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Critical Thinking vs. Critical Consciousness

by Howard A. Doughty

Abstract

This article explores four kinds of critical thinking. The first is found in Socratic dialogues, which employ critical thinking mainly to reveal logical fallacies in common opinions, thus cleansing superior minds of error and leaving philosophers free to contemplate universal verities. The second is critical interpretation (hermeneutics) which began as the attempt to reveal the hidden meanings of pagan oracles and the sacred texts of the Abrahamic religions, and evolved through sociology into contemporary literary criticism and semiotics. Third are the analytical techniques that comprise a set of instructions about "how to think" in accordance with the scientific method and technological rationality. Finally, there is radical criticism that interrogates every kind of inquiry and knowledge (including science) to reveal the human interests that they serve. Of the distinctively modern kinds of critical thinking, analytical techniques serve as the unofficial ideology of contemporary education. In the alternative, radical criticism – commonly but not inevitably associated with the Marxist tradition – questions that ideology, and produces a critical consciousness that dissents from the dominant pedagogy and politics of college life. All four – Socratic dialogues, hermeneutics, critical analysis and critical consciousness – are important precursors to, or examples of, critical thinking.

"Science must begin with myths, and with the criticism of myths." - Sir Karl Popper

"Every real advance in the arts and sciences means a crisis."- C. L. R. James

The concept of critical thinking has its roots in ancient Greece, where intellectuals generally believed that immutable "truths" existed, and that it was the task of great minds to discover them. For Plato (427-347 BC) and his followers, truths were universal, eternal, remote from ordinary life and accessible only to philosophers. Falsehoods, on the other hand, were commonplace and could, when unmanaged, cause untold mischief, especially when generally believed by citizens in that worst of all political systems, democracy. It was not that Plato wanted ordinary people to learn the truth; like Nathan R. Jessep, the Jack Nicholson character in the 1992 film, "A Few Good Men" (SONY Pictures, 2001), he can be imagined sneering at the multitude and barking: "The truth? You can't handle the truth!" More menacingly, Plato anticipated the Hitler-Goebbel's tactic of the Big Lie, which he grandly called the Noble Lie (Bloom, 1968, p. 94 - The Republic, Book 3: 415a-b), and had Socrates (470-399 BC) present it as a useful method to persuade people to accept inequality and elite domination in what he construed to be their own and everyone else's best interest. This describes totalitarianism. On the basis of a metallic metaphor that allocated people, on the basis of their innate qualities, to the categories of gold, silver, bronze and iron, Plato provided a template for dividing the inherently superior to whom decision-making authority was

granted, from the inherently inferior from whom uncritical obedience was demanded. A subtle shift from metallurgy to biology is all that is required to adapt Plato's dream to the 20th-century pseudo-science of eugenics that was embraced by Fabian socialists like George Bernard Shaw (1856-1950), liberal American jurists like Oliver Wendell Holmes (1841-1935) and, of course, Adolf Hitler (1889-1945).

To protect this hierarchical and militarized social order, Plato imagined a state ruled by Philosopher-Kings and administered by Guardians, who might not fully understand the truth, but could be trusted to enforce it. Until such a dictatorship of the professoriat could be created, however, Plato had to make do with the wit and wisdom of Socrates, who spent his time bantering with a local audience including Philosophers-Fools. Socrates lost about as many arguments as Perry Mason, the fictional defence lawyer, lost criminal cases. He could be expected to undo the errors of his colleagues by the use of brisk "Socratic" cross-examination. By these lights, critical thinking meant the exposure of foolishness by someone wise enough to engage winningly in discussion with interlocutors gifted in such dazzling ripostes as "Yes, Socrates" and "Of course, Socrates." If we are suspicious that Socrates' debates were rigged, or at least slanted in the reports of his ardent admirer Plato, we cannot deny that there was a formal method in play.

Plato's belief in first principles, axioms and eternal and ethereal "forms" seldom boldly intruded into Socratic dialogues themselves. Socrates' boast that he was the wisest of men because he claimed to know nothing (other than how to make his friends look silly) points to the fact that, in logic, his method has much in common with the criterion of falsification put forward by Sir Karl Popper (1902-1994). He happily displayed the capacity to reveal others' mistakes while cheerfully finessing the need to prove any belief of his own. Thus, he avoided "the pitfalls that Aristotle encountered after he formulated the theory of deduction and faced the problem of first principles." That both "Socrates and Popper are left in a certain condition of ignorance because the weeding process of falsification never leaves us with a final and absolute truth" was no problem for Plato (Ross, 2006). He employed the honourable hoplite Socrates to act as his sword against his adversaries, while leaving the matter of first principles to his faith that such things are non-inferentially justified and are self-evidently matters of pure mind.

In contrast, for the admirers of Hermes (decked out in his winged sandals and cap, the multitasking Olympian god of, among other things, commerce, cowherds, orators, poets, travellers, weights and measures, and the cunning of liars and thieves) truth was likewise remote; but, it could nonetheless be discerned not by intense contemplation but by examining divine communications – whether prophesies of pagan soothsayers or sacred monotheistic texts – and by using spiritual knowledge to determine what the deity (or deities) had in mind when they spoke through the oracles at Delphi, from burning bushes, or in divinely inspired books like the Pentateuch or the Qur'an. For these hermeneuticists, critical thinking involved using their wits to ferret out hidden meanings in otherwise murky talk and text.

Among both Socratics and hermeneuticists, a form of critical thinking was required to approach truths that were more than human inventions, conventions and legends. Critical thinking was a means of engaging with the supernatural either negatively by revealing and contradicting human error or positively by elevating human receptivity to divine messages, whether directly

or indirectly delivered. In both cases, critical thinking was indispensable if humanity was to learn and understand what was beyond normal human powers of knowledge and comprehension. In both cases, critical thinking involved an emerging relationship with universal truth, religion and the gods.

Post-Renaissance Europe brought revolutionary change in all areas of philosophical inquiry from aesthetics and ethics to ontology and epistemology, and in science and technology as well. Despite the refusal of traditional religion to stand meekly aside, and notwithstanding the current atavistic reconstructions and distortions of fundamentalisms in Christianity, Islam, Hinduism and other theological systems, modernity has forced most serious thinkers to stage at least a strategic withdrawal from asserting transcendental truths. This trend has been evident especially among those with primarily secular and humanistic concerns, but also in a number of mainstream religious traditions which now accept the idea that the allegedly revealed word of God amounts primarily to tales heavy in moral meaning but light in factual accuracy. Accordingly, critical thinking has largely disengaged from the struggle to partake of divine wisdom. This does not mean, of course, that there is a contemporary consensus about what critical thinking is and how to go about practicing it. Just as in ancient times, modern thinkers are also divided about the nature and purpose of critical thought.

To some, critical thinking refers to a set of analytical techniques consistent with the views of the Enlightenment and with the technological preoccupations of late capitalism (cf. Jameson, 1991; Mandel, 1975). In this variation, it amounts to set of instructions about "how to think" in accordance with scientific method, technological rationality and value-free inquiry. Its aim is expeditiously, economically and efficaciously to solve problems. It insists that pragmatic inquiry be undertaken free of bias, prejudice and, above all, ideology. Though ideology admits of many meanings, for simplicity's sake it will be defined here as a set of more of less coherent beliefs which, taken together, construct a conceptual lens through which individuals perceive reality and with which they explain and justify that reality; it is not used in the traditional Marxist sense of "false consciousness" as contrasted, for example, with Marxism which orthodox Marxists conceive to be "scientific" and therefore exempt from the category of ideology (cf. Minar (1961; Plamenatz, 1970; Mullins, 1971; Lipset, 1972; Hawkes, 2003). This is not to say that any particular ideology is in some sense true or somehow better than any other; it merely refers to something equivalent to a mindset or a way of thinking that may or may not have veracity in some particular place or time. For those critical thinkers who use the word as a term of opprobrium, it denotes not merely false but dangerous thought including fanatical commitments to Nazism or Stalinism, which seek to create a perfect society and are none too concerned about the means to achieve their goals. In this sense, ideological beliefs are often tantamount to totalitarianism.

For those who equate critical thinking with careful analysis, clarity in conceptualization, rigor in application and honesty in execution are essential to its use. One convenient definition of critical thinking is "the art of analyzing and evaluating thinking with a view to improving it" (Paul and Elder, 2006). This is no merely academic affair. Our civilization is confronted with many problems – most of our own making – and solving them would seem to be of the highest importance. Because we are facing ostensible ecological, cultural, social, economic, political and spiritual crises that threaten our way of life and, perhaps, the survival of our species, any scheme that promises to improve our thinking deserves investigation and may have much to recommend it. If nothing

else, it certainly seems to be a better tactic than Stephen Hawking's impractical and irresponsible but much publicized suggestion that we hedge our bets by admitting that we have made a mess on Earth and set our minds to exporting our pathologies along with ourselves to other less convivial sites such as the Moon and Mars (Sherriff, 2006, 14 June).

Some, however, are sceptical of a sort of critical thinking that is described as the analysis of thought undertaken for the purpose of improving it. Such detractors claim that thought cannot be usefully discussed in a social vacuum. Genuine criticism, they say, involves interrogating all forms of inquiry and knowledge to disclose how they contribute either to the oppression or to the emancipation of humanity. Following James, in his perceptive study of the novel Moby Dick by Herman Melville (1819-1891), we can imagine that our society is like the whaling ship, the Pequod, and that our cultural crisis mimics the "crisis of Ahab [and] is that of a civilization which has recognized that it is on the way to complete mastery of the arts and sciences of civilization" (James, 1985, p. 14). Indeed, it can be argued that the Promethean desire to master human and non-human nature lies at the root of our problems and sums up our pathology (Cf. Bateson, 1972; Brand, 1974; Grant, 1966). If criticism is not restricted to winkling out logical fallacies and goes on to address material conditions, we may come to appreciate that the main threats to our civilization – environmental degradation, cultural illiteracy, social inequality, economic inequity, state tyranny, corporate corruption, technological hegemony and personal alienation in all its forms – are at least partly the result of our impulse toward mastery. This impulse leads to the ancient Greek sin of "hubris," for which the gods invariably exacted severe punishment.

From this hypercritical perspective, the idea of critical thinking as problem solving may have less to recommend it than we might originally have supposed and could, in fact, be part of a much larger predicament. Our future may not be decided by those who have the analytical capacity to think more clearly about how to solve problems, but by those who possess the political and economic power to determine what counts as a problem and in whose interest the search for a solution will be undertaken. Adding ethanol to gasoline may produce a superior fuel, but that may not impress people starving for want of corn. From this perspective as well, it can be demonstrated that every exercise in critical thinking is knowingly or unknowingly infused with commitments to particular human interests and that those who cry the loudest that they are unbiased, unprejudiced and, above all, non-ideological are the ones that must bear the closest critical scrutiny. They may or may not be liars or hypocrites; but, if they are sincere, they are quite possibly delusional and that may be more distressing still.

Scrutiny, of course, is not easy to impose. A first step, however, would be to remind ourselves and to teach our students that knowledge is "a product of social relationships wherein exercise of power is a major factor. In this way," Spring tells us, "students would not only argue with the material but would also investigate why particular types of knowledge exist and not other types" (1993, p. 99).

This article, then, is a meditation on Socratic dialogue, hermeneutics, contemporary critical thinking, and critical consciousness. It seeks to isolate, describe and interrogate these four concepts of critical thinking, so that we may better understand what we are doing when we employ its language and its logic in our classrooms. It begins with a brief account of how our classrooms

came into being.

Mass Education, Democracy and Social Control

In literate, but otherwise pre-modern Western societies – prior, let us say, to the development of universal, public educational systems – schools were almost exclusively reserved for the ruling class or for those few individuals of humbler origins who sought to join or to serve intimately the ruling class on the basis of some extraordinary intellectual acumen. Generally speaking, training in the classics dominated the curriculum of pupils who were destined for careers in the church, in the law and in statecraft. Elitist in the selection of students and in the development of subject matter, medieval, Renaissance and early modern universities disdained vernacular languages and mundane education. They resisted the teaching of the practical sciences. Knowledge of ancient Greek, Latin and the "trivium" of grammar, rhetoric and logic were essential. Likewise, the "quadrium" of arithmetic, geometry, music and astronomy (more accurately, perhaps, Ptolemaic cosmology) counted, whereas physical science, life science, mechanics and the yet to be imagined social sciences did not.

Exceptions existed, of course. Rare polymaths such as Leonardo da Vinci (1452-1519) and early empiricists like Sir Francis Bacon (1561-1626) won acclaim and have been set firmly in position in the secular museum of intellectual achievement. In England, the Royal Society indulged the diverse interests of Sir Isaac Newton (1642-1727) in both alchemy and gravity and, a century later, Antoine Lavoisier (1743-1794) apocryphally urged that his one-way trip to the guillotine be briefly delayed so that he could complete a final experiment; but, even schools of medicine were somewhat disparaged (not least because of their reliance on grave robbers for research materials and classroom demonstrations). Most other useful sciences were either studiously avoided or actively suppressed in the better institutions. Even in the late-nineteenth century, English literature was mocked in the great Anglophone universities, while subjects from anthropology to zoology were studied chiefly by inspired amateurs, but dismissed by serious academics as mere hobbies aimed at satisfying that segment of the idle rich which chose to amuse itself by accumulating tales about "strange sects and curious cults" or by collecting beetles. Even I am old enough to remember my somewhat pedantic professor of medieval history deriding the discussion of anything that happened since the death of St. Thomas Aquinas (1225-1274) as mere "journalistic chattering about current events."

Since the creation of universal school systems, however, democracy of a sort has triumphed both by encouraging greater popular access to mass education and by moving applied arts and technological knowledge into the core pathways of the prevailing curriculum. Again, I am old enough to have studied Latin through four years of high school. No more. Instead, modern schools have concentrated on two publicly declared purposes.

The first objective has been and remains the occupational training of workers in the skills needed to become productive employees, first in an industrial and now in a postindustrial economy. Once restricted to the education of clerics, lawyers and diplomats, postsecondary education is now open to people of both sexes who are intent on entering job categories that were once the exclusive domain of artisans, mechanics and clerks. This transformation was prompted mainly by industrialization which required that factory hands be able to read instructions and make simple calculations. It has

now been supplemented and accelerated by the "information society" which adds the necessity of "interfacing" with computer screens. In the initial phase, a measure of mental labour was integrated with traditional manual labour and had to be accommodated within the educational system. Hence, the "three Rs of reading, writing and 'rithmetic." In the subsequent phase, that mental labour has come to be mediated through sophisticated electronic communications devices and untutored manual labourers are fast becoming obsolete in economically developed societies.

The second objective was moral training, commonly provided by some ritual emphasis on the usable parts of the fourth and unspoken "R" which was religion. The importance of secular schooling in promoting moral values has frequently been understated. Instead, some of us labour under the mythology of an earlier, simpler and more innocent era of relative peace, harmony and security which has been disrupted by the materialism and moral decadence of modern life. This impression, useful as it may be to those seeking a return to purportedly traditional values, has been displaced by legal anthropologists and social historians who have amply demonstrated that, from the collapse of the remnants of feudalism to the imposition of capitalist work discipline, law enforcement was inconsistent, and violence of all sorts was endemic to society. In the transitional era, schools became important mechanisms in the struggle for order. In Britain, for example, from the time from the Glorious Revolution of 1688 to the passing of the Second Great Reform Act in 1867, structural changes in the political economy produced cultural alterations that transformed a society of suspicion, uncertainty and degraded brutality into the modern world of psychological repression and institutionally enforced social organization. This pattern was stimulated in large measure by urbanization and the desire of an emerging bourgeoisie to restrain "loose and disorderly people," denizens of Hogarth's etching, "Gin Lane" (1751) and members of "The Gangs of New York" (2002), who might otherwise gather together and threaten the lives and property of the prosperous. The actual disruption of feudal life (no pastoral idyll either) was repeated wherever and whenever agriculture gave way to commerce and industry, and resulted in various threats to social order including both criminal activities and occasional riots, protest movements and what sometimes amounted to protracted civil war (Hay et al., 1975; Hobsbawm, 1959, 1971; Hobsbawm and Rudé, 1975; Lower, 1973; Macfarlane, 1981; Rudé, 1973; Starr and Collier, 1989; Thompson, 1968, 1977, 1993). In time, and when conditions were right, school reform became inevitable.

