

**Transforming Environmental Education: Making the Renewal of the
Cultural and Environmental Commons the Focus
of Educational Reform**

By

C. A. Bowers

This online book is published by the Ecojustice Press. As part of the commons it may be downloaded without charge. Copyright: C. A. Bowers, 2006

Content:

Chapter 1: Introduction

Chapter 2: Understanding the Cultural and Environmental Commons

Chapter 3: Integrating Environmental Education into Commons Education

Chapter 4: Teaching Sustainable Cultural Assumptions

Chapter 5: The Classroom Practice of Commons Education

Chapter 6: The Political Context of Commons Education

Chapter 7: Toward Culturally-Grounded Approaches to Teaching and Learning

Afterword: A Case of Linguistic Complicity: How the Formulaic Thinking of George Lakoff Supports the Market Liberal's Agenda of Enclosing What Remains of the Commons

Chapter One: Introduction

Educational reforms are being challenged as never before by social groups with competing economic and ideological interests. It should be no surprise that environmental education is increasingly at the center of these controversies, especially when the scientific underpinnings of environmental education include introducing students to the theory of evolution. With nearly fifty percent of adults in America, according to one recent survey, thinking that the theory of “intelligent design” should be taught alongside of the theory of evolution, many biology teachers that also introduce environmental issues into their courses face even more controversy. In addition, there are other forces that contribute to the continued marginalization of environmental education. These include the increasing number of required professional courses in teacher education programs, the lack of environmental education professors in education departments who can promote the importance of environmental education as more than yet another elective course, a general fear of science which is being magnified by the near McCarthy-type atmosphere created by the proponents of “intelligent design,” and the long-standing tradition of viewing environmental education as the responsibility of the science teacher who often has other teaching responsibilities.

There is another reason for the marginalized status of environmental education that is often overlooked. And that is that the majority of the public still views the changes occurring in the environment as affecting other parts of the world, but unrelated to their own lives—that is, if they are even aware of global warming, the depletion of the world’s fisheries, the increasing shortage of potable water, and the loss of species and habitats. There is also a large segment of the American public that support politicians who favor free-markets, economic globalization, and who take pride in the fact that they do not read newspapers that are critical of the growing influence of corporations in shaping governmental policies—and it is these newspapers that are most likely to publish articles on global warming and other environmental changes. Other Americans still widely hold the assumption that the experts in the scientific and technology communities will overcome the disruptive affects of environmental changes. Their “science and

technology will save us” attitude contributes to the malaise that characterizes the public’s attitude toward not allowing environmental concerns to interfere with their consumer-dependent lifestyle. The political reality is that if the general public, rather than a small minority, were to make the self-renewing capacity of natural systems their main priority we would then see pressure being brought on public schools and universities to make environmental education a central focus of the curriculum. But this possibility is reduced by the cycle we seem unable to alter: namely that the marginalized status of environmental education in public schools and in universities contributes to the marginalized status if not outright denial in the consciousness of the public—even among the most highly educated segment of the public. This state of consciousness, in turn, ensures that there is little if any widespread public support for environmental education.

The often repeated complaint that the segregation of courses where environmental education is viewed as the exclusive responsibility of the biology teacher, or of a separate university department, may have its roots in a deeper linguistic problem. That is, “environment” is the key metaphor that frames the area of inquiry, with the result that what is outside of this frame becomes in most public schools and universities yet another area of silence. The environment metaphor also serves to designate which public school teacher and university professors have responsibility for environmental education—though some universities now have a faculty member or two in the areas of literature, history, sociology, economics, philosophy, and religion that are integrating environmental issues into their research and courses. But there are other problems with the environment metaphor.

The word “environment” has a history and thus carries forward over many generations the meaning derived from the analogy that prevailed over others that were perceived at that time as a less adequate way of understanding. Many of these historically rooted ways of understanding the word environment are still the basis of thinking today, such as thinking of the environment in terms of human control, as an economic resource to be exploited, as separate from culture, as an external phenomena that can be objectively observed and judged, as fragile and capable of collapse, as part of a moral and spiritual universe that places upon humans an ethic of self-limitation for the sake of other species and future human generations. This list of varied and conflicting

meanings suggest yet another reason for the lack of consensus on the importance of environmental education. Yet I think a strong case can be made that the way of thinking of the environment as separate from culture is the most problematic, as it allows the more exploitive ways of thinking of the environment to go unchallenged.

As public school and university professors continue to perpetuate the linguistic and thus conceptually-based separation of environment from culture, students not only have it reinforced in the classroom but also in their everyday interactions in the larger society. Indeed, thinking of the environment as something that is separate, external, and the object of individual observation is as pervasive in mainstream America as the equally misconceptualized use of the personal pronoun “I” --as in the way we often begin a verbal sentence with “I think”, “I see”, “I want” and so forth. This cultural pattern of thinking, which reinforces the misconception that separates the environment from the observer, makes the meaning of the environment as well as its value contingent upon the judgment of the individual who too often reproduces the misconceptions of earlier generations. Unfortunately, this pattern of thinking is reinforced in environmental curriculum materials, and by both school teachers and university professors.

The multiple ways of understanding the meaning of the environment, as well as the increasingly politicization of the achievements of science, are likely to prevent the consensus that needs to be attained within different segments of society on the importance of understanding the nature of the environmental changes that the world is now undergoing. And without this understanding, the general public will continue to lack a reference point for assessing whether their ideas, values, and lifestyle are part of the problem, or part of the solution. A possible way out of this problem is to find a word or phrase that does not lend itself to the multiple and often conflicting ways of understanding what the “environment” stands for. A second goal would be to find the word or phrase that represents the many forms of interdependency that characterize the relationships between culture and the natural environment. The word that best achieves this goal is the “commons”, which allows for thinking about the interdependencies between different aspects of the commons when we use the phrases “cultural commons” and the ‘environmental commons’.

As mentioned earlier, and will be explained later in greater depth, language carries forward over many generations the ways of thinking that made sense at an earlier time in the culture's history. When these earlier ways of thinking, such as thinking of organic processes as machine-like and women as subordinate to men, are used today in a formulaic and thus non-reflective manner, they contribute to environmentally destructive and morally problematic behaviors. Changing the long-held meaning of words, such as associating "wild" with danger and a loss of human control and identifying the people that are invading the territory of indigenous groups as "pioneers", is a difficult and slow process. The acceptance of new analogs, such as associating "wild" with what is pristine and still free of economic exploitation, involves changing ways of thinking, values, and behaviors—all of which are formative of a person's self-identity. As the recent feminist movement is still demonstrating, the meaning of words can be changed. Many people in the West now recognize that "mankind" is not a gender inclusive metaphor, and that a wide range of talents and career possibilities can now be associated with the term "women." It is also important to recognize that this linguistic change took hundreds of years of resistance to how the genderized language contributed to the taken-for-granted cultural expressions of inequality and subjugation. The difficulty in changing our guiding metaphors can be seen today in the effort to stop using the word "conservative" when referring to politicians and special interest groups that are promoting a free-market economy, a diminished role for government in addressing issues of poverty and inequality, and the idea that colonizing other cultures is the expression of progress.

In spite of the difficulty of changing our guiding metaphors, a strong case can be made for dropping the phrase "environmental education," and for beginning to use the phrase "commons education" –or "educating for the commons." Not only does the commons overcome the conceptual separation of culture from environment, it also has a built in tension between what is shared in common and the forces that are working to transform what remains of the non-monetized aspects of community relationships and activities into market opportunities. The use of the commons also reconnects education with the mainstream of human history. Even before the word came into existence humans understood that everyone in the community had equal access to animals, forests, streams, etc. as well the language, stories, expressive arts, and the knowledge that was the

basis for making and using different technologies. That is, access to what is now being referred to as the cultural and environmental commons had not been monetized. As the different belief systems of cultures developed, status systems emerged that excluded some groups from accessing the environmental commons as well as from the empowering and status conferring aspects of the cultural commons. Preventing some groups from becoming literate was an example of restricting access to the cultural commons that had the effect of creating an under-class that could be exploited by the class that had full access to the full range of the cultural commons. And later still, private ownership further restricted access. With the expansion of a money economy both the cultural and environmental commons became reduced—with the consequence that many cultural and environmental resources that previously were freely available to the members of the community (regulated in many instances by the group's status system) had to be paid for. Race, gender, inherited status, slaves, the poor and uneducated, and so forth, have historically influenced which aspects of the culture's commons were freely available to all members of the community, and which were restricted. However, the critical distinction was and continues to be between what is shared in common and what has been enclosed—that is, what has become privately owned and integrated into a money economy that creates a new basis for exclusion and the poverty that follows.

Today, the process of enclosure is spreading seemingly without either moral and ideological constraints. Examples range from the transformation of the tradition of work as returned to viewing work as paid, from the difference between learning the intergenerational skills necessary to prepare a meal from locally grown vegetables to purchasing an industrially prepared meal, and from the difference between a mentoring relationship to paying tuition or a fee in order to have access to a body of knowledge or a skill. Although some social groups still retain these traditions, the modern idea of development equates progress with bringing what remains of the cultural and environmental commons under the control of the market forces that have been made even more destructive by the expansion of global competition.

In order to understand the role that public schools and universities can play in restoring a better balance between what remains of the world's diverse cultural and environmental commons and the colonizing nature of an industrial, consumer-centered

lifestyle, we should substitute educating for the cultural and environmental commons in place of environmental education. The phrase “environmental education” especially when approached from a scientific perspective, fails to take account of the interdependencies that exist between the local culture and local environment, as well as the ways in which the high-status forms of knowledge underlying mainstream Western culture continue to undermine the viability of both the cultural and environmental commons. Traditional approaches to environmental education focus on such important issues as forest ecology, preservation of wetlands, local plant and animal diversity, while the symbolic (that is, cultural) basis of environmentally destructive practices have largely been ignored. This silence, which can partly be attributed to the limits of scientific knowledge, ensures that the environmental problems will continue to proliferate. The major weakness of the traditional science approach to environmental education is that it does not address the systemic reasons that the rate of environmental degradation has reached a level that now exceeds what science and technology can reverse. Restoring habitats that allow some species to recover from the brink of extinction pales in significance when we consider the changes taking place in the chemistry of the world’s oceans and the rate of global warming. Because of the scale and rate of environmental changes there is a special need for the restoration of the environmental commons at all levels—and this includes strengthening the cultural practices and beliefs that have a smaller ecological footprint.

The phrase “educating for the cultural and environmental commons” is somewhat awkward, and it certainly exceeds what modern technology allows in terms of course abbreviations. However, as long as the shorter phrase of “commons education” is understood as encompassing both the non-monetized aspects of the cultural and environmental commons, it should be used in place of environmental education. An equally strong case also can be made for substituting “commons education” for the phrase “liberal education.” If we take account of the deep cultural assumptions that are promoted in the various courses traditionally associated with a liberal education we find that they are also many of the same assumptions that underlie the industrial, consumer-dependent culture that is exploiting the environment and undermining what remains of the cultural commons. These deep assumptions include the idea of a linear form of progress that is based on the Western form of rational/critical thought, an anthropocentric

view of human/nature relationships that legitimizes exploiting the environment as a natural resource, a view of individualism that marginalizes the importance of intergenerational knowledge that represents alternatives to an industrial culture based on science and an every expanding stream of technological innovations, valuing literacy and other abstract systems of representations over oral traditions as sources of knowledge, an evolutionary-based way of interpreting cultural development that represents the West as more advanced than other cultures, and a prideful form of ethnocentrism that reduces the possibility of learning from other non-Western cultures that are more ecologically centered.

Critics of this generalization need to consider why the majority of professors in the liberal arts are still silent about the nature of the environmental crisis, and why the importance of maintaining the diversity of the world's cultural commons is either viewed as left-wing extremism or entirely unrecognized. As I will discuss later, substituting "commons education" for "liberal education" shifts the focus from the simplistic yet ideologically driven Enlightenment idea of liberation from past ways of thinking as the primary goal of education to the idea of learning to discriminate between the forms of intergenerational knowledge that are ecologically sustainable and contribute to morally coherent communities, and the intergenerational knowledge (of which a liberal education is an example) that contributes to the colonization of other cultures and to the development of technologies and an economic system that is overshooting what the environment can sustain.

On a more strategic level, educating for the commons eliminates the current way in which non-science teachers and faculty can rationalize that their areas of academic competence are unrelated to global warming, and to the degradation of other vital environmental systems. To paraphrase an important insight of Gregory Bateson, a cultural mind-set cannot be separated from the patterns of social injustice, from the nature of the built environment, and from the pathogenic causing technologies that are being introduced into the environment in the name of progress. When the main focus is on the changes occurring in the environmental commons, the science teachers should also be able to help students understand how the enclosure of the cultural commons contributes to these changes. And when the main focus is on the cultural commons, which would be

the case with social science and humanities professors, how changes in the cultural commons influence the natural environment also needs to be considered. In effect, educational reforms must overcome the artificial separations within the institutionalized bodies of knowledge that now contribute to the ignorance of so many graduates of public schools and universities about how their values and beliefs are contributing to the enclosure of the commons that leads to the poverty of others, to the degradation of the environment that they and future generations depend upon, and to the wars that are now deemed essential to ensuring our access to the resources that their wasteful lifestyle depends upon.

The commons, by its very nature, requires a radically different way of thinking from what now characterizes a modern form of consciousness. Indeed, it requires understanding aspects of culture that have largely been ignored because of the prejudices and silences reproduced in the language and thought process we associate with being modern and progressive. And in some areas of culture, the prejudices carried forward in the metaphorically-based language/thought process that each generation within the dominant culture is socialized to accept at a taken-for-granted level of awareness have become doubly destructive. In addition to the silences, the prejudices make certain ways of understanding appear as reactionary and thus out-of-bounds for a socially responsible person. If teachers and professors are to provide an approach to commons education that helps to restore a sustainable balance between dependence upon the market and the non-monetized activities that make up the cultural commons, they will need to rethink these prejudices as well as begin consider what has been ignored because of the silences in their own education. Thus, the following chapters will address both the prejudices and the silences, as well as explain how these new ways of thinking can be introduced as an essential part of the background understandings of the interdependencies that exist between the diversity of the cultural and environmental commons. The following chapters will also be used to explain how the many forms of enclosure of both the cultural and environmental commons can be introduced into the curriculum at both the public school and university level.

Chapter two will draw upon a number of bodies of knowledge that might be encountered if a student were to take a course in the sociology of knowledge, a course in

cultural linguistics, and were required to read authors that write about aspects of culture where the current prejudices would prevent their writings from being included in a course. I have written about several of these aspects of culture before, and ask readers who may have read one or two of my other writings to recognize that I need to cover these themes again in order to lay the foundation for understanding the prejudices that must be overcome in order to begin thinking about the importance of the cultural and environmental commons. The aspects of culture that need to be explained in a way that overcomes the prejudices that currently account for ignoring the connections between the importance of the world's diverse cultural commons and long-term ecological sustainability have been brought into focus nearly every time I have given a talk on the ecological sustainable characteristics of some indigenous cultures that I have had contact with. And the same prejudices are voiced nearly every time I mention the commons to colleagues in other academic disciplines. Invariably, the responses have been “we cannot go back to a more primitive state of existence,” “your romanticizing backward cultures” and, perhaps, the most egregious being the criticism that any discussion of ecologically-centered cultures is an example of reviving the “noble savage” as a model for future development.

These responses from highly educated people reproduce a shared misunderstanding that underlies the modern mind-set: namely, the belief that their daily lives are not dependent upon many forms of intergenerational knowledge, skills and activities that are part of the cultural commons shared by other members of their community. What the responses to my references to the commons indicate is that there is a lack of knowledge of their own cultural patterns, as well as a lack of awareness of the many ways in which enclosure is now taking place—and how the different forms of enclosure contribute to the spread of poverty and to the disruption of environmental systems. In spite of their specialized field of knowledge, they too often are unable to recognize the patterns of the culture they participate in on a daily basis. This leads, in turn, to an unquestioning attitude toward what is taken-for-granted, and this state of unawareness becomes especially important when we recognize that the many forms of enclosure occurring today involve benefiting only a small segment of society and a loss for other groups. To make this point in a different way, the many forms of enclosure--

which are usually represented as yet another technologically-based convenience, as a source of empowerment and entertainment, and as the latest expression of progress—are political in the sense that the members of the community need to consider who gains and who loses, as well as what is being lost that the community depends upon or represents a genuine achievement that needs to be carried forward. Perhaps most important today, each form of enclosure needs to be questioned in terms of whether it undermines the skills, knowledge, and moral values that enable the members of the community to live less money-dependent lives.

