

Critical Theory: Ideology Critique and the Myths of E-Learning

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Critical theory designates a philosophy and a research methodology that focuses on the interrelated issues of technology, politics and social change. Despite its emphasis on technology, critical theory arguably remains underutilized in areas of practical research that lie at the confluence of social, political and technological concerns, such as the study of the use of the usability of information and communication technologies (ICTs) or of their use in educational institutions. This paper addresses this situation by first describing the methodology of ideology critique. This critical methodology operates comparatively, by "measuring" consensual truths against actual social conditions. In doing so, it frequently shows these truisms to have the quality of mystifications or "myths," claims possessing a "false clarity" and that are misleading in developing and justifying research plans and priorities. Focusing on the specific example of e-learning (or the use of ICTs in education), this paper shows how critical theory can be used to "de-mystify" three particular truths or myths. These are claims that 1) we live in a "knowledge economy," 2) that users enjoy ubiquitous, "anywhere anytime" access, and 3) that social and institutional change is motivated by a number of fixed "laws" of progress in computer technology. These claims are shown to simplify or obscure a complex social reality that is constituted by different and conflicting forms of knowledge, and these claims are shown to work to the benefit of interests that are hegemonic and conservative in nature.

Introduction

Critical theory is generally defined as the diverse body of work produced by members and associates of the Frankfurt Institute for Social Research (or simply, the "Frankfurt School") between 1930 and the present. Among the most important of these individuals are Theodore Adorno, Walter Benjamin, Jürgen Habermas, Max Horkheimer and Herbert Marcuse. In a broader sense, critical theory is also associated with the contributions of late twentieth century social and even literary theorists, such as Louis Althusser and Roland Barthes. The theoretical contributions of the original Frankfurt School members frequently focus on media and technology (e.g. Benjamin, 1968; Habermas, 1970); on education (e.g. Adorno, 1981a) and on the relationship of both of these to social change generally (e.g. Horkheimer and Adorno, 1972). Despite the fact that these areas are of clear relevance to e-learning, this theory and associated methods appear little recognized in research in this field.

The central argument of critical theory is that all knowledge, even the most scientific or "commonsensical," is historical and broadly political in nature. Critical theorists argue that knowledge is shaped by human interests of different kinds, rather than standing "objectively" independent from these interests. (Even knowledge encoded in the form of scientific facts, like those of epidemiology or astronomy, has changed over time, giving varying meanings even to relatively unchanging natural phenomena such as the spread of disease or the movement of celestial bodies.) Human interests are understood as multiple and sometimes contradictory and as a consequence, knowledge itself is also seen as fundamentally pluralistic and incongruous, rather than unitary and monolithic.

Critical theory singles out for criticism and critique knowledge that is marked by a particular characteristic. This is knowledge that presents itself as certain, final, and beyond human interests or motivations. Critical theory sees its own central purpose as the destabilization of such knowledge. In the place of this type of knowledge, critical theory seeks to generate alternative knowledge forms, specifically, those shaped by social interests who are democratic and egalitarian. Critical Theory, in sum, seeks to "make problematic what is taken for granted in culture," and it does so in the interests of "social justice," especially in the interest of "those who are oppressed" (Nichols & Allen-Brown, 1996, p. 226).

Jürgen Habermas, a member of the "second generation" of the Frankfurt School and one of the most well-known of contemporary social theorists, provides a basis for a compelling and widely-referenced tripartite division of knowledge forms, or more specifically, of "knowledge-constitutive interests." Habermas understands knowledge as corresponding to human interests that are "instrumental," "practical" and "emancipatory" in nature. *Instrumental* knowledge corresponds to technical human interests that are associated with work, labour, or production and with the natural sciences. *Practical* knowledge refers to interpretive ways of knowing through which everyday and social human activities are coordinated and given meaning. *Emancipatory* knowledge, finally, is the kind that critical theory itself seeks to generate, and it is articulated in terms of power, control and emancipation.

Most critical theorists would maintain that these three forms of knowledge and interest are never entirely separate. Emancipatory, or more broadly, political knowledge and interests are seen as interpenetrating *all* knowledge forms – whatever their purpose or constitutive interest. This all-pervasive character of political knowledge and interest is central to the critical-theoretical concept of *ideology*. Ideology, in this context, does not so much refer to all political or emancipatory knowledge in and of itself nor to extreme political orientations or programs. Instead, ideology refers to *any* kind of knowledge (whether technical, practical or emancipatory) that *appears* to be purified or freed of political interest: knowledge that is presented as self-evidently factual, neutral or objective. According to critical theory, it is precisely this kind of knowledge that is actually most "interested." As Adorno describes it, ideological knowledge is characterized by an "overbearing matter-of-factness," as facts which present themselves as neutral, self-evident or objectively true, despite being strongly shaped by social interests (Adorno, 1981b, p. 126).

As the *Oxford English Dictionary* defines it, ideology refers to "a systematic scheme of ideas, usually relating to politics or society, or to the conduct of a class or group, and regarded as justifying actions" (OED, 2007). Ideological beliefs or ideas are also generally "held implicitly or adopted as a whole and maintained regardless of the course of events" (OED, 2007). Ideology, then, is a set of ideas or a kind of knowledge that is used to justify actions of social and political consequence and that is considered so obviously commonsensical or natural that it is placed beyond criticism, "regardless of the course of events." Other ideas or ways of knowing, by implication, tend to be marginalized as nonsensical, radical, or even as "ideological" (in the more common and polemical sense of the word).