The utility of schools as instruments of social control is obvious in hindsight, but it was controversial in its time (mainly in the mid-nineteenth century). The "school promoters," as Allison Prentice (2004) has famously called them, had fulsome opponents. For every Egerton Ryerson (1803-1882), the main advocate of compulsory education in Ontario, there was a John Strachan (1778-1867), cleric and educator, who feared what might befall if the lower orders were made literate but uninhibited in their reading habits. Moral and political chaos, he fretted, would surely follow.

Eventually, of course, the battle for school reform was won and, to date, few workers, especially in North America, have taken to reading the compelling screeds of nihilists, anarcho-syndicalists, socialists and communists of various sorts as a prelude to transformative revolutionary praxis. In this, the so-called post-Marxist era, Wicca seems as likely to recruit proletarians as the doctrines of the First, Second, Third and Fourth International Workingmen's Associations combined; instead, Wal-Mart provides as popular a program for economic

survival – cheap goods produced in foreign sweatshops – as most people can imagine. Moreover, neither in pioneering struggles when literacy workers from volunteer organizations such as Frontier College taught isolated miners and loggers nor in new industrial towns where Mechanics Institutes provided working class education to skilled and semi-skilled labourers did added learning stimulate adequate political ferment to pose the threat that the ruling elites had feared. Although self-help was a significant theme among working people who sought material improvement, intellectual stimulation and, on occasion, political knowledge and awareness in addition to the functional skills they needed, the fear of a robust class consciousness has only rarely been displayed and has been forcefully suppressed or cleverly co-opted when it has appeared. Instead, the ideological embourgoisement of the proletariat seems to have at least provisionally succeeded; moreover, on those occasions when workers did seem rebellious, the cause was seldom found in public school education. Although the field of adult education was once hotly contested (Welton, 2006), "the reality is" that "Reality" television, professional sports and other distractions have dulled the dream of a different social order, and blunted the "revolutionary consciousness" that was once considered a necessary prelude to serious social change. For the time being, even stagnant wages, rising living costs, employment insecurity and an increasingly obscene differential between rich and poor – domestically and globally – have not significantly altered the pattern of muted protest, but have instead driven alienated labour deeper into the self-regarding and self-obsessed idiocy of private experience where life is reduced to culturally barren, technologically mediated, politically apathetic and psychologically anxiety-ridden personal space.

Education and Work under Capitalism

To locate a kind of critical thinking that might inspire change, it is necessary to look elsewhere. In the first of his "Economic and Philosophical Manuscripts of 1844," Karl Marx (1818-1883) expressed the view that "positive, humanistic and naturalistic criticism begins with [Ludwig] Feuerbach [1804-1872]" (Fromm, 1961, p. 91). It is equally fair to say that scientific and emancipatory criticism begins with Marx. Dissatisfied with previous materialisms (including Feuerbach's), Marx sought a method that would permit scientific materialism to escape a static relationship with pure idealism by joining it to sensuous subjectivity thereby rescuing both class consciousness and political praxis from the sterile domain of abstract thought. Understanding the world philosophically was important but ultimately pointless in the absence of the will to change it. "The materialist doctrine concerning the change of circumstances and education," Marx complained in his "Theses of Feuerbach" (1845), "forgets that circumstances are changed by men and that the educator must himself be educated" (Easton and Gaudet, 1967, p. 401). His subsequent comments on alienation, written over a century-and-a-half ago remain pertinent, except insofar as they understate the technological innovations that have accelerated cultural, economic and political change. For example, electronic communications technology – both as mind-numbing entertainment and as an extension and an instrument of mental labour – has been added into the mix with extraordinary and often inhuman results. According to Marx (Fromm, p. 99), the structure of capitalism alienates workers from the products of their labour, from the process of labour and from themselves as labourers whose work is not free, spontaneous or even their own. As a result, "man (the worker) feels himself to be freely active only in his animal functions – eating, drinking and procreating, or at most in his dwelling

and in personal adornment – while in his human functions he is reduced to an animal." Indeed, human workers are less than animals in that they are increasingly deprived of even the erotics of physical work and engaged in routinized, reified simulations of work. They lose the sensations of their own bodies and become extensions of machines and of networks of machines. They are no longer living creatures but abstracted "human capital."

Aware of their new and reduced status, yet compelled to do their best to become appealing "resources" for employers, they are locked into a system, says David Noble, "in which the human parts of the industrial apparatus [are] fashioned to specification" (1977, p. 168). As a result, what Newson and Buchbinder once described as a "new stage of economic development [that] is hastening and intensifying the integration of [higher education] into the productive sector of Canadian society" has now placed "manpower planning" at the centre of academic decision making (1988, p. 79). The further consequences, as Michael Skolnik emphasized, are "deliberate efforts to relate enrollment numbers in various programs to anticipated labour market demands for workers with corresponding educational backgrounds" (1983, p. 84). This emphasis on vocational training may still have the power to shock and appall those scholars who remain most fully insulated from the realities of fiscal restraint and policy development as they sip sherry in the rarefied atmosphere of university faculty clubs, but such an agenda represents "business as usual" for the majority of colleges.

Morality is something else. Fear of urban gang violence was once among the main motives for compulsory education in the 19th century. It has now returned as a focus for "law and order" politicians who are eager to "get tough on crime," build privatized prisons, initiate "workfare" and impose restrictive immigration policies. This is, however, mainly a rhetorical gloss on underemployment, chiefly among the young.

Real crime rates are declining, and rising levels of incarceration are mainly artificially induced by the criminalization of illicit drug use, a medical problem to the extent that it is any kind of problem at all. Besides, neither unfettered recreational drug use, the popularity of computer pornography (adequately covered under existing criminal law) nor other instances of moral degradation seem to have reduced the gross domestic product. In fact, although the methods for gathering data on such topics are problematic, it is widely believed that marijuana is the largest agricultural crop in British Columbia (Meissner, 2003, 27 April) and the fourth largest cash crop in the United States (MetaFilter, 2006, 17 February). As such, it is an important, if unrecognized, part of the world economy.

In short, more rigid legal restraints on personal behaviour (including the criminalization of poverty in anti-panhandling laws) amount to little more than emotive rhetoric that builds on fear of youthful resentment (particularly when combined with racial, religious and other demographic factors) rather than authentic social distress, and is directed almost exclusively at the lowest links on the drug chain. Persistent persecution of the homeless, the abandoned and the socially marginalized – whether in school or recently withdrawn from the system – adds a malodorous cover to the already unacceptable levels of child poverty in some of the world's most prosperous countries.

Whatever unruly behaviour in the lower social orders might betoken for the human soul is perhaps an important topic, but it is not one that bothers the

ruling class excessively as long as rowdy young people can be kept in their "hoods," drive-by shootings are mainly restricted to recognizable free fire zones, and the social costs of violence and addiction are borne principally by the poor, the dispossessed and the politically anomic – in short, the already marginalized and victimized.

It would be churlish, of course, to insist that schools were simply designed for purposes of increasing profits and imposing social control on those who produced them. Few social institutions of any sort are unambiguously monolithic in ideology or practice. "Liberation theology," for instance, is an enduring albeit a small and dwindling minority theme in the Catholic Church. Irshad Manji represents a minority opinion within Islam, but is certainly not the only liberal and openly lesbian critic of her faith. And, lest we forget, the great anarchist philosopher Peter Kropotkin was a prince. Never mind that princes in Tsarist Russia were almost as common as Colonels in Kentucky, he was definitely a scion of nobility and was attached to the imperial household. So, it should not astonish us that education has lived with a measure of internal tension between those (usually the majority) who would use it to indoctrinate and those (usually the minority) who sought to liberate their pupils.

At least since Jean-Jacques Rousseau (1712-1778), "progressive" education has been encouraged in the interest of fostering the healthy development of the whole person. The nobility of an agenda that would support holistic personal growth has regularly been articulated, though seldom seriously attempted on a large scale. Nonetheless, from Maria Montessori (1870-1952) to A. S. Neill (1883-1973), the fact that some pioneering initiatives were undertaken cannot be ignored, and support for the dissemination of a broad range of knowledge and the development of emotionally sound and socially responsible individuals cannot be gainsaid. Many progressive and sometimes courageous experiments have been begun in schools all the way from junior kindergarten to postgraduate studies. Nonetheless, such efforts (commonly denounced as "permissive" by those who endorsed getting rid of "frills," going "back to the basics," and measuring success through "standardized testing") also resulted in a backlash including the stiff reassertion of narrow vocationalism in pedagogy and commensurate corporate domination in ideology (cf. O'Sullivan, 2000). In general, this reaction to reforms attempted in, for instance, the 1960s (Ontario, 1968) has tended to prevail. As Barlow and Robertson observed over a decade ago (1994), the media, myth factories such as the Fraser Institute and opportunistic right-wing politicians have successfully carried on an "assault" on Canadian schools that serves the interests of corporate profiteers and the religious right alike – all the while ensuring the success of what Linda McQuaig (1998) has famously called the "cult of impotence" among high school, college and university graduates (and drop-outs) alike. Sustaining this reaction has been a host of studies emphasizing the need for skills training in order to survive in an increasingly competitive global economy (Radwanski, 1987; U.S. National Commission, 1983)

The concern with economic competitiveness and worries about how critical thinking about political economy have had some noteworthy consequences. Of special interest in Canada is the demise of Canadian Studies. In the late 1960s and the 1970s, partly in response to A. B. Hodgetts (1968) exposé of the sorry state of knowledge about Canada that was purveyed in schools, a ten-year enthusiasm for Canadian Studies erupted and then went bust, thanks mainly to managerial complaints about "ideology" once

again. Canadian "content" was fine (where necessary), but critical studies of Canadian society, and especially any that could be deemed "anti-American" were either eviscerated or obliterated. The rise and fall of Canadian Studies does not for a moment, however, reduce the need for Canadian Studies – more desperate now than ever. Plenty of help is available in defining what Canadian Studies should be. A good first step is Ken Osborne's agenda for democratic citizenship (1988, pp. 53-75); little, however, is being done to promote such policies and practices at any level of education. Still, the dream endures of counter-acting what appears more and more likely – a new barbarism in an age wherein, as conservatives lament, we substitute synthetic understandings for facts and attitudes for moral principles (cf. Neatby, 1953, pp. 239-258). That such critics were dismayed by the "debased conception of man" that was put forward by progressives and materialists and saw no fault in capitalist social organization does not take away from their concern that education seemed eager only to help students "to satisfy their animal hungers." A parallel to Marx's thoughts about alienated labour is too stark to miss. A partial community of interest, then, is at least possible between those conservatives who criticize contemporary education for what it fails to do (educate) and those radicals who criticize it for what it does all too well (indoctrinate).

While the progressive ethos is mainly in retreat, modern schools continue to have a hard time living up to even their narrow economic mandates. If we are no longer much interested in the humanities (everyone being familiar with the legion of successful PhD candidates in English or Sociology who currently drive taxicabs or serve transfats at fast food outlets), we are still worried about the supposed relationship between educational achievement and personal prosperity. Critics have been quick to point out that schools have not significantly improved individual social mobility but have, instead, obediently reproduced the existing social division of labour. The children of the plutocracy enjoy an intellectually rich (and often private) education. The children of the proletariat do what they can under the circumstances. None of this has gone unnoticed in the literature.

For the past several decades, the place of colleges in maintaining social class divisions has been sociologically set and extensively discussed. Modest quasi-academic credentials are now awarded to those fated to occupy sub-professional, functionary and part-time positions in the work force. The pattern has been well documented for over thirty years (Bowles and Gintis, 1976; Gaskell, 1987; Karabel, 1972; Livingston, 2000; Luker, 1990).

Complaints that secondary schools discriminate in their various "streaming" policies, that they treat socially unequal students unequally, and that they do not fulfill the promise of high rates of upward mobility should therefore not surprise, nor should the egregious performance of "inner city" schools that remain starved for cash and judged undesirable employers for many clean, callow, middle class teachers. Accordingly, while it may be true that a good education is normally a necessary condition for success, it is not sufficient and, despite much talk about the predominance of a competitive meritocracy, intergenerational economic mobility is more fiction than fact in contemporary capitalist societies.

As Rossanda et al. (1970, p. 647) explained: "as a public institution for the masses, the modern educational system was born of the modern bourgeoisie and carries with it the imprint of the bourgeois state." Nothing could be more obvious. The principal purpose of schools is to generate competent

producers, credulous consumers and compliant citizens. If minority groups, the marginal middle class, or proletarians and women are discouraged from advancing or are directed into employment ghettoes, that process merely replicates the external world of race, class and gender inequality. If the appearance of change is manifest in the increase of women now winning university degrees and graduating from some prestigious professional programs, the "glass ceiling" is obscured but not removed.

Sometimes, however, critics go beyond statistical accounts of social stratification to address more subtle and perhaps deeper cultural issues. A little over a decade ago, for example, I happened across a concise critique of school textbooks. It came from an Italian teacher's diary, Il Paese sbagliato (A World Awakened) that has not yet, to my knowledge, been fully translated into English. It contained an account by Mario Lodi (reproduced on the back cover of Our Schools/Our Selves # 39) of his experiences in a small rural school. It read, in part, as follows:

"The very purpose of school textbooks [is to] present 'culture' as something that has already been organized, that exists by itself, and that children receive in daily doses. It is just like a department store: the program is broken up into chunks and pieces arranged on shelves called 'subjects.' All the teacher has to do is follow the instructions, measure out the daily dose and everything will be in order … It is clear that, when you follow a textbook, even a good one which tries to stimulate the child's thinking processes by asking suitable questions before going on to give the answers, this approach excludes any kind of experimentation on the child's part. Consequently, no rules of behaviour can ever be worked out from experience. Everything comes from the top down. Culture and morality will be considered beyond and above personal experience; they will be isolated from real life ... This ideological content and this authoritarian approach are the expressions of a school … which tends to develop docile, passive individuals, as ignorant as possible about vital issues. In such a context, teachers can unwittingly become instruments of the system when they should be ensuring the development of free citizens."

Lodi's complaint was valid at the time, but the situation seems to have worsened. Now, his gripe against textbooks can be applied to the entire educational systems, and not just in remote Italian schools but in North American colleges and universities as well. Issues of "culture and morality" are no longer taken seriously as issues in education. The teaching of anything like an adequate curriculum in history is absent as common cultural references fragment, and people lose even the possibility of relating to an organic community. As for moral development, at most students from primary grades up are provided with a list of cookie-cutter corporate "values" such as positive attitudes, dependability, honesty, resourcefulness, initiative, willingness to follow instructions and, of course, appropriate dress and grooming (Palmer 25). Whether supplied by proponents of the insidious "character community" movement or independently generated by educators, these moral traits are said to lead to success in the material world, the only domain that seems to count. Ethical growth is thus transformed into an addendum to the job description of an entry-level or part-time employee.

The one discernible improvement in all of this is that the process is now transparent. So, teachers no longer have the excuse of being ignorant of their part in corporatist pedagogical practice. We can no longer pretend to be "unwitting" agents of political indoctrination and social control. Any of us who

choose to think critically about our jobs and our institutions cannot help but understand what we really do and recognize our culpability as co-determiners of the educational system and as "curriculum delivery" people. (In Britain, for example, many members of National Union of Teachers helped sabotage "the supposedly classless comprehensive schools" of the 1960s and 1970s and eviscerate the Plowden Committee's 1967 proposals for providing inner city schools with additional funds (Perkin 1989, pp. 349-351). We therefore carry a burden of responsibility for what is done by us and in our names. Since one of our contractual obligations is often the teaching of critical thinking, it behooves us to know what that phrase means and to determine whether there is any isomorphism in its philosophical definition, its practical definition and its meaning in the minds of those managers who supervise us as well as those students whom we are employed to supervise.