While what is taken-for-granted in each culture will differ, there is nevertheless a need for students understand how the taken-for-granted cultural experiences make it is so difficult to recognize the cultural patterns and processes that are sources of empowerment and mutual dependency, as well as the patterns and processes that contribute to new forms of dependency. There is also a need to understand the metaphorical nature of the languaging processes of a culture, which again will differ from culture to culture—and to understand how the metaphorical language of the students' primary culture, as well as that of the dominant culture, carries forward earlier cultural ways of thinking. The cultural assumptions that are encoded and carried forward in the use of such metaphors as progress, individualism, environment, evolution, and so forth, will be given special attention, as well as how to introduce into the curriculum examples that students will easily understand. The tradition in public schools and universities of representing language as a conduit through which ideas and data are communicated (the sender/receiver model of communication) contributes to the lack of awareness of how the metaphorical nature of language creates silences, reproduces prejudices, provides new ways of understanding, as well as forcing what is new to fit misconceived taken-for-granted patterns of thinking, such as using the vocabulary derived from industry that is currently used to describe the characteristics of a plant cell.

If students are to understand how the cultural commons impact natural systems, as well as why and when it is important to resist the process of enclosure, they will need to have a more complicated and thus accurate understanding of the nature of tradition. If the Enlightenment bias against traditions is reproduced in the silences and metaphorical language that students rely upon as the basis of thought, it will then be difficult for them

to understand that taking seriously the importance of intergenerational knowledge is not a reactionary and thus inappropriate way of thinking. A more complex understanding of tradition is not only essential for taking seriously the community enhancing as well as the destructive nature of the intergenerational knowledge, it is also essential for understanding the place-based experiences of the community. The stories of past mistakes as well as the wisdom gained from careful observation of the limits and possibilities of the bioregion are examples of traditions that need to be shared and reflected upon by each generation. Traditions, in effect, are integral to the process of change, which becomes clearer when attention is focused on traditions that need to be changed as well as when the forces of technological and market-oriented progress overturn traditions before there is an awareness of what is being lost. The new technologies that enable corporations and small business to monitor the private lives of employees, thus enabling them to eliminate employees that pursue life-style habits that may lead to higher medical expenses, is an example of the inherent tension between traditions (in this example, the tradition of privacy) and the new forms of enclosure.

The connection between cultural traditions, the metaphorical nature of the language/thought process, and political ideologies also need to be presented as essential background knowledge for understanding the nature and importance of the cultural commons, and its impact on the environmental commons. The two dominant ideologies that are part of the political discourse within the dominant culture are liberalism and conservatism. Both their historical roots in the thinking of earlier political theorists, as well as how they are being misused today, needs to be clarified in order to avoid misidentifying which ideological tradition that supports the process of enclosure by market forces, and which ideological tradition supports the revitalization of both the cultural and environmental commons. Why the problem of misrepresenting in Orwellian fashion what these two political labels stand for is so important to resisting the further enclosure of the commons will also be discussed.

Chapter three provides an explanation of the many ways in which both the cultural and environmental commons are being enclosed. Even though the introduction of new technologies, markets, expert services, and decisions to outsource production to other countries are being announced nearly on a daily basis, few people are aware that

that each new development can also be understood as yet another example of enclosure of either the cultural or environmental commons—and sometimes both simultaneously. Thus, there is a special need to identify the different forms of enclosure where what was previously a skill, a mutual support relationship, an ability to be self-sufficient, a civil right, a tradition of knowledge for growing food or putting up a building, and so forth, now must be acquired by participating in the money economy—even when the opportunities for earning a living in the money economy are being drastically reduced. In addition to identifying the enclosure of the cultural and environmental commons taking place in the students' own communities, as well as in other parts of the world, it is important that the previous discussion of ideology be connected with specific examples of enclosure. Students need to consider whether specific forms of enclosure, as well as the reforming of destructive traditions, should be identified as the expression of conservatism or liberalism.

The role that scientists play in the process of enclosure also needs to be highlighted, along with their role in providing the evidence needed for resisting the further economic exploitation of the environment. The traditional approaches to environmental education are noted for their failure to help students understand that without modern science and technology there would not have been an industrial revolution—and thus the hyper-consumer-dependent culture as we know it today. And few students that have taken the traditional environmental education classes are able to recognize when scientists, in their predictions about the future of cultures, have moved onto the slippery slope of scientism. If students are to defend the achievements of scientists, as well as be able to ask what is being overturned as a result of the new technologies based on scientific discoveries, they need to be able to discriminate between the legitimate uses and explanatory power of science and the misuses that are founded on basic misconceptions promoted by ideologues and religious zealots. The relationship between science and the cultural and environmental commons is a very complex one, and anyone concerned about the survival of the commons needs to know what questions to ask about it.

Chapter four addresses how the cultural assumptions that underlie the industrial, consumer-oriented culture can be made explicit and examined in terms of their impact on

the cultural and environmental commons. Special attention is given how to recognize the presence of these assumptions in various subject areas that range from educational software, textbooks, classroom discussions, mentoring relationships, and in even in the design and materials used in the built environment. There is also a discussion of how to make explicit the differences between the assumptions that are the basis of the industrial culture and the assumptions and that underlie the cultural and environmental commons of different cultures. The importance of helping students to understand when these assumptions--such as change being inherently progressive in nature, thinking of the environment as a natural resource, using mechanism as an interpretative framework for understanding organic process, viewing the individual as the basic social unit—have led to constructive and destructive changes is a focus of this chapter. Perhaps most important is the attention given to how the taken-for-granted status of these assumptions closes off other ways of thinking that are more ecologically grounded, as well as how they contribute to the ethnocentrism that underlies the current efforts to globalize the economic forces that are undermining what remains of the self-sufficiency of local communities and the regenerative capacity of natural systems.

Chapter five introduces the many ways in which the practices and knowledge systems that constitute the local cultural commons can be introduced into the curriculum at different level of the educational process—from the early grades through university level classes. The examples are from North American communities, which is important to point out as the local practices and knowledge systems of non-Western cultures vary significantly. As a mapping of the local cultural commons is undertaken, the richness of a commons-oriented curriculum will be expanded beyond the examples given in this chapter. The limited number of examples presented here are intended to provide a model that can utilized when introducing other examples of how the cultural and environmental commons contribute to reducing dependence upon the money economy and the self-renewing capacity of natural systems. This chapter identifies the characteristics of the cultural commons that are widely shared in different communities, and in different cultures. These characteristics include the largely non-monetized local and intergenerationally based approaches to growing and preparing food, the creative arts, ceremonies and narratives, the moral and spiritual commons of different groups in the

community, technologies, craft knowledge and skill, landscapes and built environments, and the language that reproduces the moral values that govern human and human/nature relationships. One of the strengths of the chapter is that it provides examples of how naming the cultural commons that are part of the students' otherwise taken-for-granted experience provides them with the initial basis for developing the communicative competence for participating in the democratic process of deciding when aspects of the cultural commons needs to be conserved and when they need to be reformed or eliminated entirely. Curricular examples are given that range from the early grades to university level classes of how to provide the language and understanding of relationships for recognizing how different aspects of the cultural commons represent alternatives to being dependent upon a money economy. Attention is also given to recognizing the different ways in which enclosure is undermining the self-sufficiency of communities.

Lastly, the chapter introduces a proposal for reforming universities in a way that gives a more central place to learning about the nature of the world's diverse cultural and environmental commons, about why resistance to the further enclosure of the commons is ecologically important, and how the traditions of Western thought—ranging from philosophy, political theory, and economics to literature and the arts—have contributed to marginalizing an awareness of the commons as sites of resistance to an economic/industrial system that is based on the cultural myth of unending progress.

Chapter six addresses a seldom recognized aspect of the politics of language that contributes to the failure of people to resist the further enclosure of the commons. As municipal water systems are sold to corporations, as “data” on our personal lives are sold to corporations, and as the intergenerational knowledge of preparing food is replaced by industrially prepared food, most people remain silent about how these and other forms of enclosure make them more dependent upon a money economy—even as they sink further into debt. Understanding how the politics of language contributes to the inability of most Americans to recognize how their silence makes them complicit in the further encroachment of the industrial culture on the commons requires returning to the earlier discussion of the root metaphors that are share by both market and social justice liberals.

What is given special attention is how the root metaphors that are shared by these two traditions of liberalism (individualism, progress, human-centered world, most

culturally advanced and thus justifiably messianic) leave people unable to address the moral and political issues that are central to an ecojustice way of thinking. Social justice liberals are concerned about environmental racism and a few are concerned about the exploitation of the resources of Third World peoples. Unfortunately, this concern has not led them to consider how the alternatives to the hyper-consumerism that they want to made available to all members of society would lead to reducing the need to exploit the resources of other cultures. The chapter points out that social justice liberals have been largely silent about the ecojustice issues related to revitalizing the cultural commons and to the need to ensure that the prospects of future generations are not further diminished. The cultural assumptions that most social justice liberals take-for-granted leads them to interpret the role of critical thinking in much the same way it is understand within the industrial culture—namely, as leading to changes that are assumed to be progressive in nature. Understanding the nature and ecological importance of the cultural and environmental commons, as this chapter points out, leads to a different understanding of the role of critical thinking—which is not only to clarify the reforms that need to be undertaken but also the traditions of self-sufficiency and, especially now, the institutions and moral norms that are the basis of the civil liberties that need to conserved.

The chapter concludes with an analysis of the double bind that now characterizes today's political discourse, including how public school teachers and university professors contribute to perpetuating the Orwellian double bind thinking where the word "conservative" is used to refer to the market-liberals that want to turn every aspect of daily life into an exploitable market opportunity—and of how environmentalists and people working to renew the cultural commons identify themselves as liberals and as progressives. If the commons are to become a focus of curriculum reform, it will be necessary to ask what the faux "conservatives" want to conserve, and why we continue to refer to the Christian Fundamentalists and many evangelicals as social conservatives when their agenda for progress includes undermining the separation of church and state, an independent judiciary, and the separation of powers, and reversing the gains in protecting human rights that were not anticipated by the men who wrote the Constitution. In effect, the chapter is used to restate Wendell Berry's argument for using our political vocabulary in a way that clearly represents what people stand for. In the case of

educators helping students to understand the potential of a revitalized cultural and environmental commons, this will require introducing students to the history of liberalism and philosophical and environmental conservatism.

Chapter seven has two main foci. First, the misconceptions that are the basis of constructivist learning theorists such as John Dewey, Paulo Freire, and the many professors who assume that students achieve greater personal autonomy as they learn to construct their own knowledge. The chapter identifies the key misconceptions that underlie the theories of both Dewey, Freire, and their contemporary followers. As many environmental educators rely upon a constructivist theory of learning which is often based on core assumptions shared by Dewey and Freire, there is a special need to identify what these assumptions are. These assumptions include the ethnocentrism that underlies the arguments of both theorists for promoting their respective one-true approach to knowledge, their reliance on a social Darwinian interpretative framework for distinguishing between backward and advanced cultures, their assumption that change is progressive in nature and that traditions must be overcome through the experimental mode of inquiry and critical reflection. This section of the chapter also includes a discussion of how the high-status knowledge promoted by American universities also promotes a less theoretically-based constructivist view of learning.

The other primary focus of the chapter is on explaining how classroom teachers and university professors should understand their responsibilities as mediators in the process of learning—rather than as promoters of the cultural assumptions that underlie the industrial, consumer-oriented culture that is now accelerating the rate of global warming and the undermining of the self-renewing capacity of other natural systems. The role of mediator is to help students to understand differences—between the ideologies and practices that are enclosing the commons and the beliefs and values that contribute to the intergenerational renewal of the commons, between the genuine contributions of the industrial culture and the technologies (both mechanical and social) that contribute to the spread of poverty and the loss of local democracy, between the different cultural commons that are based on a more ecologically informed intelligence and cultures that are based on the myth of individualism, unending progress, and that humans can survive the destruction of the natural environment. Examples of this

mediating role were given in the earlier discussion of how teachers need to help students to name the difference between the experience of oral and print-based communication, between food prepared and shared with the family and food that is industrially prepared and eaten alone in a fast food restaurant, and so on. As pointed out in the chapter, helping students to recognize the differences between the wisdom of their own culture as well as that of other cultures of how to live less consumer dependent lives and the information and data of today's experts who are promoting the latest technology, drug, and expert procedure, will be especially challenging as the role of being a mediator requires that the teacher and professor does not take-for-granted the same cultural assumptions shared by the experts who now define the source of health and happiness.

In effect, the collective message of the book is that the rapid changes in the environment, as well as the spread of poverty and hopelessness, now confront us with the challenge of initiating a new ecologically-centered paradigm where the health of the cultural and environmental commons becomes the central focus of human attention rather than how to exploit the environment in order to promote a lifestyle of excessive profits and materialism.

Chapter 2: Understanding the Cultural and Environmental Commons

Many of the everyday interactions and interdependencies that are part of life in urban and rural America, as well as in other regions of the world, should be understood as contributing to the renewal of the commons that are deeply rooted in the cultural and environmental histories of the region. This statement is not meant to be interpreted as meaning that we should not be deeply concerned about the long-term sustainability of the cultural and environmental commons. Rather, it is meant to establish again one of the givens of the human situation, regardless of cultural and bioregion. In short, this statement is meant to promote the recognition of what sustains human life in the present and what will be the basis of future sustainability--that is, if humans do not destroy the commons out of greed, hubris, and a reliance on unexamined cultural myths.

As pointed out earlier in the brief discussion of the process of enclosure, both the cultural and environmental commons are fast becoming reduced as more of everyday life, including the genetic make-up of plants and animals, are being integrated into a money economy. What is being taught in public schools and universities is furthering the enclosure of both the cultural and environmental commons in two ways that have specific relevance for reversing the current slide we are on into an unsustainable future. All levels of formal education promote the patterns of thinking and values that equate the modern form of progress with the development of scientific knowledge, with new technologies, and with a continued expansion of choices for consumers. This Western approach to development is now being emulated in other regions of the world, such as in India and China where the rate of ecological damage may soon begin to rival that of the American lifestyle.

The other way in which public schools and universities contribute to undermining the commons is through what is omitted from study. That is, the cultural assumptions that underlie the modern, progress-oriented form of consciousness reinforce a prejudice against learning about the many ways that people in different cultural settings and social strata are dependent upon the local cultural and environmental commons. And as their many forms of dependency are part of their taken-for-granted experience, they too often lack the explicit awareness that is necessary for recognizing when the patterns and mutual support systems are being integrated into the money economy that they are unable to

participate in. Several examples may help here. In North America, most people assumed that their daily activities, including their travel and purchasing preferences, are private matters. However, with the ability of computers to track nearly every personal activity, these previously private aspects of a person's life have now become data; that is, a commodity that corporations are eager to purchase in order to target potential customers whose life preferences most closely match the corporation's products. What was previously taken-for-granted is transformed into a market relationship without being the outcome of democratic choice.

Similarly, the vocabulary that enabled individuals to articulate the nature of relationships and the skills that were a prideful part of a craft, whether it was making a piece of furniture, preserving fruit, cooking a certain recipe, or weaving a table covering, have been lost (enclosed) when they are socialized to think within the vocabulary that supports an increasingly monetized existence. Again, what was previously a taken-for-granted language acquired through being socialized by older members of the community in how to perform more self-reliant skills is lost as they become socialized to the language required by the increasingly automated and hierarchically organized work settings, and by the market-liberals values that transform the worker into a wage-earner on an assembly line or in an office cubicle. The common refrain today is that those aspects of the cultural commons that are being lost cannot be recovered, just as many people now claim that we cannot reverse the Orwellian use of our political language. However, as the recent successes of the feminist movement have demonstrated in challenging the cultural practices based on patriarchal assumptions, it is possible for educators at all levels of formal education to become aware of what they previously took for granted. And in becoming aware, they are then able to provide the vocabulary and explanation of relationships that make explicit the cultural patterns that previously were part of the unacknowledged patterns and interdependencies of daily experience.

