
Seven articles are presented from a symposium on critical theory, cultural analysis, and the ethical aspects of the use of educational technology. Two papers deal with the educational philosophy of two modern thinkers, and others focus on educational technology in the modern or postmodern era. The following papers are included: (1) "Foucault and Disciplinary Technology" (Jane Anderson); (2) "Paradigms Reframed: Constructivist, Post-Industrial, Modern or Postmodern Educational Technology?" (Denis Hlynka); (3) "Foundations and Technology in Education: A New Area of Study within the AECT?" (Al Januszewski and Elisa J. Slee); (4) "Post-Modern Thinking in a Modernist Cultural Climate: The Need for an Unquiet Pedagogy" (J. Randall Koetting); (5) "Schools and Technology in a Democratic Society: Equity and Social Justice" (Robert Muffoletto); (6) "Critical Theory, Educational Technology, and Ethics: Helping Teachers Respond Meaningfully to Technology" (Randall Nichols); and (7) "Where in the World Is Jacques Derrida?" (Andrew R. J. Yeaman). (SLD)
Title:

Foundations Symposium: A Continued Dialogue on Critical Theory, Cultural Analysis, and Ethical Aspects of the Field

Chair:

J. Randall Koetting

Authors:

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Denis Hlynka
Al Januszewski and Elisa J. Slee
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FOUCAULT AND DISCIPLINARY TECHNOLOGY

"Where the sun lights up the swift joys of deprived animals."
...Baudelaire

Crisis of representation ("Let X equal X". Laurie Anderson), crisis of authority ("Your gaze stops on the side of my face." Barbara Krugar), crisis of subjectivity (Photographs of Cindy Sherman dressed up as many different women subjects. Who is the real Cindy Sherman?). Politics of the observed, politics of the observer (Van Maanen, 1988; Lather, 1991). The post-modern condition (Lyotard, 1984) necessitates that what claims to be real, true, universal, and timeless, may in fact be partial, time/place bound, incomplete and socially constructed (Toulmin 1990, Rorty, 1989). Kuhn writes about "paradigm shifts", Rorty about "historical contingencies", Foucault about "epistemes" and discourses, and Wittgenstein about "language games". As we draw to the end of the 20th century all that was understood to be true is up for question. Rather than seeking Truth, we are now encouraged to seek little truths which are situationally appropriate.

For Michel Foucault, it is important that we question everything, including law, science, religion, and Western philosophy. An ironic stance, disciplined thought, and practical wisdom helps people invent themselves, rather than being concerned with finding themselves. Foucault believes in reason, but he believes that it is important to place limits on reason and realize that there are times when humor, the imagination and the acceptance of contradictions co-existing can help people develop a healthy attitude about living in
this world. Rather than calling for unifying around a project, such as Habermas's emancipatory project, Foucault suggests accepting a society of difference and the developing of an ethos ("Life as art." Baudelaire). For Foucault, rather than being concerned with using language for converging on a concept of community, language should be used to open up possibilities.

Foucault works with what he calls methods of archeology and genealogy: he studies current conditions, tries to determine what has allowed these conditions to develop, and then opens up possibilities of new ways of looking at these issues. A focus in his study is the relationship between power and knowledge. For Foucault, those who seek and maintain power over others frequently use three disciplinary technologies which shape people into accommodating, docile bodies:

- **Surveillance** - ordering bodies in space and time so that they can easily be observed or think they are being observed.
- **The Examination** - testing people so that they can be compared with others in a group, while also be further individualized.
- **Normalizing judgement** - convincing people of correct action, thoughts, and truth.

Some questions concerning educational technology which emerge from my reading of Foucault include:

- Should we, as educational technologists, be concerned with how we position the whole bodies of the teachers and students?
- How can materials which aim at reliability, replicability, algorithmic decision making, control and quantitative evaluative measures develop the critical thinking capabilities of a person?
- Are there appropriate sites and non/sites for educational technology? If so, how do we determine appropriateness?
- What is our theory of instruction? Do we aim to teach students what they should learn, or do we aim to teach students how to learn?
- Is one a teacher's responsibilities making students comfortable with receiving directions and trusting information which comes from technology?


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Paradigms Reframed: 
Constructivist, Post-industrial, 
Modern or Postmodern Educational Technology?
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There is some confusion and some reluctance to accept the term "postmodern" within mainstream educational technology. Opponents argue that it is too vague a term, too slippery, too literary, too negative, or just plain inappropriate. Proponents argue otherwise.

