marginalization occurring in cyberculture. I raise these as challenges to my peers and to my preservice teachers alike. Problems as imbued within social tropes and constructs are very difficult to identify, much less resist effectively. But that should not lead to despondence, but a

renewed effort and a greater sense of urgency. I leave you with this, what can we do to effectively resist the Cartesian dream of a mind / body split and the subsequent binaries it props up:

By body I mean whatever is capable of being bounded by some shape, and comprehended by some place, and of occupying space in such a way that all other bodies are excluded; moreover of being perceived by touch, sight, hearing, taste, or smell; and further, of being moved in various ways, not of itself but by some other body that touches it. . . . The power of self-movement, and the further powers of sensation and consciousness (sentiendi, vel cogitandi) I judged not to belong in any way to the essence of the body. (Quoted in Bailey, p. 337)

By seeing social justice educational issues as real, not merely theoretical or a newspaper issue, my students are experiencing embodiment. Embodiment in the context of hyperpedagogy is a journey from the safe spectacle of sympathy to the lived experience of empathy, of honest concern for the socially marginalized other, be it a racial, gendered, or sexual gulf that needs to be broached.

Conclusion

In “The tree of knowledge,” Jorie Graham (1992) challenges us: “Have you ever to put your hand right in / to open it up and push it deep in there, / to make the other thing begin?” (ll. 20-22). I believe that hyperpedagogy has the potential to initiate this “other thing”—in this case, an alternative digital pedagogy to social-efficiency curriculum informed ideologies and methodologies. In her poem, Graham speaks out against entrenched Western epistemologies that inform masculine violence and feminine objectivity, and that invoking and provoking entrenched beliefs is fraught with danger, as Boler (1999a) also posits. But the danger is worthwhile because dominant, entrenched ideologies that inform digital pedagogies are closeting a great many agendas taken as facts, e.g. boys like computers, girls don’t; human information processing is natural; e-learning is just another medium equal to any other (no significant difference); the only way to determine if learning has taken place is through standardized, information-processing informed, tests. Hyperpedagogy is my way of sticking my hand right in the fire, to push it deep in there, to change how digital technologies are used.

In this document, I have explored six primary topics for developing hyperpedagogy: what is hyperpedagogy’s relationship to hypertext theories, how poststructuralist theories inform hyperpedagogy, how hyperpedagogy resists dominant assumptions made for information age pedagogies, how hyperpedagogy is indebted to *poiêsis*, how hyperpedagogy disrupts binary logical constructs inculcated within e-learning, and what hyperpedagogy as a praxis embodies. In the first section, I explained how hyperpedagogy aligns itself with Landow and Delaney’s (1992; 1994; 1997; 1993a) theories respecting hypertext, while distancing hyperpedagogy from modernist assumptions of hypertext as yet another media difference. I defined hyperpedagogy, accordingly, as the infusion of progressive, social justice, interactive pedagogies into online and

digital learning environments. Early hypertext enthusiasts theorized that hypertext's non-linearity disrupts modernist modes of cataloguing reality as hierarchical and consisting of finite and distinct matter, basing their speculations on postmodern and poststructuralist theory (Barthes, 1970/1974, 1977; Deleuze & Guattari, 1987; Derrida, 1966/1998, 1976; Foucault, 1972, 1977, 1980a). In disrupting Platonic / Cartesian assumptions regarding logic and ontology, hypertext – thoughtfully configured – can be utilized for non-binary logical inquiry. Such inquiry functions to make a rift in the fabric of binary privileging allowing for plural properties to exist in online learning environments. I conclude this first chapter by questioning some presuppositions in technocratic rationality that tend to marginalize the cultural other.

In the second chapter I delve more deeply into the metaphysics girding modernist binary thought. In particular, I explode classic notions of duality inculcated in dominant modes of Western epistemology and by extension pedagogy. To illustrate my point that the flight to objectivity is a means to make privileging invisible and thereby a cultural norm seen as natural, I deconstruct the facile logic informing No child left behind (Paige, 2002). I use contradictory logic to inform hyperpedagogy, and accordingly I turn to Haraway's (1991/2001) concept of cyborg and Latour's (1994) of congealed labor. The significance is to see past essentialist ideologies informing dominant trends in so called educational reform, which is as the phrase "back-to-the-basics" implies a reaction not a reform, including e-learning. Seeing humans and technologies as intertwined and logically connected, mutually signifying entities, further frays the worn edges of modern, essentialist pedagogical ideologies.

In the third chapter, I illustrate how hyperpedagogy repudiates dominant information age pedagogies. I have traced a progression of factory metaphor learning models from Bobbitt (1918; 1924) to Tyler (1949) and emphasize how hyperpedagogy relies instead on Deweyian

pragmatism. Pragmatism, with its core belief in interactive learning and learning as disequilibrium, denies pedagogical models premised on learners as passive recipients of wholly formed facts and bits of isolated information. Pragmatism views learning as social intercourse in which people adapt ideals to realistic situations. Changing perspective from learning as individual to social, imbued within a cultural matrix, I turn to curriculum theorizing. My critique of scientific curriculum making is steeped in curriculum reconceptualist theory (Michael Apple, 1990; Applebee, 1996; Doll, 1993; Eisner, 1994; Greene, 1971/1997; Kliebard, 1975/1992a; Marshall, 1999; W. Pinar, 1978/1997, 1994; W. Pinar, Reynolds, Slattery, & Taubman, 1995; Walker & Soltis, 1997) and rebukes the premise that education occurs something like a data download for a computer.

In chapter four, I elaborate on learning in a postmodern world as poetic creation, *poiêsis*. *Poiêsis*, calling something novel into being, denies Western metaphysics' assumption that nature is finite and made up of perfected, unchanging essences to be discovered by the enlightened mind. In such a cosmos, only one true answer to a question is possible, no matter the complexity of the issue. Hence, the educational problems (vaguely defined as impoverished people's problems) can be solved if the right solution is verified and applied rigorously for the benefit of the afflicted. On the contrary in a fluid and evolving universe, conditions, participants, and the intricacies of cultural action influence multiple possible actions to be taken to address an issue that is likewise multiple, complex, culturally imbricated, and evolving.