As a second provisional definition of critical thinking then, I shall borrow the words of Lawrence Hazelrigg (1988, p. ix) as applied to philosophies and practices in education and in other social institutions of cultural, economic and political importance. "Criticism," he explained, "interrogates an activity, any activity, as to its conditions and possibilities. And in doing so," he continued, "criticism's inescapable act of affirmation is also, inseparably, a 'disputation of errors' – that is, polemical. A question that is always to be asked both in and of criticism is how to discriminate error from that which is not error?" There is more than a whiff of Friedrich Nietzsche (1844-1900) here, but that can be an inspiration (cf. "I love them which greatly scorn because they also greatly adore" (1933, p. 7). When discussing official education's attitude toward criticism, I shall return to this problem of definition. For the moment, however, it is necessary to show why it is important to worry about definitions at all.

A "Word" from Eric Blair

To advance this rumination on the practice of critical thinking in contemporary college education, we could do worse than to reflect briefly on what is called Orwellian language. "Orwellian" is a word that has become … well, Orwellian. In his public career as an author and activist, George Orwell (1903-1950) – the famous nom de plume of an Englishman named Eric Blair – did many things, many of them admirable and most of them memorable. His greatest legacy, however, was his defence of plain speaking. Both in his essays, especially "Politics and the English Language," (1970), and in his novels, most notably Nineteen Eighty-Four (1954), Orwell wrote about the importance of clarity, especially in the domain of political discourse. Not everyone was impressed. For example, according to Stanley Fish (2006, 16 July) "Politics and the English Language" is "turgid, self-righteous and politically hopeless" and "the most overrated essay in the modern canon." Nonetheless, it is plain that Orwell took words seriously. He worried that language could be diminished, degraded and ultimately manipulated for nefarious purposes. Words matter.

The ease with which a fastidious preoccupation can be put into the service of aristocratic gentility, of course, should not be overlooked. Dr. Johnson, for example, once remarked that "wheresoever manners and fashions are corrupted, language is. It imitates the public riot" (quoted in Kermode, 2006, p. 28). Such an utterance implies that corruption is primarily a lower class or minority phenomenon. The sentiments behind it are mimicked by contemporary defenders of "standard English" and opponents of, for example, "Ebonics"; while certainly a legitimate topic of interest, it is not the one primarily

under consideration here. Those interested in the educational potential of non-standard English might consult Fillmore (1997) for an introduction to a debate that seems temporarily to have been eclipsed by (or at least subsumed within) the more general issue of multiculturalism and the increasingly strident opposition thereto as they emerge as another battlefield in American "culture wars." What is of concern here is the corruption of language from the top down, the cunning manipulation of language by social leaders whose continuing power is sustained, in part, by the imposed befuddlement of the led.

Sometimes Orwell identified cases in which words were employed to convey the opposite of their original denotative meanings. Hence: "War is peace. Freedom is slavery. Ignorance is strength," the slogan of his fictional Ingsoc Party. More elaborately, he came up with an entire approach to social communication, called "Newspeak," which was a systematic perversion of open communication. Newspeak relied upon simplification of grammar and vocabulary in a manner that was extremely useful to totalitarian regimes. In case we failed to understand how it worked, Orwell helpfully explained its principles in an appendix to his great novel (1954, pp. 241-251). Some people worry that these principles, or something very like them, are being used today. Some even imagine that the corruption of grammar and the depletion of vocabulary even among nominally educated people is a prelude to authoritarian rule. It would be unwise to discount their concerns.

Since the publication of his dystopian speculations, the word Orwellian has become part of our popular lexicon, and its definition has become predictably more elastic. It is, for instance, common to hear it applied to certain euphemisms that are deployed by the authorities to disguise the content of their acts. Hence, bombing becomes "delivering ordnance," dead civilians are transformed into "collateral damage," and killing one's own soldiers is explained by "friendly fire." In colleges, students are transformed into "customers" or "clients" as they enter and "products" as they emerge from the institutions. People also denote as Orwellian the calculated alterations of affect in political terminology. Hence: "anti-abortion" becomes "pro-life" and "unemployment insurance" becomes "employment insurance," as if people were seeking protection against getting a job. Indeed, I have even heard grumblers give, as examples of Orwellian speech, such relatively benign instances of commercial advertising as the labeling of a laundry detergent as "revolutionary". This last is certainly overstatement and perhaps hyperbole, but I am reluctant to put such mildly misleading phrasing in the same category as "tenant protection" laws that enhance the power of landlords or "academic freedom" policies that restrict the rights of teachers, to say nothing of the command to "terminate with extreme prejudice" as a way of ordering an assassination or "pacification" as a direction to destroy villages. The list goes on.

In this wide range of cases, it is plain that our use of words has become sloppy if not deceptive in precisely the way Orwell found objectionable. Orwellian is now an adjective that can be used to identify any expression that we consider disingenuous. Perhaps I am naïve or lack a sufficiently supple mind to grasp the matter properly but, on the dubious assumption that Orwellian has not already become the sort of cliché that he warned us against, I prefer to reserve its use for terminology that has serious political implications.

I have discussed the notion of Orwellian language at some length because the central issue of this meditation falls along the border between misrepresentation for disreputable political purposes and legitimate dispute

about meaning in an academic setting.

The matter at hand is, let us remember, "critical thinking." Like concepts such as "beauty" or "democracy" or "justice," it is essentially contested. Reasonable people may reasonably disagree about its meaning, but occasionally get into nasty and unnecessary arguments as a result (cf. Gallie, p. 121). One goal of this essay is to clarify the issues at stake so that we will at least know the sources of our quarrels.

A standard example of an essentially contested concept that I have used before and no doubt will use again involves a hypothetical painting. Two people can quite easily agree that the object before them is a painting. No complicated chemical analysis is needed to assent to the proposition that the object is composed, say, of oils applied to canvas. Difficulties can arise quickly, however, when the painting in question is said to be a work of art. The abstract expressionism of Jackson Pollock (1912-1956) strikes some as artistic depravity. The realistic ornithological illustrations of John James Audubon (1785-1851) strike others as second-rate photography. Moreover, even if these of questions of what can legitimately be allocated to the category of "real" art are resolved, a further set of aesthetic questions arises when we want to judge whether a particular portrait or landscape or set of splatters is a poor, mediocre or excellent instance of its genre. Definitions matter. What applies to art applies equally to thought. Especially for educators, the definition of critical thinking matters. I began with a tentative definition of critical thinking. It must withstand interrogation. A recurring theme in its definition is "truth"; we think critically, it is generally agreed, at least in order to reveal falsehoods and perhaps to discover the truth. At issue are the questions: How? And Why?

Socratic Dialogues

Critical thinking has been a core concern of philosophy since the beginning of recorded thought and probably long before. Socratic dialogues are often put forward as ideal models of critical inquiry. Indeed, the so-called Socratic method is commonly considered to be archetypal critical thinking in action. In his dialogues, Plato presents Socrates as unconcerned with advancing his own views or even with undermining the substantive beliefs of others by offering other evidence. He rarely advocated or attacked the content of a belief, preferring to subject them to questioning in order to determine whether they were logical and therefore eligible to be believed. To pass his tests, which few did, Socrates sought to determine, for example, if the beliefs which others expressed displayed consistency irrespective of whether they corresponded to factual evidence (Plato's rampant idealism made the latter a decidedly secondary matter). Socrates' relentless questioning won him the status, at least among his supporters, of the prototypical critical thinker. He constantly exposed fallacious reasoning. He was always suspicious that beliefs were unsupportable and needed to be challenged. Only those propositions that could withstand his withering cross-examination – that were "left standing," so to speak – after the windstorm were deemed acceptable.

Socrates also failed. As Canadian philosopher John McMurtry successfully argues, "Socrates … despite his reputation as an inveterate interrogator of conventional opinion, never went so far as to seriously query his society's belief in enslaving other people to do its work, nor did he ever think to question the system of aggressive war and imperialism upon which these enslavements were based. Like his fellow citizens, he benefited from such

arrangements, and however much they might cry out for the philosophical daemon he held so dear, he left them unquestioned" (1999, p. 2). His philosophizing may have made him into an annoying "gadfly," but his dialogues were no great threat to existing order; his subversion lay elsewhere.

The fact is that the only explicitly dissenting political position Socrates seemed to take was in opposition to Athenian democracy. He was arguably the first philosophical proto-fascist, if not a Spartan fifth columnist or a "Spartan hound," in Zeno's apt phrase (Plato, Parmenides, 128c). His record included an eagerness to recruit young, rich men to the legion of anti-democratic forces supportive of the "Thirty Tyrants" whose dictatorial regime was overthrown just four years before his famous trial. Thus, corrupting the morals of the young as a propagandist for despotism – not by playing amusing mind games with plainly outmatched verbal sparring partners – might not be as far-fetched a charge as we are commonly urged to believe. Of course, that judgement depends in part on how one defines democracy and what we imagine to be a fair trial.

This is no small matter, for today allegedly clear thinkers retain a proclivity for ad hominem arguments that plainly violate their own endorsement of fairness and objectivity. So, Ross (2000), an acclaimed expert on logic, epistemology and the scientific method, misrepresents the argument of I. F. Stone (1907-1989) in his book, The Trial of Socrates (1988) and goes on to accuse him of being a Stalinist, a supporter of North Korea in the Korean conflict and of having "had dealings with the KGB" though this esteemed logician stops just short of accusing one of America's most revered journalists of being "a paid agent of the Soviet Union," as if any of it (even if it were true) made the slightest difference to his study of a 2500-year-old trial. So, also, Steve Pinker, whose ideological brush takes strong strokes at scientists such as Richard Lewontin and Steven Rose. Their "commitment to the 'dialectical approach' of Marx, Engels and Mao," he says, "explains why they deny human nature and also deny they deny it"; Stephen Jay Gould (1941-2002) is treated a little better for he is relieved of the epithet "doctrinarian" though still deemed to have been corrupted by what is surely an unusual variety of Marxism that insists upon putting human agency over determinism and also uses Marx to vindicate the concept of "free will" (2002, p. 127). In the end, both Hitler's belief in innate human qualities and Marx's qualified acceptance of the notion of free will are folded into a single frame as, despite obvious differences, "Nazism and Marxism" are said to be launched on "parallel trajectories" (2002, p. 157). And what is it that binds these two movements together? Pinker explicitly dismisses what Gould (1992) calls a "wonderful aphorism" – namely Marx's assertion that "men make their own history, but they do not make it just as they please; they do not make it under circumstances chosen by themselves …." (Marx, 1978, p. 9), and finds the answer in a single word, used in The Gulag Archipelago by Solzhenitsyn and italicized by Pinker: "ideology"!

Ancient Hermeneutics

For all its subsequent popularity, however, the Socratic method has venerable competition in its claim to early supremacy in the domain of critical thought. In the West, at least, the larger part of philosophical history has been preoccupied with another sort of critical thinking – hermeneutics. The objective of hermeneutics was not the interrogation of contestable beliefs, but the correct interpretation of (mainly sacred) texts. Whereas Socrates suspected error and sought to expose it, hermeneutics assumed truth and sought to reveal it.

Like Socratic reasoning, the origins of hermeneutics are also ancient. The word comes from the Greek, Ερμηνεύς, meaning "interpreter," and is associated with the god Hermes, whose task was to explain messages from the gods. Each culture that became a main contributer to the Western canon practiced hermeneutics. Examples include the work of Greek rhetoricians as well as the Jewish Midrashic and Christian Patristic traditions. The purpose of hermeneutics was to offer interpretive commentaries on religious communications, whether verbal or written. The aim was to reveal the "truth" that was assumed to lie hidden behind or beneath the words – however opaque – of divinely inspired speech and documents. Hermeneuticists were in the business of explaining everything from the oracles at Delphi to the parables of Jesus and, in due course, The Qur'an of the prophet Mohammed. Though not limited to this purpose (hermeneutics was also involved in the interpretation of mythology and poetry), the importance of the discipline for the conduct of daily life was enormous. To do God's will required assistance in determining what that will was.

Proper interpretation was no small task, and it carried risks. Selected quotations from The Bible, for example, were regularly used to support slavery well into the nineteenth century in the United Kingdom and, even later, in the United States. Both the legitimacy of human enslavement and a set of rules surrounding its practice are scattered through Exodus 21 and Leviticus 25:44-46 (all Biblical quotations are from the King James edition). New Testament documents add to the litany. Most explicit and concise is the injunction: "Servants, be subject to your masters with all fear; not only to the good and gentle, but also to the froward" (1 Peter 2:18). Additional comments on the topic can be found in Ephesians 6:5-8, Titus 2:9-10 and Colossians 3:22-25. That such talk should appear in the Judaeo-Christian canon is hardly astounding. The documents were composed at a time was slavery was common practice; so, the absence of dissent demonstrates no more than ordinary conformity to the customs of the day.

Less expected may be the number of times that Biblical figures railed against social and economic inequity. The prophet Isaiah is justly famous for denouncing those who "beat my people to pieces and grind the faces of the poor" (Isaiah 3:15), but similar attacks on Earthly oppressors can be found in Jeremiah 5:27-29, Ezekial 16:50, Amos 2:7 and 8:4-8, Habakkuk 2:5-9, and Malachai 3:5. On this basis, McMurtry is prepared "to say that class analysis originates with the old prophets, though their repudiation of the wealthy's exploitation of the needy is seldom officially noted" (1999, p. 261). As for risk, Canadian socialist J. S. Woodworth learned to his dismay that his mere mention of Isaiah in the 1930s "was enough to incur his prosecution for sedition" (Dowson, 1980, p. 51). He might thank his God that he did not rely more upon the New Testament, for what other source could there be for the Marxist slogan – "To each according to his ability, to each according to his need?" – than the Book of Acts 4:31-35, which declares that the apostles were filled with the Holy Ghost "and they spake the word of God," which was in part: that ought of the things he possessed was his own; but they had all things in common … Neither was there any among them that lacked: for as many as were possessors of lands or houses sold them, and brought the prices of the things that were sold, And laid them down at the apostles' feet: and distribution was made unto every man according as he had need.

This is certainly not what the latter day apostles on the North American religious right such as George W. Bush and Stephen Harper, Pat Robertson

and Jerry Falwell, would be pleased to hear; however, it does point to the inevitability of selective disagreements about the literal, symbolic and prescriptive meanings of sacred texts.

Disagreements arose, of course, not only about what the texts meant but also about which texts properly mattered. Quite apart from the current kerfuffle about the so-called Gospel of Judas and the long-known but mainly ignored Gospels of Philip, Thomas and Mary Magdalene, as well as the large quantity of materials contained in the Dead Sea Scrolls and the Nag Hammadi Library, but cut from the final edit of the New Testament that was cobbled together by church fathers in the fourth century, there has been a longstanding debate about what kinds of literature – whether sacred or secular – was worthy of consideration and in need of interpretation.

For philosophers who followed Plato, close reading of poetry was not merely nonsensical, but could be downright dangerous. In The Republic, The Laws and elsewhere Plato has Socrates – amusingly considered not only the quintessential philosopher but the most inspirational martyr to the cause of free speech – explain that the creative arts are inimical to the good society. They inflame our passions and despoil our intellect. For this reason, poets assume the lead position in the inventory of artists that Socrates would banish from the polis. (Asmis, 1992; Bogdan, 1983; Griswold, 1981; and Hwang 1991.)