"Modernity" reflects an almost scientific belief in the progress of the twentieth century. Yet others argue that modernity did not deliver all that it promised. That questioning attitude towards the thrust of modernism is a post-modern view.

There seems to be less concern less trouble when the noun is "industrialization." We have, likewise moved beyond the "industrial" revolution, beyond our fascination with the machine as savior, towards what has been dubbed a "post-industrial" world view, one in which the benefits of industrialization are accepted, but critically.

Psychology, for many the root metaphor for educational technology, has also made a similar move. The Behaviorist model led to the cognitivist. Today, constructivism is seen as a next step in the cognitivist road towards understanding how we understand. And what we are beginning to understand is that reality is not always just there, but like mathematics, technology and religion, it is a human construction.

The field of Artificial Intelligence has made similar shifts. A post-"artificial intelligence" era confronts reality and non-reality with "virtual reality." But virtual reality is not merely a science fiction concept in which one seems to step inside one's computer world. A virtual library is one in which all the books of the world are available to you, via simple technologies of data-base searching, electronic mail, and interlibrary loan services. A virtual classroom is one which is tied in to the entire world through electronic technologies.

All of the above are examples of the same "megatrend". Concentration on the "technical" is not enough. That provides a one-sided view of reality. Even culture, in a shrinking global village is becoming an ironic post-cultural phenomenon. In short, we need to be post-cultural; we need

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to be post-cognitive; we need to be post-industrial; we need to be poststructural; we need to be post-aesthetic. And the word which captures all of that is "postmodern."

Bibliographic Comment

The following entries represent some of the many writings which suggest a move away from the concept of modernity:

Saul, J. R. (1992). *Voltaire's Bastards: The Dictatorship of Reason in the West*. Saul pinpoints Voltaire as the beginnings of the rational order, the age of reason. But, Voltaire's followers bastardized his ideas and his ideals. Reason and rationalism don't work when led by bureaucrats and technocrats. And that is precisely what modern society has become. As one reviewer has put it, "John Ralston Saul wants to persuade us that real enlightenment lies not in the modern cult of Answers, but in the stubborn, sceptical and humane pursuit of Questions."

Barrett, William (1986). *Death of the Soul: From Descartes to the Computer*. Barrett identifies the seventeenth century as the beginning of modernism and in particular, modern science. While the early philosopher was equally at home in matters of science and soul, contemporary philosophers have become pre-occupied with data and information. What has been lost is a philosophy of mind, of morals, of the soul. If Nietzsche has argued that "God is dead", Barrett shows that it is us, that is our soul, that is dead.

Nisbet, R. (1980). *History of the Idea of Progress*. Writes Nisbet: "Faith in the dogma of progress is waning rapidly in all levels and spheres in this final part of the twentieth century...[The reason is the] erosion of all the fundamental intellectual and spiritual premises upon which the idea of progress has rested throughout its long history." (p. 9)
Our purpose in writing this paper is threefold: first, we would like to describe what it is that we think that those who affiliate with this "alternatives group" are interested in doing; second, we would like to show that a large number of these individuals study in an area of education that is commonly known as educational foundations; third, we would like to outline some of the ideas and considerations that would be involved in the creation of "Division of Foundations" within the AECT.

Admittedly, we are relative newcomers to the AECT. We are somewhat unclear as to what all this talk of 'alternatives' is about. It was a label that seemed to be in place when we arrived, and so, perhaps a little grudgingly, we will use it.

What are the individuals in the alternatives group interested in doing? The term alternatives group is perhaps a misnomer. After all, the word alternatives implies a certain degree of relativity, that is, it is an alternative to something. The AECT, as the mouthpiece of the field of educational technology, has, for some time, tried to define the field with/for some sort of clarity. The difficulty that the AECT has had in successfully completing this task (defining the field of educational technology) makes it equally difficult to define an alternative to it.

You can however, try to describe such alternatives in terms of function. That is you can show a little about how things differ from the mainstream of current study being done in the field of educational technology. Broadly speaking, those that affiliate with the alternatives group seem to differ from mainstream educational technology research when they conduct their studies by at least one of the following forms:

- they use different theoretical bases
- they use different research methodologies
- they ask different sorts of questions

Like others that study in the field of educational technology, the folks in the alternatives group both pose, and try to answer, questions of "how to?" One of the ways in which the members of the alternatives group can differ from the "traditional" investigators of educational technology is that they may start with a different theoretical base. Here's an example: How would we design instruction without task or hierarchical analysis? This question would emanate from a different theory base because it would challenge some of the basic practices of our field, namely that task or hierarchical analysis is even appropriate.