Currently this controversy between assuming a finite and perfectible cosmos and postmodern, decentered, and infinitely changing universe rages among proponents and opponents of the educational reform movement because the movement towards standardized curricula and high-stakes testing assumes the former cosmic perception. In the limited cosmos

perspective, knowledge is finite and perfect—the one right answer in a multiple choice world. Students experiences and attitudes cloud the reality of the correct answer because classic epistemology, as represented by Plato’s “parable of the cave” (ca.380bce/1985), posits that essential facts cannot be corrupted by the contingencies of existence because humans are innately fallible. People misperceive the transcendent real by confusing it with the circumstances of mundane existence. From this perspective, a test formulated on facts derived by experts and hierarchically disseminated to unenlightened students makes perfectly good sense. If one sees the universe as changeable, dependent upon context, however, such tests do little to inspire creativity and problem-solving in context skills. Therefore, poetic education premises that education is a change in habits through disequilibrium and this occurs in solving realistic and meaningful problems. In the context of the Social Foundations of Education, this problem solving relates often to addressing the very real concerns of marginalized learners.

In chapter five, I examine how classic metaphysical binaries categorize the good from the bad and how all too often the positive binary is white, affluent, heterosexual, and male and the bad is the other: non-white, poor, homosexual, or female. In e-learning people will often premise an escape from such marginalizing binaries (Bagui, 1998; Callahan & Switzer, 2002; Dreyfus, 2001; William Gibson, 1986; *Leadership & Technology: Keys to Transforming Education*, 2002; Molnar, 1997; Rhinegold, 1993; Tergen, 1997; Tergen & Lechner, 2000). This escapist fantasy assumes that e-learning is a form of disembodiment, that people transcend their race, their class, their gender, and their sexuality. However, habits are embodied, so escape is about as possible as having an intellect exist independently of a functioning biological body. Since escapism proves an inadequate and highly biased option, people have to confront categorical binaries beginning with the theoretical apparatus that supports such deeply ingrained cultural biases. In class, I

challenge preservice teachers to confront ingrained habits and attitudes first theoretically, then with particular cultural issues such as the ramifications of race, class, gender, and sexuality biases in the classroom.

In the final chapter, I expand from the theoretical to the practical. Compelling students to confront deeply ingrained habits as a means to social justice pedagogies adaptation can prove a very emotional endeavor. Inviting preservice teachers to inspect their beliefs can prove very challenging for them and me. I reflect, in this chapter, on how together we delve into confronting classism, racism, misogyny, and heterosexism using computer mediated communication to make what is understandably difficult easier to broach. One of the goals of hyperpedagogy is to use e-learning to inspire creative learning solutions for realistic issues because such problem-solving often proves highly charged. By offering a rhetorical breathing space in which students wrestle with ideas in hyperspaces not in face-to-face confrontations, the distance offers students a tool to fathom the depths of an emotional issues without feeling forced to answer a difficult question publicly and immediately. The relative safety to consider ideas thoughtfully has proven a boon to my desire to address issues of marginalization and have these issues met more with reflective acceptance than reactive resistance. The results has been that students tend to react less and reflect more when confronting these issues. This is very promising, and so I will continue to experiment with iterations of hyperpedagogy.

I have attempted to make the theory I invoke more tangible by illustrating hyperpedagogy in action through case-studies. I have been experimenting with discursive online forums to see if I can put these theories into action—to make them a praxis. I feel that the online forum affords for more intimate and discomforting dialogue than class alone. I am in now way endorsing hyperpedagogy as a replacement to human to human, proximal communication, but look for

ways to meld burgeoning information age hype to social justice and poststructuralist concerns.

The online forum is happily inefficient; it is provocative; it raises more questions than it answers; it seeks for disequilibrium. These examples are not meant to be the entirety of hyperpedagogy, but rather a synecdoche of what it may be.

To conclude, I invoke T.S. Eliot's The waste land because like Eliot I have found the modern era a cultural wasteland, a wasteland of intellectual, emotional, and spiritual endeavors from which the West needs to awaken to imagination (Southman, 1994). I can only hope that the modern ear gives way to the postmodern like the Hollow Men: "This is the way the world ends / Not with a bang but a whimper." (ll. 88-89). A way out of this wasteland is to embrace emotion, danger, discomfort, and to give voice to the other. Coupled with embracing otherness is to deny binary logical constructs that marginalize.

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APPENDICES

Appendix 1-1

Cohort Research and Report

In addition to tasks 1 and 2 mentioned in the last section, your cohort group is required to carry out independent research on a topic you choose from the following list:

- A. Should the separation of Church and State be maintained?
- B. Should we have compulsory school attendance?
- C. Should multiculturalism permeate the curriculum?
- D. Are school integration efforts doomed to fail?
- E. Have public schools failed society?
- F. Is school choice a good idea?
- G. Is full inclusion of disabled students desirable?
- H. Should technology lead the quest for better schools?
- I. Is teaching a profession?
- J. Is it possible to secure the equality of educational opportunity?
- K. Can character education help prevent moral decline?

I am very willing to consider alternative topics if everyone in your group is interested. You will need my approval before selecting an alternative topic. Cohort research counts for 20% of your grade.

Cohort groups must research their topic thoroughly and provide a report of no less than 4900 and no more than 5100 words (excluding bibliography) to everyone in the class including the teacher.

You must deliver this report by means of the course listserve by 4 p. m. Friday before class the following Tuesday. Late reports will be penalized one fraction of a letter grade for each day it is late (e.g., A to A-, B- to C+, etc.).