The pedagogical challenge is that in becoming aware of how modern cultural assumptions, when divorced from specific cultural and environmental contexts, contribute to undermining the commons, it then becomes necessary to determine how to introduce students to a balanced way of thinking about these assumptions. While some of the cultural assumptions held in the past were fundamentally wrong, with no

redeeming characteristics (such as those that held certain groups as inherently inferior) other cultural assumptions that are problematic in terms of sustaining the commons have, at the same time, served as a basis thinking about social justice issues. The assumption that the highest educational goal is to emancipate the individual would be one of these. Other cultural assumptions that were originally understood as leading to advances over previous ways of thinking, but are now understood as problematic in terms of contributing to the sustainability of the cultural and environmental commons, include the idea that change is an inherently progressive force, that the environment is to be valued as a human resource, that literacy is a more reliable source of knowledge than orally-based traditions, and so on. If the examination of the prevailing cultural assumptions are treated in terms of their original historical and cultural context, as well as in terms of whether they help to sustain or undermine the commons, there is more likelihood that students will learn how advances in the past can become a destructive force in today's more ecologically fragile and socially unjust world where billions of people are barely surviving on one or two dollars a day in physical environments that are becoming increasingly degraded.

The following discussion of key cultural assumptions that now must be made explicit as background knowledge for understanding the cultural forces that contribute to the further undermining of the cultural and environmental commons is meant highlight both the reasons that the assumptions were adopted in the first place, as well as the questions and issues that now must be raised as part of any assessment of their current value. The following should be as much a part of a commons curriculum as learning about the characteristics of local habitats.

Change as a progressive and linear process of development. This culturally specific assumption can be traced back to many possible sources: the change in how artists understood their own creative works in relation to what were previously regarded as the highest forms of artistic achievement (which lead from copying what had been done in the past to signing their names to signify their own powers of origination); the introduction of the printing press and the spread of literacy; the growing acceptance that science-based knowledge has greater explanatory power as well as instrumental effectiveness than blind faith in traditions; the merging of technological developments

with mass systems of production that lowered the cost of goods and helped to overcome hardships and less efficient ways of doing things; and so on. But more than anything else, the greatest source of validation of the assumption that change is both linear and progressive can be traced the spread of the industrial revolution and the market-liberal ideology that provided both its conceptual and moral legitimation. The ability of the industrial revolution to produce an expanding stream of new technologies, from toasters to genetically altered plants and from telephones to cell phones, has turned true-believers into trend setters—which furthers an unquestioning attitude toward the assumption that change is inherently a progressive force.

One of the consequences of assuming that change (whether in the arts, ideas, values, technologies, and so forth) is progressive in nature is that cultural groups such as the Amish and those that have retained their indigenous traditions are viewed as backward—and when labeled as backward they are no longer considered as sources of knowledge. One of the questions that needs to be raised in challenging this way of thinking about cultures that have been more selective in adopting Western technologies is whether they have achieved a different form of complexity—in understanding the life cycles of their bioregions, in the development of stories and other expressive arts, in knowing how to use local materials in ways that are better adapted to the climate and other environmental conditions, and in the ways they engage in mutually supportive activities. Another way to put the question is to ask what there is about their belief system and cultural practices that lead them to view wealth in terms of relationships and skills useful to the community rather than in terms of material goods. This line of inquiry can be changed by asking whether the scope of technological dependency, as well as being more dependent upon consumerism in the West, has led to a less developed symbolic world for the average person.

The question of whether the cultures that have not based their approach to development on the assumption that change is inherently progressive—leading ultimately to catching up with the more “progressive” cultures such as those in the West—can be introduced in terms of having the students examine the differences in approaches to education of the new generation. In the West, as well as in non-Western countries that are attempting to “catch-up” with the latest expression of modern development, a large

segment of the elites that largely control how classroom teachers should think about how learning occurs assume that students should construct their own knowledge. This idea goes back to the early stages of the progressive education movement, and has been revitalized by the ideas of Piaget, Dewey, Freire, and educational theorists that are borrowing their ideas from chaos theory and a selective interpretation of Whitehead. Such progress-oriented metaphors as change, emancipation, discovery, inquiry, and autonomy are represented as the alternative to “cultural transmission,” learning intergenerational knowledge, mentoring relationships, and so on.

The question of whether the new insights and ways of doing things that originate supposedly from the students’ own ways of understanding need to be assessed in terms of specific cultural tasks, such as assessing whether the students can learn on their own the medicinal characteristics of plants or whether this knowledge is best acquired as part of the culture’s fund of intergenerational knowledge. Other examples that will help test the assumption that the students’ ability to construct their own knowledge is more progressive than learning from the oral and mentoring traditions passed on between adult and student is in such areas as preparing a meal that is part of an ethnic tradition, in planting a garden that takes account of the soil conditions required by different plants and sources of resistance to pests, in building a piece of furniture or framing a house—including putting in the plumbing and electrical system. Another test of whether students contribute more to social progress when they learn on their own or from adults that play a mentoring role is to observe whether students on their own will come up with the critical questions of the day: such as what is the difference between science and scientism? and how do the languaging processes of the culture carry forward values and ways of thinking that are ecologically problematic? This line of inquiry can be framed in terms of recent history by asking if the students that were free to learn what interested them in the progressive education classes of the nineteen thirties were able to recognize the many expressions of gender bias, that the industrial culture required degrading environmental systems in order to provide cheap goods and services, and that racism was widespread in society.

Helping students to obtain a more balanced understanding of when the assumption about the progressive nature of change is supported by evidence, and when it

simply is part of the taken-for-granted way of thinking that benefits the promoters of enclosure while creating new forms of dependencies for the larger segment of society, can be approached in other ways. For example, the assumption that student constructed knowledge can be further tested by assessing whether they, on their own, come to an understanding of how the forces promoting the further expansion of an industrial/consumer based lifestyle contributes to undermining a democratic society. Or whether the students are able to recognize how the changes promoted by extremist groups weaken our democratic institutions, while promoting a political agenda that possess many of the characteristics of a fascist society. I suspect that when students are left to construct their own knowledge, if this were possible, they would not be asking the questions that require a historical perspective on the hard-won struggle to establish the institutions and moral norms necessary for a democratic society. While readers still caught up in an environmental education way of thinking may be wondering if the above issues should be included in an expanded curriculum, I would like to suggest that whether the curricular focus is limited to the environmental commons or, as I am suggesting here, includes the cultural commons as well, the issue of local decision making (democracy) is equally important.

Similarly, if the classroom teacher or university professor does not help students obtain a more complex and critical understanding of the many ways that the assumption of progress limits thinking about the double binds that various expression of progress are creating, students will be even less likely to recognize what they need to resist as well as affirm if they are to live less impoverished and socially-just lives. The extreme example today of widespread support of the public for equating an increase in consumer opportunities with a form of progress that is, in fact, undermining local small businesses, lowering wages, and polluting local ecosystems is the spread of Wal-Mart supper stores across the country. Another example of how the cultural commons is being further undermined is the blind acceptance that technological advances, including those that make the outsourcing of jobs and technologies to foreign countries, are the latest expression of progress. The increased levels of unemployment and people left without medical coverage, estimated to reach 55 million Americans in the next five years, have

direct implications for understanding the problems and prospects of the cultural commons.

One last word about the influence of the cultural assumption that equates change with progress: the more widely this assumption is held the less likely that attention will be given to importance of the local cultural commons as providing lifestyle alternatives to the current level of dependency upon a money economy that is failing at an increasing rate vast numbers of people.

The individual is the basic social unit and source of ideas and values. Some scholars have argued that this cultural assumption can be traced back to the early roots of Judeo/Christian thinking. Over the years, however, the metaphor of the “individual” has been interpreted differently: as a subject in the Middle Ages, as a citizen with democratic rights during the late eighteenth century, as the source of creativity and now as a potentially autonomous self-creating individual whose ideas and values are subjectively determined. The assumption about the autonomous individual underlies many aspects of our legal system, including how we think about property rights and the ownership of ideas and the expressive arts. It is also basic to our approach to understanding what constitutes social justice. It is such a widely held assumption that few people have bothered to consider what effect it has for the quality of life in the cultural commons. On the other hand, the more thoughtful environmentalists have been questioning for some time whether this assumption is not partly responsible for the increasing rate of environmental destruction. What should be especially important to the commons educator is that the assumption about individual autonomy has been a key reason that the nature of traditions have been so widely misunderstood—and misrepresented in both public schools and universities.

Given its taken-for-granted status in the thinking of most classroom teachers and university professors, their misrepresentation of the nature of tradition has been matched by their silence on another equally important set of relationships that are especially crucial to the health of the cultural and environmental commons. That is, their emphasis on the autonomy of the individual cuts two ways: it leads to downplaying the possibility that many traditions are sources of empowerment (indeed, the more widespread view is that traditions are impediments to individual self-realization) while at the same time

reinforcing the idea that individual autonomy leads to a greater dependence upon meeting life needs through consumerism. In effect, the expansion of the industrial culture is dependent upon promoting the idea that individuals should not be constrained by intergenerational knowledge and moral responsibilities. The more individuals are oriented toward change, and are free of the skills and knowledge that might lead them to question and resist technological innovations and the other promises of the market place, the more pliable they will be as consumers. But the dependency upon the market place for supplying needs that range from industrially prepared food, to entertainment and health care, has even more troubling consequences for the future of the cultural and environmental commons. The dependency on material goods and services also leads to a shift in ideological commitments whereby the market-liberal emphasis on expanding the scope of market-based activity becomes equated with the myth of progress. And who can resist the promise of further progress, especially when they are ignorant of the economic forces that are undermining the cultural commons while at the same time reducing the need for workers.

As will be explained later, the cultural assumption that represents the individual as an autonomous thinker and actor is yet another myth that is based on a basic misunderstanding perpetuated in our educational institutions. Just as classroom teachers and university professors carried forward over generations the misconceptions (prejudices) acquired in their own education, they continue to reinforce the myth that the educational process should further emancipate the individual as an autonomous thinker and political agent. The contradiction that goes largely unnoticed is that while some classroom teachers and university professors may be critical of the social injustices and environmental damage caused by the industrial culture, they nevertheless continue to socialize students to the way of thinking about individualism that is needed by the industrial approach to production and consumption.

The Western myth of the autonomous individual, which is profoundly different from the individualized expression to the shared cultural patterns, serves as yet another conceptual barrier to recognizing the network of interdependent patterns that the individual relies upon each day—but which are part of the implicit, taken-for-grantedness of everyday experience. Many of these taken-for-granted patterns need to be understood

as part of the cultural commons that have not been monetized, and thus represent sources of mutual empowerment that are not dependent upon where one stands in the money-dependent pyramid of social status. If students are to obtain a more accurate understanding of just how complex and interdependent the cultural commons are, they will need to begin challenging the myth that they are autonomous individuals and that their goal in life is to obtain even more autonomy. As the task of making explicit the cultural patterns that are taken-for-granted is very difficult, especially when others in society share the same taken-for-granted patterns, it is necessary that classroom teachers and university professors make a special effort to help students recognize the interdependent and taken-for-granted nature of cultural patterns they share with others.

Seemingly, the most obvious starting place would be to give students the language for naming what otherwise is part of the silence in an educational process that now emphasizes the explicit forms of knowledge that are easily represented as abstract, context-free, and as having universal validity. In addition to being the bases of the high-status knowledge promoted in universities, it is the explicit rather than the implicit and context-dependent knowledge that is reproduced in print and other abstract systems of representations. Print is a highly useful way of preserving ideas and a fund of knowledge, as well as in promoting new ideas and technologies. But it has an especially important limitation that is relevant to understanding why formal education, with few exceptions, marginalizes the taken-for-granted cultural patterns that need to be recognized in order to understand just how dependent the “autonomous” individual is upon the cultural and environmental commons.

Reading about the shared cultural patterns may contribute to awareness, such as reading about the racist and gender prejudices that were part of the cultural norms of the past, and that continue to exist today. But the more effective approach to challenging this myth is to engage in face-to-face discussions of the patterns that otherwise would be part of the tacit background experience. Identifying the patterns of thinking that are carried forward in the metaphorical language, and that continue to influence both the average individual as well as elite groups of intellectuals, is a good starting place. Encouraging students to discuss how they think about the nature of change, why such elite thinkers as E. O. Wilson and the local biology teacher continue a nearly 400 hundred year tradition

of using the names associated with different parts of the machine for naming the characteristics of a plant cell and the human brain—as well as the students own use of machine metaphors. They should also be encouraged to consider what long-standing cultural patterns and assumptions are being reinforced when they use the phrase “I think” and “I want”, and so forth.

Making explicit how the languaging processes within the culture become part of the students’ taken-for-granted experience that remains conceptually and morally disconnected from their self-image as autonomous individuals should also include examining how the non-verbal patterns of communication are shared—and why people within the same language community tend to derive the same meaning from facial expressions, uses of social space, body gestures, and uses of voice to communicate messages about how relationships are being understood. There is also a need to discuss the why patterns of meta-communication within other cultural groups are so difficult to understand initially. This would also help to clarify the many ways they give individualized expression to long held cultural traditions. Making explicit the shared cultural patterns, and representing them as an aspect of the ecology of the cultural commons, will challenge in the most fundamental way that myth of individual autonomy.

But there is more to the languaging patterns in the culture than the spoken and written word, and the ongoing processes of meta-communication. The built environment can also be understood as a culturally influenced language that influences thought and behavior. That is, the design, placement, use of building materials, and organization of social space not only encodes the assumptions of the people who did the designing and building, but they also communicate the culture’s way of understanding of the behaviors that are appropriate in different social spaces. The behaviors appropriate in a library, church, and a bank are very different from the behaviors that are appropriate in a sports stadium and in one’s own home. In effect, the design of a building and the organization of social space represents, as Michel Foucault put it, an “action upon an action”—that is, a power-relationship which is very close to what Bateson referred to as a “difference which makes a difference” (which will shortly be discussed more fully). Making explicit and discussing the cultural patterns that are intergenerationally handed down and learned at a taken-for-granted level (with generally only minor changes introduced by

individuals) will also help students to recognize that their take-for-granted cultural patterns have their roots in the distant past of the culture. An interesting example would be to have the students identify in terms of their houses, as well as their bodies, where the line is drawn between personal and public space—and when they consider either one to be violated. Students could also be asked to consider the design and use of materials are expressions of metaphorical thinking. Considering how doorways are often intended to be seen as metaphors that communicate status and power would be a good starting place.

As pointed out earlier, the myth of being an autonomous individual in a world of constant progressive change undermines an awareness of the many cultural patterns that are shared and reenacted as part of daily life—cultural patterns that when taken seriously challenge the myth of individual autonomy. Including in the curriculum the many ways this myth needs to be challenged by an awareness of the patterns reenacted on a daily basis also prepares the students to understand their own level of dependence upon the cultural commons—which then establishes the basis for examining how different technologies contribute to the enclosure of the cultural commons—and directly and indirectly the enclosure of the environmental commons.

This last comment may appear as obscure and thus meaningless until we recognize the point that Gregory Bateson makes about a sustaining characteristic of all ecologies--both natural and cultural. This sustaining characteristic is the ongoing exchange of information that all the participants in the larger ecosystem depend upon. Bateson understood this basic unit of information as the “difference which makes a difference.” The basic unit of information that the other participants in the system respond to occurs across a scale that ranges from changes in the behavior in microscopic organisms, to the daily changes in the position of the sun, to the patterns of meta-communication between humans. That is, it is the process that connects plants, animals, weather patterns, human ways of thinking and behaving, and so on. To sum up: the Cartesian way of thinking, which is reproduced when individuals assume there are autonomous observers of and actors on an external world contributes to being cognitively and morally indifferent to the importance of these ecologies of information exchange—even when the individual may respond to them at a behavioral level—such as when the body language of a dog or another animal communicates being on the verge of

attack. Or when the other person glances at her/his watch, which is a “difference which makes a difference” that signals that what may have been an interesting conversation has come to an end—at least for one of the participants. Bateson’s insight into the multiple levels of communication that occur in natural systems (e.g., where the difference in sunlight makes a difference in the behavior of plants and animals) and between natural systems and humans—which are mediated by the culture’s way of knowing—is further evidence that the idea of the autonomous individual is a cultural myth. As Bateson also pointed out, our cultural maps may be inadequate for becoming aware of the micro-level of communication that is occurring at all levels of the cultural and natural ecosystems—as well as between these interdependent aspects of the commons.