Another way in which the members of the alternatives group may differ is in the research methodologies employed to collect information. For example, members of this group are particularly interested in exploring conceptual and qualitative research methods (another concept that seems to defy consensus meaning) in their investigative efforts.
The questions that are posed by members of this alternatives group can also differ significantly from those that are asked by AECT members that are studying educational technology. One example revolves around the seemingly very simple question, "Why should we do something?" (Such as recommend a particular instructional intervention.) Often, traditional educational technologists might recommend a particular practice and then study the idea of this particular intervention to see if it "works". Conversely, many of those involved in the alternatives group would study the action or intervention to see if it is "right" or "good." In this case a conscious effort would be made to differentiate between an idea that "works" and an idea that is "right or good." The thought is that the two ideas are simply not, a priori, the same. An idea that "works" in a given situation is not, de facto, "right" or "good" for it. The emphasis for this sort of question is less on the 'technical' (How can we do it?) and more on the 'moral' (Should we do it?) and the 'political' (What would it mean for our greater good?).

Another distinction that might be made, by virtue of having reconstituted the "why" question, is that traditional educational technology research seeks to answer questions and solve problems. The alternatives group seems to be interested in posing questions and finding problems.

Specifically, the areas of research of interest to the members of the alternatives group seem to lie in the arenas of philosophy, qualitative methods, history, sociology and cultural studies, in addition to the more traditional areas of interest such as psychology, communications, and teacher education. It is important to note that most of these areas of research interest are, more often than not, considered as part of programs that are called "cultural foundations of education", or "social foundations of education", or simply, "foundations of education."

It is not the case that all of the work that is done by those that affiliate with the so called "alternatives group" within the AECT falls into the category that is referred to as educational foundations. Neither is it the case that all of the work that is done in the area of educational foundations at the AECT is done by those that affiliate with the so called "alternatives group". There is, however, an area that is common to both that is undeniable and unmistakable.

Within the realm of educational technology, foundations seems to have taken (or been given) a back seat. Instead, our field has focused upon systems and technology with an increasing emphasis on micro technologies (hypercard, etc.). So, the alternatives group might be said to be a group of individuals interested in some of the broader issues with which educational technology can be concerned. For example, educational technology and its relationship to curriculum construction or its impact on society and culture in general.

So, why form a separate division? One answer is that we do this sort of work anyway. At present, the members that might comprise such a division are scattered amongst the other nine divisions, often an unheard voice in each. Often, unless by some chance meeting, perhaps at one of the AECT receptions, the opportunities to exchange common ideas and perceptions on these sorts of issues are rare. In fact, the opportunities for intellectual exchange can be so rare that we may lose many of these individuals to other, more traditional associations such as American Educational Research Association. There, the individuals in AECT's "alternatives group" may find themselves more comfortable in an organization which has a large membership studying similar things.
Why should we run the risk of losing these individuals to the larger organizations? Can't their contributions influence the AECT and help us to consider broader issues that will only improve our pursuits as a field? AECT has taken a step in this direction. It established, several years ago, the Annual Open Forum on the Foundational Issues of the Field. This is an annual session at the national AECT conference. While this forum provides an arena for some exchange, it needs to be supplemented by additional sessions to increase the opportunity for discussion on related topics.

Finally, a study of history will show that some of the best advances in a field arise when its membership takes the time to reflect upon and evaluate the field's growth. A "Division of Foundations," while engaging in ethical review and the recording of history, might also undertake this effort, on a regular basis. The results of this self-evaluative effort could inform the membership in all divisions of the AECT.

With what would a "Division of Foundations" within the field of educational technology be concerned? Some of the topics would include: the field and its history, social concerns, and research. Issues that are central to the discussion of the field are personnel certification, competencies and roles; legal and ethical issues; and the status, definition, and future of the field. For example, it would be useful to examine the status and future of the field, as well as its relationship to other fields such as psychology.

Issues that are central to the discussion of social concerns include the relationship of technology to education, the impact of technology on culture and issues of equity involved in the use of educational technology. An example of such a social concern would be the unintended effect of computer based instruction on social interaction.