The report must include all of the following:

- a. What are the relevant facts?
- b. What are the most prominent positions taken on these questions?
- c. State the argument offered by each position.
- d. What backing, warrant, and evidence do they offer?
- e. What position does your cohort group take on this issue?
- f. What are your backing, warrant, and evidence for your position?
- g. What are the implications of all of this for the classroom, school, your teaching, and community?

You will find that you do not have enough space to cover your topic completely. Part of your task is to map the territory well and present a coherent interpretation of facts and positions surveyed. **In this paper, every word must count. You must cite at least 9 references in your bibliography, no more than 5 of which may be from the internet.**

Each cohort group is expected to present a synopsis of their report in class and coordinate a class discussion on the topic for the first hour of class. This report will provide other members of the class a chance to express their opinions and, perhaps, require the cohort group to defend their conclusions. I consider the presentation part of the report. Your task is to elicit thoughtful, reflective discussion, not prove your group is right and everyone else is wrong. Still, you have a right to defend your position with passion, and, more importantly, good backing and warrant.

Appendix 1-2

Rubric for Assessing Cohort Teaching

For an **A**:

All of the criteria for a B grade must be present, and in addition:

The group demonstrates reading beyond the required materials (e.g., the optional on-line readings); and demonstrates good critical judgment in selecting additional material.

The group raises questions (and help classmates) raise questions that could stimulate further study.

The group looks for alternative perspectives on the issues in question.

The lesson includes tasks and activities that allow students some choice in what they do.

The lesson affirms collective self-hoods of students in the class, and at the same time gives students tools to understand experiences and perspectives of people different from themselves.

The lesson connects with experiences and questions students have related to diversity

For a **B**:

The lesson demonstrates that the group has a clear understanding of the required reading material

The group will demonstrate extension beyond the literal meanings of the readings, that is, draws inferences, generates hypotheses, and so on.

The lesson consists of tasks and activities that allow students some choice in what they do.

Students are allowed to participate actively in the lesson. The lesson builds on:

- What is familiar to the students, and engage them actively in thinking.
- The aspirations and strengths of their homes and communities, and
- The other strengths students bring such as their language, interests, and talents.

For a **C**:

The lesson addresses the key issues in the readings, but shows little evidence of going beyond the literal meaning of the readings.

For a **D**:

The lesson exhibits inaccurate or partial understandings of readings; it makes only tangential connections to students' experiences and backgrounds; students are not engaged.

Students that do not explore required material, do not understand the material, do not engage students, or fail to connect to students' experiences and backgrounds will receive an **F**.

The students taught will evaluate cohort teaching. My grade will be the average of the number grades assigned by the students (please familiarize yourself with the number grades as they break down in this course so you may perform this task properly). Teachers engage in evaluation constantly. It is not fun. You must strive to be fair. Artificially inflating grades to help fellow students is not responsible conduct. You are a student-teacher; that means you must begin now to think like a teacher. If you cannot strive to do this task responsibly and fairly, you should consider another career.

Appendix 2-1

Statistics from the U.S. Department of Education illustrate that educational opportunities are unequal with the most consistent determinants to achievement being parents' educational level and income bracket (Spring, 2002). When one examines the dropout rate by social class (Tables A-1 & A-2) and differences in educational expenditures by school districts (Table A-3) and subsequently poor academic achievement, a clear picture of social reproduction emerges. This discrepancy in expenditures by district leads to less satisfactory student-teacher ratios, outdated, if not inoperable, facilities, and poor teacher recruitment and retention in poorer districts in comparison to more affluent ones (Kozol, 1991).

TABLE A2-1 Dropout Rate according to Social Class, 1996

Social Class of Family	Dropout Rate (%)	Percent of All Dropouts
Upper (top 20% income)	2.6%	5.2%
Middle (includes upper-middle, middle and lower-middle)	10.8%	56.1%
Lower (bottom 20%)	22.1%	38.7%

Source: National Center for Educational Statistics, "Dropout Rates in the United States, 1996," <http://nces.ed.gov/>.

TABLE A2-2 Dropout Rates by Race and Gender, 1996

Characteristics	Dropout Rate (%)	Percent of All Dropouts
Sex		
Male	11.4%	51.3%
Female	10.9%	48.7%
Race-ethnicity		
White, non-Hispanic	7.3%	44.8%
Black, non-Hispanic	13%	17.6%
Hispanic	29.4%	37.6%

Source: National Center for Educational Statistics, "Dropout Rates in the United States, 1996," <http://nces.ed.gov/>.

While race-ethnicity, particularly among Hispanic populations, plays a role in this, as does gender to a lesser degree, the overwhelming factor is social class for determining the likelihood for dropping out. When one couples the dropout rate with expenditure discrepancies

within states by district (Image A-1), one can hardly blame the victim, but Gallop Polls have shown that this American pastime is not going away any time soon and the current climate is one of blaming the victims more so than seeing the need for more equitable educational expenditures.

TABLE A2-3 The Range of Expenditures in Public School Districts for Selected States, 1996