A human-centered and Darwinian-governed world. The cultural assumption that represents humans as both separate from and superior to the external world can be traced back to the Book of Genesis. The mainstream Darwinian overlay on the human-centered interpretation of an anthropocentric world, which holds that humans have evolved a higher form of intelligence, also represents the cultures that have developed in ways that reflect a more complex understanding of the characteristics of the bioregion they depend upon as less evolved than cultures that have a more destructive environmental impact. The challenge for classroom teachers and university professors is to help students recognize the various ways in which anthropocentrism is reinforced in everyday patterns of thinking, in the development of technologies, and in the nature and placement of the built culture. With fundamentalist extremists in both the religious and scientific camps (I’m thinking of Ray Kurzweil, E. O. Wilson, Hans Moravec, and Richard Dawkins as representative of the latter), the challenge of helping students understand the explanatory limits of the theory of evolution, and why these limits need to be understood if we are to recognize how the theory of evolution can be used as an ideology that justifies the further enclosure of the cultural and environmental commons, will be especially daunting.

The irony in the current debate between fundamentalist Christians and the scientists that have strayed onto the slippery slope of scientism is that the respective explanatory frameworks that both draw upon explains why the strongest will survive. That is, for the scientists the long-term survivors are better adapted and thus fitter in

terms of passing their genes on to future generations. For the fundamentalist Christians it a matter of being better adapted to living the life dictated by God's speaking to them through the Old Testament. While the scientists view the intergenerational reproduction of a better adapted gene as the basis of future life, the fundamentalist Christians envision the individual's future as being taken up to sit at the right hand of God. They are not only waiting for Armageddon but are actively pursuing political policies that will hasten the ecological collapse and the human bloodbath that will accompany its arrival. Given their belief in this end-of-time scenario, they do not think that what remains of the world's diverse cultural and environmental commons is worthy of concern. Indeed, they view the destruction of both as dictated by certain passages in the Bible. The expanded theory of natural selection and the certainty of the coming of the rapture for a chosen few make irrelevant the survival of the democratic process that is essential to sustaining what remains of the world's diverse cultural and environmental commons.

In effect, the scientists that have extended the theory of natural selection to include how the environment selects which cultural memes are better adapted (that is, the fittest in terms of competition with other values, institutions, business practices, corporations, etc.) also place the ultimate source of decision making outside of the democratic political process—as the changes in the environment that ultimately select which collection of memes are better adapted can never be fully anticipated or understood by humans, whose thinking and values are themselves expression of the memes that are subject to Nature's process of perpetuating the better adapted. It is already clear, in terms of the explanatory framework of how natural selection determines with memes are to survive into future generation, that Wal-Mart is better adapted than the small business along the main streets of America, and that the United States, China and other countries that are pursuing a hyper-consumer lifestyle are better adapted for survival than indigenous cultures that have had their basis of relative self-sufficiency exploited by the forces of capitalism.

What the above comments bring out is the need at different levels of the educational process for helping students to understand the explanatory systems of fundamentalist Christians, as well as the ways in which the theory of evolution is being wrongly extended—such as explaining when and how computers are to replace humans

in the process of evolution (Kurzweil, Stock, Moravec), how humans have a choice in directing the process of evolution by choosing the ecozoic over the technozoic phase in the long history of evolution (Thomas Berry and Brian Swimme), and the more mainstream account of how Nature selects which collections of memes (cultures) will survive while others go extinct. Helping students to understand what the theory of evolution can legitimately explain--that is, where there is scientific evidence that supports different claims--is vitally important to ensuring that the unwarranted extrapolation does not become a basis of support for the market-liberal ideology that has no self-limiting principle on what can be enclosed. At the same time, when students understand how natural selection operates in terms of natural systems, they will also have a basis for understanding that human cultures are directly affected by changes in the natural systems. For example, how the fishing-dependent communities have been affected by the loss of fish stocks off the Grand Banks and in the waters surrounding Ireland and Great Britain, as well in the world's other fisheries, come easily to mind.

Similarly, the interdependencies that need to be examined include the cultural practices that lead to soil erosion, as well as how global warming will affect agricultural practices—and, in some instances, where the changes in weather patterns or loss of top soil are extreme to the point of putting the prospects of human survival in question. The curricular issue is how to understand different cultural ways of representing human dependence upon natural systems, and what the scientific-based theory of evolution helps students to understand about the potentially non-reversible consequences of exploiting natural systems beyond their capacity to renew themselves. In effect, this means bringing the process of evolution into the discussion of what represents sustainable forms of intergenerational knowledge and practices—and what represents an unsustainable future. **Language is a conduit through which words and ideas that have universal meanings are communicated.** This is another misconception that makes it difficult to recognize the diversity of the world's cultural commons and thus the diversity of cultural languages. The misconception promoted in public schools, universities, and other sectors of society is that language is a neutral conduit through which ideas and information are passed from one person to another—and from one center of power to the agents that carry out the policy implications. This misconception reinforces the ethnocentrism that is promoted in

most public school and university courses, supports the dogma that holds that the rational thought and critical inquiry are free of being influenced by the assumptions of the culture, and is essential to maintaining the Western myth of the autonomous individual.

The view of language as a conduit in a sender/receiver process of communication has other consequences that also need to be recognized if commons education is to overcome the inherent ideological bias in current approaches to environmental education—and in many environmental studies programs. These include how a sender/receiver view of language reinforces the idea that words accurately represent ideas, events, relationships, objects, and so forth. That is, this view of language leads to thinking that words represent or stand for real objects, relationships, and events—rather than culturally influenced interpretations. To put it another way, the conduit-sender/receiver view of language puts out of focus that words have a history, and that they carry forward analogies that were settled upon at an earlier time in the culture's history. As students are socialized to this view of language they are unlikely to recognize that words such as “environment,” “individualism,” “tradition,” “ecology,” “data,” “conservatism,” and so forth, had different meanings that reflected the taken-for-granted analogies of earlier times. In short, the conduit view of language serves to hide the fact that words are metaphors, and that their meanings are framed by the prevailing root metaphors—which are always culturally specific.

Examples of how root metaphors carry forward the earlier schemata of thinking or interpretative frameworks can be seen in a number of root metaphors that still dominate in the sciences—and in environmental education. The ways in which the root metaphors are reproduced in the thinking of even the culture's most highly educated and elite groups begins when as an infant the individual learns to think and communicate in the language that significant others take for granted. That is, at the earliest stages of socialization, infants are not able to think critically about words, and their underlying schemata (cultural assumptions). And at later stages of the process of socialization when the individual is learning something for the first time, she/he brings the taken-for-granted ways of thinking acquired earlier in the process of socialization to what is being modeled or explained. If what is being explained is based on the same root metaphors which are seldom made explicit, then learning takes place. If what is being explained is based on a

different root metaphor (explanatory framework or paradigm) then understanding may be difficult, slow, and even require rethinking of the earlier taken-for-granted schemata (root metaphor). This process of being initially dependent upon the patterns of thinking carried forward by the languaging process of the cultural group needs to be understood if educators are going to make the shift away from an approach to environmental education that reinforces many of the same root metaphors that underlie the industrial culture that is degrading the environment.

As the role of language in the process of primary socialization also occurs in graduate classes, its cultural reproductive characteristics need to be constantly kept in mind--especially since what is reproduced are often the misconceptions of the past. There are a number of root metaphors that became the dominant basis of thinking of scientists, technologists, and the capitalists that promoted the industrial revolution and the consumer dependent society as we know it today. When we list the most dominant root metaphors we can see how they function as a symbolic ecology: that is, an ecology of assumptions that interact to support each other. Taken together, they represent a world view or totalizing way of thinking. These include the root metaphors of mechanism, individualism, anthropocentrism, economism, progressive nature of change, evolution, and ethnocentrism. Patriarchy was also one of the root metaphors that has only recently been challenged: that is, made explicit in ways that have led to changes in overcoming the prejudices that limited women's potential as scientists, artists, and other fields traditionally dominated by men.

The following example of how the root metaphor influences thinking over hundreds of years, across a wide range of cultural activities, and continues to be the conceptual bases of highly esteemed scientists and technologists today can be seen by tracing the history of the root metaphor of mechanism. In challenging the cultural assumptions that dominated the Middle Ages where knowledge was a combination of faith, miracles, and folk knowledge framed by a mixture of Christian theology and Aristotelian dogma, Johannes Kepler (1571-1630) anticipated the thinking of Isaac Newton and others when he summed up the way of thinking that became the root metaphor that still underlies the thinking today in a wide area of the sciences, agriculture, medicine, politics, and education. As Kepler put it, "My aim is to show that the celestial

machine is to be likened not to a divine organism but to a clockwork.” That is, the new model (schema) required that whatever exists, even organic and political processes, must be understood in terms of what can be observed, subjected to experimentation, and measurement. Examples that reflect how leading scientists still reproduce Kepler’s machine metaphor can be seen in how E. O. Wilson refers to the brain as a problem in engineering, in Richard Dawkins’ reference to the human body as a “survival machine,” and in environmental education software programs such as Sim Earth where the earth is represented as a complex machine that requires re-engineering through experimentation and measurement. And in a cell biology class today, a student will learn that the basic components of a plant cell include a recycling center, a solar station, a powerhouse, production centers, and storage sacs.

Thinking of plants, brains, ecosystems, and so forth, as possessing parts that can be measured, taken apart and put together in new ways that increase their efficiency and predictability involves a short term and highly reductionists perspective. That is, these activities need to be understood within a larger conceptual framework. This is where the root metaphor of progress, which reinforces the root metaphor of mechanism, serves to divert attention from the real issues. The way of interpreting change as inherently progressive, particularly change based on scientific evidence and rationally-based procedures, made it possible for scientists to introduce thousands of chemicals into the environment on the taken-for-granted assumption that their discoveries were expressions of progress. The use of computers to collect and share information on people’s personal habits, as well as making it possible to outsource jobs to the low wage areas of the world, is also understood as an expression of progress. And this is where the mechanistic root metaphor provides a way of thinking that enables progress to be measured and thus to be objectively demonstrated. As pointed out earlier, the root metaphor of progress provides an interpretative framework that enables people in a variety of cultural activities, from designing gas inefficient SUVs to genetically altering the ability of plants to reproduce themselves—thus forcing farmers to purchase new seed each year, to ignore the unanticipated consequences. In effect, all forms of change become interpreted as the expression of progress; thus making it unnecessary to ask what is being lost that is essential to the viability of the cultural and environmental commons.

Other root metaphors that have the effect of reducing people's ability to consider their impact on the self-sufficiency of the cultural commons include anthropocentrism (a key element in the interpretative framework that represents a human-centered world) and science, which is increasingly being claimed to be the only legitimate source of knowledge. Important scientists, such as E. O. Wilson and the late Carl Sagan are leading exponents of this view of science; but as few students in the sciences are encouraged to consider the limits of scientific knowledge and thus to be able to recognize when they are straying into the scientism, there is the constant danger of scientists using their well-earned reputations in a specialized field of science to making pronouncements that have political implications.

The root metaphor of individualism, which influences thinking and values ranging across a wide range of cultural practices and institutions, not only strengthens the seeming legitimacy of the form of consciousness that is buttressed by the above root metaphors, but it has other consequences that contribute directly to deepening the ecological crisis. The modern image of the individual as autonomous when directed by rational thought (the myth that does not take account of how earlier forms of cultural intelligence carried forward by the metaphorical nature of language that the individual uses to think within), has a number of consequences that directly influence the prospects of world's diverse cultural commons. First, the root metaphor of individualism marginalizes the importance of culture, and thus the traditions that are re-enacted on a daily basis. The taken-for-granted way of looking at and acting on the external world from an individualistic perspective also makes it difficult to be aware of interdependencies within the cultural and environmental commons. And in not being aware of these interdependencies, the question of which tradition of ideas, values, daily practices contribute to strengthening community relationships and which contribute to their enclosure is unlikely to be considered.

There is another consequence that is widely ignored because of the root metaphor of individualism. Just as thinking of oneself as an independent observer and actor on an external world of other people and nature, rather than recognizing oneself as part of a larger cultural ecology that is nested in the ecology of plants, animals, weather systems, and so forth, the root metaphor (taken-for-granted interpretative framework) contributes

to the ethnocentrism that is such a prominent characteristic of how most mainstream Americans think. This ethnocentrism is especially prominent in the thinking of politicians as well as the promoters of the industrial culture that is enclosing the cultural and environmental commons at home and in other parts of the world. Ethnocentrism is promoted at all levels of our educational institutions—with the major exceptions being what is learned in such areas as anthropology, cultural linguistics, and comparative religious studies. We shall return to the connections between ethnocentrism and the ideology that drives economic globalization in a later chapter. But for now it must be understood as part of symbolic foundations of mainstream American culture that is caught in the double bind of promoting a form of industrial-based progress that is a major contributor to the destruction of the life-sustaining characteristics of the natural environment.

Returning to the main theme of this chapter: As there are few universities where the education of future environmental educators addresses the misconceptions discussed above, there is a greater likelihood that environmental education will reproduce the double binds of reinforcing the deep cultural assumptions (taken-for-granted interpretative frameworks) that were constituted before there was an awareness of environmental limits while at the same time leaving students with the idea that their environmental restoration efforts are reversing the rate of environmental degradation. A strong case can be made that the continued separation of environmental education from the rest of the public school and university curriculum furthers this likelihood. Leaving the responsibility for environmental education in the hands of teachers and professors educated (even well educated) in the sciences further ensures that the background knowledge of cultural assumptions, and thus patterns of taken-for-granted thinking, that are contributing the rapid rate of enclosure of the world's diverse cultural and environmental commons will be ignored.

Rather than making the symbolic systems that we know as culture a sub-field of science, as E.O. Wilson proposes in Consilience: The Unity of Knowledge (1998), as Carl Sagan proposes in The Demon-Haunted World: Science as a Candle in the Dark (1997), and as Francis Crick proposes in The Astonishing Hypothesis: The Scientific Search for the Soul (1994), we now need to understand how the symbolic underpinnings

of different cultures influence their way of understanding the interdependencies between the cultural and environmental commons. And this will require not only teachers and professors taking responsibility of expanding on current approaches to environmental education in ways that transform it into commons education. This, in turn, will require a radical shift in the underlying cultural assumptions that are now responsible for the ways in which a university education contributes to the expansion of the industrial-consumer dependent culture that now must undergo a major transformation if we are to have a sustainable future. To reiterate a key point: commons education cannot be based on the cultural assumptions that were and continue to be the basis of the industrial, consumer culture that is further degrading the sustaining capacity of the cultural and environmental commons. This point cannot be restated too many times!

Chapter 3 Integrating Environmental Education into Commons Education

The problem with a narrow view of environmental education, even one that encourages students to investigate the connections between how political decision-making at the community level affects changes in the viability of local habitats and that lead to solutions to such problems as municipal solid waste and air pollution, is that the dominant cultural ways of thinking discussed in the previous chapters remain unaddressed. Students in an environmental education class may learn how to monitor the local recycling program and the changes in the quality of local streams, and to map the green spaces in the community. At the same time they will be exposed to the cultural messages communicated through various media, to the super-sized houses that are being built in their community and the super-sized SUVs that crowd their roads. They will also have reinforced in a variety of ways the idea that personal success, along with achieving a higher social status and the secular promise of happiness are achieved by living a consumer dependent lifestyle

In spite of their good intentions, few environmental educators will have the conceptual background necessary for helping students to understand fundamental changes now taking place in American society. The hyper-consumerism that is having such an adverse impact on the natural systems, which is not studied in most environmental education classes, can be seen in the fact that the average of personal credit card debt is in the neighborhood of seven to eight thousand dollars, that lifetime employment is fast becoming a thing of the past as corporations shift more of their operations to low-wage regions of the world, and that what remains of the cultural and environmental commons are being rapidly incorporated into the industrial system—thus transforming what previously was freely available to members of the community into commodities and services that must be purchased. In addition, the increasing loss of traditional governmental and corporate safety nets for the retired and the unemployed, along with the increasing cost of living associated with overshooting the availability of natural resources such as water and petroleum, are just a few of the problems that have their roots in the mismatch between the sustaining capacity of natural systems and the deep cultural assumptions that the well-intentioned environmental education teachers are unable to address. In effect, these cultural trends now require a more expanded approach to learning about the prospects of the cultural and natural environment.