The social acts that an ideology justifies are often closely allied with powerful social and economic interests. For example, in mid-19th century England it was generally a matter of "common sense" that keeping children in factories and out of school was socially productive, even economically necessary. Other views – that children deserved special consideration or that education would bring greater benefits to society in the long term – were marginalized. One British member of parliament at the time went so far as to claim that regulations *against* child labor would represent "a false principle of humanity" and "an argument to get rid of the whole system of factory labour" (as cited in Feenberg, 2002, p. 146). Of course, the once marginal views that were opposed to child labor now take the form of what appear to be obvious and commonsensical regulations in the developed world, while anyone advocating a significant loosening of these regulations would be highly criticized.

When ideological positions and arguments are elevated to (false) principles of humanity or are said to endanger whole ways of life, when they eliminate even the slightest hint of reflection or doubt, then they enter the terrain that Adorno and Horkheimer describe as "myth." These are "explanations of the world as all or nothing," truths that possess a "false clarity," that acquire the status of absolutes or that are presented as inevitable or indisputably "natural" (Adorno & Horkheimer, 1997, pp. xiv, 24). In his book of cultural critique, *Mythologies*, Roland Barthes echoes and amplifies this understanding: Myth "purifies" things, "makes them innocent...gives them a clarity which is not that of an explanation but that of a statement of fact." Myth, Barthes continues,

Is constituted by the loss of the historical quality of things: in it, things lose the memory that they once were made... A conjuring trick has taken place; it has turned reality inside out, it has emptied it of history and has filled it with nature. (Barthes, 1972, pp. 142-143)

Critical theory responds to mythical inevitabilities and ideologically-charged "common sense" by undoing these emptying and conjuring tricks. It "denaturalizes" that which is seen as natural and it problematizes that which is plain and commonsensical. It does this through what is known as "ideology critique" or more particularly, "immanent critique." In these "critical" processes the researcher takes ideas or knowledge that is presented as commonsensical and self-evident and compares them to the social and cultural conditions to which they pertain. The researcher places ideas in their historical context and situates them in the complexity of a larger social background. Using the term "philosophy" to designate this critical method generally, Horkheimer explains that this process begins first by taking seriously the significance or "truth value" of ideological claims or ideas:

It should be admitted that the basic cultural ideas have truth values, and philosophy should measure them against the social background from which they emanate. It opposes the breach between ideas and reality. Philosophy confronts the existent, in its historical context, in order to criticize the relationship between the two and thus transcend them. (Horkheimer, 2004, p. 124)

Immanent critique, in other words, seeks figuratively to "measure" the difference between what is claimed in commonplace ideas on the one hand and what is evident from historical and other social sources, on the other (see also Held, 1980, 183-187). In the language of Barthes, this method restores to things their history and recovers "the memory that they once were made" rather than presenting things as though they have simply always been the way they are. Horkheimer sees these differences and contradictions overcome or "transcended" in the sense that immanent critique does not remain confined to either ideas or the background from which they emanate. Instead, in highlighting the contradictions hidden behind ideological claims, this critical method is able to point to new ways of understanding circumstances which are otherwise taken for granted and it is therefore able to suggest new courses of action. Essentially, the de-naturalization and problematization of critique is performed by bringing a multiplicity of forms of knowledge into play, comparing what is accepted as self-evident in one set of sources, one literature or discourse and comparing it with what can be found in different and often alternative sources of information.

To summarize in slightly different terms, ideology critique is about asking questions of things that are otherwise considered too self-evident to be put into question. For any claim of social or political relevance, therefore, ideology critique asks: "Why is it being made as it is?" "In whose interest is it being made?" "What is its relationship to different knowledge forms and claims –especially ones considered radical or marginal?" Critically engagement with ideological claims in this way can then extend critical inquiry to questions such as, "How might it appear to be natural or commonsensical and how can this 'naturalization' be undone?"

It is important to remember that the process of critique is not so much a question of replacing the deceptions of ideology with incontrovertible truths. Instead, as Adorno puts it, it is more a matter of disabusing ideology of "its pretention to correspond to reality" (Adorno, 1981b, p. 32). In doing so, ideology critique is able to show that beneath the veneer of the commonsensical or self-evident there are multiple, contradictory or opposed knowledge claims or forms. Behind the "naturalness" of natural or obvious truths are clashing social and human interests. The steps through which immanent or ideology critique gains access to these conflicting interests – and develops "critical" or "emancipatory" knowledge on this basis – can be summarized as follows:

- 1) Identifying ideas or claims that are presented as obvious, inevitable, or matter-of-fact in dominant bodies or sources of knowledge;
- 2) Scrutinizing these ideas or claims in the context provided in other more marginal knowledge forms or sources;
- 3) Revealing through this scrutiny that behind dominant claims and ideas lay one or more politically-charged and often contradictory ways of understanding the issue or phenomenon in question; and
- 4) Using this underlying conflict as the basis for developing alternative forms of understanding and point to concrete possibilities for action.

This listing, of course, is not intended as a kind of simplistic "recipe" for implementing a critical-theoretical analysis or conducting an immanent critique in a given field. Being principally concerned with philosophy and theory, and sensitive to conflict and complexities inherent even in their own writing, some of the originators of critical theory would be averse to providing the kind of enumerated summary outlined above. These points are therefore to be taken as merely a starting point for research utilizing critical theory. As with any other methodology, an overview like the one presented here needs to be read along with other sources (both primary and secondary), in order to arrive at a more complete understanding of its nature and potential.