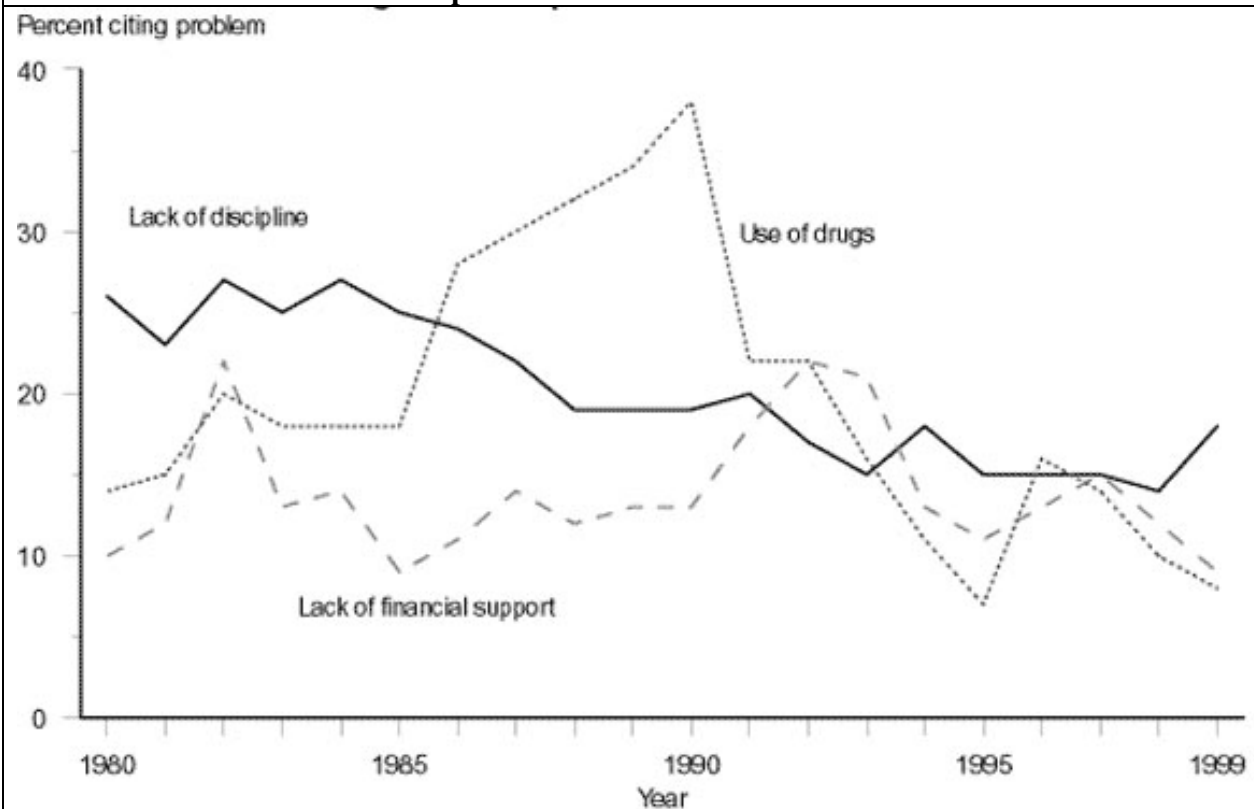
State	Type	Range between the 5 th and 95 th percentiles (in dollars)
Alaska	Elementary and secondary	\$7,657
California	Elementary	\$1,472
	Secondary	\$2,057
Connecticut	Elementary and secondary	\$3,239
Illinois	Elementary	\$4,017
	Secondary	\$6,795
Massachusetts	Elementary and secondary	\$3,545
Michigan	Elementary and secondary	\$3,368
Nevada	Elementary and secondary	\$583
New Jersey	Elementary	\$4,182
	Secondary	\$5,249
New York	Elementary and secondary	\$5,122
Pennsylvania	Elementary and secondary	\$3,933
West Virginia	Elementary and secondary	\$781

Source: Wayne Riddle and Liane White, "Expenditures in Public School Districts: Estimates of Disparities and Analysis of Their Causes (1996)," <http://nces.ed.gov/>.

In most cases, clear and profound differences in expenditures exist. Such discrepancies act as highly reliable indicators of academic success and life-time earning expectancies. While the statistics are this crystalline, most Americans continue to believe that the American educational establishment is fair and equitable and that the blame resides in poor student attitudes and behaviors.

The American public tends to blame the victim as Image A-1 shows. During the Regan Era, the public perceived that illicit drug usage would be the best indicator for a student doing poorly in school and now the issue of a perceived lack of discipline is taking precedence while a lack of financial support is declining the reflect the Bush's administration's media blitz, "No Child Left behind."

Figure A2-1: Items most frequently cited by the public as a major problem facing the local public schools: 1980 to 1999



Source: "The Annual Gallop Poll of the Public's Attitudes Toward the Public Schools." *Phi Delta Kappan*, various years.

Appendix 2-2

Below is InTime's checklist for observable behaviors of democracy. One should note that the Enlightenment ideal for dialogue, rationality, takes precedence. What this fails to address that Eurocentric concepts of rationality are largely misogynist and discriminatory to social practices of people of color as too emotional. The faith in observable behavior is misplaced because the ability to distinguish between providing what a teacher wants to hear and silent, yet critical engagement with this material is not addressed. Additionally, what are the ramifications for not exhibiting such behaviors?

Checklist of Observable Behaviors:

1. Communicating: an active, open exchange of ideas; requests for justification.
2. Understanding: logical conversation; knowing each other's concerns.
3. Being reliable: demonstrating ability; sending clear, simple messages and showing how your intentions are mutually beneficial.
4. Being rational: balance between defending ideas and challenging ideas; using emotional responses to help examine beliefs
5. Being noncoercive: being willing to consider the possibility of a change in your way of thinking; persuasion based on logic and principle
6. Accepting: showing mutual respect and learning from one another; listening to each other and participating in an open and balanced conversation about stated beliefs.

Source: <http://www.intime.uni.edu/model/democracy/empo.html>

Appendix 4-1

Contributions to the Online Forums

Each student is expected to make meaningful contributions to online dialogue forums that will be located on our Blackboard website under the Discussions topic. You should be able to relate issues brought up in class discussion and readings to your experiences. **Like class discussion, you will be asked to relate the readings that deal with global issues to local, specific contexts, i.e. you should ask yourself, “How does this issue affect me as a teacher?”** I urge you not to answer questions so much as to pose them so that dialogue can continue. Be open-minded and ask open-ended questions.

You must have a direct quotation to ground your claims!!!