Issues that are central to the discussion of research include the purpose of the research, the methodologies that are employed and the setting of the research study. Those in the "Division of Foundations" that were interested in research might reflect upon the type of research we conduct as a field. How does it differ from that conducted in psychology? communications? Should it differ? Are we making progress in our research as a field? Because of the practical nature of educational technology, should all of our research necessarily be conducted in applied settings? What research methods should be employed? The purpose of a creation of a "Division of Foundations" is not meant to centralize and control the discussion of each of the above activities. Rather, we acknowledge that the potential member of such a division might also be active in other divisions of the AECT. It is our opinion, however, that the proposed division would provide a means for linking individuals interested in pursuing similar lines of investigation. And, exploring these topics as an organized membership, individuals would be able to inform members in other divisions of their findings which would undoubtedly guide future research and development in all divisions.

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Post-modern Thinking in a Modernist Cultural Climate:
The Need for an Unquiet Pedagogy

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A working paper of ideas for the
Open Forum, Foundations Symposium:
A Continued Dialogue on Critical Theory, Cultural Analysis
and Ethical Aspects of the Field
Association for Educational Communications and Technology
Research & Theory Division
New Orleans, LA
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Post-Modern Thinking in a Modernist Cultural Climate: The Need for an Unquiet Pedagogy

A pedagogy is that much more critical and radical the more investigative and less certain of "certainties" it is. The more unquiet a pedagogy, the more critical it will become.

Paulo Freire

All educational activities are political in nature. The act of teaching itself is a moral activity, because teachers intervene in the lives of their students.

To view schooling within a political/ethical context suggests the need for research and analysis that would include but not be limited to, an examination of the following: the non-neutrality of educational institutions, and hence the connectedness of knowledge and power; a critical analysis of current meanings and the "official discourse" of schooling within sociocultural agendas; visions of society that are oriented toward social justice and community; and having the tools/conceptual framework and language of research that allows for the multiple and complex forms of schooling that we experience.

The above commentary suggests that we need to be concerned with the "foundational" issues of schooling. By foundational I mean those issues that raise questions about the very nature of educational experiences. In raising questions about the nature of the schooling experience, we are confronted with contradictions. The contradictions are present not only within the school experience, but in our day-to-day experience of social life.

Foundations/Uncertainties of Schooling

Why is it that educators find themselves with the best tools, technologies/testing procedures/organizational models, i.e. the best that modernist thinking has to offer, yet they are unable to impact the postmodernist world of their students? The mainstream framework for explaining life in schools, what life in schools should be like is a modernist concept rooted in predictability and control. School reform is seen as fine tuning the system, hence incremental rearrangement of school practice, is seen as substantive change. Yet living in schools is not program-able, living in school is living in conflict (if "real" learning is going on). Living in school is living on "contested terrain" (if "real" learning is going on). Working through the conflict, struggling and negotiating meanings on the contested terrain, can leave one unsettled, experiencing a feeling of "chaos", hence unsettled feelings, experiencing feelings of chaos, are part of the human condition.
but far removed from this experience of living in schools are similar experiences of "being in the world". We find ourselves in social settings that are "supposed to make sense", that are supposed to be predictable, that are supposed to be controlled. Social reform is seen as fine tuning the social system. We respond to incremental change with expressions like "but look how far we have come". Yet living, like schooling, is not programmable. Being in the world is being in conflict. Being in the world is being within a social setting that is also a contested terrain of many voices, experiences, interpretations. Working through the conflict, struggling and negotiating meanings on the contested terrain, can also leave us unsettled within the social setting. Feelings of chaos also occur. This too is part of the human condition.

We feel and experience post-modernism, within a context (school/world) that uses modernist language and thinking. This is unsettling. Is modernism an imposition of rational, linear, technical processes to control living/schooling? Is post-modernism experiences and feelings of chaos, conflict and struggle, all of which brings uncertainty because modernism is the dominant ideology?

A sociocultural perspective can bring these experiences of school/world together. Situating schooling within the larger context of living in the world is not a new idea. A sociocultural perspective sees no separation between the world and school. A sociocultural perspective understands the historical and acknowledges the political and economic realities. Social issues are school issues, and vice versa. An unquiet pedagogy, a critical pedagogy, confronts the social-school-life-world and acknowledges the conflict and contested terrain as the human condition.

An unquiet/critical pedagogy is informed by and allows for the technical, practical and emancipatory forms of knowing within the learning process. An unquiet/critical pedagogy understands the notions of cultural capital, achievement ideology and social reproduction, as well as the social construction of knowledge (knowledge is created rather than consumed).