It is not difficult to take the steps associated with ideology critique, above and apply them to the field of e-learning (or to a related area), especially to statements and publications that are used to legitimate or promote particular priorities and perspectives in the field. The claims and ideas presented papers, presentations and proposals that are most obvious and least subject to dispute or disagreement in the field in question can be subjected to critique -- with the intention of highlighting their constructed or ideological nature. In the case of e-learning in particular, examples of these self-evident truths or claims are frequently encapsulated in catchphrases or buzzwords that are relatively easy to find in the literature. Phrases like "knowledge economy" (e.g. Gandel, Katz Metros, 2004) "anywhere anytime learning" (e.g., Bourne, Harris & Mayadas, 2005) or fixed "laws" of technological change (e.g. Hodgins, 2004) are salient examples. As will be shown, these slogans give economical expression to "self evident" notions: that we live in an economy driven principally by knowledge; that the Internet provides the possibility of ubiquitous education; or that technological progress drives educational change. It is these "common sense" ideas that, in this paper, will be subject to the "historicizing" and "denaturalizing" force of ideology critique. They will be shown to be shaped by powerful, entrenched and often conservative social interests. They will also be shown to simplify or obscure a complex social reality that is constituted by different and conflicting forms of knowledge and that can be interpreted variously, depending on one's interest or motivation.

The Myth of the Knowledge Economy

It is commonly asserted that "knowledge," "information" or more abstractly, "the networked" or "the postindustrial," are eponymous for our society, age or economy. As with ideological claims generally, these broad and often unquestioned assertions have significant social and political implications. In the case of e-learning, they bring with them urgent implications for all levels and forms of education – from the preparation of children as "knowledge builders," through the reconfiguration of higher educational institutions, to support for different forms "lifelong learning." As a consequence we are presented with assertions such as the following: "In what is coming to be called the 'knowledge age' [the] challenge [is to] get students on...a *developmental trajectory* leading from the natural inquisitiveness of the young child to the disciplined creativity of the mature knowledge producer" (Scardamalia & Bereiter, 2003; 1370; emphasis in original); and "The new economy has placed the acquisition of knowledge, and the role of higher education, at the center of national development" (Futures Project, 2001); or further, that in our "knowledge-driven era... education is a lifelong endeavor and may —only occasionally—be mediated by the traditional artifacts of our historical learning experiences (Gandel, Katz, Metros, 2004, p. 73).

Unsurprisingly, traditional educational artifacts – such as "classrooms," "professors" and "degrees" -- are generally seen as being superseded in this new economy, by more advanced information or knowledge technologies: computer supported "knowledge building" environments (Scardamalia & Bereiter, 2003), learning objects (Polsani, 2003) and other advanced technologies.

The idea of a radically new social, historical or economic order centered on information or knowledge has an important and politically-charged history. By examining this history and thus *historicizing* the idea of the knowledge economy, it is possible to show its gradual construction and its actual and possible contestation. This history begins with a paradigmatic "shift recognized as early as 1973 by Daniel Bell...the shift from an industrial to a knowledge economy..." (Gandel, Katz, Metros, 2004, p. 42). Bell, who is sometimes described as one of the fathers of neo-conservatism (e.g. see Nuechterlein, 1990), is famous for his account of the "coming... postindustrial society." In fact, this phrase forms the title of a text by Bell, which arguably serves as the basis for much subsequent speculation on new social and economic forms for the twentieth century (e.g., Brzezinski, 1970; Toffler, 1980; see Mattelart, 2003 pp. 73-98). In his foreword to the 1999 edition of this famous text, Bell lists the characteristics of the coming postindustrial society and how they have become and continue to be manifest. Among these are four trends: First, Bell identifies a shift from "manufacturing to services" in the workforce and the economy (Bell, 1999, xv). The percentage of the workforce employed in the manufacturing sector in America, Bell points out, has shrunk over the past decades, and has been accompanied by an "extraordinary rise of professional and technical employment" (Bell, 1999, p. xv). Associated with this first shift is an important, second change, an increase in the general importance of education: "Today education has become the basis of social mobility," as Bell puts it, "especially with the expansion of professional and technical jobs..." (Bell, 1999, p. xvi). A third change listed by Bell is the increased importance of technological infrastructure, and what he refers to as "intellectual technology:" "These technologies," Bell explains, "form a complex adaptive system that is the foundation of the electronically mediated global economy" (1999, xvii). The combined result of these and other changes is effectively summarized in Bell's fourth trend or characteristic: The "knowledge theory of value:" "Knowledge is the source of invention and innovation. It creates value-added and increasing returns to scale..." (Bell, 1999, xvii).

This last point on the social and economic value of knowledge is perhaps of greatest importance in descriptions of the "knowledge economy." Bell makes it clear that his phrase, "knowledge theory of value" is a deliberate variation on Karl Marx's, "labor theory of value" (Bell, 1999, p. xvii). Marx understands labor – specifically physical labor – as being a unique force in capitalist economies in that it is the only

one capable of "adding value" to commodities and products that can then be sold at a profit (Bottomore, 1983; 265). In a significant theoretical move, Daniel Bell as well as those following in his footsteps, present *knowledge* as playing this essential generative, value-adding, profit-making function. This has substantial consequences for understandings of the generation, mobilization and exchange of knowledge in educational and research contexts. These consequences and implications extend to the nature of knowledge itself, as well as to the multiplicity of knowledge forms posited by Habermas and others. What follows is a discussion of these consequences and implications.