You will be assessed as to how often you contribute to the list, how insightful your contributions are, how well they tie to our readings, and how well you encourage further discussion. To put it more concretely, to earn an A for this on-going assignment, you need to pose paragraph length discussion questions that illicit meaningful responses from your classmates, respond thoughtfully to your classmates, be able to logically support your points, and be able to relate discussion topics to class topics. Simply posting “yes” or “no” response questions, responding by writing inane comments such as “me, too,” posting infrequently or only towards the end of the semester, and merely parroting class texts will not earn as high marks. Moreover, I expect that we can remain civil in all class dialogue and respect, no matter how much we may disagree, others’ comments and responses.

Contributions to the online forums are due no later than 5 PM the Friday before the readings are due. This rule applies to your initial contribution to the list; you are encouraged to reply whenever and however frequently you choose to do so.

Rubric for assessing contributions to online forums

- A Corresponds thoughtfully, weekly, respectfully.
 Inspires dialogue with others. Issues you address and responses to others’ issues are insightful.
 Encourages dialogue not squelch it.
 Refrains from sophomoric taunts, tirades, and sloppy thinking.
 Overall, excellent dialogue.
- B The same as an A except to a lesser degree and with less consistency.
 Overall, good dialogue
- C Corresponds frequently and with insight on occasion.
 Overall, adequate.
- D Corresponds infrequently or disrespectfully.

Shuts down conversation.
Relies on taunts, logical fallacies, and belittlement.
Does not understand issues.

F Fails to correspond or is required not to respond.

Nota bene: I hold the option to stifle dialogue that is mean-spirited and a disturbance to class.

Appendix 6-1

Cohort Research and Report

In addition to tasks 1 and 2 mentioned in the last section, your cohort group is required to carry out independent research on a topic you choose from the following list:

- What are the ramifications of church involvement in education?
- Why is school attendance compulsory? What alternatives exist and who can afford to take advantage of these and why do they do so?
- How do gender issues affect how-paying, high-profile educational tracks, such as Technology, Computer Science, and Math?
- How can teachers address issues of masculine violence and homophobia?
- How does high-stakes, standardized testing affect education and what is the impetus for this latest call for “back-to-the-basics?” Who tends to support this political and cultural agenda and why do they do so? Who tends to oppose this movement and what do they claim as justification for their resistance?
- How does American education tend to disregard historically marginalized cultures and peoples? What can be done to ameliorate this situation?
- How does school funding distribution reflect on American culture? Whose goals are being met and whose are being marginalized?
- What are some of the driving forces behind the choice/school vouchers movement? How may vouchers affect education?
- How is digital technology and mass media used in schools and what effects do these have on a pluralistic culture (think gender, class, and race)?
- How does the mass media tend to portray schools, especially schools from differing cultural circumstances?
- How has the war on terror affected American classrooms? Look at funding, cultural stigmatization, curricular alterations, etc...
- Why have American schools become a dumping ground for America’s perceived cultural ills? Why is this political process expedient and what does this tell us about dominant groups in American culture? Why do politicians run on educational platforms that preach “tough love”?

I am very willing to consider alternative topics if everyone in your group is interested. You will need my approval before selecting an alternative topic. Cohort research counts for 20% of your grade.

Cohort groups must research their topic thoroughly and provide a report of no less than 8 pages and no more than 12 (excluding bibliography) to everyone in the class including the teacher.

You must deliver this report by means of email to me by 4 p. m. Friday before class the following Monday. Late reports will be penalized one fraction of a letter grade for each day it is late (e.g., A to A-, B- to C+, etc.).

The report must include all of the following:

- What are the relevant facts?
- What are the most prominent positions taken on these questions?
- State the argument offered by each position.
- What backing, warrant, and evidence do they offer?
- What position does your cohort group take on this issue?
- What is your backing, warrant, and evidence for your position?
- What are the **implications** of all of this for the classroom, school, your teaching, and community?

You will find that you do not have enough space to cover your topic completely. Part of your task is to map the territory well and present a coherent interpretation of facts and positions surveyed. **In this paper, every word must count. You must cite at least 7 references in your bibliography, no more than 4 of which may be from the Internet (unless the source is also available in print). Regarding Internet sources, use referred, qualified sources, such as Eric, Rethinking Schools, Education Week, and the Kappan, all linked to our class website.** Each cohort group is expected to present a synopsis of their report in class and coordinate a class discussion on the topic for the first hour of class. This report will provide other members of the class a chance to express their opinions and, perhaps, require the cohort group to defend their conclusions. I consider the presentation part of the report. Your task is to elicit thoughtful, reflective discussion, not prove your group is right and everyone else is wrong. Still, you have a right to defend your position with passion, and, more importantly, good backing and warrant.

Responses to cohort research papers

Students will create a collection of response papers (10% of the final grade). These will consist of four one-page reader responses; that is, one for each cohort group research report. **You need to have your response paper ready for the class meeting in which a given cohort group presents their research.** That means you will need to read the cohort group research report prior to class. That is why cohort groups are required to have their papers ready by 4 p. m. the preceding Friday.

Before the cohort group presents their research paper, you must submit your response to the appropriate response forum online. By the end of the semester, each student should have 4 responses they wrote in response to the cohort group research report.

Appendix 6-2

1. GUARANTEE EQUALITY

Gay and lesbian members of the school community need to know that their schools value equality and that they are protected against discrimination. Schools should add “sexual orientation” to their non-discrimination statements in all school publications as a way to communicate their commitment to equal treatment for all.

2. CREATE A SAFE ENVIRONMENT

Every member of the community has a right to play his or her role without fear of harassment by peers: it is the school's obligation to take pro-active measures to ensure this right. However, in too many schools, physical and verbal harassment against gay and lesbian people is the norm. Schools must make it clear that neither physical violence nor harassing language like “faggot” and “dyke” will be tolerated. Clear harassment policies, which include sexual orientation as a protected category, must be developed and then publicized to the entire school community, so that the consequences of and procedures for dealing with such behavior are clear to all.