Many environmental educators are limited, by virtue of their own education, to dealing with the symptoms and are unable to help students understand the multiple ways that the patterns of thinking and values that came into existence before there was an awareness of environmental limits are no longer ecologically viable. The taken-for-granted status of the patterns of thinking discussed in the previous chapter continue to limit most environmental education to making short-term attempts to reverse the ecological damage that will only increase in

the future. The ability to think about the environment in more inclusive ways, which include recognizing the sustainable and unsustainable cultural beliefs and practices—including their historical roots, is simply beyond the capacity of most environmental educators—and environmentally-oriented scientists at the university level. As mentioned earlier, the word environment is a metaphor that is too often associated with the plants, animals, oceans, streams, forests, weather patterns, and so forth. That the metaphor could be expanded to include both natural systems as well as cultural beliefs and practices is seemingly too steep of a conceptual hill for most Americans, including educators, to climb.

When the analogs that are the basis of a conventional understanding of what a word means cannot be easily changed, then the next strategy is to change the metaphor—that is, to identify a different word (metaphor) that is more inclusive. As suggested in the earlier chapters, the use of “cultural and environmental commons” are the words that bring into focus relationships, processes, and possibilities in ways that the word “environment” fails to do. And as we begin to understand just how complex these relationships, processes, and possibilities are we can then begin to see how the curriculum at both the public school and university levels can be changed in ways that move beyond critical analysis and short-term efforts to reverse environmental damage to helping students recognize the community-centered possibilities that represent alternatives to a consumer-dependent lifestyle that is now driving more people into poverty and that is overwhelming the self-renewing capacity of natural systems. The task here is to obtain a more in depth-understanding of what is meant by the cultural commons, including how the forces of modern industrial culture are enclosing both the cultural and environmental commons. With this understanding, it will then be easier to recognize the nature of the educational reforms that will enable students to understand how revitalizing the cultural commons represents an alternative to the further globalization of the industrial culture that continues to create the illusion of progress and plenitude while forcing more people into a state of poverty and hopelessness.

As it is easy to think of the commons in such general terms that what the metaphor refers to loses its potential explanatory power, I would like to provide again a general definition—which will then serve as a basis for identifying the many examples of the cultural commons, as well as the many ways in which the process of enclosure is occurring. The commons, even when the word is used in an inclusive way that includes both the cultural and environmental commons, refers to what is shared by members of the local community largely outside the framework of a money economy. As mentioned before, different cultures may have developed traditions that limit who has free access and use of different aspects of the cultural and environmental commons. And this aspect of the commons—that is, who has the free use and who is restricted—should be an important part of the curriculum. Helping students understand that the prejudices and narratives the legitimate the privileged status of

some individuals and groups are also part of the commons of some cultures will help them to avoid romanticizing the commons. This is the area of inquiry that can most effectively be addressed by classroom teachers and professors who possess a non-science background. For now, it is important to specify some of the general characteristics of the commons.

The key characteristics of the cultural and environmental commons, beyond their being shared by the members of the community, include the practice of local decision making which in many cultures takes the form of local democracy. This approach to the politics of the local cultural and environmental commons requires a strong sense of accountability—which is to the other members of the community. In addition, there is the accountability that comes from having to live with the disruptive effects of actions that degrade the natural commons. Unlike when decisions are made within the factory that is located upstream from the community, where the consequences of having to drink the contaminated water are not shared by the people who made the decision to release the toxic industrial waste into the river, people who rely upon the environmental commons for food, water, and other materials have to live with the consequences of their actions. Who makes the decisions about the use of the cultural and environmental commons, and who has to live with the consequences, become especially important to understanding the fundamental changes that result from the enclosure of the commons.

To summarize the key characteristics: what constitutes the cultural and environmental commons will vary from culture to culture and from bioregion to bioregion. Secondly, the cultural and environmental commons are, for the most part, not privately owned. Equally important is that access is not dependent upon a monetized relationship. Although in modern cultures, where there are few aspects of the cultural commons that at some point do not require the use of materials, technologies, products, skills that have been purchased, the important overriding point is that the examples of the cultural commons that will shortly be given reduce the dependency upon what has to be purchased while, at the same time, placing greater emphasis on the development of personal skills, interdependent relationships, and the non-monetized aspects of experience.

The enclosure of the cultural and environmental commons occurs when privatization takes place—which may be the result of a social status system, and an ideology that makes private ownership a public virtue. Enclosure may also involve the transformation of what previously was produced by hand or the outcome of some form of creative activity into a manufactured commodity or product that has to be purchased. The monetizing and privatizing of the cultural commons also may be influenced by a credentialing system that limits who has the right to practice certain skills and to provide expert advice to others—for a fee. The current extension of the patent system represents an example of how an ideology, in this case market liberalism, can further undermine the commons by extending private ownership and the logic of the market to include what individuals write and

create. Legally, if another person wants to use what now falls under patent law, such as taking a picture of another person's art or quoting their writing, they may be forced to pay a fee. In the West, the trend is for enclosure to take the form of private ownership by individuals or corporations where they are not accountable to the members of the community that are affected by their decisions. This trend is also being extended to the patenting of indigenous knowledge of the medicinal characteristics and other uses of local ecosystems.

Enclosure may take other forms that go largely unrecognized by the members of the community until it is too late to resist, such as how different technologies degrade or limit access to what was freely available as part of the taken-for-granted nature of everyday life. It may take the form of certain words and ways of thinking disappearing under the pressure of words and ways of thinking that are considered to be more current and fashionable. For example, the influence of computer mediated thinking and communicating has led to the loss of certain words such as wisdom and knowledge—which have been replaced by data and information (which have entirely different meanings). The increasing widespread idea that individuals own ideas and artistic creations, even what appears on the Internet, has contributed further to marginalizing the language (words and concepts) that was necessary to talking and thinking about the commons. New technologies, which are given legitimacy by the myth of progress, have led to enclosing a wide range of practices, forms of knowledge, and relationships that were previously part of the cultural commons. For example, mentoring relationships and other face-to-face ways of sharing of knowledge and skills are being increasingly replaced by the information presented in the printed word appearing on the computer screen or modeled on videos and DVDs. Ideologies also have different impacts on which aspects of a culture's commons will be transformed into a niche market or lost entirely as a result of developments in other cultures where new technologies are being developed. But the main distinguishing feature is that the cultural and environmental commons are largely free of monetized forms of dependency while what has been enclosed, particularly in the West and cultures that have taken the Western approach to development, involve dependency upon a money economy—and thus access to paid work (which is rapidly disappearing under the pressure of automation, outsourcing, and downsizing).

The distinction between the commons and the process of enclosure needs to be understood in ways that reflect commons sense—rather than as conceptual abstractions that present clear distinctions that are divorced from everyday realities.. That is, certain modern forms of the environmental commons include national parks, forests and range land controlled by the federal and state governments, municipal water systems, and public highways. In most cases, access to these commons is freely available to the public, and are monetized to the extent that revenues have to be raised for maintenance of the service. The current efforts by market liberal members of Congress to allow individuals and corporations to purchase public lands represents the process of

enclosure, and stands in marked contrast to the environmental commons that are controlled by governmental bodies that are still responsive, even if slowly, to public opinion. Just as in other relationships and activities within the cultural commons, such as a mentoring relationship and relying upon the healing characteristics of medicinal plants, there may be a limited involvement in the money economy; but it is not the main characteristic. The forms of enclosure that will be the focus here are driven by the desire to make a profit, to expand markets, and to create more dependency upon what is manufactured or presented as a service of an expert. The forms of enclosure to be discussed here share another characteristic: namely, a focus on the individual as a consumer—which carries with it a disregard for how the intergenerational knowledge and mutual support systems that sustain the community are being undermined. To make this point in another way, the market-driven forms of enclosure, where profits are the primary concern, are based on a mind-set that views all traditions of community self-sufficiency and local democracy as obstacles that must be overturned. In effect, the authority that the World Trade Organization has for overturning any restrictions passed at the state or federal level that would restrict the activities of corporations is an example of this.

The metaphor of the commons is important for a number of reasons that go beyond the obvious reference to what is shared in common. One of the most important is that it has a built in critique of what threatens the basis of community—namely, the process of enclosure, with its emphasis on privatization and profits. But there is another characteristic of the cultural and environmental commons that makes protecting the cultural and environmental commons from the profit-driven forms of enclosure extremely difficult. For example, if the language necessary for identifying and understanding the community strengthening relationships has been marginalized, and even represented as reactionary by self-identified “progressives” who identify either with market-liberalism or with the social justice liberals who also share many of the cultural assumptions that lead to promoting the further expansion of the industrial, consumer-dependent culture, it then becomes extremely difficult to introduce the marginalized or missing vocabulary into the curriculum of the public schools and universities. The current misuse of our two most prominent political metaphors, “liberalism” and “conservatism”, further complicates any attempt to identify in terms of educational reform what needs to be conserved in this era of ecological limits and the further spread of poverty.

Educational reforms that attempt to make the cultural and environmental commons a central focus of the public school and university curricula (which is another way of making the issue of living in a sustainable relationships with the environment a central focus) face a particularly difficult challenge. The difficulty is partly related to not having the vocabulary and theory frameworks necessary for making explicit the long-term implications of revitalizing the cultural and environmental commons. It is also related to the largely taken-for-

granted way in which people participate in the patterns and traditions of the cultural commons. In sharing a meal prepared by grandparents or in being engaged in a conversation with members of the community, important knowledge is passed from generation to generation that contributes to self-sufficiency and mutual reliance. It may take the form of learning whether the length of the local growing season is adequate for planting a particular variety of tomato, the rules and moral norms that govern participation in a game of chess, how wood from a particular tree will resist pests and how it should be attached to a building in a way that reduces the damaging effects of rain, where to site a new house in order to be protected from the summer heat, and so forth. As these forms of knowledge are passed along as part of conversations that may in themselves be a source of pleasure and intellectual stimulation, they may become lost under the pressure of enclosure that requires a different form of learning, behaviors, and social relationships. For example, when I purchased a prefabricated set of cabinets for my garage, I had to read the instruction, and to purchase several new tools in order to assemble the unit. The social relationships were limited to interacting with the clerk at the local hardware store. On the other hand if I had taken the time to build it myself, I might have had to ask my neighbor about whether using a mortis and tenon was the best approach to constructing the drawers. And this conversation that would have strengthened our social bonds—and the sense that he could come to me about solving a problem that he might have. In this example, which could be multiplied many times over, new behaviors and expectations involved learning to become dependent upon what the market system makes available (and requires) rather than developing the skills and mutual support systems within the community that reduce the need to participate in a money economy.

The special challenge facing educational reformers is how to introduce the students to the background concepts and vocabulary that will enable them to make explicit the patterns of the cultural and environment commons that are not recognized because of their taken-for-granted status, and that do not have the high-status visibility that results from media advertising. There is also the special challenge that goes beyond that of helping the students to recognize the non-monetized relationships and activities that are part of their daily experience; and that is to become aware of what is being lost when different aspects of the cultural commons they experience at a taken-for-granted level become enclosed. The many ways in which the daily cycle of work and consumerism promotes a high-pressure and fast-paced lifestyle too often leads to viewing the new consumer product as yet another example of how the market adds to the conveniences of everyday life. Thus, the packaged and chemically engineered breakfast cereal and the industrial prepared lunch that the child takes to school, as well as the iPod and the video games that are promoted as a constant source of entertainment, are seen as conveniences and increasingly as necessities—and thus as yet another expression of technological and market-driven progress. Seldom recognized are the relationships, development of personal skills, and the formation of an identity and

sense of self-worth that comes from participating in an intergenerationally connected community that are being lost as a result of basing more of daily experience on has to be purchased,

In effect, one of the most challenging tasks that educators at all levels face is in encouraging students to recognize how the enclosure of what remains of the cultural and environmental commons they still unconsciously rely upon is driving them into a double bind where both the increasing failures of the market system and the loss of the knowledge and skills that accompanies the further enclosure of the commons will create forms of dependency that can no longer be met—which then leads to increased levels of poverty and helplessness. The poor diets, sedentary lifestyle, and increased reliance upon drugs, are now creating a double bind as people are losing their health benefits and are facing greater unemployment due to changes in the global economy. Both the poor diet as well the lack of awareness of physical activities might have been avoided if the person had participated in the different activities that strengthen the mutual support systems of the cultural commons. A consumer-dependent existence reinforces a more solitary form of existence, where the television too often becomes the main source of social life outside of the work environment and the encounters with the sales clerk. And this solitary existence reduces the opportunity to learn how to use the collective knowledge of the community in growing vegetables and in preparing healthy meals, in learning about the activities in the community that would be a source of physical exercise—such as helping others who need house repairs, participating in community gardening projects, in helping to restore degraded habitats, in taking walks with others, in participating in local arts programs, and so forth.

Education that contributes both to a sustainable cultural and environmental commons involves going against the grain in how most students have been conditioned to think, and in terms of the multiple cultural messages that constantly reinforce living a lifestyle that is degrading the life-supporting characteristics of natural systems. The double bind can be seen in how many people already living in poverty continue to rely upon expensive industrial prepared food rather than utilizing the less expensive and more nutritious basic ingredients. The passing on of intergenerational knowledge of recipes that rely upon the use of fresh vegetables from the garden or from the community garden, as well as inexpensive sources of protein, may have been a casualty of an intergenerational condition of poverty and racism. But this lack of knowledge of how to rely upon the combination of local sources of food and the intergenerational knowledge that developed prior to the mass commercialization of food is yet another expression of enclosure.

In order to avoid the misconception that any discussion of the commons represents an example of romantic thinking about the need to return to a pre-industrial past, it is necessary to identify contemporary examples of how different forms of enclosure undermines relationships, skills, and intergenerational knowledge

that are still part of life in the world's diverse communities. The focus here will be on clarifying how the process of enclosure (monetizing and privatizing) undermines the mutual support and self-sufficiency of individuals—and thus of the community. The main qualification that needs to be kept in mind is that these examples should not be generalized to all cultures. Differences in cultural ways of thinking and in status systems may lead to different forms of enclosure. At the same time, when the process of enclosure is a result of the expansion of the West's industrial/market system, such as is occurring when American corporations set up their factories in non-Western countries, the intergenerational knowledge of how to live less money-dependent lives is being lost. Young workers who are required to live in factory dorms and work 10 to 12 hours a day, six days a week, are largely cut-off from the intergenerational knowledge of their communities. A different form of enclosure can be seen in the displacement of the narratives that were the source of the environmental ethic and character/identity formation of Western Apache youth by the increased reliance on television and electronic games, as well as how the Mexican campesinos have been displaced from their traditional plots of land and from the intergenerational knowledge that was the basis of a subsistence life (forcing them into the poverty of an urban existence) by the adoption of economic policies dictated by NAFTA. Other forms of enclosure could be easily cited.

In terms of the commons in the urban and rural areas of North America, which vary widely in terms of geography and local culture, there are several examples that highlight how the process of enclosure has a ripple effect that spreads through community relationships and results in limiting the development of different individual competencies. The process of enclosure generally has more than one consequence in terms of loss—which means it seldom leads to creating a single form of dependency. Rather, its impact spreads through the community in multiple ways that often go unnoticed—partly because the widely held myth of progress leads to focusing on current and anticipated changes and partly because the accumulated effect of becoming less self-sufficient and thus more dependent upon a money economy does not really hit home until the credit cards have been maxed-out and bankruptcy has to be declared. But the focus here will be on clarifying the ripple effect that contributes to the dependency of the individual on further consumerism, and the loss of mutual support and interactions that are essential to the patterns of reciprocity within communities.