With this "knowledge theory of value" as Bell recognized early on, the "knowledge work" occurring in education and elsewhere appears as a process of unprecedented importance. Besides being "the basis of social mobility" (Bell, 1999), education takes its proper place, as Peter Drucker says, at "the center of the knowledge society, [with] schooling [as] its key institution" (Drucker, 1994, p. 2). The critical economic and social value of these key educational institutions rests not so much in their function of social reproduction or in their potential to contribute to individual autonomy and responsible citizenship. The value of educational institutions rests instead in their role as a means of generating and reproducing knowledge as a productive force, above all as this force is mobilized in the natural sciences and in the applied social sciences:

The major problem for the post-industrial society will be adequate numbers of trained persons of professional and technical caliber... The expansion of science-based industries will require more engineers, chemists, and mathematicians. The needs for social planning...will require large numbers of persons trained in the social and biological sciences (Bell, 1999, 232).

When evaluated in terms of the post-industrial knowledge generation and creation, however, the school in its current form appears as woefully inadequate, hopelessly or even fatally outmoded. In the literature of educational technology and reform, schools and universities alike are characterized as following an outdated "industrial paradigm" (as opposed to a "postindustrial" model; Gilbert, 2005), as being "cottage industries" (Newman & Couturier, 2001; Smith Nash, 2005) or more generally as being "stuck in the past" (e.g. Lucas, 2003):

in very fundamental ways, education is stuck. It doesn't know where to move and it doesn't have the tools to move with. The dialogue, both within and outside the education profession, does not advance. The same blunt statements (including this one) are made over and over. The tools education needs, of course, are conceptual tools. In this so-called Knowledge Age [sic], that is the first requirement. (Bereiter, 2002)

Not surprisingly, this same author goes on to emphasize the importance of computer, Internet and other high-tech tools that correspond to these conceptual tools (e.g. Bereiter, 2002; pp. 460-462; Bereiter & Scardamalia, 2003).

A second implication of the knowledge theory of value is that it privileges some characteristics of knowledge over others. When knowledge is understood as a productive force, for example, it is not the role of knowledge as an instrument of enlightenment or of democratic decision-making that is foregrounded; instead, knowledge tends to be characterized as a kind of service, utility or good to be bought and sold, used, enhanced and re-used. It becomes a kind of "super commodity" that has market value like physical commodities but that also transcends the products of physical labor. Mason, Lefrere and Norris, writing specifically of "e-Knowledge," describe it as being "both a thing and a flow" that has the capacity to be "'atomized,' repurposed, updated, recombined, metered, and exchanged" (Mason, Lefrere & Norris, 2003, p. 1). Unlike physical goods, however, this commodified knowledge can be readily "mobilized" and "unbundled to take account of the location of users and their needs at [any] location"

(Mason, Lefrere & Norris, 2003, p. x). And when such knowledge or "content is modularized and coupled with learning objectives," these same authors explain, "it is typically referred to as 'learning objects' or 'knowledge objects'" (5). In the context of a "knowledge society" in which knowledge as an economic force and commodity is paramount, it takes its paradigmatic form in education as a learning object. These "learning objects," which have received much attention in the literature of e-learning, refer to modular, exchangeable, digital resources that are able to be combined and configured with other digital objects.

A third ramification of the "knowledge theory of value" is that when conceptualized as a kind of "super-commodity," knowledge becomes something quite different from the way it is understood by Habermas and critical theory – as being contestable, multiple and derived from different human "constitutive interests." This multiplicity and this motivated or "interested" character of knowledge is effectively suppressed or erased. Instead knowledge is judged by a single and sole criterion, specifically, its "*performance*" (Polsani, 2003; emphasis in original). Writing about this performative knowledge, specifically as it is manifest in learning objects, Polsani explains:

Before the advent of the post-industrial age in the 1960s, Enlightenment and post-Enlightenment ideas determined the purpose and use of knowledge. The European Enlightenment defined the human being as a subject whose destiny is the realization of its full potentialities through reason. The goal of acquiring learning was the realization of spirit, life, and emancipation of humanity and the purpose of production of knowledge was the moral and spiritual guidance of a nation. However, in the contemporary conceptualization of knowledge, its purpose is no longer to realize spirit or emancipate humanity but *to add value*... The legitimacy of performative knowledge is no longer granted by the grand narratives of emancipation, but by the market. (2003)

This notion of a purely performative and productive knowledge that is privileged above any other knowledge forms is also described in other accounts of the knowledge society. Again it is Daniel Bell, in his *Coming of the Post-industrial Society* (1999), who provides an early and powerful distillation of this "knowledge age" phenomenon. In this text he describes the generation of productive knowledge as occurring paradigmatically in the "community of science:"

The community of science is a unique institution in human civilization. It has no ideology, in that it has no postulated set of formal beliefs, but it has an ethos which implicitly prescribes rules of conduct. [...] As an imago [an ideal or subjective image], it comes closest to the ideal of the Greek polis, a republic of free men and women united by a common quest for truth (Bell, 1999, p. 380)

This "universal" and "disinterested" scientific knowledge enables what Bell refers to as "technical decision-making" (Bell, 1999, 34). This form of technological management or administration is an application of knowledge, as Bell explains further, that "can be viewed as the diametric opposite of ideology: Technological decision-making is "calculating and instrumental, [while ideology is] emotional and expressive" (Bell, 1999, 34).