3. PROVIDE ROLE MODELS

Studies consistently show that personal acquaintance with gay and lesbian people is the most effective way of reducing homophobic bigotry. Both gay and straight students benefit from having role models such as openly gay teachers coaches and administrators: straight students are offered an alternative to the inaccurate stereotypes with which they have been raised, and gay students get the chance (often for the first time) to see healthy gay adults, which gives them hope for their own future. Schools need to create the conditions necessary for gay faculty to feel safe in “coming out,” just as heterosexual faculty “come out” daily through such acts as wearing wedding rings.

If no role models are available from within the school community, the school must work to bring in such individuals from beyond the campus. Inviting presenters from a local gay and lesbian speakers bureau, gay youth group, or college gay and lesbian student association can help fill the gap left by the absence of openly gay faculty. These measures, however, cannot substitute for having on-campus role models, and should be seen as interim arrangements until these can be provided.

4. PROVIDE SUPPORT FOR STUDENTS

Peer support and acceptance is the key to any student's feeling that he or she "belongs" in the school. Gay-Straight Alliances" have been the key to creating such an atmosphere in many schools. These groups welcome membership from any student interested in understanding issues of homophobia and sexual identity, regardless of sexual orientation. They have been successfully established in all kinds of schools and in communities as diverse as Los Angeles, Chapel Hill, N.C., Lincoln, Nebraska, and Minneapolis. The diverse range of schools which now have "GSAs" indicates that, if there is a will, there is a way to establish one in any school.

5. PROVIDE TRAINING FOR FACULTY AND STAFF

School staff need to be equipped to serve all the students with whom they work, including gay and lesbian ones. Understanding the needs of gay and lesbian youth, and developing the skills to meet those needs, should be an expected of all teachers. Schools must provide the ongoing training necessary for the faculty to fulfill this expectation.

6. REASSESS THE CURRICULUM

Teachers need to incorporate gay and lesbian issues throughout the curriculum--not just in classes such as health education, but in traditional disciplines such as English, History, and Science. This can be done in three ways. First, incorporating new scholarship in fields such as

gay history can now be done easily, due to the proliferation of such material in recent years.

Second, teachers can address the impact of sexual identity on works by gay and lesbian people already included in our curriculum, such as the novels of Virginia Woolf, the music of Tchaikovsky, or the poetry of Walt Whitman. Finally, teachers can undo the “hidden heterosexism” of the curriculum, such as the exclusive use of opposite-sex couples in math word problems and foreign language exercises. The bulk of the school day is spent in class; as long as gay and lesbian issues are seen as “special” and outside the classroom, students will continue to see gay and lesbian people as marginal.

7. PROVIDE APPROPRIATE HEALTH CARE AND EDUCATION

While being gay is not a “health issue” (any more than being heterosexual is), health education on sexuality and sexually transmitted diseases should sensitively address the particular issues of gay and lesbian people in this field. Counselors and other health staff should be particularly careful to make their sensitivity to gay issues clear, as the history of psychiatric “cures” for homosexuality has led to a climate of distrust between many gay people and the health care profession.

8. DIVERSIFY LIBRARY AND MEDIA HOLDINGS

Often, the library is the first place students turn for accurate sexuality information. Too often, few or no works on gay and lesbian issues are found there. Librarians and media specialists need to be sure their holdings are up to date and reflect the diversity of our world. The existence of collections addressing gay and lesbian issues needs to be communicated to the community, through events such as book displays which include gay and lesbian titles.

9. BROADEN ENTERTAINMENT PROGRAMS

“Extracurricular” activities often set the tone for the community. Programs such as assemblies and “film nights” should regularly include gay and lesbian content that reflects the diversity of our nation.

10. DO NOT ASSUME HETEROSEXUALITY

The constant assumption of heterosexuality renders gay and lesbian people, youth in particular, invisible. Such invisibility is devastating to the individual's sense of self. Both the school as an institution and its professionals as individuals must be inclusive in their language and attitudes. Inviting “spouses” instead of “friends,” offering health care only to heterosexual families, and encouraging students to find opposite sex dates, are all inappropriate manifestations of heterosexism. By reminding themselves that gay and lesbian people are found on every staff, in every classroom, and on every team (which they are), faculty can “unlearn” heterosexism and become more inclusive in both word and deed.

NOTES

¹ Dialectics in this sense refers neither to a Hegelian or Marxist dialectic, but rather to one advocated by Harvey (1996). In Justice, Nature, and the Geography of Difference, David Harvey (1996) promotes dialectical logic as a way to confront positivism, naïve empiricism, and historical materialism with phenomenological, hermeneutical, and dialectical traditions. He emphasizes that reality is an event, a flow of and flux among processes that disperses Cartesian ideals of fixed essences, independent, a priori structures, and intelligently organized systems: “This [dialectical understanding of reality] transforms the self-evident world of things with which positivism and empiricism typically deals into much more confusing world of relations and flows that manifest in things” (p. 49). The primary difference a poststructuralist dialectic, as expressed by Harvey, has from a structuralist one is the lack of a teleological conclusion.

² McLaren (1984/1989) defines as a dominant culture exercising its power over marginalized groups through consensual social assumptions (common sense) and practices (norms). Often the actors do these assumptions and practices in ignorance; in fact, oppressed people typically reify these assumptions through their activities. This privileging remains largely hidden and unquestioned through such myths as the achievement of the individual and entrepreneurship. This blackboxing functions as “a prison-house of language and ideas, that is ‘freely’ entered into by both dominators and dominated” (p. 182). Hegemony is hidden so well that it exists in the very structures of language, biological determinism, religious beliefs, laws, institutionalized bureaucracies and their activities, and social agencies. The dominant culture fixes meanings as transcendent, beyond questioning; this can be seen in educational texts, including dictionaries, and of course, the text of texts – the Bible, the Koran, and the Torah. Gramsci (Hall, 1999) posits that a social class attempts to establish its ideology as preeminent, much like standardized

curriculum and common culture advocates (A. D. Bloom, 1987; H. Bloom, 1999; L. Cheney, 2001; L. V. Cheney, 1992a, 1992b; Finn, Petrilli, Vanourek, Cheney, & Thomas B. Fordham Foundation., 1998; Hirsch, 1988, 1999) argue that upper class Anglo-Saxon protestant culture is an American norm. Such ideological superiority in thoughts and deeds ensures control and obedience. As Stewart Hall (1997) argues categorization of things through concepts – how a culture defines one thing by its similarities and dissimilarities to other things – reifies power structures in that our means of identification as normal / abnormal binaries reflect cultural values not transcendent, inherent pigeonholes.