Perhaps the examples that will be most easily recognized within different cultures is what happens when the complex set of traditions that underlie the growing and preparation of local foods are replaced by becoming dependent upon the industrially prepared food found in supermarkets and fast-food restaurants. Meals prepared from locally grown vegetables and animals represent participating in a complex ecology of human and environmental relationships that does not exist when meals are prepared by low-paid workers on the assembly line in a McDonald's or the ingredients are purchased from a supermarket. As we consider three different possibilities

(and in reality there is often a mix of all three) we can see the degree of enclosure (that is the degree of dependence) connected with all three. The person that finds a fast food restaurant convenient in terms of saving time and eliminating potentially complicated social relationships trades money earned generally at a job that offers little opportunity for personal development for the equally sterile social experience of eating alone and watching others consume the same chemically altered food. What is being enclosed (and in this case limited in terms of development) can be seen when a comparison is made with the person whose meals are part of a complex set of interdependent social relations and which leads to meals that are nutritious and a source of enjoyment—perhaps even aesthetically interesting. The social relationships go well beyond the hurried clerk in the fast food restaurant to include interacting with the local farmers who are selling their produce at the market where friends and neighbors are likely to be encountered.

Other relations include the members of the family and friends that participate in interesting conversations while sharing the meal; and if not interesting conversations, it at least provides an opportunity for sharing the daily experiences with others. The recipes as well as the skill necessary for bringing all the elements of the meal to the table in their traditional order involves learning from the older members of the family or from friends who share what they learned from their own culinary mistakes. What are the right ingredients for a light pie crust, how long are different forms of rice to be left in a boiling state, what other foods and fruits complement a curry dish? What vegetables need to be included to ensure a healthy diet, and what combinations are good sources of protein? The knowledge necessary for a home-prepared meal continually expands as changes in the seasons occur and different combinations of food become available. And then there is the knowledge of where different wild fruits can be found as well as who grows the best cultivated varieties. What recipe works best for preserving cherries for the long winter months? Which farmers grow organic vegetables and chemically-free meat, and how does buying locally provide them with the financial support? When one is dependent upon on industrially prepared meals, there is no need to learn about any of the above—which then leads to being increasingly dependent upon chemically engineered foods that contribute to the excessive intake of salt and sugar, as well as the other chemicals that are intended to make the food look more inviting—and to extend its shelf-life.

There is another difference between what is becoming known as “slow food” movement and the industrially prepared meals which has to do with acquiring a different form of knowledge that leads to acting in a more ecologically responsible way. The fast food chains, as well as most of the foods purchased in the supermarkets, are part of a link in the industrial approach to agriculture that is dependent upon the use of pesticides and fertilizers that damage the soil, including the local aquifers and nearby streams. In effect, purchasing the canned fruit grown by giant agri-businesses in California, the strawberries flown in from Mexico during the winter

nonths, the breakfast cereals made from genetically altered corn, and the chickens that are processed by migrant workers that are subjected to dangerous working conditions, and so forth, involves a different form of responsibility. The acquiring, preparation, and sharing of food within the local, intergenerationally connected community builds trust and a personal sense of moral reciprocity by all the participants. By way of contrast, the consumer of industrially prepared and processed food does not (indeed is highly unlikely to) take responsibility for how it degrades the environment, and for how the laborers are exploited in terms of low wages and exposure to dangerous chemicals. And in reducing the human relationship to that of a consumer encountering a check-out clerk, the likelihood that the complex set of relationships and forms of interdependencies that enable the individual to meet the need for a healthy diet and stimulating social relationships will be further reduced. Its much less time consuming just to go to a fast food outlet or to the grocery store—which in turn leaves more time to watch television and to engage in the

The point that Robert Putnam argues in Making Democracy Work (1993) is that the face-to-face encounters with other members of the community that are dealing with different economic and social challenges, that have different ways of thinking, and that represent different lifestyles, are essential to a political process that takes the interests of a diverse community in account. What is seldom recognized is how the cultural commons is diminished when the production and sharing of food becomes reduced to monetized relationships. The increasing social isolation that comes with an increase in monetized relationships may be experienced by the individual as simply another characteristic of living in a modern society that seems to fit the other individually-centered experiences that accompany the use of computers, iPods, television, video games, and the chief mode of transportation: the ubiquitous car.

In considering other examples of how the increasing dependence upon the industrial-based production and consumerism impacts the cultural and environmental commons, we find similar patterns. And one of the more important ones that helps to justify expanding beyond the traditional approaches of environmental education in ways that takes account of the interdependencies between the cultural and environmental commons is the way in which the various forms of enclosure, and the increased dependence upon consumerism that results, is the way in which the sense of personal responsibility is radically diminished. In effect, dependence upon monetized relationships reduces the individual's sense of moral responsibility—transforming a sense of responsibility that takes account of the local producers in the community, as well as for the impact on the local natural systems, into an instrumental quest for what meets the individual's immediate need. In the purchasing of bottled water, the focus of responsibility is highly personal. Few of the progressive-minded individuals who seemingly are always in

possession of bottled water give any thought to where the water comes from, and to whether the corporation that produce it are exploiting (enclosing) the aquifer or stream from which it is taken.

Similarly, as the increased reliance upon computer mediated thought and communication becomes more widespread, there are fewer individuals who think of the impact of the technology upon the cultural commons—or of the impact on the environmental commons when the computer becomes obsolete and is discarded along with all the toxic materials that went into its manufacture. Again, responsibility for the cultural commons is largely reduced to the instrumental and subjectively determined needs of the individual. The enclosure of the airwaves by media corporations has led to similar state of individual indifference for how the airways have been taken over for commercial purposes. A strong case can be made that the role that the media corporations now play in the enclosure of the cultural commons contributes to the widespread acceptance on the part of the general public that making a profit is what is important. How this impacts the mutual support systems of the cultural and environmental commons is too often not even considered. At the same time the business bias of most media outlets makes it possible for a large segment of the population to restrict their reading and viewing to those media outlets that reinforce their ideological orientation—which is focused primarily on governmental policies that promote the further expansion of markets at the expense of both the cultural and environmental commons. We shall later consider how the market-liberal and fundamentalist Christian inspired ideologies have an adverse impact on the cultural and environmental commons. For now it is important to highlight several other examples of enclosure that have largely gone unnoticed by educators at all levels, as well as by the general public.

The study reported sometime ago about the ability of youth to identify the logos of many corporations while being unable to identify the names of local plants brings out yet another aspect of enclosure that has resulted from the increasingly dominant role that the industrial, consumer-oriented culture plays in shaping relationships and ways of thinking in society. The logos are part of the visual language system that corporations, and the media that promotes their interests, use to promote what they want to become the taken-for-granted way of thinking and communicating. In addition to the logos, corporations and the market-liberal ideology they promote reinforce the deeper cultural assumptions that were discussed earlier: the idea that a state of constant change represents a linear form of progress (thus eliminating the need to think about the importance of what aspects of the cultural and environmental commons are being undermined); the idea that individuals are the basic social unit (thus that they have no responsibility to the larger commons but only to meeting their immediate interests); the idea that this is a human-centered world (thus reducing the environment to that of an exploitable resource); the idea that a market and technologically-based culture represents the highest stage of development (thus leading to the idea that this form of culture should be imposed, in the name of democracy, upon the world's other cultures).

What is important about this limited vocabulary, and the deep cultural assumptions that are the basis of the interpretative frameworks that provide the conceptual and moral coherence to the use of this vocabulary, is that it largely excludes for the majority of the American people the vocabulary that would enable them to be aware of the aspects of the cultural and environmental commons they still unconsciously depend upon. To make the point more directly, the language and the deep cultural assumptions that support the cultural forces that are further enclosing the commons also marginalize the vocabulary and concepts that are necessary for articulating why the commons are vital to the present and future prospects of humanity—and to sustaining the natural systems we depend upon. To cite examples mentioned earlier, in order to think about the importance of what is being lost as more aspects of daily life are integrated in the a market system it is important to have a complex understanding of the nature of traditions, to have a more explicit awareness of the traditions and ways of thinking that contribute to a more interdependent community, and to be able to recognize how the different forms of intergenerational knowledge and mutual support systems provide alternatives to being dependent upon a monetized approaches to meeting daily needs. The vocabulary and concepts that are missing in the media, in what is learned in our educational institutions, and in everyday conversations include such words and phrases as the “commons,” “ecojustice” “intergenerational knowledge,” “moral reciprocity,” “community self-sufficiency,” “responsibility for future generations,” “conserving the moral and institutional foundations of local democracy,” “diversity of the world’s cultural and environmental commons”.

Ironically, the vocabulary that serves the interests of the industrial culture that can only expand as a specific form of individual subjectivity is formed by the media and educational institutions is the vocabulary of both market and social-justice liberalism. This vocabulary includes “progressive,” “emancipation” “individualism” “democracy” (which is to be based on the Western form of individualism), “critical reflection” (which is to lead to change), “overcoming oppression” (which is assumed to be both intergenerational knowledge as well as forms of social injustice), and, more recently, and “globalization.” The market-liberals think of globalization in terms of integrating all of the world’s culture into the Western model of economic development, while the social justice liberals think of globalization as transforming the world’s cultures in ways that fit their understanding of a progressive, individually-centered, change-oriented, and equal-opportunity centered lifestyle that they are striving to attain in the West. Equal opportunity is understood by most social justice liberals as occurring in employment, as consumers, and as participating in the political process—all of which are largely controlled by the market-liberals that are bent on expanding economic opportunities by further enclosing what remains of the commons.

The increasing dominance of a consumer-dependent lifestyle for those Americans that have not already fallen into poverty, along with the failure of the educational institutions to help students understand the importance of the cultural and environmental commons to living less money-dependent lifestyles, have resulted in reducing resistance to the further monetization and privatization of both the cultural and environmental commons. The enclosure of the language that supports the renewal of the cultural commons, of the privacy that has been enclosed by the use of the computer by corporations and the different levels of government, of the airways by media corporations, of the expressive arts and craft knowledge by automation and the selling of super stars, of healing practices by the health care industry (including the pharmaceutical companies that create images of diseases in order market their new drugs), are now accepted by the majority of the public as the latest expression of progress. The other aspect of acceptance is that silence has displaced most substantive expressions of resistance—that is, resistance that is based on an understanding that local democracy, informed about the mutual support systems and intergenerational alternatives to a money-dependent existence, is necessary to strengthening the local economy—which may become more oriented toward barter relationships, including the exchange of services and skills. The point that has been demonstrated by the members of the middle class that, in becoming disenchanted with the pressures of the work-intensive consumer lifestyle, have dropped out in order to pursue what is referred to as voluntary simplicity is that involvement in mutual support activities with the community not only improves the quality of life but demonstrates that people can lead less money-dependent lives.

As I have raised the question of why there is so little resistance to the enclosure of the cultural and environmental commons (the loss of privacy, the monetization of health care and entertainment, the displacement of skill by automation and outsourcing, the industrialization of our food supply, and forth) it is also necessary to ask why there has been so little resistance to the market-liberal policies of President George W. Bush's administration, and to the increasing influence that such international organizations as the World Trade Organization have over local, state, and national policy decisions. In asking this question it is necessary to keep in mind that the current lower level of public support for President George W. Bush does not necessarily mean there is less support for his market liberal domestic and foreign policies. The WTO is the most powerful organization bent on overturning local barriers to the further expansion of the market system—and to destroying what remains of the cultural and environmental commons. A corporation can take its complaint that local and federal laws that are designed to protect local interests that range from protecting the environment to protecting the health of the people, and which the corporation views as restricting their right to set up operations and make a profit, to the decision-making body of the WTO. And the decision, which generally reflects the market-liberal idea that there should be no barriers to the expansion of the free-enterprise system and thus to the further enclosure of the

commons, may involve such huge penalties that the corporation either is allowed to go ahead or that it receives as compensation the profits it claims it would have made. Aside from a small group of environmentalists and people concerned with the anti-democratic and community –destructive implications of this world-governing body, the general public (including educators at all levels) has remained passive. Their silence about this fundamental transfer of economic and political power to the WTO, which represents the interests of transnational corporations and such special interest groups as the International Chamber of Commerce Association, is yet another instance of the public’s failure to protect the commons that they and future generations depend upon.

Given the increasing rate of destruction of the cultural and environmental commons in America, even as members of local communities find personal meaning and mutual support in keeping alive a wide range of the traditions of the cultural commons, the question that arises is: “How can public school teachers and university professors help to halt the further enclosure of the cultural and environmental commons by what is learned in the classroom?” To ask the question in a way that brings the traditional idea of environmental education back into the discussion: “How can the formal educational process help students to recognize how the revitalization of the taken-for-granted nature of the cultural commons that are further threatened by market forces are vital to the strengthening the self-renewing capacity of the natural systems that were the traditional focus of environmental education classes?” More specifically, “What reforms are needed at both the public school and university level that will contribute to the communicative competence that is needed to conserve the cultural and environmental commons.” We shall now turn to the task of explaining how it can be done in spite of the historical and ideological forces that are working against it.

Chapter 3 Integrating Environmental Education into Commons Education

The problem with a narrow view of environmental education, even one that encourages students to investigate the connections between how political decision-making at the community level affects changes in the viability of local habitats and that lead to solutions to such problems as municipal solid waste and air pollution, is that the dominant cultural ways of thinking discussed in the previous chapters remain unaddressed. Students in an environmental education class may learn how to monitor the local recycling program and the changes in the quality of local streams, and to map the green spaces in the community. At the same time they will be exposed to the cultural messages communicated through various media, to the super-sized houses that are being built in their community and the super-sized SUVs that crowd their roads. They will also have reinforced in a variety of ways the idea that personal success, along with achieving a higher social status and the secular promise of happiness are achieved by living a consumer dependent lifestyle

In spite of their good intentions, few environmental educators will have the conceptual background necessary for helping students to understand fundamental changes now taking place in American society. The hyper-consumerism that is having such an adverse impact on the natural systems, which is not studied in most environmental education classes, can be seen in the fact that the average of personal credit card debt is in the neighborhood of seven to eight thousand dollars, that lifetime employment is fast becoming a thing of the past as corporations shift more of their operations to low-wage regions of the world, and that what remains of the cultural and environmental commons are being rapidly incorporated into the industrial system—thus transforming what previously was freely available to members of the community into commodities and services that must be purchased. In addition, the increasing loss of traditional governmental and corporate safety nets for the retired and the unemployed, along with the increasing cost of living associated with overshooting the availability of natural resources such as water and petroleum, are just a few of the problems that have their roots in the mismatch between the sustaining capacity of natural systems and the deep cultural assumptions that the well-intentioned environmental education teachers are unable to address. In effect, these cultural trends now require a more expanded approach to learning about the prospects of the cultural and natural environment.

Many environmental educators are limited, by virtue of their own education, to dealing with the symptoms and are unable to help students understand the multiple ways that the patterns of thinking and values that came into existence before there was an awareness of environmental limits are no longer ecologically viable. The taken-for-granted status of the patterns of thinking discussed in the previous chapter continue to limit most environmental education to making short-term attempts to reverse the ecological damage that will only increase in

the future. The ability to think about the environment in more inclusive ways, which include recognizing the sustainable and unsustainable cultural beliefs and practices—including their historical roots, is simply beyond the capacity of most environmental educators—and environmentally-oriented scientists at the university level. As mentioned earlier, the word environment is a metaphor that is too often associated with the plants, animals, oceans, streams, forests, weather patterns, and so forth. That the metaphor could be expanded to include both natural systems as well as cultural beliefs and practices is seemingly too steep of a conceptual hill for most Americans, including educators, to climb.