Of course, it precisely these kinds of claims that Adorno, Horkheimer, Barthes (and other critical theorists) would see as being ideological in the extreme, as exemplifying myth or the mythological in its critical sense. When knowledge claims deny their relation to human interests of any kind, their "pretention to correspond to reality" becomes absolute. In this context, simply having shown -- in the preceding paragraphs -- how these ideas originated and how they continue to evolve hopefully undermines their claims to natural or self-evident truth.

As emphasized earlier, however, the task of critical theory is not simply to engage in "criticism" for its own sake. It also seeks to generate emancipatory forms of knowledge able to provide alternative and progressive ways of thinking and acting. These can be found by looking to sources of information that stand as alternatives to those usually referenced in e-learning or research and development in ICTs. One simple example of this kind of source is provided by information that is supplied to people who are unemployed or who find themselves, as is euphemistically said, "in between jobs." Imagine yourself looking for a job as a student or considering the possibility of a new area of employment (as millions of people do every day). As a part of your job search you go to the US Department of Labor Web site and look at the "career advice" section available there. Under the heading "Career Changers" this Web site lists the top ten highest-growth industries in the US and shows the total number of jobs that will be created in each by the year 2014. Based the way that the "knowledge economy" has been described above, you would think that jobs in research, in high tech and in information technologies would be at the very top of this list. But this is not the case. The first three industries or areas of employment listed are "hospitality," "health care" and "retail." Together, these three categories will provide more new jobs than the remaining seven job categories, combined. These top three sectors are predicted to produce over 15 million jobs in the US by 2014. After these top three come the financial services and construction industries. These top five industries hardly suggest that your best chances for a job would be to become a "mature knowledge producer" who would manage and produce knowledge or direct and meter knowledge flows. You would be more likely to conclude that future career choices can be found in the area of *service*: Working in a Wal-Mart (retail), a Holiday Inn (hospitality), or perhaps more optimistically as a hospital worker or care provider (healthcare).

Indeed, Daniel Bell and other sociologists and economists have given significant emphasis to this *service* component of the postindustrial economy. They sometimes describe the current social and economic order as being *both* a knowledge *and* service economy, highlighting the postindustrial specifically as entailing a shift "from manufacturing to *services*" (Bell, 1999; xv; emphasis added). This particular emphasis has much more ambivalent and problematic implications than the more single-minded emphasis on knowledge or information that is likely familiar to those researching ICTs. Obviously, service jobs do not hold the long-term attraction or bring with them the income, status or stability associated with terms like the "information worker" or "knowledge producer." Also, service sector employees generally require only "short- to medium-term on the job training" (Henwood, 2003, p. 73), with obvious and baleful implications for education and higher learning.

Perhaps the most important implication of the postindustrial economy as one reliant on *services* is social and economic polarization. Management guru Peter Drucker, for example, distinguishes between a *knowledge class* on the one hand and a *service class* on the other. It has been part and parcel of the new economic order that the rich are getting richer by (among other things) taking advantage of economic changes related to knowledge and technology to increase their wealth, and that the poor, disadvantaged by these same changes, are getting poorer. A rather dire picture of where this all may lead is also provided by Drucker:

This society, in which knowledge workers dominate, is in danger of a new class conflict: the conflict between the large minority of knowledge workers and the majority of people who will make their living through traditional ways, either by manual work, whether skilled or unskilled, or by services work, whether skilled or unskilled. (Drucker, 1994, p. 67)

Thus, beneath the simplicity of the slogans about the "knowledge economy" and its imperatives for educational change, lurk socio-economic developments that are fraught with contestation between economic classes and clashing political interests. The myth of the knowledge economy obscures this clash by generalizing the situation of one class or group within the "knowledge economy," "knowledge

workers" – to the population as a whole. To simply state that "children need to be placed on a trajectory" leading to knowledge work is to ignore the fact that other, marginalized and less celebrated forms of work are also structurally necessary in a "knowledge and service society." To recognize this is also to recognize that education must instead actively cultivate a range of skill sets germane to different economic fates.

Of course, given its inescapable involvement in knowledge in all its forms, e-learning and education have a further responsibility in this regard: to move beyond understandings of knowledge and of its construction and reproduction as a "universal" and "disinterested" productive force that is measured and valued only in terms of its performance. With regard to knowledge or learning objects, critical theory teaches the importance of moving beyond their conceptualization as interchangeable modules or "black boxes" of knowledge, separated from the contexts and interests associated with their use. Using critical theory, educators generating and reproducing knowledge are able to open up this black box to ask whose knowledge might be inside, in whose interests this knowledge might be constructed and about the possible and multifarious implications and contexts of its use.

The Anyone, Anywhere, Anytime Myth

In the way that the catchphrase "knowledge economy" papers over a polarized and contested social reality, the slogan "anyone, anywhere and anytime" access and education suggests a similarly reductive conception of identity, location, and of education itself. Instead of one class being designated as representative of an entire economy, as suggested in "knowledge economy," in the slogan "anyone, anywhere and anytime," it is particular people, times and places that are seen as typical and representative of others. To conduct an immanent critique of this second myth, it is useful to begin by historicizing – however briefly and partially – the phrase "anyone, anywhere and anytime" by considering its role just a few years ago, at the turn of the century. During the Internet's heyday – when e-learning was seen as "the next killer app" (Chambers, 1999) that threatened to turn traditional campuses into "relics" (Drucker, as cited in Lenzer & Johnson, 1997) – ICT researchers celebrated the promise of new technologies to overcome of space, time and even the body. Commentators celebrated the "death of distance" (Cairncross, 1997) and remarked with hope that the promise of disembodied community and learning could make prejudices like race and gender a thing of the past (e.g., Ried, 1998). Cyberspace was seen as clearly different from (and in many ways better than) the "real world." This is a sentiment that has been given powerful and economic expression in phrases like "anyplace, anytime" access or learning for "anyone, anywhere, anytime." But since the convenience and the irritations of the Internet have become an inseparable part of the banalities of everyday life, however, many have come to see these two worlds as less different than expected. "[T]he binary opposition between cyberspace and 'the real world,'" scholars have come to learn, "is not nearly as sharp or clean as it's [been] made out to be" (Kolko, Nakamura & Rodman, 2000, p. 4).