An unquiet/critical pedagogy acknowledges student/teacher voice in the learning process. This pedagogy fosters and helps create a democratic schooling through confronting issues of social justice, the common good, and the creation of community.

Technology is a part of this world of the educational community. Therefore...
SOME REFERENCES:

Works by the following authors have helped to inform my thinking:

Russell L. Dobson/Judith Dobson/ Michael Apple/Henry Giroux/Paulo Freire/Peter McLaren/Jay Macleod/Ira Shor/Jurgen Habermas/Antonia Darder/Lois Stalvey/Mike Rose/Eleanor Kutz & Hephzibah Roskelley/ Herbert Kliebard/Robert Young/Maxine Greene/.

Where do you stop?

Conversation and support from the following has been significant and important:

Chute/Martin/Robinson/Nichols/Yeaman/Januszewski/Muffoletto/DeVaney/Lukowsky/McIssac/Taylor/Johnson/Fosnot/Combs/I know I left people out. I'm sorry.

Dallas, 1982 was the beginning; New Orleans, 1987 was the first; New Orleans, 1993 was the tenth; here is to ten more....JRK
Schools and Technology in a Democratic Society: 
Equity and social justice

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(This working paper was written for the 1993 meeting of the Association for 
Educational Communications, Research And Theory Division forum on ethics 
and technology. Any comments and discussion is welcomed.)

Questions needs to addressed concerning the role of public education in 
a democracy. As individuals, and as a profession, involved in the research, 
development, production, and dissemination of educational experiences for 
children and adults, we need to consider what we have created and will create 
in light of social justice and democratic principals.

Our history is full of attempts to design and produce effective learning 
environments (In using the term "our" I am referring to those of us working 
in educational technology. I also realize its not our history but "a" history that 
has evolved out of conflicts and contridictions representing various interest. 
There are many histories, many voices.). We have consumed various learning 
thories and have produced various formats for the delivery of curriculum 
materials. Our purpose has been to increase the effectiveness of teaching 
materials and the efficiency of the learning process.

Our field is grounded in logical positivism, capitalism, and a 19th and 
20th century notion of progress and classical realism. Technology, both as 
machine and as system, was and is linked with modernism and progress. 
Reality, especially social reality, and the stories told about it by experts, is 
understood to exist outside the individual and has for the most part gone 
questioned and unrecognized by researchers in our field. Beneath all of 
this lies the ideology of the machine and the expert (Muffoletto, in press).

Our field has strived to create through various presentational formats 
"a" reconstructed reality. Most of the debate in these attempts has centered on 
the veracity of the experience; does it feel real, does it reflect reality, is it 
efficient, and is it effective in its delivery. There has been little debate on the 
consequences of those strivings for a reality on the lives of real people and 
their culture. With the recent developments in virtual reality and multi-media 
hardware and software we must begin and continue our attempts to address the 
psychological, social and political implications and effects of what "we" do as 
perceived experts, as educational technologists. No longer can we afford to 
claim the neutrality of a modernist tradition or the non-historical 
consciousness which accompanies a positivist discourse towards reality and 
experience. As educators, researchers, and developers of learning 
experiences we must find avenues and entry points for debates and practices 
that argue and provide for spaces that support and maintain democracy and 
social justice. The first step I believe is to recognize ourselves for what we are; 
a social, historical, and epistemological construction. The second step is to
define what we mean by democracy and social justice. The third is to position our definitions in practice.

**Technology as a medium for discourse**

Technology is more than a tool; it is a medium which effects how we think and interact with others and machines (Rheingold, 1991). It is a form which not only controls and limits discourse but determines the nature of the content as well (Postman, 1992). Technology is more than access to information and learning experiences. Technology determines the nature of that information as well as our understanding of it. As a medium of experience (discourse), technology effects our consciousness, our visions, and our expectations. The "wetware" of a modernist technology constructs the individual as a subject (Berger and Luckmann, 1966; Muffoletto, 1991). The technological medium is more than a mind manager and a reality simulator, it is a consciousness generator -- an ideological horizon line.

**Information**

If technology is to provide us with access to information, there are a number of issues that must be considered and addressed. Simply providing access to information is not enough in a social context were historically access has been limited to the wealth, gender, and race of the individual or community. Access to information must also include equity in access to ways of "thinking" about information. If information is to be used to empower people within the democratic tradition, then educational experiences must provide a means for equal access to ways of thinking as well as valuing different ways of thinking.