To be fair, Plato does not have Socrates say that every scrap of poetic expression should be destroyed. He merely wanted to eliminate all "epic, tragic and comic poetry," all "the great festivals of ancient Athens," and all "the public recitations of Homer which sometimes attracted as many as 20,000 people." As Nehamas (1999) admits, however, this "is still a serious enough issue." What upset Plato was the notion that poetry (and most other art) was "mimetic," which means that it sought to represent real things in artistic form. A statue of a woman represented a real woman and a poem about love gave expression to an experienced emotion. To Plato, however, true reality was transcendent. It was to be found in ideas of pure mind and not in the messy, transient and untrustworthy world of contingent, empirical and impure matter, much less in mere copies of transient material reality. Mere physical matter and impure human emotions were bad enough; artistic copies of them were not just impure but deceptive. The idea of a circle, for example, was pure and perfect. Any attempt to create a circular object in the real world was necessarily a corruption of the idea. Any painting of a circular object was one more step removed from the eternal form. So, expression that was rooted in the world of experience was, at best, a distraction from the highest form of thought, the contemplation of the essence of reality and, at worst, an invitation to degradation and chaos. The difference between Socrates and the hermeneuticists is most clearly displayed in his contention that nothing can be learned from a written text and that any writer who thinks his text can "embody clear knowledge of lasting import deserves reproach" (Plato, Parmenides, 277d), a judgement that places his pupil, Plato, on very thin ice indeed.

Hermeneuticists operated differently. They attended to scattered stories and bits of writing that they believed were divinely inspired, and tried to work out what they meant. This involved discussion of the literal meaning, the symbolic meaning, the application of that meaning to a specific situation and the elucidation of the general theological and ethnical principles that could be inferred from them. There is, it should be obvious, a fair comparison to be made between textual exegeses on the Book of Daniel or of Revelations and

modern psychoanalysis and the interpretation of dreams. Such tangents, however, need not be followed here.

Socratic examinations and the critical deciphering of religious and other texts are two of the important background traditions in critical thought. Hermeneutics is closely associated with rhetoric. The rhetorical arts can comprise a theory of expression and persuasion and they can also refer to the native skill of orators in the practical matter of speaking convincingly. Likewise, hermeneutics can involve a theory of interpretation, and it can also refer to the natural power of understanding that everyone possesses to some degree. Hans-Georg Gadamer (1900-2002), for one, insists that the practical skills of speaking and listening are prior to their theoretical expression: "In both rhetoric and hermeneutics, then, theory is subsequent to that out of which it is abstracted; that is, to praxis" (1977, p. 21).

Contemporary Hermeneutics

The interpretive art of hermeneutics comes to the fore whenever there is a conundrum, a dispute, a vaguery that needs to be explicated or a contradiction that needs to be resolved. Thus, while explanations of obtuse utterances were always required (and a priestly class was always available to assume the role of interpreter for a price), the hey-day of hermeneutics came later.
Writes Gadamer (1977, p. 21):

Historically, it is worthy of note that while rhetoric belongs to the earliest Greek philosophy, hermeneutics came to flower in the Romantic era as a consequence of the modern dissolution of firm bonds with tradition. Of course, hermeneutics occurs in earlier times and forms, but even in these it represents an effort to grasp something vanishing and hold it up to the light of consciousness. Therefore, it occurs only in later stages of cultural evolution, like later Jewish religion, Alexandrian philology, Christianity as inheriting the Jewish gospel, or Lutheran theology as refuting an old tradition of Christian dogmatics. The history-embracing and history-preserving element runs deep in hermeneutics, in sharp contrast to sociological interest in reflection as basically a means of emancipation from authority and tradition.

Gadamer's comment that hermeneutics differs from "sociological" criticism in that it does not seek emancipation from authority is of interest, and will be considered again. Meanwhile, it is worth mentioning that several strains of contemporary hermenutical inquiry have emerged more recently as products of the Enlightenment, albeit at some remove. The main contributions have been to expand hermeneutics to incorporate more than religious, symbolic, mythological or other forms of creative writing. They have also reached out to other traditions, not least those of neo-Kantian philosophy, phenomenology and the critical theories of the second generation of the Frankfurt School, notably Jürgen Habermas. In literature, connections were made to the post-World War I migrants to English Literature. In the study of popular culture, they lead to semiotics. Moreover, there was a social basis for these intellectual trends.

As Terry Eagleton reports, "English Literature rode to power on the back of wartime nationalism"; it really took off, however, when the sons and daughters of "the provincial petty bourgeoisie" (F. R. Leavis, Queenie Dorothy Roth, I. A. Richards, et al.) arrived to displace the "patrician dilettantes" and to

"challenge the social assumptions which informed [the] literary judgements … of the pre-war upper class" (1983, pp. 30-31). They precipitated developments in formalism, in what came to be called the "New Criticism" and in various versions of structural analysis. On the continent, hermeneutics developed in the hands of a succession of theorists whose contribution was to expand its scope.

Friedrich Schleirmacher (1768-1834), for instance, vastly enlarged the field to include all human communications, and made a valiant effort to synthesize subjectivity and objectivity, the real and the ideal through the analysis of both the grammatical (ideational and organizational) and psychological (individual) components of a work. His interest came about when he was asked to translate an early account of an Englishman's encounter with Australian aborigines. "Schliermacher," writes Eagleton, "was concerned about how we could understand the beliefs of this people even though they seemed desperately alien to us. It was," he continues, "from a colonial encounter that the [modern] art of interpretation was born" (Eagleton, 2004, p. 23).

Subsequently, Wilhelm Dilthey (1833-1911) steered hermeneutics in a still more expansive direction, combining it with a form of empiricism and locating it within the domain of sociology using the intellectual objective of "verstehen" (subjective understanding) as his focus. Distinguishing between the natural sciences (based on cause and effect) and the human sciences (rooted in the search for meaning), Dilthey anticipated much of what today is understood in the tension between "etic" (objective, externally observed human behaviour) and "emic" (subjective, internally experienced mental states) perspectives on social reality. For an explanation, see Harris (1980, pp. 30-41); for a critique of what Harris calls the obscurantism of later hermeneutics, see his later castigation of "modes of thought that exalt knowledge gained by inspiration, revelation, intuition, faith, or incantation as against knowledge obtained in conformity with scientific research principles" (1980, p. 316).

In due course, the hermeneutical project was overtaken by phenomenologists at first in thrall to Edmund Husserl (1859-1938), then to Martin Heidegger (1889-1976) and, more recently, to Gadamer.

It was Husserl's ambition to construct a wholly scientific entry into the mind of the author, to grasp the meaning and intentionality of discourse from the unmediated consciousness of the speaker and to produce a dispassionate account of what was happening in the mind of the creative artist, writer or mythmaker when the work was completed. Empathetic, non-judgemental and sensitive to all contextual markers as well as subjective experiences, the phenomenologists deployed techniques not altogether different from those of psychoanalysis. They depended, counter-intuitively, on the assumption (Husserl calls it an "insight") that "a 'purely immanent' investigation of the psychical" can be "on the one hand the fundamental condition for a completely scientific psychology and on the other the field for a genuine critique of reason" (Husserl, 1965, pp. 109-110). For Husserl, all we need do is transcend our naturalistic biases and grasp pure essences. With Husserl, it seems, Hermes has flown home to roost in the groves of Plato's Academy.

The relevance of the hermeneutical problematic is that, like its predecessors and progeny, it related both the nature of human understanding and the relationship of author and reader to the authentic meaning of a text. In its most up-to-date form, "reception theory," it uses the language of "strategies,"

"repertoires" and "codes" to emerge 2500 years after Socrates with what Eagleton dismissively calls "a liberal humanist ideology: a belief that in reading we should be flexible and open-minded, prepared to put our beliefs into question and allow them to be transformed" (1983, p. 79). Other words for this include acultural, asocial, antihistorical, antinomian, essentialist, formalist, idealist, noumenalist, speculative, subjectivist and falsely transcendental. In short, it is only by the most bizarre reformulation of the concept of science that Husserl can claim to be scientific (he, of course, would dismiss this as evidence of my pathetic attachment to naturalism and my experiential embrace of merely contingent, material reality). Unfortunately, for all the polysyllabic discourse, we are left at the end of the rainbow not only without a pot of gold but also without a periodic table of elements that could let us know what gold was, and provide some criteria according to which we could judge its presence or absence.

Thus, endeth the current chapter in the history of idealism. We ultimately have little to show for two-and-a-half millennia of reading except an awareness that people who have already made up their minds about this or that are poor readers, that "ideology" blinds us to alternative possibilities and that, since "the only good reader would already have to be a liberal: the act of reading produces the kind of human subject which it already presupposes" (Eagleton, 1983, p. 79). The best we can anticipate becomes a "normalized" text which, having been reduced to a manageable and stable meaning by consensus, shows itself to be as authoritarian in its exclusivity as any other.

Whatever differences may originally have separated Platonists and "textualists," this much can confidently be said: both sought wisdom that was not of this world. The first aspired to the realm of supernatural, transcendent reality through contemplation. The second tried to escort messages from the transcendent, supernatural realm to mortal reality without distortion. Plato wanted his head in the clouds; hermeneutics invites us to examine divine droppings. Both, however, had their minds fixed on the heavens.

Modernity (and, of course, postmodernity) has, in one sense, been more modest. Our eyes are fixed not on the stars but on ourselves (so, in another sense, what appears to be modesty may merely be narcissism). In any case, we examine historical reality as we "underlings" experience it, and we probe reality as it is socially constructed. We abandon the notion of inimitable truths and content ourselves with whatever negotiated understanding we can extract from experiences and observations through the careful testing of limited hypotheses.

The implications for college education should be plain. We may well have abandoned pure Platonism, but we still pay homage to his irritating Tabanid philosopher. We may even have jettisoned our sacred texts, but we still dither about the meaning of our actions and seek some sort of comfort in sharing our subjective lived experience. Marvin Harris thus concludes that such "cognitive obscurantist strategies … [define our] primary mission to be that of finding out how natives think" and to endlessly reflect on subjectivity in the sure and certain knowledge that truth is always "relative and social." Let Eagleton deliver the final blow (1983, p. 61):
For all its claims to have retrieved the 'living world' of human action and experience from the arid clutches of traditional philosophy, phenomenology begins and ends as a head without a world. It promises to give a firm grounding for human knowledge, but can do so only at a massive cost: the sacrifice of human history. … Phenomenology sought to solve the nightmare of modern

history by withdrawing into a speculative sphere where eternal certainty lay in wait; as such, it became a symptom, in its solitary, alienating brooding, of the very crisis it sought to overcome.

This is a long way from Platonic forms and chicken entrails, but it is the bleak shore upon which idealism ultimately dumps us. None of this is to deny, of course, either the importance or the possibility of textual interpretation or of detecting clues to the historicity of sacred documents. To achieve anything close to accuracy, however, the legitimate tools of historical inquiry known to disciplines as diverse as geology and philology must be brought to bear on empirical evidence. This is being done in such well-known endeavours as the "Jesus Seminar" which seeks to either confirm or reject Biblical assertions about the statements and acts of the Christ. To date, the roughly one hundred members of the group have published sixty-six books and determined an accuracy rate for Biblical claims of about 16%. Related questions are being pursued by anthropologists, historians, philologists and archaelogical researchers in the field. Their analyses of both Old and New Testament documents are scattered through professional journals and occasionally synthesized in popular books (e.g., Crossan, 1991; Funk 1998; Wilson 1985). These efforts, when undertaken and carried through with rigorous scientific methods are not to be discounted. And this, of course, brings us to the third example of critical thinking, the systematic cultivation of excellence in thought measured by the standard of modern analytical reasoning, the most popular version of which is to be found in the scientific method.

Science

If idealism has become impoverished, the intervention of critical scientific thinking to demystify transcendental theology, mythology and magic is largely to be credited (or blamed). Unfortunately, the sterility of idealism is only slightly more intellectually desiccated than the heroic model of the sciences.

We have all learned the drill. The scientific method from Sir Francis Bacon onward turned idealism upside down. The goal of Plato (and of most religionists) is to assert a number of unimpeachable universal truths and apply them to more discrete instances of contingent, mutable, particularized and imperfect reality. Science, in the alternative, starts small. It does not make deductions from axioms as geometers and dogmatists do. It employs the inductive method instead. This is to say that science, as properly conceived and competently done, starts with a problem and works upward from observations of nature and proceeds to more general statements that link observations in testable hypotheses until it becomes possible to generate theories meant to explain relationships among diverse events with the goal of ultimately discovering natural laws. These "laws," of course, are not equal to Thomistic natural law, which had its (lower) place in the hierarchy of God's law but was nonetheless subsumed within it and was therefore divinely ordained as well. Traditionally, there was no inherent conflict between the rules that applied in the supernatural and the natural world since both were a part of divine creation.

Unfortunately for the epistemologically naïve, today's scientific aspirations have surpassed not only Aquinas but Sir Isaac Newton as well. We no longer have confidence in the predictable, mechanical universe that flowed from Newton's straightforward laws of gravity and motion. The principle of uncertainty, proclaimed by Werner Heisenberg (1901-1976), put an end to all

that when it helped to substitute probabilistic for positivistic science (Heisenberg, 1930). Since then, we have advanced far beyond into an inchoate understanding of the universe that is more complex, subtle and unpredictable than the comparatively simple and reassuring model that Newton had in mind. Self-criticism smashed the scientistic shibboleth and demonstrated how criticism assists human understanding even (or especially) when it takes the form of autocritical interrogation, for who can discover our faults better than ourselves if we are intelligent and truthful enough to engage in rigorous self-examination?

Conversely, who is more able than us to cater to our illusions and delusions when we are conceptually unclear and committed to a distorted account of the truth for which we have little evidence but which seems to be in our interest? Above all, when we are open to idealistic obfuscation and eager to be misled, mischief abounds. As far as I can see, to take the example of Sir Arthur Conan Doyle, he surely foreshadowed his future preoccupation with fairies and séances by insisting that Sherlock Holmes solved mysteries through the process of "elementary deduction" when, instead, it seems to me that the great fictional detective employed a method more closely resembling induction, for he seemed to notice small things and declined to come to conclusions until all plausible alternatives has been rejected. He refused to theorize before being familiar with all the data, put his confidence in careful attention to detail (trifles) and expressed a commitment to what Popper would develop as the task of falsification by saying on a number of occasions that his famous method consisted of eliminating all other explanations until he was left with the truth. Unfortunately, we shall never have an adequate account of Mr. Holmes' expert methods in detection since, as Ross (2005) points out: "While the immortal Sherlock Holmes created a mythic gold standard for reasoning, anyone looking for a sensible explanation of the form of his reasoning will come away with very confused and erroneous ideas," because almost everything Holmes said about his method was "wrong." Even his use of language to convey how he performed his feats of problem solving faltered and, when he tried to explain his reasoning, "we [got] a very poor sense" of his practice since he called it "analytical" as if this was a form of reasoning when there was actually "no real meaning of 'analytic' … that [was] relevant to his point."

Although Mr. Holmes seemed unable to provide a proper description of his method, the word analysis has survived. It is now used to describe a process whereby an intellectual or material whole is divided into its component parts either for individual study or for the study of the relationships among those parts as the elements of a functioning system. Thus, anything from tectonic plates to internal combustion engines to recipes for lasagna to parts of speech can be analyzed according to a standard formula or method, one that takes complicated systems apart and tries to find out what makes them tick, examining them from the ground up, so to speak.

The relationship between inductive and deductive reasoning in scientific investigation is not of the "light switch" variety (either "on" or "off; "yes" or "no"; a "zero-sum game). As Harris (1980, p. 8) correctly states: "Science has always consisted of an interplay between induction and deduction, between empiricism and rationalism; any attempt to draw the line on one side or the other conflicts with actual scientific practice." Moreover, he continues: "The main function of these alternatives – besides giving jobs to philosophers – has been to provide ammunition for shooting down someone's theories or building up one's own. One's rivals have overindulged themselves with speculative,

metaphysical assumptions or they have been obsessed with superficial empirical appearances, depending on which particular moment in the interplay ones chooses to emphasize."