All the same, claims of learning "anywhere anytime" and of being able to be "anyone" online – creating one's own Internet identity – are still commonplace in e-learning publications today. It is not at all strange to read of projects claiming that they are realizing the overall aim of making "learning available to anyone, anywhere, anytime" (e.g. Bourne, Harris & Mayadas, 2005). It is also not surprising to come across descriptions of the educational potential of blogs, e-portfolios, wikis or other technologies emphasizing how they free the user to "construct" or develop their own "online identities" (e.g., Cameron & Anderson, 2006), with no explanation or qualification concerning such freedom.

It is again research and reports appearing largely outside of the literature of e-learning that undermine these kinds of claims. The freedoms of placelessness and facelessness that are thought to be available online, in other words, do not exist independently of the problems and limitations of the "real" or "physical" world. Research beyond the field of e-learning has shown, for example, that individuals are not free to create new identities online that simply erases the physical markers of race and gender. The sociological and communications research of Susan Herring into chat and discussion forums, for example, has long demonstrated that "gender is often visible 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" (Herring, 2000). As one general example, Herring describes how her own research has repeatedly shown that female communication is manifested in "an aligned orientation towards [its] interlocutors," while its male counterpart presents a markedly more "adversarial orientation" (Herring, 2000). Lisa Nakamura has done similar research on racial stereotypes, coining the term "cybertypes." She shows how tools that were earlier described as being able to conceivably "redress" issues of "age, gender and races [actually]... produce cybertypes that look remarkably like racial and gender stereotypes" (Nakamura, 2002; pp. 5). Nakamura correspondingly concludes that the Internet "propagates, disseminates, and commodifies images of race and racism" (Nakamura, 2002, pp. 3). What this research shows, in short, is that it is not possible to simply construct an online identity or persona *ex nihilo* or from scratch.

There are literal limits, in other words, to the myth of interchangeable identity or of being "anybody" online. Research also highlights other literal limitations for the myths of "anywhere" and "anytime" activity online --specifically under the rubric of the "digital divide." Research in this area first of all shows how "anywhere" and "anytime" stop rather abruptly at the borders of the 30 "developed" member nations of the Organization for Economic Co-operation and Development (OECD; e.g. WSIS, 2005). The OECD, of course, includes Europe, North America, Japan, and South Korea but excludes all of Africa, South America, Russia, India and China – the vast majority of the world's population, in other words. Research on the "digital divide" also emphasizes that gaps or "digital divides" *within* OECD countries are also notable. These are generally observed, moreover, to be co-extensive with class and other social divisions (e.g. WSIS, 2005). For example, one report on e-learning in Aboriginal or First Nations communities in Canada describes how gaps in expertise and knowledge in these contexts "are compounded by digital divides which in turn deepen existing social divides" (C.B.N.C., 2005, p. 7). Widening class divisions – above all, the gap between the richest and the poorest – have been earlier identified as important factors in debunking the myth of the "knowledge economy" and they play a role here as well. As one Statistics Canada report concludes, the digital "divide is [actually] widening when the lowest income deciles are compared with the highest income decile" (Sciadas, 2002). Gaps in the availability of the Internet, in short, fall along income and other economic and demographic fault lines, both internationally and in more local terms.

But the "anyone, anywhere, anytime" catch phrase is not only misleading when taken literally; its limitations are equally clear when identity, place and time are understood in more abstract and figurative terms. Consider: when we are online, we are not simply anybody anywhere; we are also positioned figuratively but inevitably in terms of identity, place and time by the messages that bombard us from the computer screen. To understand and articulate this process of "positioning," it is useful to briefly consider further theoretical developments of the critical approaches outlined earlier. These developments, largely contributed by French theorists Louis Althusser and Michel Foucault, focus on the complex interrelationship between ideology and identity or between control and subjectivity. Thus far in this paper, ideology has been presented as something that operates in the rather abstract realm of ideas and that connects with practice in terms of how problems, policies and projects are conceptualized and realized. Through the work of Althusser, Foucault and other theorists in the 1970's, ideology (or "power" in the

vocabulary of Foucault) is seen rather differently, as instantiated in everyday practices. Political power is seen as being manifest through the things people routinely do and the roles they routinely play without even thinking about it. For example, to play the role of a student or of a teacher (online or in a classroom) is to be cast as an individual into pre-defined relationships and structures, which are reproduced and reinforced through even the most trivial statements and actions. Once "positioned" in these roles, individual identity is to some extent defined by them. Roles and identities determine, for example, how a person is addressed and responds to being addressed (for example, putting up one's hand to as a question, or closing the door at the beginning of a class). "Ideology," in this expanded sense, "is something that happens both to us and in us" (Freeden, 2003, p. 30). This positioning or "formation" of the individual as a social subject occurs not just in the context of formal, prescribed roles but also through expectations, stereotypes and responses that are associated with race, gender, age and class. This "positioning" of the individual, or his or her "formation" is often invisible to those whose race, gender, age or class is in the majority (e.g. white, male and with disposable income).