To have information and not know what to do with it, is as serious problem as not having information at all (Of course this begs the question about the nature of information, epistemology, legitimization). Individuals who historically have been positioned on the margins of power and knowledge because of their culture, their economic class, their gender, their race, or their religion, may have been given equal access to information (even in limited ways), but not ways of knowing (thinking). For example, the cultural ways of making sense in the United States has been limited to primarily one cultural and economic framework (white, middle-class, male, and European). How one thinks about the world and one's self in it determines the rationale for understanding why things are the way they are (common sense), and not why reality is thought about in that manner.

How one thinks about the world as well as self, is how one has been told to act and think in relationship to self and others. Having information, but not divergent ways of thinking, maintains the individual and the community in a powerless relationship to those who do. Having access to information may create a false consciousness resulting in less real power than before.

**Simulations as experience**

Virtual reality, as a technology of experience, poses a number of questions. First and most basic, we must consider what the relationship is between a "virtual" reality and something we call reality. Is it good enough to be concerned with only the veracity of the experience and its correspondence
to what is believed to be out there? (The physical and social sciences can be separated here, but questions concerning how we know reality and truth are essential to both paradigms.) In doing so we must offer up for analysis the manner in which we came to think about what is out there. We tend to forget that our understanding of what we think is out there is a result of the tools we use to explore it, the language we use to construct it, and the context or system (Goodman, 1978) used to understand it. Change the tool, the language, or the system, and reality differs. As individuals concerned with the creation of simulations, other worlds, we can not forget that we exist within a social reality, a virtual reality of sorts. We must also recognize that through discourse management, constructed reality has become reified and objectified.

Second, if virtual reality is understood in terms of simulations, looks, feels, and sounds alike, can not that simulation be understood as a discourse? As a discourse virtual reality must be analyzed as any other discourse? Borrowing from Cherryholmes (1988) we would need to question virtual reality by asking: Who is controlling the discourse (reality)?; Who is allowed to speak and listen?; What is being said?; Who benefits from what is being said?; and What is not being spoken about?

Any simulation or virtual reality must be considered from two different perspectives. On one side we must consider who is constructing the world to be experienced by users (students, teachers, workers, infonauts) Notions concerning hypertext environments, interactive video, and virtual reality include authors and readers, guides and travelers, navigators and explorers. No technological environment, as a system, is authorless. Every author, every programming production team, every navigator, holds a world view, an ideological perspective, a consciousness about self and others. On the other side, what are the social, psychological, and political effects of a constructed world on the readers of the virtual text.

Social Learning

How "we" come to be as subjects, as social beings, is a result of experiencing constructed texts (texts is used here in a post-modernist manner) and meanings (Belsey, 1980). All texts are hegemonic and are part of a larger discourse encoded with meanings, values, and ideological perspectives on others and self. How and what we learn about a social world is the result of experiences with various discourses about that world. In doing so, we either reproduce dominate meanings and ways of knowing or offer oppositional and alternative discourses (Hall, Hobson, & Willis, 1980). In either case, individuals as members of interpretive communities (Fish, 1980) understand a reality to be as it is, to be real and truthful, because of their experiences with various formative and informative discourses (Ellsworth & Whatley, 1990). Questions referring to equity and social justice emerge out of a discourse on social learning, power and control, benefit, and history.

School Reform and Technology: Towards Social Inquiry and Justice

Curriculum materials, delivery systems, and learning environments may be understood as social texts, representational in nature, always overtly referring to something else, while covertly referring to themselves as a formative medium. The form and content of learning environments not only speak to methods and content, but also refers to ways of thinking and knowing. Thinking about all learning environments, methodologies, and contents as
representational, as ideological representations, adds another dimension to our thinking about schooling, technology, and change.

Change always refers to difference. In education as well as business change is considered as a reply to some identified problem. How these problems are identified is as important to understand as what the problem is reported as being. Needs assessments, goal development, and vision statements refer to a history, the present, and to a future. Futures are normally related to notions of progress.

What the problem is, is determined by who (who being not an individual but a community) is asking. If problems and solutions are defined in terms of efficiency, outcomes, and management, the problems and solutions will be of one nature. If problems are contextualized in a discourse of democracy and social justice, efficiency, outcomes, and management may be part of the solution but to "what and how" they refer will be different. As education in the United States considers why and how it must change, technology as a medium which effects knowing, institutional and individual relationships, as well as a sense of self and others, must be better understood within a discourse of democratic ideals. The problem needs to be redefined. (Again, the language has to be problemized when we consider that there is not one education, but many.)