With that caveat in mind, it is still important to call attention to the genuinely revolutionary use of inductive reasoning and its devastating consequences for those who either sought or, worse, thought that they had already found immaculate truths. People such as Copernicus (1473-1543), Galileo (1564-1642) and their followers put the lie to the entire Western cosmological system of Ptolemaic assumptions, Biblical instructions and celestial epicycles with a few crude observations and some rough calculations. Their systematic investigations inverted the deductive method and devastated the mysticism, scholasticism and shamanism that preceded them. They were wrong in their immediate conclusion that the universe was heliocentric rather than geocentric for, of course, it is neither; but, they were correct to reject one falsehood on the best available evidence, and to raise up another for future scientific scrutiny. What must be grasped is that scientific criticism is regularly successful against both idealism and scientific arrogance not merely because of the content of science (the earth is not the centre of the universe; women were not formed from Adam's rib; and Pallas Athena did not spring from the head of Zeus, grown and fully armed), but rather of its structure, its grammar, its method and its validating authority, which is material experience apprehended to the best of our ability and reported as honestly and accurately as our natures will allow.

The practice of science must constantly guard against the comfortable acceptance of axiomatic assumptions and faith in its own proofs. Science is not purely rationalistic nor is it at all faith-based. It is necessarily empirical, though the extreme and currently ragged edges of physics are coming strangely close to metaphysical ambiguity that often involves rationalistic (mathematical) speculation and, in some interpretations, borders on poetic and Taoist conclusions (Capra, 1977). The point can, perhaps, best be understood when we recall that no better compliment can be given to scientists than to describe their explanations of difficult problems as "elegant" – until, of course, the next revision (and improvement) is made.

In the alternative, the deductive method relies on a closed system. With deductive logic, once the eternal truths, axioms and a priori assumptions (e.g., the internal angles of a triangle are equal to 180°; or, God is omniscient, omnipotent and benevolent) are mustered, affirmed and promulgated, logic confines the investigator to a limited number of options. If an application of a truth is fully consistent with its axiomatic base, then it, too, is true. Those who deviate from the inescapable conclusions derived from a priori sources (whether burning bushes or tea leaves) are variously demons, infidels, heretics or mere non-believers and therefore enemies at worst, potential converts at best. The separate category of mathematical axioms also relies on formal thinking that is unconcerned with empirical reality; it is less dangerous, however, because the refusal to accept the proposition that 2 + 2 = 4 rarely results in torture and execution but, rather, in an interesting discussion of the differences between the plane geometry of Euclid (ca. 325-265 BC) and the exploration of the curvature of space-time introduced by Albert Einstein (1879-1955).

Restricting ourselves to the competing claims about the world that have been made by religionists and scientists, it is important to stress that the two

"magisteria" come at truth from the opposite directions but, some believe, need not conflict as long as each sticks to its own turf, with science dominating in the domain of physical reality, and religion restricting itself to morals and meaning (Gould, 1999). Except for symbolic logic, algebra and so on, however, many scientists discount all axioms, superstitions, presumed certainties, venerable truths and ideological doctrines as inherently unreliable, if not literally meaningless. For them, empirical evidence, to be obtained through the observation of natural phenomena, is the final authority. Thus, hypotheses that are not confirmed by the observation of nature must either be amended or abandoned.

In addition, two corollaries are regularly affirmed. First, any proposition that cannot be falsified is not scientific, and therefore cannot be the subject of genuine knowledge. In the matter of life after death, for example, since no one has yet constructed an experiment or otherwise determined a method of obtaining evidence to decide the point, the question is excluded from scientific inquiry. Second, and somewhat harsher, any question concerning "values" is excluded from scientific inquiry because it essentially irrelevant to the quest for understanding or, at best, is a matter of purely subjective preference but not of scientific importance because it involves concepts or characteristics that cannot be operationalized and therefore cannot be tested or verified and therefore cannot constitute knowledge.

To explain: I may say that I prefer chocolate ice cream to vanilla, and you may say the opposite. If we are being honest and are not delusional, each of these statements may be in some sense true and might even be verified using sodium thiopental. Neither statement, however, implies that either flavour is in any way "better" than the other merely because either you or I happen to prefer it. The same thing goes for questions of theology, politics and morals. Likewise, in this severe form, positivistic science does not even bother to deny religious beliefs, political ideologies or moral preferences; it considers them epistemologically empty (cf. Weldon, 1953). Since they cannot be answered, they are not worth asking.

The critical position of science vis-à-vis religion is, of course, itself a matter of controversy. For a very long time, what we understand as science was called "natural philosophy," and was not automatically considered to be at odds with speculative idealism. Within this tradition, St. Thomas Aquinas, following Aristotle (384-322 BC) rather than Plato, was happy to acknowledge the existence of natural law as a proper subject of pious inquiry, provided that it was recognized as the application of divine will to material reality. "Keeping in mind that man, who is finite, cannot be expected to have anything like complete knowledge of God, who is infinite," S. Samuel Shermis explains that "reason, which is an element of philosophy, is grounded in observation of God's creation" (1967, p. 85). Moreover, since sacred doctrine is based on faith and is sincerely believed to be God's revealed word, religion and science ought never to be in conflict for they are merely two different ways of apprehending the work and the will of God.

In this schema, natural laws were derivative from and subservient to eternal or divine law; yet, they were superior to human law – the positive law of any particular state and were the criteria against which human law could properly be judged. Though more accessible than divine law, natural law was not wholly available to human reason; but, it was at least partially so, whereas God's wit and will – except for those bits of it that he chose to share – remained

inscrutable. Since the material world was God's creation, the exploration of that world was certainly a fit enterprise for humanity to undertake. This judgement provided the moral basis for undertaking scientific work, and it should neither be forgotten that the Church sustained and supported a great deal of early scientific work nor, for instance, that it was cleric Gregor Mendel (1822-1884), whose pioneering experiments in genetics provided Darwinism with the previously unknown mechanism of adaptation in its theory of evolution . Despite the stated community of interest between religion and science, tensions between faith and science are rarely absent. Desperate attempts to reconcile the supernatural with the mundane in the name of natural theology regularly broke down with the result that one side, the other or both were discredited. When science began to disclose "facts" that ran afoul of religious belief, religionists had two principal responses: denial when convenient and repression when necessary.

From the house arrest of Galileo (1564-1642), who was finally absolved in 1992 when Pope John Paul II (1920-2005) officially admitted that the Earth orbits the Sun, to the repeated refutations the Genesis story, Biblical "miracles" and many of the central elements of the Jesus story, some churches have been willing to concede that such narratives contain mythic elements that can be spiritually enhancing while not being literally true. As Kurt Vonnegut (1970, p. 14) said in and of his novel Cat's Cradle: "Anyone unable to understand how a useful religion can be founded on lies, won't understand this book either." Just as often, however, scientific understanding has been forcefully resisted and the efforts of scientists to overcome mythology and superstition have escalated into what has often been called a "war" (A. D. White, 1960).

What accounts for religion's stubborn refusal to face the facts or, at least, to deny them as long as possible? Simple ignorance counts for something, but more important may be a deep fear that yielding on even the most farcical facets of Bronze Age belief systems would bring down the entire religious project. Religion is thus deemed to be psychologically necessary for human happiness, whether or not its tenets are in any way true.

It is easy to mock the contumaciousness of the church. The futile defiance of evolution by the Catholic Church was totally abandoned only in 1998, when Pope John Paul II, having removed Galileo from the interdicted list only six years earlier, dragged the Roman church into the 19th century by rehabilitating Charles Darwin (1809-1882) as well (though one ought not to celebrate too quickly since there seems to be some serious backsliding in the new papacy of Benedict XVI). Still, it should equally be admitted that there are plenty of progressive theologians who understand that their faith is, or ought to be, rooted in something more than sorcery and spiritual slight-of-hand. Episcopalian Bishop John Shelby Spong (2004, 24 November) is just one of many contemporary religious leaders who have happily accepted scientific findings on a host of issues, yet remained committed to their faith:
If I am required to read the gospels as history, then I must be willing to believe that a star can wander through the sky so slowly that wise men can follow it; that stars are hung out in the sky to announce an earthly birth, that angels literally sing (in perfect Aramaic presumably) to hillside shepherds; that the fetus of John the Baptist inside the womb of Elizabeth can leap to acknowledge the superiority of Jesus, who is still in the womb of Mary; that Jesus could feed 5000 people with five loaves, still a storm, walk on water and finally return to God by rising up into the sky. Those things are inconceivable to me.

As he elsewhere points out: "Religion has always been more about the search for security than it is the search for truth" (2006, 24 May). I would put it another way. Science is about asking questions; religion is about pretending to have answers.

Other motives that are darker than simple anxiety in the face of mortality and metaphysical uncertainty persist. Sometimes religious conviction becomes associated with bigotry. As the Canadian francophone newspaper, Le Devoir, once screamed in evident ethno-religious agony: "The Jew Einstein made us accept on his word the theory of relativity" (quoted in Richler, 1992, p. 246). As well, the same idea can sometimes be denied from a different perspective. In the former Soviet Union during the Stalinist era (1929-1953), party ideologues sought to impose the peculiar notion of "dialectical materialism" on all aspects of science. Few fared worse than physics. Einstein's theory of relativity was thought to be reactionary and counter-revolutionary. Physicists who defended it were systematically harassed and many perished in political prisons (Vucinich, 2001). Although the Soviet leadership of the post-Stalinist era came slowly to its senses, China was not as immediately fortunate. During the "Cultural Revolution" and beyond, Einstein was accused of spouting "bourgeois nonsense," and was not "rehabilitated" until 1979 (Hu, 2004; Hu, 2005).

More damage, however, may have been done in biology because not only scientists but also people who might otherwise have avoided starvation perished because of the destruction of authentic agricultural research. In the USSR, political orthodoxy distorted biological science for decades as Trofim Lysenko (1898-1976) purged botanical studies of evolution according to Darwin and substituted the more "ideologically correct" but scientifically primitive ideas of the brilliant, provocative but ultimately mistaken evolutionist, Jean-Baptiste Lamarck (1744-1829). Lysenko managed to maintain his position as the alpha scientist of Soviet biology by systematically falsifying data and by acting as a one-man Inquisition, with able assistance from the NKVD. He successfully organized the purging, imprisonment, and execution of hundreds of scientists and the ruination of the study of genetics throughout the USSR, while millions starved at least partly because of his wrong-headed agricultural research.

Depraved as the religious and ideological persecution of science and scientists may be, however, the scientific project is not immune from legitimate criticisms.

One is directed against the account of scientific inquiry that makes it a secular substitute for religion and transforms scientists into a civic clergy complete with a liturgy rooted in the scientific method. During the late 19th century, the philosophy of positivism and the popularity of the notion of ineluctable linear progress combined to constitute an ideological formation that is commonly called "scientism," an extravagant set of interrelated claims for the capacity not only to reveal all natural laws relevant to the hard (physical) and the soft (life) sciences, but to carry this knowledge over into domains of political economy, psychology, ethics and the arts to produce a comprehensive understanding of the universe and everything in it, including all aspects of human life. Quite apart from the factual question of science's capacity to discover everything, this ambition inevitably involves the logical problem that G. E. Moore (1873-1958) called the "naturalistic fallacy," which is often expressed in the proposition that you cannot derive an "ought" from an "is" (Frankena, 1963, p. 206).

Ernest Renan (1823-1892) stands as an exemplar of scientism at its most optimistic (although the words uttered by Ronald Reagan in countless General Electric commericals in the mid-1950s – "Remember, folks, at GE, progress is our most important product" – run a close second). Renan memorably declared that all the mysteries of science would surely be known by the turn of the 20th century, and he insisted that "[i]t is no exaggeration to say that the future of humanity lies in science, that science alone can make known to a human being his or her destiny, that it teaches one the way and means to attain one's goal" (quoted in Gedo, 1990). The assumption of the role of a secular priesthood was a profound betrayal of scientific scepticism and was quickly undone, not merely by "humanists" but by any scientists worthy of the name. Science, after all, has come to accept only a few authentic assumptions, the most important of which is that science never proves anything. It simply falsifies foolishness and presses on to ask further questions, to tear down what it has assiduously constructed and to persist in adjusting and refining its hypotheses and amending its theories in light of new evidence. It is a perpetual process of modification with no end in sight. With much respect to those adventuresome people who seek the "Grand Unifying Theory" that will eventually reconcile gravity, electromagnetism, the strong and the weak nuclear forces and thus provide our species with a "Theory of Everything," announcements of the "end of physics" (like the promise of "the end of" almost everything else that became fashionable phrases in popular books at the end of the second millennium) is every so slightly exaggerated and certainly premature (cf. Lindley, 1993). As Konrad Lorenz put it: "Truth in science can best be defined as the working hypothesis best suited to open the way to the next better one" (quoted in Singh, 496).

The scientific enterprise, at least since the discovery of relativity and quantum mechanics, has been dedicated to establishing probabilities, not certainties. This is not to deny that there is a world external to the human mind and senses, nor to say that this external world is inherently unknowable. Some phenomena including gravity, biological evolution and human mortality have been observed with such regularity that it would be perverse to withhold at least provisional assent to the proposition that they are, for any practical purpose, established as facts. Still, the consequences of research into the small and the large, into particle physics and cosmology are such that a mere century of exploration has simultaneously presented us with radical redefinitions of reality and imposed upon us the necessity of modesty. We may have learned some tentative scientific laws, but we also know that scientific laws do not apply always and everywhere. We have moved from the mechanical universe of Newton through Einstein's relativity and the quantum mechanics of Max Planck (1858-1947) into the fresh, surrealistic and so far hypothetical worlds of string theory in barely a century. Now, as we confront multidimensionality as explained in the protoscience of brane cosmology (a derivative of superstring theory) and contemplate interpretations of the universe (s) that defy human imagination, we understand the absurdity of suggesting that science can ever speak authoritatively about the external world, if by authoritative we mean the establishment of a set of large, final, incontrovertible truths. Descriptions of the physical world are already more than elusive. The thought that we could successfully apply alleged scientific truths to judgements about aesthetics, morals and the like are therefore not merely absurdities but particularly parochial ones as well. Reductionism, the quest to discover the causes of human and other animal behaviour in complex but identifiable, deterministic physical and chemical exchanges remains an unholy grail, and not one that sensible scientists expect to claim. Some regard it as a

metaphysical impossibility; others at least admit that the task is impossibly difficult and almost certain to generate little but frustration among the new Prometheans.

Another legitimate criticism is directed against the account of science that reifies what is, at best, a misleading hagiography of scientific method, a method that does not exist and would destroy science if it was ever seriously tried. Science, we are told in introductory textbooks, proceeds incrementally. Problems are identified, hypotheses are made, experiments are designed, observations are recorded and the educated guesses of researchers are either confirmed or rejected, in which case they may either be abandoned or modified and tested again. Through what amounts to a rigorous process of "trial and error," science plods along until someone makes a genuinely interesting hypothesis and, "Eureka!" a dramatic breakthrough occurs. Such newly "great" scientists then dutifully advises anyone who cares to listen that they were simply standing on the shoulders of giants.

No small number of scientists have said that this type of account is hogwash, but few have been as insistent and as eloquent as Paul Feyerabend (1924-1994) in doing so. Feyerabend was not merely an annoying gadfly, but was an especially sharp and painful thorn in the side of official science. He pointed out during his allotted three-score-and-ten years that the privileged position of science in modern society is not warranted for at least three reasons. First, especially since science morphed into technology and "pure" research came to take a secondary place to research with immediate practical applications and "pay-offs" either in profits or military power, it has held centre stage in the political economy of modernity. In the process, it has become profoundly undemocratic, if not inherently inhumane. From the time of the Luddites (Thomas, 1972; Thompson, 1968, pp. 537-545, 598-659), people who have seen industrial transformations of society have glimpsed in "real time," the price that is paid for progress. From the hymnal condemnation of the "dark, Satanic mills" by William Blake (1757-1827) to the demonic flight of the Enola Gay piloted by General Paul Tibbets (1893–1983), science has been working hand-in-glove with capitalist exploitation at home and with imperialism abroad.