One way of understanding this process of "positioning" is through a process known as *interpellation*: Simply think of a policeman who shouts "Hey, you there!" on the street. If you turn around to "answer" that call, at that moment, when you see yourself as "addressed" by that call, you are positioned: You are defined, at least to an extent, as a subject relative to the dominant system of beliefs or ideas regarding law and crime. Something similar happens when encountering emails, blog entries and perhaps most powerfully, advertisements on the Internet: these texts and (in some cases animated) images "address" you. As with the example of being hailed by the policeman on the street, the "address" of Internet images define or position the individual as a subject and in whatever terms and ideologies that are generally taken as "normal" on the Internet. For example, I go to a popular news site (www.cbc.ca), where I am greeted by an animated ad for computers that announces: "Dell: Purely You." I check out "Today's recommendations for you" at amazon.com, where I am presented with various products that can be "delivered Tuesday, February 20" (if I order them within a given number of hours and minutes). Even when I return to my own desktop, I go to "my computer" and "my documents."

By being repeatedly addressed in these ways (about *my* computer, *my* recommendations, *my* Dell), I am placed in a relationship with what I encounter as a computer "user," a document "producer" and above all, a *consumer*: As someone who is literate, with a potential understanding of the products presented and most importantly, at least potentially with disposable income to purchase them (e.g. White, 2006). Of course, advertisers and content developers will use a wide range of demographic and personal categories – including the socio-economic categories of class, race, and educational background and sometimes an individual's browsing or purchasing history – in order to make an online address as personal, direct and unavoidable as possible. If at least some of these categories used to shape the "address" fits or matches the recipient or addressee, then it is generally easy to accept it as "normal." In this way, the personalization and localization provided by sites and services like Google and Amazon.com can be understood as powerful ideological and broadly identity-forming tools. Even if an addressee does not fit the demographic and other categories used to shape and advertiser's address, the addressee is generally still identified and positioned in other ways – for example, as a disenfranchised outsider lacking funds or interest for the advertised product.

"Anyone, anywhere, anytime" invokes not only an abstract, default time and place – of consumption and production – but also kind of "default" person. Because advertisers seek demographic segments that have money to spend, it should not come as a surprise that the kind of identity that the Internet or Web in general addresses by "default" is white and male (Nakamura, 2002, p. 58). In uncritically invoking categories like anyone, anywhere, anytime, the experience of a single (and relatively small) privileged group (or class) of people is, in effect, universalized. Differences and even contention and conflict

between different subject "positions" – as shaped by class, race, gender, income and many other categories – are again covered up or papered over. "You" are by default a producer and consumer and "you" are further assumed to be able to produce, consume and also learn in a kind of default space dominated by economic activity. In this situation, the ideological dynamic is much the same as was the case in the earlier discussion of "knowledge workers." As was also argued in that case, instead of using the kinds of catchphrases that cover up or ignore conspicuous gaps and inequalities, emphasis needs to be placed instead on ameliorating disparities in access and the ways that these are reinforced in common ways of thinking and talking about the Internet.

Technology drives educational change

The third and final myth to be considered here is not associated with a single catchphrase or slogan in e-learning but this makes it no less powerful and pervasive. This myth is registered instead in ways of talking about technological and social change. More specifically, it appears in connection with technological *impacts on* society, particularly in statements that present technology as single-handedly achieving change in education or even as "driving" educational change. In its most extreme form, this myth is encapsulated in so-called "laws" of technically-driven progress and change, which are found with surprising frequency in literature promoting and discussing e-learning and other high-tech subjects. Examples of these laws include Moore's law (the regular doubling of computer processor speeds; Moore, 1964); Kurzweil's "law of accelerating returns" (positing the exponential nature of technical innovation; Kurzweil, 2001); or Gladwell's "tipping point" (a mathematical model of "epidemic" dynamics of change; Gladwell, 2000). According to this myth, technological progress is independent of other social conditions, and it has the power to change professional practices and priorities irrevocably or even, to render them obsolete. As a result, technology – as the word "impact" suggests – can be said to have decidedly "traumatic" repercussions on the individuals and institutions with which it comes into contact (Hilton, 2006; Pannabecker, 1991). Technology, in still other words, can be said to appear as the "destiny" of education and even of society as a whole

As an example, consider this discussion of the inevitable "epidemic" of portable, wireless computing devices predicted to overtake educational institutions:

Widespread access to PWDs (portable wireless devices) will represent a tipping point in American education. Almost all consumer devices—from microwaves to cell phones—have a price point at which widespread adoption occurs in a short period of time. The same will be true for the spread of PWDs in schools. (Bull et al, 2002)

According to the authors it is only a matter of technological progress, both in the design of technologies and the cost and efficiency of their production, that determines the future of education: "Such tools and techniques are developing at an accelerated rate, a rate that calls for an effective response—the preparedness of educators in schools with technology integrated into all subject areas" (Bull et al, 2002). This same article concludes somewhat ominously by warning its readers that this "opportunity to [act] before the tipping point arrives will occur only once" (Bull et al, 2002). Educators, in other words, are not seen as being particularly active or influential in the determination of the future of their profession: Instead, they "face a choice:" Either accommodate to technically-driven change or be left behind. Technical progress – applying to "PWDs," processor speeds and other developments – is presented as inevitable and autonomous in its effects.