Critical Theory and Educational Technology

Critical theory offers an entry point for unpacking the values, assumptions, and practices of educational technology. From a post-modernist perspective critical theory claims no absolute authorship. It declares its own subjectivity and ideological construction. As a theory working within a post-modernist tradition, those who practice critical theory are concerned with questions of power, control, and epistemology as social constructions with benefits to some and not to others.

A critical theory of educational technology would be concerned with issues of consciousness and epistemology, power and control, institutional and individual relationships (Feenberg, 1991). Questions concerning equity and social justice, and the construction of individuals as subjects within an ideological discourse would be critical to the unpacking and redefinition of the theories and practices of educational technology. A major impact of critical theory on the field of educational technology would be to recognize itself as a social construction with a history of conflicts, struggles, and contradictions. In understanding the social and historical nature of the field, the values and assumptions which are expressed through various discourses would be open for analysis.

Conclusion

Schooling in reflecting a democratic society, requires a society to be democratic, non-racist, non-sexist, and not class based. In positioning education as a major socializing institutions, with a major role in forming the worldviews and subjectivities of its participants, the products and processes of educational technology do play a major role in how communities of individuals think about others and self. A critical theory position, breaking from the common sense reified world offered by modernist and positivist alike, would need to address issues concerning the function of schooling and a technology.
of instruction in a democratic society.

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Critical Theory, Educational Technology, and Ethics: Helping Teachers Respond Meaningfully to Technology.

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"...critical theory turns its face resolutely away from all forms of dogmatic authoritarianism, asserting the necessity of a transformation of conscious control over system imperatives through democratic communication processes" (Young, 1990, p. 55). Critical theorists aim to move people to freedom via a changed consciousness brought on by democratic communication. Our transformed consciousness is to include not only the technical and practical forms of knowledge that now dominate our lives but the emancipatory forms of knowledge which express not only what can be done but which should be done, which put truthfulness and sincerity on a par with being right, which are subjective as well as objective (Habermas, 1984, 1987; Ewert, 1991). Put similarly, instrumental reason is to be re-unified with political-ethical reason (Young, 1990, p. 17).

A primary method of a critical theory of educational technology must be to expose the ways ideologies are developed and perpetuated via language forms. For present purposes, ideologies are perpetuated via "languages" which include technologies.

Ideology can be described as "The values and interests of ruling classes and elites [that] are installed in the very design of rational procedures and machines even before these are assigned a goal" (Feenberg, 1991, p. 14) as well as the values and interests in the goals of technology. A television expresses the political-ethical interests of the Sony Corp. to have power over consumers, especially via money and technology, and especially in such a way as to keep the technical, practical, and political-ethical knowledge held by the corporation away from consumers and others.

Language can be taken primarily to be spoken or written Spanish or Russian, for instance, but it also is a more technical form such as computer programming languages, it is representational visual images such as paintings or holograms, and it is even symbols such as computers, cars, and beer bottles and the ways they speak to humans.

Technology can be the belief in and application of rational/systematic thinking. It is manifested in a belief in technology, in products such as gas chambers, and in processes such as science.

Educational technology can be any technology and a belief in any technology used to change humans, though change usually is prescribed and occurs within formal bounds of schooling.

More than exposing ideologies in languages, the method of critical theory (and so of a critical theory of educational technology)
includes “immanent critique, which proceeds through forcing existing views to their systematic conclusions, bringing them face to face with their incompleteness and contradictions, and, ultimately, with the social conditions of their existence” (Young, p. 18).

For example, educational technology perpetuates students’ lack of critical thinking because it promotes mostly technical interests and rational-instrumental thinking. It fosters the dominance of financiers, politicians, militarists and professional educators over students. Further then, educational technology limits democracy and sincere communication because people are less able to think critically about politics (Koetting, 1983; Nichols, 1990).

A technical and practical ideology rather than a democratic-communicative ideology appears predominant in all of education. That is, students and teachers are not responsible for knowledge and education but for fulfilling the desires of others, especially the desires to have power and make money. As a result of this dominance, kept from authentic motivation, students don’t want to know much and can’t know much, teachers don’t learn or teach much, and people and society loose hope and act non-communicatively, on the whole. Schools are filled with demoralized people who don’t know or often care that they are not communicative. 30-40 per cent of American students drop out of school.