Feyerabend was among the first in the scientific community to criticize the political process of defining the scientific agenda. Much as secular society tries to maintain a separation of church and state, Feyerabend felt that there should be a separation between science and the state. The community of interests, for example, among arms manufacturers, energy companies, pharmaceutical firms, government grants agencies and politicians all but ensures that governments and private corporations collude to do what is in the interest of profits and not of the people. This essentially populist stance is not apt to win friends among any of the interest groups involved, and Feyerabend paid a heavy personal price for his outspoken opinions. In this, of course, he was not alone and might also have been dismissed as a crank, a crackpot or – worse, a communist (cf. Chomsky, 1967).

Paul Feyerabend was particularly disturbing to the scientific establishment, however, because his credentials as a physicist and as both a philosopher and an historian of science were impressive. His doctoral work proceeded under the immaculately empirical gaze of Karl Popper. He held prestigeous academic positions in England, Germany, New Zealand and Switzerland as well as at Yale University and the University of California at Berkeley. Beginning as a confirmed empiricist, he became one of the foremost

critics of empiricism and especially of his mentor Popper and his prized concept of falsification. Feyerabend showed that, despite the predominance of talk about scientific method, actual scientific discoveries do not happen methodically. Moreover, by setting up a false regimen and insisting that there are established methodological rules that scientists do follow and must follow if their work is to be deemed credible, science has been transformed from a liberating to a repressive enterprise now largely in cahoots with institutions of power, political repression and economic exploitation. Although his contention was more a thesis in intellectual history than an argument from political economy, there is little wonder that Feyerabend lost more friends than he won.

Feyerabend offered a deeply humanistic cri du coeur. He allied himself with existentialist philosophers like Søren Kierkegaard (1813-1855) and pled for the recognition of subjective experience, myth and even magic in the definition of reality. For this alone he might have been thanked and politely turned away from serious discussion. He went further, however, and added his personal critique of science as "a miserable, unfriendly, self-righteous mechanism without charm and humour" (1978, p. 175). It was his position that science is inhibited when it opts for anything less than theoretical, methodological and epistemological pluralism. To buttress this unconventional view, he delved back into the history of those iconic watersheds in scientific progress and found that truly transformative scientific discoveries such as the Copernican or the Darwinian in fact violated almost all the rules of scientific inquiry. In particular, he attacked the "consistency criterion" which stressed that new scientific advances must flow logically from past discoveries, whereas the very important ones shatter the prior consensus. Defunct theories are just that, and a new approach that explains more facts or explains facts better is justified in expelling an antique explanation, thus permitting the exploration of new paths of inquiry. He also famously took on Popper's idea of falsification, arguing that there is prejudice in our definition of what constitute facts and that it is therefore unsurprising that theoretical innovation should be at least partially inconsistent with the known data. He focuses on (pardon the irony) the fact that there are no facts that are apprehended in the absence of an historical and cultural context, and that even the most exquisite observational technology and the purest scientific reasoning cannot fully account for measures of physical reality without slipping into the necessity of approximation. Again, it is quantum theory (particularly the theory of fields) that most demonstrably tosses a spanner in the works, and compels particle physicists to hedge their bets by resorting to "ad hoc approximations" (Feyerabend, 1978, p. 63). One need not, however, probe into the admittedly counter-intuitive world of quanta to see the point. According to Feyerabend, it is absurd to accept "[t]he demand to admit only those theories which follow from the facts" since the essential unreliability of observation and the innate ambiguity of the facts "leaves us without any theory. Hence, science as we know it can exist only if we drop the demand and revise our methodology." He continues: "According to our present results, hardly any theory is consistent with the facts" (p. 65). Hence, the fundamental methodological revision must involve "admitting counterinduction in addition to admitting unsupported hypotheses" (pp. 65-66).

At this point lay readers may be forgiven for throwing up their hands and thinking that, if he is correct, one of three conclusions is inescapable: (a) science is impossible; (b) science is possible but it no more reliable than astrology or creationism; (c) science is impossible, but something else that looks a lot like science must be happening because airplanes fly, skyscrapers rarely fall down, electric lights illuminate dark rooms, and my granny's hip

replacement means she doesn't need a walker anymore!

Fortunately, we do not have to travel all the way to Kierkegaard and psychokenesis to grasp Feyerabend's point. He was, after all, a scientist whose insight went a little beyond that of what Thomas S. Kuhn called "normal science." In Kuhn's classic formulation, (1962, pp. 10-42), science proceeds in a manner similar to the Eldridge-Gould reformulation of Darwinian evolution to include the phenomenon of "punctuated equilibrium" (Eldridge & Gould, 1972). In the evolution of animals and ideas alike, it seems that relatively long periods of statis are followed by abrupt crises and immense creativity and innovation. In the most dramatic instances in zoology, this involves mass extinctions followed by explosions of speciation as, for example, occurred when a hunk of interplanetary rubbish crashed into the Yucatan peninsula about sixty million years ago, and precipitated the elimination of the dinasaurs, thus giving "lebensraum" to mammals and providing the opportunity for primates (including us) to evolve. Similarly, scientific revolutions involve the collapse of well-established theories, the elevation of new orthodoxies and the restoration of normal scientific activities that work out the details of the triumphant paradigm until a new revolution brings the edifice crashing down.

Of course, the process is not quite as exhilerating as all that, but what Feyerabend did express was the process of dismantling old theories by bringing in new ones – but not exactly according to the rules. If the rituals and prejudices or normal science were (dare I say it?) religiously observed, science would never go anywhere. What his gentle anarchism permits is change and "renormalization," but not in the incremental way that dogmatic adherence to the scientific method demands. Scientists, we find, are just not as well organized as introductory textbooks tell us they are, and it does not help the case of pedants to notice that, among the more interesting new fields of scientific research, is chaos theory.

One final criticism of science can be mentioned, but will not be explored at length. It follows from the fact that the entire scientific enterprise, as generally conceived, consists of "observations and laws closely related to them." There are subtle differences, of course, in specific formulations. On Bacon's thesis, science "consists of observations and generalizations induced from them"; according to the logical positivists' principles, it "consists of observations and generalizations that are verifiable"; [and] on Popper's "demarcation criterion, science is what is empirically testable by observation" (Wisdom, 1972, p. 62). These familiar notions, however, ignore the fact that underlying all comments about the scientific method are untestable, "intrinsic components" that include an "embedded ontology" (Wisdom, p. 64) and a "Weltanschauung" (Wisdom, p. 70) that are essential to the understanding of, and the rationale for, science, but that are no less axiomatic than anything Plato dreamed up. Empirical content and testability are absent in the justification of empiricism and, absent a method to observe the process of observation or to test the concept of testability, the entire scientific project cannot be fully thought, proven, or practiced with the confidence normally attributed to scientists.

These criticisms of scientism and scientific method are not the only ones available. They should, however, stand as cautionary notes in regard to the dominant type of critical thinking extant in colleges today. It is related to both scientism and a belief in adherence to the scientific method, though few teachers and fewer students come anywhere near doing anything remotely

resembling science. It may – with better reason than Mr. Holmes provided – be labeled analytical thinking. It has become the prevailing framework within which critical thinking in any discipline has been set. It is, moreover, untroubled by esoteric concerns about what reality "really" is. It congratulates itself, instead, on being realistic, which means that it is practical, pragmatic and unprepared to enter into squabbles about ontology, epistemology, parallel universes, quarks and quirks, to say nothing of ancient Greeks, gods and Gadamer.

Critical thinking in the college context is deeply connected to instrumental reasoning, which is to say that it views thought as a means to a material end, not as an autonomous and self-justifying activity. The material end, of course, is successful negotiation of a course in the hope that a sufficient number of successfully negotiated courses will one day translate into employment.

It also sustains an ideology of liberal individualism insofar as personal responsibility for success or failure is concerned, but not with regard to personal growth and intellectual development. This is because, co-extensive with problem-solving skills, are teaching and evaluation methods that reduce ambiguity, set precise behavioural learning objectives and incline toward true-false, multiple-choice, definitional and short-answer questions as legitimate means for students to demonstrate "mastery" of a subject, or of a module within it.

A small cottage industry of proselytizers and pamphleteers has arisen to train teachers in the transferable skills of critical thinking. One organization, the Foundation for Critical Thinking, has (at last count) produced fifteen forty-eight-page booklets that cover everything from ethical reasoning to propaganda detection, and from "How to Write a Paragraph" to "Taking Charge of the Human Mind."

Richard Paul and Linda Elder (2005, p. 13; 2006) for example, gleefully apply their formula not just to scientific thinking, but to ethical, legal, religious and social questions as well. These advocates of contemporary critical analysis attempt to establish a precise way to separate "all thinking" into eight distinguishable elements (Elder & Paul, 2005, p. 3). Thinkers, they allege, move more or less sequentially through a process of identifying a purpose or a problem within a point of view. That point of view is based on assumptions. The assumptions lead to implications which permit the use of data to make inferences based on concepts to solve the problem (Elder & Paul, 2005, p. 5). The point of critical thinking in this scheme is to ensure that each step is completed properly according to a common set of "intellectual standards" such as clarity, accuracy, relevance, logic and fairness (Elder and Paul, 2005, pp. 6-7). The problems with problem solving in this account are that:

a. they do not address the question of who decides what problem to investigate and what counts as a legitimate problem in the first place;
b. the procedural sequence could easily be altered since there is no "logical" reason for setting out the process in any particular order; and,
c. since some of the intellectual standards such as breadth, depth, sufficiency and practicality are rather vague, it is hard to distinguish one criterion from another.

Hence, the amount of usable guidance is questionable (not that it matters much, because the authors indicate that we may "select" those standards to fit

the problem we are trying to solve).

Critical thinking, in this framework, merely amounts to a short-hand and rather nebulous version of inductive reasoning. Its only firm point is that no factors (especially those related to power relations among thinkers, and between thinkers and the rest of society) are permitted to intrude into the grammar of inquiry. Their advice is purely formal and procedural. It is a restatement of the scientific method in a manner applicable to non-scientific problems. As a prescription that is supposed to apply to "all thinking," it is intended to apply equally to moral, aesthetic and interpersonal as well as commercial, botanical and, of course, educational issues. It is a one-size-fits-all guide to thinking.

Critical Consciousness

The fourth perspective that I wish to address could certainly benefit from a better label. It, too, is a form of critical thinking, but it differs from the other three in important but different ways.

Plato's superworld of transcendent forms requires not simply the acceptance of the superiority of an ideal, supernatural domain of pure ideas (the perfect circle of your imagination being more real than the imperfect plate that holds your still less than perfectly round pancake), but also demands a set of hierarchical, quasi-militaristic social arrangements in which the naturally superior shall govern the naturally inferior. This is an ontological system that is not just open to political abuse but necessitates it. Master races, whether defined by skin colour, IQ, or analogies to gold, silver, bronze and iron are both empirically unsupportable and morally wrong. They do not exist, and we ought not to try to create them. Critical theory that stops with Socrates' fly bites has not begun to be seriously critical of things that matter, which are more likely to be contingent and observable manifestations of human ignorance or malfeasance than any extension of primordial abstractions into the social world. Absolutism is dangerously misleading in the world of ideas. It is deadly in the world of life.

Hermeneutics' quest for ultimate, true and perfect interpretation can make for amusing and occasionally insightful artistic criticism – itself an art of sorts, but does not constitute a plunge into the realm of hypermeaning. The utterances and texts of either occult communications in tarot cards, the Revelation of St. John the Divine, Mephistophelian omens and the human creativity of surrealism, zen poetry and the silent music of 4'33" by John Cage (1912-1992) amounts both in the beginning and in the end to someone's ideas about someone else's ideas: an invitation to conversation but not to pure experience or transcendental truth. Hermeneutics, however, is necessary to deal adequately with the problem of cultural relativism, which is often set in a moral context (cannibals thinks cannibalism is acceptable; non-cannibals do not) but in epistemological and ontological contexts as well.

Cultural relativism raises tremendous problems of perception and evaluation, but not merely in the common sense of different values from sexual mores to culinary taboos or from attitudes toward work to obligations toward kin. At issue are far more fundamental matters. Kuhn (1962, pp. 114-115) drew attention to the fact that astronomers had been watching the planet Uranus at least a century before it was "discovered," but had not understood it to be a planet because their scientific assumptions denied that such a planet was

possible.

This kind of paradigmatic vision-shift is matched or exceeded in mathematics. The conceptual, linguistic and numerological interplay of perception, language and what Barrow puckishly calls our "counter culture" suggests more fundamental relativities. Arithmetic that uses the concept of zero and decimal points is not merely more convenient than Roman numerals or the habit of some societies to count in base-2 or base-4 as contrasted with base our preference for base 10, it reveals a different way of thinking and illustrates the degree to which interpreting the objective world is not a matter of accuracy or commensurability but of interpretation (cf. Barrow, 26-105).

More than our methods of numbering change with our circumstances, of course. Now that globalization is all the rage, corporations are displaying extensive interest in other societies (mainly in Asia – to date Africa or, at least, Africans – seem to be of no particular interest either as producers or as consumers except where petroleum is to be found). Considerable research into the "Other" is being funded through postsecondary applied anthropology, communications, cross-cultural psychology programs to sort out the differences, for instance, between East Asian and Western populations.

Nisbett and Masuda, for example, begin their study on culture and points of view by stating that academics "have long assumed that basic processes of cognition and perception are universal, that inductive and deductive inference, attention, memory, categorization, and causal analysis are the same for everyone in every culture" (2003, 16 September, p. 11163). It takes them little time to show that this is not so. The ancient Greeks, they explain, formalized logic and used it to develop geometry; the Chinese cared little about logic and became expert in algebra instead (a footnote to Cromer, 1993, is supplied in case anyone wants to find out why). They also report that the Greeks thought in terms of discrete objects and a stable world, whereas the Chinese saw constant change. This would, I suspect, be news to Heraclitus and those who received his famous aphorism "Everything flows, nothing stands still" – to say nothing of the proclivities of the joyful god Dionysus, but perhaps we can be tolerant of excessive generalizations. Whatever faults may be found in their conclusions about antiquity, they at least have empirical evidence about the contemporary global village. Studies have amply demonstrated important cultural differences in such broad fields as cognitive differences (e.g., causal attribution and prediction, categorization) and attention and perception differences (e.g., detection of covariation, field dependence). Of special interest is the claim "that there is a causal chain running from social structure to social practice to attention and perception to cognition" (Nisbet & Masuda, 2003, p. 11170). Now, all it would take is an explanation of the ultimate determinants of social structure to complete the process of generating a genuinely critical consciousness.

Positivistic science, which is a legitimate contender for our species' biggest bite out of the fruit of the tree of knowledge, remains a project of practical importance. By providing empirical evidence, it gives us something to work with. Interpretation also matters, because it can speak to the meaning of processes that social science describes. But radical criticism is necessary for the quest for understanding, the progenitor of emancipatory action, to be complete.

Why are interpretation and critical reflection of relationships between

political economy and ideas necessary? It is partly because of the inherent limitations of each exploratory methodology and partly the result of antagonistic or, at least, inconsistent human interests that direct intellectual endeavours.

It would be pleasant if modern science could reliably devote itself to solving or at least ameliorating the effects of authentic problems such as ecological breakdown, which, of course, is a by-product of previous scientific problem solving. The problem with such problem solving, however, is that it is the condition of our species that is the problem. Competent and responsible scientists, of course, comprehend the limits of their craft and have taken remarkable strides in the direction of genuine understanding of the material world. Science remains problematic, however, because its self-inspection has not been sufficiently thorough and its discoveries of its own limitations have not had the necessary effects on its practices in support of precisely the pathological political, economic and cultural conditions that have brought us far too close to the long-threatened abyss.