When the analogs that are the basis of a conventional understanding of what a word means cannot be easily changed, then the next strategy is to change the metaphor—that is, to identify a different word (metaphor) that is more inclusive. As suggested in the earlier chapters, the use of “cultural and environmental commons” are the words that bring into focus relationships, processes, and possibilities in ways that the word “environment” fails to do. And as we begin to understand just how complex these relationships, processes, and possibilities are we can then begin to see how the curriculum at both the public school and university levels can be changed in ways that move beyond critical analysis and short-term efforts to reverse environmental damage to helping students recognize the community-centered possibilities that represent alternatives to a consumer-dependent lifestyle that is now driving more people into poverty and that is overwhelming the self-renewing capacity of natural systems. The task here is to obtain a more in depth-understanding of what is meant by the cultural commons, including how the forces of modern industrial culture are enclosing both the cultural and environmental commons. With this understanding, it will then be easier to recognize the nature of the educational reforms that will enable students to understand how revitalizing the cultural commons represents an alternative to the further globalization of the industrial culture that continues to create the illusion of progress and plenitude while forcing more people into a state of poverty and hopelessness.

As it is easy to think of the commons in such general terms that what the metaphor refers to loses its potential explanatory power, I would like to provide again a general definition—which will then serve as a basis for identifying the many examples of the cultural commons, as well as the many ways in which the process of enclosure is occurring. The commons, even when the word is used in an inclusive way that includes both the cultural and environmental commons, refers to what is shared by members of the local community largely outside the framework of a money economy. As mentioned before, different cultures may have developed traditions that limit who has free access and use of different aspects of the cultural and environmental commons. And this aspect of the commons—that is, who has the free use and who is restricted—should be an important part of the curriculum. Helping students understand that the prejudices and narratives the legitimate the privileged status of

some individuals and groups are also part of the commons of some cultures will help them to avoid romanticizing the commons. This is the area of inquiry that can most effectively be addressed by classroom teachers and professors who possess a non-science background. For now, it is important to specify some of the general characteristics of the commons.

The key characteristics of the cultural and environmental commons, beyond their being shared by the members of the community, include the practice of local decision making which in many cultures takes the form of local democracy. This approach to the politics of the local cultural and environmental commons requires a strong sense of accountability—which is to the other members of the community. In addition, there is the accountability that comes from having to live with the disruptive effects of actions that degrade the natural commons. Unlike when decisions are made within the factory that is located upstream from the community, where the consequences of having to drink the contaminated water are not shared by the people who made the decision to release the toxic industrial waste into the river, people who rely upon the environmental commons for food, water, and other materials have to live with the consequences of their actions. Who makes the decisions about the use of the cultural and environmental commons, and who has to live with the consequences, become especially important to understanding the fundamental changes that result from the enclosure of the commons.

To summarize the key characteristics: what constitutes the cultural and environmental commons will vary from culture to culture and from bioregion to bioregion. Secondly, the cultural and environmental commons are, for the most part, not privately owned. Equally important is that access is not dependent upon a monetized relationship. Although in modern cultures, where there are few aspects of the cultural commons that at some point do not require the use of materials, technologies, products, skills that have been purchased, the important overriding point is that the examples of the cultural commons that will shortly be given reduce the dependency upon what has to be purchased while, at the same time, placing greater emphasis on the development of personal skills, interdependent relationships, and the non-monetized aspects of experience.

The enclosure of the cultural and environmental commons occurs when privatization takes place—which may be the result of a social status system, and an ideology that makes private ownership a public virtue. Enclosure may also involve the transformation of what previously was produced by hand or the outcome of some form of creative activity into a manufactured commodity or product that has to be purchased. The monetizing and privatizing of the cultural commons also may be influenced by a credentialing system that limits who has the right to practice certain skills and to provide expert advice to others—for a fee. The current extension of the patent system represents an example of how an ideology, in this case market liberalism, can further undermine the commons by extending private ownership and the logic of the market to include what individuals write and

create. Legally, if another person wants to use what now falls under patent law, such as taking a picture of another person's art or quoting their writing, they may be forced to pay a fee. In the West, the trend is for enclosure to take the form of private ownership by individuals or corporations where they are not accountable to the members of the community that are affected by their decisions. This trend is also being extended to the patenting of indigenous knowledge of the medicinal characteristics and other uses of local ecosystems.

Enclosure may take other forms that go largely unrecognized by the members of the community until it is too late to resist, such as how different technologies degrade or limit access to what was freely available as part of the taken-for-granted nature of everyday life. It may take the form of certain words and ways of thinking disappearing under the pressure of words and ways of thinking that are considered to be more current and fashionable. For example, the influence of computer mediated thinking and communicating has led to the loss of certain words such as wisdom and knowledge—which have been replaced by data and information (which have entirely different meanings). The increasing widespread idea that individuals own ideas and artistic creations, even what appears on the Internet, has contributed further to marginalizing the language (words and concepts) that was necessary to talking and thinking about the commons. New technologies, which are given legitimacy by the myth of progress, have led to enclosing a wide range of practices, forms of knowledge, and relationships that were previously part of the cultural commons. For example, mentoring relationships and other face-to-face ways of sharing of knowledge and skills are being increasingly replaced by the information presented in the printed word appearing on the computer screen or modeled on videos and DVDs. Ideologies also have different impacts on which aspects of a culture's commons will be transformed into a niche market or lost entirely as a result of developments in other cultures where new technologies are being developed. But the main distinguishing feature is that the cultural and environmental commons are largely free of monetized forms of dependency while what has been enclosed, particularly in the West and cultures that have taken the Western approach to development, involve dependency upon a money economy—and thus access to paid work (which is rapidly disappearing under the pressure of automation, outsourcing, and downsizing).

The distinction between the commons and the process of enclosure needs to be understood in ways that reflect commons sense—rather than as conceptual abstractions that present clear distinctions that are divorced from everyday realities.. That is, certain modern forms of the environmental commons include national parks, forests and range land controlled by the federal and state governments, municipal water systems, and public highways. In most cases, access to these commons is freely available to the public, and are monetized to the extent that revenues have to be raised for maintenance of the service. The current efforts by market liberal members of Congress to allow individuals and corporations to purchase public lands represents the process of

enclosure, and stands in marked contrast to the environmental commons that are controlled by governmental bodies that are still responsive, even if slowly, to public opinion. Just as in other relationships and activities within the cultural commons, such as a mentoring relationship and relying upon the healing characteristics of medicinal plants, there may be a limited involvement in the money economy; but it is not the main characteristic. The forms of enclosure that will be the focus here are driven by the desire to make a profit, to expand markets, and to create more dependency upon what is manufactured or presented as a service of an expert. The forms of enclosure to be discussed here share another characteristic: namely, a focus on the individual as a consumer—which carries with it a disregard for how the intergenerational knowledge and mutual support systems that sustain the community are being undermined. To make this point in another way, the market-driven forms of enclosure, where profits are the primary concern, are based on a mind-set that views all traditions of community self-sufficiency and local democracy as obstacles that must be overturned. In effect, the authority that the World Trade Organization has for overturning any restrictions passed at the state or federal level that would restrict the activities of corporations is an example of this.

The metaphor of the commons is important for a number of reasons that go beyond the obvious reference to what is shared in common. One of the most important is that it has a built in critique of what threatens the basis of community—namely, the process of enclosure, with its emphasis on privatization and profits. But there is another characteristic of the cultural and environmental commons that makes protecting the cultural and environmental commons from the profit-driven forms of enclosure extremely difficult. For example, if the language necessary for identifying and understanding the community strengthening relationships has been marginalized, and even represented as reactionary by self-identified “progressives” who identify either with market-liberalism or with the social justice liberals who also share many of the cultural assumptions that lead to promoting the further expansion of the industrial, consumer-dependent culture, it then becomes extremely difficult to introduce the marginalized or missing vocabulary into the curriculum of the public schools and universities. The current misuse of our two most prominent political metaphors, “liberalism” and “conservatism”, further complicates any attempt to identify in terms of educational reform what needs to be conserved in this era of ecological limits and the further spread of poverty.

Educational reforms that attempt to make the cultural and environmental commons a central focus of the public school and university curricula (which is another way of making the issue of living in a sustainable relationships with the environment a central focus) face a particularly difficult challenge. The difficulty is partly related to not having the vocabulary and theory frameworks necessary for making explicit the long-term implications of revitalizing the cultural and environmental commons. It is also related to the largely taken-for-

granted way in which people participate in the patterns and traditions of the cultural commons. In sharing a meal prepared by grandparents or in being engaged in a conversation with members of the community, important knowledge is passed from generation to generation that contributes to self-sufficiency and mutual reliance. It may take the form of learning whether the length of the local growing season is adequate for planting a particular variety of tomato, the rules and moral norms that govern participation in a game of chess, how wood from a particular tree will resist pests and how it should be attached to a building in a way that reduces the damaging effects of rain, where to site a new house in order to be protected from the summer heat, and so forth. As these forms of knowledge are passed along as part of conversations that may in themselves be a source of pleasure and intellectual stimulation, they may become lost under the pressure of enclosure that requires a different form of learning, behaviors, and social relationships. For example, when I purchased a prefabricated set of cabinets for my garage, I had to read the instruction, and to purchase several new tools in order to assemble the unit. The social relationships were limited to interacting with the clerk at the local hardware store. On the other hand if I had taken the time to build it myself, I might have had to ask my neighbor about whether using a mortis and tenon was the best approach to constructing the drawers. And this conversation that would have strengthened our social bonds—and the sense that he could come to me about solving a problem that he might have. In this example, which could be multiplied many times over, new behaviors and expectations involved learning to become dependent upon what the market system makes available (and requires) rather than developing the skills and mutual support systems within the community that reduce the need to participate in a money economy.

The special challenge facing educational reformers is how to introduce the students to the background concepts and vocabulary that will enable them to make explicit the patterns of the cultural and environment commons that are not recognized because of their taken-for-granted status, and that do not have the high-status visibility that results from media advertising. There is also the special challenge that goes beyond that of helping the students to recognize the non-monetized relationships and activities that are part of their daily experience; and that is to become aware of what is being lost when different aspects of the cultural commons they experience at a taken-for-granted level become enclosed. The many ways in which the daily cycle of work and consumerism promotes a high-pressure and fast-paced lifestyle too often leads to viewing the new consumer product as yet another example of how the market adds to the conveniences of everyday life. Thus, the packaged and chemically engineered breakfast cereal and the industrial prepared lunch that the child takes to school, as well as the iPod and the video games that are promoted as a constant source of entertainment, are seen as conveniences and increasingly as necessities—and thus as yet another expression of technological and market-driven progress. Seldom recognized are the relationships, development of personal skills, and the formation of an identity and

sense of self-worth that comes from participating in an intergenerationally connected community that are being lost as a result of basing more of daily experience on has to be purchased,

In effect, one of the most challenging tasks that educators at all levels face is in encouraging students to recognize how the enclosure of what remains of the cultural and environmental commons they still unconsciously rely upon is driving them into a double bind where both the increasing failures of the market system and the loss of the knowledge and skills that accompanies the further enclosure of the commons will create forms of dependency that can no longer be met—which then leads to increased levels of poverty and helplessness. The poor diets, sedentary lifestyle, and increased reliance upon drugs, are now creating a double bind as people are losing their health benefits and are facing greater unemployment due to changes in the global economy. Both the poor diet as well the lack of awareness of physical activities might have been avoided if the person had participated in the different activities that strengthen the mutual support systems of the cultural commons. A consumer-dependent existence reinforces a more solitary form of existence, where the television too often becomes the main source of social life outside of the work environment and the encounters with the sales clerk. And this solitary existence reduces the opportunity to learn how to use the collective knowledge of the community in growing vegetables and in preparing healthy meals, in learning about the activities in the community that would be a source of physical exercise—such as helping others who need house repairs, participating in community gardening projects, in helping to restore degraded habitats, in taking walks with others, in participating in local arts programs, and so forth.

Education that contributes both to a sustainable cultural and environmental commons involves going against the grain in how most students have been conditioned to think, and in terms of the multiple cultural messages that constantly reinforce living a lifestyle that is degrading the life-supporting characteristics of natural systems. The double bind can be seen in how many people already living in poverty continue to rely upon expensive industrial prepared food rather than utilizing the less expensive and more nutritious basic ingredients. The passing on of intergenerational knowledge of recipes that rely upon the use of fresh vegetables from the garden or from the community garden, as well as inexpensive sources of protein, may have been a casualty of an intergenerational condition of poverty and racism. But this lack of knowledge of how to rely upon the combination of local sources of food and the intergenerational knowledge that developed prior to the mass commercialization of food is yet another expression of enclosure.

In order to avoid the misconception that any discussion of the commons represents an example of romantic thinking about the need to return to a pre-industrial past, it is necessary to identify contemporary examples of how different forms of enclosure undermines relationships, skills, and intergenerational knowledge

that are still part of life in the world's diverse communities. The focus here will be on clarifying how the process of enclosure (monetizing and privatizing) undermines the mutual support and self-sufficiency of individuals—and thus of the community. The main qualification that needs to be kept in mind is that these examples should not be generalized to all cultures. Differences in cultural ways of thinking and in status systems may lead to different forms of enclosure. At the same time, when the process of enclosure is a result of the expansion of the West's industrial/market system, such as is occurring when American corporations set up their factories in non-Western countries, the intergenerational knowledge of how to live less money-dependent lives is being lost. Young workers who are required to live in factory dorms and work 10 to 12 hours a day, six days a week, are largely cut-off from the intergenerational knowledge of their communities. A different form of enclosure can be seen in the displacement of the narratives that were the source of the environmental ethic and character/identity formation of Western Apache youth by the increased reliance on television and electronic games, as well as how the Mexican campesinos have been displaced from their traditional plots of land and from the intergenerational knowledge that was the basis of a subsistence life (forcing them into the poverty of an urban existence) by the adoption of economic policies dictated by NAFTA. Other forms of enclosure could be easily cited.

In terms of the commons in the urban and rural areas of North America, which vary widely in terms of geography and local culture, there are several examples that highlight how the process of enclosure has a ripple effect that spreads through community relationships and results in limiting the development of different individual competencies. The process of enclosure generally has more than one consequence in terms of loss—which means it seldom leads to creating a single form of dependency. Rather, its impact spreads through the community in multiple ways that often go unnoticed—partly because the widely held myth of progress leads to focusing on current and anticipated changes and partly because the accumulated effect of becoming less self-sufficient and thus more dependent upon a money economy does not really hit home until the credit cards have been maxed-out and bankruptcy has to be declared. But the focus here will be on clarifying the ripple effect that contributes to the dependency of the individual on further consumerism, and the loss of mutual support and interactions that are essential to the patterns of reciprocity within communities.

Perhaps the examples that will be most easily recognized within different cultures is what happens when the complex set of traditions that underlie the growing and preparation of local foods are replaced by becoming dependent upon the industrially prepared food found in supermarkets and fast-food restaurants. Meals prepared from locally grown vegetables and animals represent participating in a complex ecology of human and environmental relationships that does not exist when meals are prepared by low-paid workers on the assembly line in a McDonald's or the ingredients are purchased from a supermarket. As we consider three different possibilities

(and in reality there is often a mix of all three) we can see the degree of enclosure (that is the degree of dependence) connected with all three. The person that finds a fast food restaurant convenient in terms of saving time and eliminating potentially complicated social relationships trades money earned generally at a job that offers little opportunity for personal development for the equally sterile social experience of eating alone and watching others consume the same chemically altered food. What is being enclosed (and in this case limited in terms of development) can be seen when a comparison is made with the person whose meals are part of a complex set of interdependent social relations and which leads to meals that are nutritious and a source of enjoyment—perhaps even aesthetically interesting. The social relationships go well beyond the hurried clerk in the fast food restaurant to include interacting with the local farmers who are selling their produce at the market where friends and neighbors are likely to be encountered.

Other relations include the members of the family and friends that participate in interesting conversations while sharing the meal; and if not interesting conversations, it at least provides an opportunity for sharing the daily experiences with others. The recipes as well as the skill necessary for bringing all the elements of the meal to the table in their traditional order involves learning from the older members of the family or from friends who share what they learned from their own culinary mistakes. What are the right ingredients for a light pie crust, how long are different forms of rice to be left in a boiling state, what other foods and fruits complement a curry dish? What vegetables need to be included to ensure a healthy diet, and what combinations are good sources of protein? The knowledge necessary for a home-prepared meal continually expands as changes in the seasons occur and different combinations of food become available. And then there is the knowledge of where different wild fruits can be found as well as who grows the best cultivated varieties. What recipe works best for preserving cherries for the long winter months? Which farmers grow organic vegetables and chemically-free meat, and how does buying locally provide them with the financial support? When one is dependent upon on industrially prepared meals, there is no need to learn about any of the above—which then leads to being increasingly dependent upon chemically engineered foods that contribute to the excessive intake of salt and sugar, as well as the other chemicals that are intended to make the food look more inviting—and to extend its shelf-life.