Of course, technology as a force that drives social and educational change is not always expressed in such a direct or portentous manner as it is in the example, above. At the same time implicit understandings of technologies as something that single-handedly and directly cause or force social change are detectable in much research on innovation. This is illustrated investigations based on Everett Roger's model of technological innovation (Rogers, 2003). This model understands these innovations or technologies generally as being "disseminated" throughout a population as ready-made artifacts that are absorbed by a largely passive group of users. This generally allows for only two responses: "Adoption" or "resistance" of varying intensity. Rogers uses labels for degrees of adoption or resistance that are rather telling: "innovators" "early adopters" "late majority" and "laggards." The character of these labels leaves little doubt as to how various responses are viewed in this model. In e-learning research, as it happens, the population that is often studied and categorized in this way is comprised of university faculty members (e.g. Mahony & Wozniak, 2005; Bull et al, 2002; Garofoli & Woodell, 2003; PT³ 2002).

An immanent critique of this myth can be undertaken simply by looking to alternative sources of information on technology to the work of scholars in the history and sociology of technology. Research and scholarship in these kinds of studies warn of the trap or fallacy of *technological determinism*: "the belief that social progress is driven by technological innovation, which in turn follows an 'inevitable' course." (Smith, 1994, p. 38; see also Chandler, 1995).

There are different forms of technological determinism. The understanding of technological change implied in a great deal of e-learning research would fit well under what scholars have called "hard" rather than "soft" determinism, and also would fit under "optimistic" rather than "pessimistic" determinism. In the case of "hard" determinism, as Smith and Marx explain, "agency (the power to effect change) is imputed to the technology itself...with the advance of technology lead[ing] to a situation of inescapable necessity" (Smith & Marx, 1994; xii). As indicated in the example cited above, technology is indeed given the agency of a power or force of change. Technology is seen as being capable of acting on its own to produce significant social and educational transformation. What makes this determinism *optimistic* is that the "positive" aspects of this technical change are generally emphasized over "negative" ones. For example, faculty members who do not adopt technologies are seen as "laggards," as refusing the obviously "positive" potential of technology, rather than as being the last or wise few to resist its "negative" or destructive consequences.

The recent history of e-learning itself provides some powerful counter-examples that refute this overriding optimistic, "hard" deterministic bias. One example is provided by the emergence and entrenchment of "learning management systems" such as WebCT or Moodle in traditional educational institutions since the late 1990's. In this case, the rapid emergence of the Internet as a popular medium did not mean that it simply washed over the educational landscape, doing away with existing institutional and business models (as Drucker and others predicted). Instead, through a complex series of developments, interactions and "negotiations," this technology was re-shaped, adapted and appropriated through the development of Web-based software. In many instances, these software systems originated directly from universities themselves, in the form of individual or community projects of faculty and other university developers. These systems, moreover, have been designed and adapted in clear conformance with the interests and management structures of large educational institutions: they are centrally administered, meaning they can be serviced and supported by network or computing services units already in place in these institutions; and they explicitly define "roles" (via system login options) and thereby reinforce traditional functions and identities of university personnel, teachers, students, and administrators. The adaptation of Internet technology, as a result, seems to have had the end effect of reinforcing rather than disrupting many conventional educational practices and functions.

By introducing a vocabulary that makes use of terms such as "adaptation," "negotiation" and "interaction" – rather than casting technology in terms of "impacts," "laws" and "inevitable" – the relationship between technology and education appears as much more complex. Technology itself is no longer an unstoppable force that inevitably determines the future of society in general and e-learning in particular. Going even further, it is possible to say that when it is viewed as the result of complex, multi-causal processes of social construction and negotiation, technology emerges as something very much *other* than the destiny of either education or society as a whole. It becomes, as Andrew Feenberg describes, "an 'ambivalent' process of development" that is "suspended between different possibilities" (Feenberg, 2002, p. 15). "On this view," Feenberg concludes, "technology [itself] is not a destiny but a scene of struggle." (Feenberg, 2002, p. 15).

Conclusion

Critical theory, a methodological orientation familiar in many areas of social research, has clear relevance to e-learning as one example of a field of applied research into ICTs. This relevance has been demonstrated in this paper by applying ideology critique to a number of basic and even self-evident notions and understandings in literature, and that promotes, describes and investigates e-learning. At their most extreme, these notions – of a knowledge economy; of anywhere, anytime, anybody learning; of inevitable, technology-driven change – can be understood in critical-theoretical terms as "myths." The point of critiquing these myths, however, has not been to assail what is essential or axiomatic to e-learning or any other field, but rather, to provide a corrective: to show that economic, technical, cultural and historical conditions central to the use of information and communication technologies are complex and need to be interpreted and investigated in new, different and above all, interdisciplinary ways.

Such an explicitly interdisciplinary approach is indispensable for providing a more realistic and balanced basis or set of starting points for undertaking e-learning and likely other fields as well. Research becomes compromised or even misdirected if it is based on presuppositions that are fallacious and oversimplified. Alternatively, when myths, like those listed above, are clearly identified and their repetition avoided, the realization of alternatives and broadly progressive research designs becomes easier and more natural. For example, recognizing that many contemporary economies are oriented to the provision of service at least as much as to knowledge or information will surely effect how the contribution of ICT projects to the economy are conceptualized in research designs and proposals. Understanding technology as a scene of struggle rather than as a destiny or *fait accompli* might also help to guide the exploration of metaphors other than "impact" or "dissemination" when inquiring into the relationship between technology and changing institutions and practices.

Author's Bio

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