So, it is time and possibly well past time to attempt a more comprehensive kind of critical thinking. Such an attempt does not excessively demean the valuable, though limited contributions of Platonism (it helps to know that perfection is not of this world, though it is risky to take superordinate ideal worlds too seriously), hermeneutics (it is can be pleasant to attempt to "get into the head" of painters, poets and musicians, and it is sometimes rewarding to learn what is happening in the minds of academics, entrepreneurs and artisans, though it is dangerous to try to read the minds of their gods) and science (it is exciting to discover top quark or to figure out how to cure cancer, though it may prove to have been suicidal to create toxic chemicals, thermonuclear bombs, internal combustion engines and plastic).

The kind of critical thinking that seems necessary now (absent the wisdom of the Tao, which might just tell us to "follow the way" and leave it at that), is more compendious than ideas, interpretation and positivistic empiricism can provide. Radical criticism, it must be admitted, probably has more in common with modern, post-Enlightenment science than with either Platonism or hermeneutics. It is content to follow empiricists such as Gellner (1980, p. 80) to the degree that it "repudiates," for example, "any substantiative revelations" that owe their existence to "extra-mundane and trans-cultural authorities." It accepts that, although "the precise details of scientific method … continue to be contentious, … there are no privileged or a priori substantive truths [and] that all facts and observers are equal … no privileged Sources of Affirmations, and all of them can be queried. … In other words, no miracles, no divine interventions and conjuring performances and press conferences, no saviours, no sacred churches or sacramental communities" (pp. 80-81). As will be shown later, however, its ruthless scepticism is softened a little. Critical consciousness is sufficiently self-critical that it stops just short of Gellner's desire to eliminate the sacred from the known world and to "preclude … the intrusion of the Other into the Mundane" (p. 81), though it does so tentatively and not in a way that provides much solace to customary theism. It does so by simultaneously adopting much of the secular scientific theory of knowledge that, according to Aronowitz, "refuses to ascribe quality or cause to 'divine primordial forms' [and], by abolishing the sacred, … also transforms all of the categories that underlay human experience, especially substance, quality, causality" (1988, p. 271). It remains attentive, however, to the consideration of context that strict positivistic analysis jettisons, and is open to serious

discussion of manners and morals.

Relentless desacralization and the replacement of synthetic mythological accounts, however intensely interpreted, by analytical procedures, does not complete the modern project of critical thinking as critical consciousness. It does not display positivism's indifference or hostility to contextual issues, and holds science to be only a partial advance over idealism but not yet a fully human (or humane) undertaking.

To achieve this latter purpose, a method must be found that connects science and human action. The first step toward such a connection involves the critique of criticism.

It has long been held that no scientific knowledge can be won except by disinterested observers. Every methodology and conceptual scheme that allows the material interests of knowledge seekers to contaminate their inquiries is immediately described as ideology. Max Weber (1864-1920), Karl Mannheim (1893-1947), and others urged that, in addition to the adherence to formal scientific method, every person engaged in research be aware of their own special interests lest their work be corrupted by their value preferences and commitments.

Weber famously produced the distinction between fact and value, between science and politics that has grown to dominate 20th-century scholarship and pedagogy. Mannheim tried to go him one better by creating a "sociology of knowledge" that would disclose and scientifically expose the way and the extent to which intellectual projects that reflected the interests of, for example, competing social classes, were inherently ideological (1936).

Value-neutral pedagogy has roots in the writings of Weber, Mannheim and such stalwarts as Talcott Parsons (1902-1979), whose theoretical framework of "structural-functionalism" sought to exclude personal prejudice from the study of society (Black, 1961; Parsons, 1937, 1951, 1964). Such approaches have been relentlessly pursued for over half a century and remain as part of official schooling's insistence that teaching be objective, non-ideological and free of political bias. Despite the disruptions of society and of higher education during the tumultuous 1960s, the work of sociologists such as Daniel Bell (1960) and Seymour Martin Lipset are once again models of collegiate courtesy, civility and conformity. Lipset's famous formulation that political philosophy was obsolete because the United States was "the good society in operation" (1960, p. 403) may be suffering some strain because of the current US administration and the divisions on foreign and domestic policy within the republic, but dissatisfaction and disillusionment have yet to produce a robust and politically distinct alternative to corporate capitalism. Citizens may be upset, but they are eager only to have their beloved system perform better and bring its behaviour closer to its expressed ideals.

The fundamental conceit of liberal education in its corporate form is that contemporary college curricula eschew what is termed ideology, insisting that students be taught that huge and potentially catastrophic issues such as environmental degradation, poverty, racism, sexism and imperialism can be reduced to problems that can be solved within existing social structures by pragmatists and technocrats. It does not deny that there are controversial issues be discussed, but it insists that they be discussed in an unbiased or, at least, a balanced manner within a framework of depoliticized discourse. This

does not, of course, remove political commitment but, as Lilienfeld nicely put it, "simply provides a vocabulary which permits its practitioners to celebrate and serve whatever social developments emerge over the horizon" (1978, p. 263). Corporate power disguises its own interests using the false claim that its cultural paradigm amounts to no ideology at all. It thereby advances "the notion of society," Lilienfeld adds, "run by benevolent technicians operating on the basis of actuarial logic and impersonal algorithmic methods" (1978, p. 264) in the dispassionate business of adjusting to what "the reality is" at any given moment. It goes without saying that this reality will be whatever is in the material interest of the economic elites.

To attack specific environmental, economic and social policies of governments places teachers at risk, no matter how disastrous the conventional course of action might be. So, it is necessary to develop critical consciousness at a level deeper than worries about global warming, war and poverty.

The subject of critical thinking itself must be revisited and exposed. This can be done admirably with the assistance of social theorists such as the aforementioned Jürgen Habermas. I have elsewhere dealt with Habermas' views on the concept of a universal pragmatics based on the notion of an "ideal speech situation" (Doughty, 2003). I wish here only to retrieve some of his earlier thoughts about the inescapable ideological and material commitments that inhere in three broad categories of human inquiry.

Habermas begins with a discussion of what he terms "knowledge-constitutive interests." It is his contention that there are three fundamental human interests that direct our attention towards different objects of study, employ different methods of inquiry and seek to achieve different kinds of purposes. Human knowledge is not therefore seamless, but is constituted by our intentions and shaped by deep linkages among knowledge, experience and conscious purpose (Habermas, 1970, pp. 81-122; 1971, pp. 301-317). Habermas argues that what we think is less important than how we think. We can alter our opinions in the light of new experience, but our epistemological presumptions are more difficult to change and these assumptions are rooted in the interests that knowledge strives to satisfy.

The interests he defines are not those of different sides in debates such as Marxists and free marketers, Catholics and Protestants, feminists and male chauvinists and so on. He digs deeper and identifies different kinds of knowledge which have different criteria for truth claims and which represent different communities with different political, economic and ideological concerns. Because the differences are so fundamental, a great deal of argumentation never gets to the point of disagreement about facts (which are at least resolvable) because it proceeds from different bases, uses incompatible vocabularies, and generates grotesque distortions of rational debate. He labels the three interests technical, practical and emancipatory.

Like the earlier discussion of the importance of language, Habermas' categories of knowledge-constitutive interests have a direct bearing on how we think and how we teach. Knowledge may not synonymous with power, but the two are certainly related. Different kinds of knowledge share more than philosophical assumptions and language; they also reflect different patterns of domination. Habermas has long struggled against positivism and scientism, but not against empiricism and science. Emancipation, no less than domination, he

believes, requires reliable information.

Habermas' first category is akin to what we call scientific knowledge. It rests on the assumption that it is possible to acquire objective knowledge of an external world. His term for it is "empirical-analytic" knowledge. It serves technical interests. Its purpose is the control of non-human nature. The second category consists of the social sciences and humanities. It imitates science, but concentrates on the quirks and contingencies of human life. Acknowledging that human beings are not like billiard balls whose motion is governed by exchanges of kinetic energy, it nonetheless tries to approximate scientific understanding of motives and meanings. His term for it is "historical-hermeneutic" knowledge. It serves practical interests. Its purpose is to control other people.

Natural science offers the model for both empirical-analytic and historical-hermeneutic knowledge acquisition and, in their more pretentious moments, experimentally minded social scientists – especially in economics and psychology – try to come up with quantifiable data to generate law-like statements about the price of gas and the behaviour of rats. Paradoxically, just as social studies were starting to flirt with the mathematical complexities of multiple regression and factor analysis, the pure sciences began to experience something of a paradigm shift themselves as they become accustomed to the implications of an unsteady universe that has outdistanced the comfortable reality of Newtonian mechanics and plunged headlong into the ultimate chaos of black holes, anti-matter, time warps and parallel universes. Science itself is becoming perilously close to being problematized in a postmodern manner that is decidedly unmannerly. As Jean-François Lyotard put it: "Capitalism inherently possesses the power to derealize familiar objects, social roles, and institutions to such a degree that the so-called realistic representations can no longer evoke reality except as nostalgia or mockery" (1984, p. 74). The same applies to science.

There remains now the third category of knowledge, which is linked to self-reflection and which Habermas entitles "emancipatory." According to Stephen White (1995, p. 6), "Habermas found that modern society has fostered an unbalanced expansion in the technical interest in control. The drive to dominate nature [has become] a drive to dominate other human beings."

Fred Dallmayr (1981, p. 225) extends the point in a passage that merits quotation at length:
To some extent, existing social sciences emulated the sketched methodological paradigms of natural science; a unique kind of linkage, however, emerged in the case of critical social analysis. Such analysis proceeded from the distinction between invariant and inescapable laws of nature and such social conditions which, though ideologically rigidified and seemingly permanent, were amenable to alteration or avoidance. In the latter case a properly designed "critique of ideology," patterned after the psychoanalytical model, was able to combine explanation and understanding: once accepted and assimilated by the victim of domination, explanations of law-like conditions could engender a process of reflection which, in turn, could lead to reinterpretation and practical reorientation. The categorical framework of this critical endeavor was constituted by self-reflection, a capacity which, due to its liberating effect, could be said to be permeated by an emancipatory interest.

By locating truth claims in an explicitly social context and linking them to human purposes related to domination, Habermas made a singular contribution to the sociology of knowledge that goes a step beyond understanding the world; he has provided a means to help to change it. Demystifying ideological distortions makes it possible to test "the validity of every norm of political consequence" provided that people are also willing to embrace Habermas' "ideal speech situation," a kind of conversation in which people can in good faith examine themselves and others and achieve "a consensus arrived at in communication free of domination" (1981, p. 284). Autoanalysis for the sake of clarification yields to group involvement in a process of demystifying ideological distortions in thought, word and deed.

A Brief Word about the Word

The Gospel of St. John makes a subtle connection to pre-Christian texts and beliefs. Though there is no consensus on the matter, there is more than idle speculation to the effect that the Abrahamic religions had important links to paganism, Zoroastrianism, Buddhism and Taoism among others. The utterance, "in the beginning was the Word and the Word was with God and the Word was God," (St. John 1:1) seems a suspiciously ecumenical if not a mildly mystical way to begin a particularistic account of the contribution of one man to human culture. It also raises an important set of questions about the purpose of education and the manner in which it should be pursued by students and practiced by teachers.

Throughout the modern world, religion and education co-mingle. In Ontario, for example, Catholic schools receive full funding from the public purse and many other faith-based groups – Hebrew, Islamic and Protestant among them – are seeking similar status. Elsewhere, private schools with core religious teaching abound. Yet, when these educational institutions insert their religious beliefs into the curriculum, few object that the students' learning is thereby being corrupted by an ideology. Theological beliefs seem to be exempt from the charge of ideological contamination, whereas political ideas are not.

An understated theme in this article has been that socialization and social control and propaganda and education are – with appropriate caveats and exceptions noted – pretty much interchangeable if not wholly synonymous. This does not mean that accusations are made or implied that colleges lie to students. Hitler and Socrates may have openly admitted and even congratulated themselves on their related ideas to fool most of the people all of the time. The corporate hegemony of late capitalism, however, does not work that way. Instead, increasing efforts are being made to reflect corporate values and practices in educational activities. Although Canadian business has been rather late to address such matters, it has been over fifteen years since Ken Powell, manager of academic affairs for Imperial Oil, admitted "business's own complacent training performance" and strongly urged "companies to invest time and money to help elementary and high school students to become more competitive workers" (Lewington, 1991, July 19). The message seems to have been heard as schools, colleges and universities join in convivial "partnerships" with business and industry to establish agreeable symbiotic relationships in which corporate financial contributions are repaid by special adaptations of curricula. Again, the point is not to have educators lie to students. It is to ensure that the descriptions and analysis (and the methods of description and analysis) of human and non-human nature are presented in the most accurate and "fun" way imaginable. The trouble is that the corporate education agenda

is not optimally imaginative.

Late capitalism can, to be sure, figure out clever ways to download music and send text-messages all the while guaranteeing that CNN's "all war all the time" format is available on all continents. It can surely move freight efficiently and ensure that tropical fruits are delivered to slightly sub-Arctic supermarkets as reliably as surface-to-surface missiles are delivered to their targets in the Middle East. It certainly does not have to lie to accomplish these technical feats or to, in Herman and Chomsky's excellent phrase, get about the business of "manufacturing consent" (1988). The main mechanism of hegemonic education is not to lie but to deny alternative possibilities.

In the mass media this is accomplished by ensuring that alternative voices are eliminated or at least marginalized. When, for example, studies of US network news show that 92% of all sources are white and 85% are male, 75% are Republicans and 25% Democrats, corporate representatives outnumber union representatives by a 35:1 ratio and, that of the non-white domestic sources, only 0.6% were Arab-American, 0.6% were Asian-American and only one out of a total of 14,632 on-camera sources was a Native American, ham-fisted censorship is not needed (Hart, P. 2005, p. 52). Should such statistics become embarrassing, the solution is simple – find a few more females preferably with darker skin and declare any slight numerical adjustment to be a victory for diversity. In education, the same plan can be shown to work. Textbooks and teachers alike, can be allowed to display as much diversity of demography as their imagination allows. Almost never, however, is attention directed to the question of why inequities exist in the first place. Thus, genuine alternatives are simply set aside.

This point was made almost forty years ago in language that is now disdained and from a viewpoint that is now deemed irrelevant by opinion leaders. J. E. Hansen put the issue this way. "The dialectician wants to avoid the fetishism of facts and objects which man has created to serve his interests. He wants to avoid the transferrence of epistemological meaning into the world of ontological necessity" (1967). He wanted, in simpler terms, to say that things do not have to be as they are. Alternatives exist! Where do we find them?

In science, Paul Feyerabend (1965) urged a theoretical pluralism to avoid the trap of assuming that what passes for scientific method under one paradigm will necessarily look the same under another. Think Einstein. Think Planck.

Needed now is a commitment to educational pluralism. Corporate educators will, of course, argue that such pluralism already exists. Introductory sociology texts, for example, regularly present competing interpretations of social phenomena. An assortment of perspectives are mentioned, typically including "functionalism," "conflict theory," "symbolic interactionism" and, more recently, "feminism." A couple of statory paragraphs provide brief biographies of people like Compte, Durkeim, Weber, Marx and, more recently, Jane Addams. Such self-conscious displays of diversity do not, however, alter the fundamental approach of such textsbooks and might best be described in the language of Herbert Marcuse (1898-1979) as "repressive tolerance" (1969).