³ Even if Landow's predictions use overly deterministic syntax, this should not damn his entire project. Moreover, a researcher can use ideals from a flawed text keeping in mind such flaws by not repeating them.

⁴ Pang (2002) asserts that hypertext does not exist because the World Wide Web does not allow for interactive feedback, this is a clear red herring logical fallacy. To assume that Internet is synonymous with the WWW is to overstate one's case; moreover, hypertext does not presume that interactions require web browsers and modems. On the contrary, Landow (1992) presents hypertexts as being localized and global and does not predicate his theories on the WWW. Truly the Web does not offer that much interface, but other technologies do, such as list-servs, email, instant messaging, and flash programs, just to name a few. One other I have not mentioned is the traditional print book. If one regards the information as infallible, then the technology matters not a whit. On the other hand, if one engages in a conversation with the text while reading it, then once again the technology, by itself, does not really matter. The overriding factor is how cultural constructs text as open or closed systems. Hypertextuality offers more opportunities with

more interactive tools, but it does not dictate this change. Ironically, Pang engages in more technological determinism than Landow, of whom he accuses of doing just this.

⁵ Respecting learning styles, I believe that a brief review of Howard Gardner's (Gardner, 1999; Gardner, Lazear, & Linton Productions., 1995) theory of multiple intelligences is in order. Gardner writes that work in cognitive and differential psychology casts doubt on generic models of intelligence as purported by Herrnstein & Murray (1994). In their view, a multiple-answer test can provide a description of a person's singular "bell-curve" IQ. From this assumption of singular and definable intelligence, they fathom that means for educating are also singular. Most reputable and corroborative research finds such conclusions reductive at best, simplistic and mean-spirited in actuality. Gardner has defined at least nine different intelligences and consequent learning styles in America alone: (1) linguistic, (2) logical-mathematical, (3) musical, (4) bodily-kinesthetic, (5) naturalist, (6) interpersonal, (7) intrapersonal, and (9) existential. Not only are their different intelligences, but we apply these differently in selected contexts; we should not conflate this idea with a singular intelligence type for a person in all settings – the old dualistic fallacy of type-a and type-b personalities. Settings, mood, and preference all affect what intelligence one uses or combinations of these as well:

One could take the position that everyone should study the same thing in the same way, and be assessed in the same way. The standard view of intelligence leads readily, perhaps ineluctably, to that educational course. Yet, if there is validity to multiple intelligences – if individuals indeed harbor different kinds of minds, with different strengths, interests, and strategies – then it is worth considering whether pivotal curricular materials could be taught and assessed in a variety of ways. (p. 79)

These differences in mind are due in part to differing biological and cultural backgrounds, personal histories, and idiosyncratic experiences. In short, an accumulation of intellectual habits. Students do not arrive at school tabula rasa to be impregnated with facts. Students are pluralistically intelligent and affective beings signifying novel experiences through pluralistic lenses of past experiences, attention level, motivational level, attitudes towards education all with layers of social interface intervening. In sum, singular intelligence – static and universal – is hardly worthy of much credence, yet lamentably this discourse dominates educational discourse. To accommodate pluralistic intelligence, instructional designers need to provide a variety of entry points in accordance with predominant intelligence types: (1) narrational, (2) quantitative/numerical, (3) foundational/existential, (4) aesthetic, (5) hands-on, and (6) social. Telling analogies need also be included. For novices, creating scaled-down expert activities that correlate to their experiences can prove very effective; however, such analogies need to be explained as similes not reality. Students need also to approach the core discourse for a discipline. They need to see that a discipline is internally heterogeneous, dynamic, and in a state of flux at its core. Living such an experience can make topics come alive and pose important, inviting questions.

⁶ For the sake of anonymity, I have used pseudonyms.

⁷ For an in-depth reading of the relationship between Pragmatism and Poststructuralism, see Garrison (1999) and Garrison & Leach (2001).

⁸ Howard Becker (Becker, 1998) urges social scientists to study people not as objects with fixed essences but as organisms in action: “Focusing on activities rather than people nudges you into an interest in change rather than stability, in ideas of process rather than structure” (p. 46). If educational researchers can observe and evaluate students not as what we think they are in an

ontological sense but to observe and evaluate them for what they do, our assessments will be more satisfactorily tied to learning meaningful to students and not institutionalized presuppositions. He also urges researchers to reexamine conventional answers for what things are; we should suspend judgment until we have observed how a thing interacts relationally with others. With respect to educational design, this is good advice for both assessment and teaching. If we determine early on what a student is capable of doing, assign a person an entelechy, we should not be surprised if our formative evaluation becomes our summative evaluation – after all, we do hold the grade-book. If we assume in teaching that we know what a thing is before teachers interact with pupils in a learning environment, we do not allow space for constructing meaning. This is not to say we go into a learning environment as the instructor without an idea of what that thing is or that our opinion does not matter; on the contrary, as the most experienced person with regard to the content, our opinions are very important, but also open to interpretation and negotiation.