If we are serious about the “education” in “educational technologist,” we must critically study this dominance. Such study is ethical/moral because of its potential to encourage greater fulfillment of human communication. Freedom of communication is moral. We will make human and ecological progress to the extent that we re-acquaint technical reason with moral reason.

Carr and Kemmis (1986) offer examples of ways to critically study educational technology, as do critical pedagogists such as Weiler and Mitchell (1992), as do Randy Koetting, Rhonda Robinson, and the other presenters at this symposium.

Problems with a critical theory of educational technology include:
1. Is social-material progress as meaningful as critical theorists indicate/hope?
2. Will a higher rationality will be more helpful to human dignity, if a lower one has gotten us into the scrapes we’re in now?
3. Can critical theorists reach their intended audience (proletariate/teachers/students) with the technical language they employ (Young, 1990)

Maybe because of these problems, critical theory, at least in its academic forms, has not reached American students or school teachers in any widespread way. Virtually no students have heard of “critical theory.” Beyond having heard the phrase “critical
theory," and more importantly, most students are not deeply sensible that their communicative (so political-ethical) freedoms are submerged and restricted. They can't be in today's predominant modes of education.

The most crucial question for educational technologists remains: How can we get students to participate in all aspects of educational technology when the likes of freedom, justice, equality, and physical existence are hardly open to conversation?

References


Where in the World is Jacques Derrida?
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The authority of the text has gone, probably stolen. The literature police called in the philosophy detectives. Together, they uncovered proof that Jacques Derrida had his eye on it for a while. Also, around the same time it was noticed missing, he began traveling widely, popping up at many seminars and lectures in Europe and North America.

Interrogations of possible witnesses show that the meaning of meaning is shifting. As soon as a lead is established, contradictory information drives the investigation onto another track. Anyway, whether he did it or not, the plan for the theft seems to appear in Derrida's *Structure, Sign and Play in the Discourse of the Human Sciences* which identifies paradoxes in structuralist reading. That conference paper reveals the pretense of contextual stability and introduces a new term: deconstruction. Not long after, Derrida provided another clue by Xing-out words as a visual sign that signs themselves are unstable and changed as soon as they are understood.

Other suspects, Roland Barthes and Michel Foucault, died under unusual circumstances and left behind suspicious documents. Between them, Derrida, Barthes and Foucault have over 60 English titles listed in *Books in Print* but there seems no indication of conspiracy. These three French writers considerably influence the contemporary teaching of English, language, literature, social studies, and similar subjects at the secondary and college levels. As a consequence, students may be becoming less intellectually docile as classroom learners and less malleable, after graduation, when exposed to new employee training.

Would-be followers surface from time to time, apparently expecting a rendezvous, but Derrida disavows them--just as he did Socrates who was picked up at the scene of the crime. Clearly the wrong guy but surely up to no good, Socrates was arrested on the related charge of teaching effectively--which shows the danger of educational communications and technology.

Derrida challenges the assumption that spoken language, the most immediate of communication media, can be accepted as the closest representation of thought. It is a non-neutral medium shaped by ideology and bias. No way of communicating, whether in speech or writing or painting, for example, is more or less direct or unequivocally better. Language has become endlessly self referential and this belief is unlikely to be reversed even if the authority of the text is restored. The tradition of searching for an author's intended meaning in a text is reduced to a mere preconception.

Other than a bungled arrest and deportation from Prague (it was obvious the drugs had been planted) Derrida has a clean record. On the face of it, he is a law abiding citizen and even writes with a word processor (Macintosh). Nevertheless, he once expressed misgivings about reading aloud an oath to respect the rules of a library. Politically, he has been active with the communal International College of Philosophy, administered by Jean-Francois Lyotard. This project developed out of a collective appeal to release philosophy from the prison of higher education. It may only be coincidence that the Groupe de Recherches sur l'Enseignement Philosophique is known by its initials: GREPH. The concealed use of the Unix command "grep" is possibly a ruse to cover a deep-rooted interest in telecommunications. In the United States, for example, J. David Bolter, Michael Joyce and George P. Landow have gained attention for applying Derrida's ideas to designing and understanding the design of computerized texts and education.

There are social consequences here that threaten to disrupt power and established authority. How can minds converge if it is a fallacy to think of thought as language because language itself is undecidable? However, at this point, the evidence against Derrida, the likely ringleader, still remains only hearsay and it is now becoming increasingly uncertain exactly what has disappeared.