Bland representations within a homogenous corporate ideology does not permit authentic alternatives with the capacity to challenge that ideology. To offer meaningful alternatives is not easy, for the economic, political and

technological assumptions of corporatism are powerful and firmly in place. As Nick Heffernan has cogently argued, the technologized or virtual classroom is merely one aspect of a larger ideological project. Information technology, he says, "offers a new level of ideological penetration for American corporate world views and commodities … IT, then, has been embraced for its magical capacity both to banish recession and precipitate … a 'new technology consensus' strong enough to marginalise as technophobic and backward-looking those who would argue that … social and economic crises … are systemic in nature rather than contingencies which can be 'innovated' out of existence" (2000, p. 41). Since only denatured versions of dissenting viewpoints are offered, it is a false sort of pluralism that prevails, and more vigorous versions of Marxist, feminist, postcolonial and other perspectives are denied – at least until graduate school seminars, where there is little potential for doing much more than "preaching to the choir." Just as the "informational function of the media [is] to help us forget, to serve as the very agents and mechanisms for our social amnesia" (Jameson, 1992, p. 179), so also mass education explicitly removes history from the curriculum, explodes any sense of chronology in human affairs and makes alternative theoretical formulations as distinctive and appealing as breakfast cereals in grocery stores. By giving marginalized theoretical alternatives a small amount of shelf space in the supermarket of ideas, official education wards off accusations of censorship while achieving its purpose of establishing the parameters of reality in its own terms and interests.

Critical consciousness must also address the "convenient relativism" of postmodernism that privileges diluted critiques and establishes mere "otherness" as a category of social struggle. Adapting Marx's comment on philosophy as the attempt to understand the world instead of to change it, Bahl states that "any theory, if it is to be of some practical use in the world, must be capable not only of explaining material reality but also of providing a tool to act on that reality" (1996, p. 34). Under the slogan of multiculturalism – or any other basis of identity politics – progressive scholars are being distracted from their central task which, she says, is to "try to understand the contemporary hegemonic powers and forces, their ideological and other mechanisms of control, and explore … how they shape people's views and consciousness" (p. 35).

Confronted on the one hand with the corporate power structure and on the other with a fractured opposition caught up largely in fragmented identity groups and factionalized theoretical treatments that consistently lose their own coherence as they flail away at the relativised truth claims of official education, we must ask with Lenin (1870-1924), Tolstoy (1828-1910) and Cherneshevsky (1828-1889): "What is to be done?"

One set of instructions may be found in, strange to say, elements of religious thought and practice, albeit ones that have fallen from fashion, especially during the later tenure of Pope John Paul II and that show few signs of hearty revival in the reign of Pope Benedict XVI. Two valuable examples are available for those who can recall them, or are willing to explore.

Of parochial interest to North Americans is Ethical Reflections on the Economic Crisis (1983), a publication of the Episcopal Commission for Social Affairs of the Canadian Council of Catholic Bishops' (ECSA). It strongly rebuked capitalism, both domestically and internationally: "Current structural changes in the global economy," it said, "reveal a deepening moral crisis.

Through these structural changes, 'capital' is re-asserted as the dominant organizing principle of economic life" (p. 2). The document went on to assert, in language echoing Marx's labour theory of value, that "the ethical principle that labour, not capital, must be given the priority in the development of an economy based on justice."

The bishops relied on two Christian principles, the "preferential option for the poor, the afflicted and the oppressed" (cf. Luke 4:16-19 and Matthew 11:4-6), and "the special value and dignity of human work in God's plan for Creation … [and for giving] meaning to [our] existence as human beings." (ECSA, 1981).Throughout the text, the bishops blended papal utterances (John Paul II, 1981) with socialist analyses (Gonick, 1975; Frank, 1980), and came up with a startling mélange that managed to offend a wide range of secular and well as clerical opinion. The pronouncements of the bishops gained much sympathetic attention from the Canadian left, not least because it provided a needed critique of the left.

The Catholic bishops had taken the remarkable step of relying on "political economy as over against economics" and had also presented "a critique of political economy as that term [was then] understood." The bishops' statement, wrote Christopher Lind, "represents a critique because it has re-asserted an element in the established tradition of political economy which is frequently ignored by the political economists formed in the Marxist mold who now dominate the discipline. That element is the ethical dimension of political economy" (Lind, 1983, 151).

This ought not to be entirely surprising, for a Christian-Marxist dialogue was recently an interesting feature of intellectual debate (Oestricher, 1969). It was premised upon teachings such as that found in Luke 1:52-53 ("He hath put down the mighty from their seats, and exalted them of low degree. He hath filled the hungry with good things; and the rich he hath sent away empty"). Such outbursts gave at least temporary hope to Europeans who opened the dialogue in the days of Pope John XXIII. Even Pope John Paul II, despite his antipathy to Marxism and his relentless work to unseat the Communist government in his native Poland (cf. Bernstein, 1996), contributed to the discourse (1981, no. 4, 5, 6, 9, 24, 25 & 26). His preamble to Laborem Exercens declared that "work bears a particular mark of man and of humanity, the mark of a person operating within a community of persons. And this mark decides its interior characteristics; in a sense it constitutes its very nature." This sounds uncommonly reminiscent of Marx's position on alienation. Grounds for discussion were evident to those with the wish to pursue them.

More important than pious statements and efforts at civil discourse, however, were the direct actions taken by Catholic priests in other parts of the world and especially in Latin America. During the Reagan administration in the United States, local Catholics could be found supporting insurrections, and death squads, acting in the interest of the military and multinational corporations, killed a number of progressive priests and nuns and, most infamously, Archbishop Oscar Romero of El Salvador.

Concern with social justice is not unusual among Christians, though it is easy to forget, in an era of neoconservative televangelists, that the US civil rights movement was led in large measure by the Southern Christian Leadership Council and that democratic socialism in Canada was once the province of Protestant preachers such as J. S. Woodsworth, T. C. Douglas and

Stanley Knowles. In the meantime, much of Marxism has been vulgarized, theorized into simplistic reductionism or, perhaps worse, abstracted into idealism in the manner of Althusser (cf. Thompson, 1979). Nevertheless, the Christian-Marxist discussions did lead to an important exchange of theoretical gifts.

To the Marxists, Christians gave a workable version of transcendence. Marxism sorely lacked "a theory of subjectivity which is not subjectivist and a concept of transcendence which is not alienated." By conceiving transcendence "not as a state but as an act, the capacity of creatively overcoming the given set of conditions in a historical situation … Marxists learned from Christians or, to put it more correctly … [Christians restored] to Marxists [their own sense of transcendence] after it had been stolen by the rigid and reductionist guardians of orthodoxy" (Sölle, 1984, p. 22).

As for the Christians, they "relearned the meaning of incarnation." The abstracted and idealistic Christian God has long lacked "both the bodily and the social dimension," a peculiar development for the one Abrahamic religion that insists that God has become incarnate in real space and time. As Sölle says, however, "by being confronted with philosophical materialism, Christians learned to take material existence more seriously in this twofold sense of body and society. Hence, hunger and joblessness, the military-industrial complex and its consequences for everyday life, advance into theological themes" (Sölle, p. 23).

Back to Basics

Whether a revitalization of leftist faith groups is conceivable, much less practical, today is a highly speculative question. What recent history should tell us, however, is that ethics and morals are not the exclusive preserve of the right, and that, as George Grant advised, "moral fervour … is too valuable to be wasted on anything but reality" (Grant, 1966, p. 123).

Moral outrage, in the absence of critical understanding, leads to little but personal frustration or, in extreme cases, to terrorism. While the reconsideration of the subject of ethics and human agency that can come from an acceptance of religious sensibilities is needed to fulfill the aims of critical thought, it is also necessary to base such criticism on a model of human understanding that can give practical support to such concerns.

The most important approach can be found in the work of Karl Marx. As Wood (1997, June) correctly says, Marxist thought is at an all-time low in public estimation. It is so generally dismissed that it is no longer even despised. Instead, it is considered hopelessly outmoded and irrelevant to discussing, much less to solving, contemporary problems. Moreover, almost the entire Marxist tradition has been misguided by a fundamental flaw that has led to disastrous consequences in practice and basic failure in theory.

Almost every significant Marxist theorist of the 20th century has been misled by a thought that would not have occurred to Marx, except as an idea to be contemptuously dismissed. Marx's entire approach to social evolution was similar to Darwin's approach to biological evolution. Each, in their own domain, understood that nature – human and non-human – does not make leaps. Just as horses do not jump evolutionary stages and find themselves magically transformed from the diminutive eohippus to gigantic Clydesdales, so human

societies do not, through force of will and any number of "Five Year Plans" proceed from semi-feudal to communist societies. Thus Mao's "Great Leap Forward" was a canard and profoundly un-Marxian in both conception and execution. The same can be said of Marxist theorists from Rosa Luxemburg and Lenin to Leon Trotsky and Mao. Each, albeit in different ways, imagined that it was possible to overthrow existing capitalist arrangements without waiting for the historical task of capitalism to be complete.

They did not seem to appreciate that the capitalist mode of production and the bourgeois revolutions that accompanied it were truly transformative and that any advance over capitalism had to wait until its evolutionary job was done. Both Edmund Burke, the "father of modern conservatism and Marx, the revolutionary well understood the profundity of the changes that capitalism wrought.

Burke said this about events in late 18th-century France (1962, p. 112): But now all is to be changed. All the pleasing illusions that made power gentle, and obedience liberal, which harmonized the different shades of life … are to be dissolved by this new empire of light and reason. All the decent drapery of life is to be rudely torn off. All the super-added ideas, which the heart owns, and the understanding ratifies, as necessary to cover the defects of our weak and shivering nature, and to raise it to a dignity in our own estimation, are to be exploded as a ridiculous, absurd and antiquated fashion.

In 1848 Marx and Engels observed (1955, pp. 12-13): Constant revolutionizing of production, uninterrupted disturbance of all social relations, everlasting uncertainty and agitation, distinguish the bourgeois epoch from all earlier ones. All fixed, fast-frozen relationships, with their train of venerable ideas and opinions are swept away, all new-formed ones become obsolete before they can ossify. All that is solid melts into air, all that is holy is profaned … The bourgeoisie has stripped of its halo every occupation hitherto honored and looked up to with reverent awe. The bourgeoisie has torn away from the family its sentimental veil, and turned the family relation into a pure money relation … in the place of exploitation veiled by religious and political illusions, it has put open, shameless, direct, naked exploitation.

Both expressions describe the significant and necessary processes at work. That the necessary changes initiated by capitalism had to be fulfilled in order for society to move on was either misunderstood or explicitly denied by Marxist theorists. Whereas Marx "was mainly interested in the internal logic of the system and its specific capacity to totalize itself, to permeate every aspect of life wherever it did implant itself, later Marxists … generally started from the premise that capitalism would dissolve before it matured, or certainly before it became universal and total" (Wood, 1997).

As a result, Marxists have believed that it was possible to achieve a communist revolution in societies that were largely peasant and barely post-feudal. In the alternative, Marx was convinced that we "progress" from scavenging, hunting and gathering societies through a succession of stages that eventually produce capitalism. So, when Russia and China embarked on their ill-conceived and ultimately disastrous attempts to skip a stage or two and go directly from largely peasant, barely post-feudal society into a communist utopia, they were making both a theoretical and practical mistake that had horrendous consequences for their peoples.

Now, anyone viewing the skylines of Hong Kong, Shanghai, Shenzhen and Guangzhou will understand that CNN's Lou Dobbs is foolish to insist on calling China "Communist China." What exists in that country is certainly not a liberal democracy, but its investment in the foreign debt of the United States and its welcoming of Wal-Mart demonstrates that it is well on the way to becoming a dynamic capitalist economy. China is taking a couple of steps back in order to move that one crucial step forward. Whether the natural environment will survive all this, and whether some version of democracy accompanies it, are open questions. What is not open is the fact that there is an internal logic to economic development that is superior to any ideology, even one that labels itself Marxist. And Russia? A visit to the McDonalds near Red Square in Moscow should be enough to convince the sceptic.

Of course, none of this is news to capitalist triumphalists. Apart from the reservations of some atavistic Islamic fundamentalists, the whole world has gone capitalist. As Wood says (1997), like air to humans and water to fish, the capitalist environment is now so complete that people have almost become unaware of its pervasive and totalized existence. She explores the implications of what we call "globalization" and her provocative claim is that "this historical moment, the one we're living in now, is the best not the worst, the most not the least appropriate moment to bring back Marx." She even claims that "this is the moment when Marx should and can come fully into his own for the first time – not excluding the historical moment when he actually lived."

She continues:
I'm making this claim for one simple reason: we're living in a moment when, for the first time, capitalism has become a truly universal system. It's universal not only in the sense that it's global, not only in the sense that just about every economic actor in the world today is operating according to the logic of capitalism, and even those on the outermost periphery of the capitalist economy are, in one way or another, subject to that logic. Capitalism is universal also in the sense that its logic – the logic of accumulation, commodification, profit-maximization, competition – has penetrated just about every aspect of human life and nature itself, in ways that weren't even true of so-called advanced capitalist countries as recently as two or three decades ago. So Marx is more relevant than ever, because he, more effectively than any other human being then or now, devoted his life to explaining the systemic logic of capitalism.

The ubiquity of the capitalist mode of production should be obvious to any teacher in any college. It is reflected in the employer-employee relations, teacher-student relations, the mission statements, marketing strategies, curriculum, learning objectives and evaluation techniques that we adopt – enthusiastically or grudgingly – and in all other aspects of the teaching and learning experience.

A critical assessment of our work and our lives requires that we rediscover the air around us, the waters in which we swim. Critical thinking, minimally defined as logical analysis and problem solving in the context of a capitalist culture will not succeed in opening our eyes to the realities before us. Pretend problems will be solved by sham solutions. Crime, poverty, inequities of class, race and gender and all the other social issues that consume our thoughts and our taxes may be ameliorated from time to time, but they will not be solved in any meaningful way.

To accept this is to open an important door of perception. Combining moral concerns with critical awareness permits us better to understand and provides the motivation to do something about ourselves, our colleges and our communities. It helps to remove distortions and to engage in actions that will make important changes, or at least make transparent the reasons why such changes cannot be made. Empowered by awareness, we can resist the false rhetoric of "empowerment" that means little more than the provision of an institutionalized "suggestion box."

So, does this mean the revolution is scheduled for next Thursday? Should we bring a lunch?

Probably not. As someone once observed, the problem with late capitalism is that it is never late enough! We can, however, rely upon Marx for some consolation. Despite Wood's view that the logic of capitalism has insinuated itself into the great nations of China and India as well as small and immiserated communities the world over, the process is far from complete. Marx said somewhere that revolution is always the kicking in of a rotten door, and the doors of capitalist societies seem sturdy enough to withstand a good deal of kicking. What is more, one of the reasons Marx said so little about what future societies would be like is that he knew predictions are for fools or charlatans. He knew enough to understand that capitalism would not last forever – nothing does; but, to offer a detailed description of its successor would be an exercise in absurdity.

Whether we can expect profound political and economic changes in the next decade, the next century or not until the next millennium is an open question. Whether such a change will be beneficial or will lead us to a life of global barbarism is also unclear. Max Weber pretty much anticipated the 20th century in 1904 when he said that we would soon find ourselves living in an "iron cage." As for the quality of life in that cage – no longer made of iron but of silicon, he added (1958, p. 182):
No one knows who will live in this cage in the future, or whether at the end of this tremendous development entirely new prophets will arise, or there will be a great rebirth of old ideas and ideals, or, if neither, mechanized petrification, embellished with a sort of convulsive self-importance. For of the last stage of this cultural development, it might well be truly said: "Specialists without spirit, sensualists without heart; this nullity imagines that it has attained a level of civilization never before achieved."

In the current century, our task is difficult but clear. Prophets – old or new – can be dangerous. And the prospect of spiritless and heartless existence is not attractive. We must alert ourselves and our students to our conditions and our possibilities. As Jesus himself put it: "I am come that they might have life, and that they might live it more abundantly" (St. John 10:10). To do that requires a critical consciousness. To help others develop such a consciousness is, perhaps, the highest calling of a teacher.

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Howard A. Doughty teaches in the Faculty of Applied Arts and Health Sciences at Seneca College in King City, Ontario. He can be reached at <howard.doughty@senecac.on.ca>.

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