⁹ As Boler (1999a) points out, emotion can no more be separated from intellect as mind from body; Dewey (1916/1944) also recognizes this false dilemma as one of the scandalous dualisms that infect modernist, post-Cartesian philosophy. This ideal of the rational mind, as opposed to its binary, the emotional mind, is closely related to the concept of hysteria. Learned, disciplined men are intellectual, rational, searchers for truth who do not allow subjectivity and emotion to cloud their judgment. This exhibits a clear binary in which masculine is superior to feminine, rational to emotional, intellect to body. This is an age-old myth constructed and reconstructed to maintain hegemonic oppression.

¹⁰ I use psychological here to indicate both intellectual and emotional environment because I can see no existential way to separate the two.

¹¹ What Edward Schiappa (1991) concludes from the man-measure fragment is that this was originally intended to repudiate Parmenides' Eleatic monism (all things are one), a belief system which denied relational truth and upheld the ideal that there are timeless right (monistic) answers that cannot be contradicted (pp. 121-2). This is what Havelock identifies as the "Homeric State of Mind"—the monolithic mythic-poetic monism (p.123). Either a thing exists or it does not, which Protagoras refutes by contending that a thing can both exist and not exist dependent upon the frame of reference. Additionally, Susan Jarratt (1991) notes that, "[the sophists] were skeptical about a divine source of knowledge or value and focused attention on the process of group decision-making in historically and geographically specific contexts" (p. xx).

¹² Various critiques of cyberculture have addressed the relevance of Cartesian disembodiment in Gibson's Neuromancer (1986), including Scott Bukatman (1994/2000), Sadie Plant (1996/2000), Claudia Springer (1996/2000), Allucquère Rosanne Stone (1992/2000), and David Tomas (1989/2000).

¹³ Not all Instructional Systems Design (ISD) advocates promote modernist, conduit learning models. Others such as Hannafin (1999), promoting Case-Based Reasoning (CBR) and Shank (1999), promoting Learning-by-Doing, see distinct advantages for getting learners involved in intrinsically motivated learning simulations.

¹⁴ Of particular note are Dick, Carey, & Carey's (2001) heavily structuralist model and Mager's (1997) Instructional Objectives. Both these works assume that students must be guided as efficiently as possible to teleological goals. The overriding assumptions are that students are passive, human-information processing is the predominant model for learning, and predetermined goals and methods take precedence over learners' cultural context, prior experience, and intrinsic motivation.

¹⁵ Eric Alterman (2003) critiques Herrenstein & Murray's (1994) The bell curve as right-wing funded extremist rhetoric written to undermine affirmative action and other governmental programs aimed at addressing institutionalized racist marginalizing in American education. Alterman details how right-wing groups have financially supported this effort to the tune of \$100,000 grant from the Manhattan Institute, the Olin Foundation, and the American Enterprise Institute (pp. 93-94). The gist of Alterman's critique is that these right-wing think-tanks, part of what Alterman refers to as the Punditocracy (Experts and the World of Ideas), recruit marginal reactionary academics to write poorly researched and reasoned – for a critique of the science and logic see Gould's (1996) Mismeasure of man – but well funded and well advertised attacks on social welfare programs as ineffective and even racist.

¹⁶ Shank, Berman, & Macpherson (1999) describe their goal-based scenarios (GBS's) as learning by doing. They developed this strategy due to a need for radical change in how schooling is currently conducted. They note that the current paradigm of fact-based knowledge dominates practice. We reward trivia masters, not people who prove active expertise with such practices. They argue that we need to teach learners how to do things, not simply instill acontextualized facts. The emphasis should be on learning "how to," not simply "know that." Curriculum rarely offers students opportunities to pursue new knowledge to achieve their intrinsically motivating goals.

¹⁷ Throughout this document I will be referring to educational transactions using ecological metaphors. I believe that for too long, mechanistic tropes have dominated technology in education and that more suitable tropes can be found in Darwinian biology and subsequent Deweyan pedagogical philosophies. For more on Dewey's indebtedness to Darwin, please see Garrison (1999), Hickman (1999), and Lavine (1999).

¹⁸ For a more thorough critique of Murray's Losing ground, its differences with The other America, and the largesse and marketing sophistication of right-wing think-tanks and related publishing companies, please refer to Alterman (2003), pp. 92-102.

¹⁹ Eric Alterman (2003) notes that Friedman, a three time Pulitzer winner for the New York Times and a well respected foreign affairs correspondent, is hard to peg as either a liberal or conservative except when it comes to the new global economy. He is on record disparaging opponents of the World Trade Organization, a body of business leaders and government officials from developed countries seeking to exploit cheap labor from underdeveloped countries such as India and maximize corporate profits, as a "Noah's ark of flat-earth advocates, protectionist trade unions and yuppies looking for their 1960's fix" (Alterman, 2000).

²⁰ This student did not display hurt or annoyance. In class I made sure to explain why I had challenged him and many others in that I believe disequilibrium in education spurs critical thinking. His posts are much more imaginative and intimate now, not only because I challenged him but he senses that the forum is a space where he can experiment without being "wrong" as he has explained to me talking after class. I believe that challenging students need not be onerous but can be done compassionately, as a means to inspire not correct. I have other participants who still upload trite answers that seem perhaps to be right answers. I have challenged these participants at least twice, but have not continued to do so lest I'm just correcting them to be intimate and imaginative. I cannot force honest intimacy. They may imitate intimacy, but that defeats my purposes. If they opt to add their voices in a more creative manner later, wonderful. If they do not, I will not coerce them to do so.

²¹ I am using pseudonyms to protect my students' identities. Following Kirsh's (1999) advice not to seduce and betray participants, I will keep them anonymous. I have no intention to showcase their intimacies.

²² This section relies heavily on Dwight and Garrison's (2003) "A Manifesto for Instructional Technology: Hyperpedagogy" in Teachers College Record.

²³ For a detailed, yet depressing, analysis of Bush's unethical and expensive energy policy, see Alterman & Green's (2004) second chapter, "Drill and Cough: W.'s Environmental and Energy Policies".