There is another difference between what is becoming known as “slow food” movement and the industrially prepared meals which has to do with acquiring a different form of knowledge that leads to acting in a more ecologically responsible way. The fast food chains, as well as most of the foods purchased in the supermarkets, are part of a link in the industrial approach to agriculture that is dependent upon the use of pesticides and fertilizers that damage the soil, including the local aquifers and nearby streams. In effect, purchasing the canned fruit grown by giant agri-businesses in California, the strawberries flown in from Mexico during the winter

nonths, the breakfast cereals made from genetically altered corn, and the chickens that are processed by migrant workers that are subjected to dangerous working conditions, and so forth, involves a different form of responsibility. The acquiring, preparation, and sharing of food within the local, intergenerationally connected community builds trust and a personal sense of moral reciprocity by all the participants. By way of contrast, the consumer of industrially prepared and processed food does not (indeed is highly unlikely to) take responsibility for how it degrades the environment, and for how the laborers are exploited in terms of low wages and exposure to dangerous chemicals. And in reducing the human relationship to that of a consumer encountering a check-out clerk, the likelihood that the complex set of relationships and forms of interdependencies that enable the individual to meet the need for a healthy diet and stimulating social relationships will be further reduced. Its much less time consuming just to go to a fast food outlet or to the grocery store—which in turn leaves more time to watch television and to engage in the

The point that Robert Putnam argues in Making Democracy Work (1993) is that the face-to-face encounters with other members of the community that are dealing with different economic and social challenges, that have different ways of thinking, and that represent different lifestyles, are essential to a political process that takes the interests of a diverse community in account. What is seldom recognized is how the cultural commons is diminished when the production and sharing of food becomes reduced to monetized relationships. The increasing social isolation that comes with an increase in monetized relationships may be experienced by the individual as simply another characteristic of living in a modern society that seems to fit the other individually-centered experiences that accompany the use of computers, iPods, television, video games, and the chief mode of transportation: the ubiquitous car.

In considering other examples of how the increasing dependence upon the industrial-based production and consumerism impacts the cultural and environmental commons, we find similar patterns. And one of the more important ones that helps to justify expanding beyond the traditional approaches of environmental education in ways that takes account of the interdependencies between the cultural and environmental commons is the way in which the various forms of enclosure, and the increased dependence upon consumerism that results, is the way in which the sense of personal responsibility is radically diminished. In effect, dependence upon monetized relationships reduces the individual's sense of moral responsibility—transforming a sense of responsibility that takes account of the local producers in the community, as well as for the impact on the local natural systems, into an instrumental quest for what meets the individual's immediate need. In the purchasing of bottled water, the focus of responsibility is highly personal. Few of the progressive-minded individuals who seemingly are always in

possession of bottled water give any thought to where the water comes from, and to whether the corporation that produce it are exploiting (enclosing) the aquifer or stream from which it is taken.

Similarly, as the increased reliance upon computer mediated thought and communication becomes more widespread, there are fewer individuals who think of the impact of the technology upon the cultural commons—or of the impact on the environmental commons when the computer becomes obsolete and is discarded along with all the toxic materials that went into its manufacture. Again, responsibility for the cultural commons is largely reduced to the instrumental and subjectively determined needs of the individual. The enclosure of the airwaves by media corporations has led to similar state of individual indifference for how the airways have been taken over for commercial purposes. A strong case can be made that the role that the media corporations now play in the enclosure of the cultural commons contributes to the widespread acceptance on the part of the general public that making a profit is what is important. How this impacts the mutual support systems of the cultural and environmental commons is too often not even considered. At the same time the business bias of most media outlets makes it possible for a large segment of the population to restrict their reading and viewing to those media outlets that reinforce their ideological orientation—which is focused primarily on governmental policies that promote the further expansion of markets at the expense of both the cultural and environmental commons. We shall later consider how the market-liberal and fundamentalist Christian inspired ideologies have an adverse impact on the cultural and environmental commons. For now it is important to highlight several other examples of enclosure that have largely gone unnoticed by educators at all levels, as well as by the general public.

The study reported sometime ago about the ability of youth to identify the logos of many corporations while being unable to identify the names of local plants brings out yet another aspect of enclosure that has resulted from the increasingly dominant role that the industrial, consumer-oriented culture plays in shaping relationships and ways of thinking in society. The logos are part of the visual language system that corporations, and the media that promotes their interests, use to promote what they want to become the taken-for-granted way of thinking and communicating. In addition to the logos, corporations and the market-liberal ideology they promote reinforce the deeper cultural assumptions that were discussed earlier: the idea that a state of constant change represents a linear form of progress (thus eliminating the need to think about the importance of what aspects of the cultural and environmental commons are being undermined); the idea that individuals are the basic social unit (thus that they have no responsible to the larger commons but only to meeting their immediate interests); the idea that this is a human-centered world (thus reducing the environment to that of an exploitable resource); the idea that a market and technologically-based culture represents the highest stage of development (thus leading to the idea that this form of culture should be imposed, in the name of democracy, upon the world's other cultures).

What is important about this limited vocabulary, and the deep cultural assumptions that are the basis of the interpretative frameworks that provide the conceptual and moral coherence to the use of this vocabulary, is that it largely excludes for the majority of the American people the vocabulary that would enable them to be aware of the aspects of the cultural and environmental commons they still unconsciously depend upon. To make the point more directly, the language and the deep cultural assumptions that support the cultural forces that are further enclosing the commons also marginalize the vocabulary and concepts that are necessary for articulating why the commons are vital to the present and future prospects of humanity—and to sustaining the natural systems we depend upon. To cite examples mentioned earlier, in order to think about the importance of what is being lost as more aspects of daily life are integrated in the a market system it is important to have a complex understanding of the nature of traditions, to have a more explicit awareness of the traditions and ways of thinking that contribute to a more interdependent community, and to be able to recognize how the different forms of intergenerational knowledge and mutual support systems provide alternatives to being dependent upon a monetized approaches to meeting daily needs. The vocabulary and concepts that are missing in the media, in what is learned in our educational institutions, and in everyday conversations include such words and phrases as the “commons,” “ecojustice” “intergenerational knowledge,” “moral reciprocity,” “community self-sufficiency,” “responsibility for future generations,” “conserving the moral and institutional foundations of local democracy,” “diversity of the world’s cultural and environmental commons”.

Ironically, the vocabulary that serves the interests of the industrial culture that can only expand as a specific form of individual subjectivity is formed by the media and educational institutions is the vocabulary of both market and social-justice liberalism. This vocabulary includes “progressive,” “emancipation” “individualism” “democracy” (which is to be based on the Western form of individualism), “critical reflection” (which is to lead to change), “overcoming oppression” (which is assumed to be both intergenerational knowledge as well as forms of social injustice), and, more recently, and “globalization.” The market-liberals think of globalization in terms of integrating all of the world’s culture into the Western model of economic development, while the social justice liberals think of globalization as transforming the world’s cultures in ways that fit their understanding of a progressive, individually-centered, change-oriented, and equal-opportunity centered lifestyle that they are striving to attain in the West. Equal opportunity is understood by most social justice liberals as occurring in employment, as consumers, and as participating in the political process—all of which are largely controlled by the market-liberals that are bent on expanding economic opportunities by further enclosing what remains of the commons.

The increasing dominance of a consumer-dependent lifestyle for those Americans that have not already fallen into poverty, along with the failure of the educational institutions to help students understand the importance of the cultural and environmental commons to living less money-dependent lifestyles, have resulted in reducing resistance to the further monetization and privatization of both the cultural and environmental commons. The enclosure of the language that supports the renewal of the cultural commons, of the privacy that has been enclosed by the use of the computer by corporations and the different levels of government, of the airways by media corporations, of the expressive arts and craft knowledge by automation and the selling of super stars, of healing practices by the health care industry (including the pharmaceutical companies that create images of diseases in order market their new drugs), are now accepted by the majority of the public as the latest expression of progress. The other aspect of acceptance is that silence has displaced most substantive expressions of resistance—that is, resistance that is based on an understanding that local democracy, informed about the mutual support systems and intergenerational alternatives to a money-dependent existence, is necessary to strengthening the local economy—which may become more oriented toward barter relationships, including the exchange of services and skills. The point that has been demonstrated by the members of the middle class that, in becoming disenchanted with the pressures of the work-intensive consumer lifestyle, have dropped out in order to pursue what is referred to as voluntary simplicity is that involvement in mutual support activities with the community not only improves the quality of life but demonstrates that people can lead less money-dependent lives.

As I have raised the question of why there is so little resistance to the enclosure of the cultural and environmental commons (the loss of privacy, the monetization of health care and entertainment, the displacement of skill by automation and outsourcing, the industrialization of our food supply, and forth) it is also necessary to ask why there has been so little resistance to the market-liberal policies of President George W. Bush's administration, and to the increasing influence that such international organizations as the World Trade Organization have over local, state, and national policy decisions. In asking this question it is necessary to keep in mind that the current lower level of public support for President George W. Bush does not necessarily mean there is less support for his market liberal domestic and foreign policies. The WTO is the most powerful organization bent on overturning local barriers to the further expansion of the market system—and to destroying what remains of the cultural and environmental commons. A corporation can take its complaint that local and federal laws that are designed to protect local interests that range from protecting the environment to protecting the health of the people, and which the corporation views as restricting their right to set up operations and make a profit, to the decision-making body of the WTO. And the decision, which generally reflects the market-liberal idea that there should be no barriers to the expansion of the free-enterprise system and thus to the further enclosure of the

commons, may involve such huge penalties that the corporation either is allowed to go ahead or that it receives as compensation the profits it claims it would have made. Aside from a small group of environmentalists and people concerned with the anti-democratic and community –destructive implications of this world-governing body, the general public (including educators at all levels) has remained passive. Their silence about this fundamental transfer of economic and political power to the WTO, which represents the interests of transnational corporations and such special interest groups as the International Chamber of Commerce Association, is yet another instance of the public’s failure to protect the commons that they and future generations depend upon.

Given the increasing rate of destruction of the cultural and environmental commons in America, even as members of local communities find personal meaning and mutual support in keeping alive a wide range of the traditions of the cultural commons, the question that arises is: “How can public school teachers and university professors help to halt the further enclosure of the cultural and environmental commons by what is learned in the classroom?” To ask the question in a way that brings the traditional idea of environmental education back into the discussion: “How can the formal educational process help students to recognize how the revitalization of the taken-for-granted nature of the cultural commons that are further threatened by market forces are vital to the strengthening the self-renewing capacity of the natural systems that were the traditional focus of environmental education classes?” More specifically, “What reforms are needed at both the public school and university level that will contribute to the communicative competence that is needed to conserve the cultural and environmental commons.” We shall now turn to the task of explaining how it can be done in spite of the historical and ideological forces that are working against it.

Chapter 5 The Classroom Practice of Commons Education

Just as helping students to recognize that their ecologically problematic cultural assumptions should be part of classroom discussions, learning about the cultural and environmental commons should also be an integral part of every area of the curriculum. Little would be gained in terms of educational reforms intended to help reverse the cultural trend-line of degrading the self-renewing capacity of natural systems if learning about the cultural and environmental commons is treated as a separate subject, along with history, English, biology, and so on. By integrating different aspects of the cultural and environmental commons into other subject areas, and by keeping in focus the different ways in which the commons are the basis of a less money-dependent and a less environmentally destructive lifestyle, subjects that many students now find irrelevant will have greater personal meaning—and will even be understood as sources of empowerment. Keeping in focus the many ways in which both the cultural and environmental commons are being enclosed, that is, brought into the industrial system of production and consumption, will also help students recognize that their silence or focus only on personal self-interest may have political implications that will contribute later to a life of poverty. If this sounds too alarmist, consider how few people were aware of the political decisions that led to the outsourcing of local jobs or the local impact of automation.

Before identifying the aspects of the cultural and environmental commons that need to be given special attention, several points need to be reiterated. The first is that learning about the cultural and environmental commons is, unlike many areas of the curriculum, based on making explicit the actual cultural activities and patterns, as well as the environmental conditions that are part of the students' too often unexamined experience. That is, learning about the cultural and environmental commons is not about an ideologically-driven representation of a new form of society, such as Dewey's vision of societies around the world adopting the scientific method of problem solving as their one-true approach to knowledge. Nor is it based on the culturally uninformed romantic idea that all forms of social injustice will become a thing of the past if students are allowed to construct their own knowledge of the world, as well as the values they will base their lives upon. The cultural and environmental commons that should be the focus of learning, including being subjected to critical reflection about what needs to be changed and what needs to be intergenerationally renewed, are part of

people's everyday experiences. It also needs to be recognized that the nature of the commons will differ from cultural to culture, and from bioregion to bioregion. Given this focus on actual cultural practices and environmental conditions, which goes against the grain of high-status forms of knowledge where the emphasis is too often on context-free generalizations and abstract (that is, print-based) representations, classroom teachers and university professors need to be especially mindful about allowing their own ethnocentrism from getting in the way of recognizing differences in cultural and environmental contexts. This more phenomenological approach should also result in giving careful attention to the dangers inherent in universal prescriptions.

The other point that needs to be kept in mind is that the modern forms of enclosure are increasingly dependent upon creating a rootless form of individual subjectivity where memory and a long-term perspective are overwhelmed by the steady stream of consumer fads. While many youth are now filling evangelical and fundamentalist Christian churches that combine the emotional release of a rock concert with the ontological certainties that come from declaring Jesus as their personal savior, their rootlessness has simply taken on a different form of expression. That is, this subjective search for identity and instant gratification further marginalizes the collective memory of the history of struggle for social justice and a democratic society. In place of memory of the social justice achievements that must be carried forward and further expanded, the merging of consumer and religious fundamentalism orientates youth toward a future where all believers will be saved, regardless of whether they are good environmental citizens or not. In effect, the dominance of what the future holds, as well as the literalist interpretations of the Bible about the fate of those who have not declared Jesus as their personal savior, create special challenges for getting students to take seriously the historical perspective that is necessary in order to understand the many traditions that enabled people to live less money dependent lives, and to recognize the degree to which the self-renewing capacity of natural systems are being undermined.

There are still aspects of the cultural and environmental commons that continue to survive because the industrial, consumer-oriented culture has not been entirely successful in overwhelming the still ethnically-rooted cultures that exist on the fringes of the dominant culture. And it has not been entirely successful in replacing the need of some youth and adults to develop their own interests and talents in more intergenerationally-

centered activities. But the efforts of the promoters of a consumer-based lifestyle continue to be unrelenting. Nearly every activity—from playing cards, dancing, cooking, sex, gardening, reading, house repair, hiking, bird watching, conversations, physical exercise, education, to healing nearly all manner of psychological and physical problems, have been turned into exploitable markets—with the latest being the placing of television style advertising on the screens of cell phones. An even more egregious example of the total lack of moral limits of what can be exploited as a new market is the example of a corporation named Team Baby Entertainment which develops DVDs that highlight college athletic teams. The market for these DVDs is the pre-school population, and the hook is that in addition to being exposed to the culture of university football the children are encouraged to count and spell. The company lists 20 DVDs, with “Baby Irish” (University of Notre Dame) and “Baby Longhorn” (University of Texas) being among the top sellers. These and thousands of similar examples of turning every aspect of the cultural and environmental commons, and every age group, into an exploitable market indicate just how dominant market liberalism has become—and just how difficult it will be to put the country on a more sustainable pathway.

Yet there are signs of hope. While market liberal politicians and corporations big and small continue their assault on what remains of the cultural and environmental commons, a minority of youth and adults continue to find meaning as well as the development of personal talents in face-to-face relationships—with mentors in the arts, healing practices, gardening, environmental restoration projects, and so forth. Another positive sign is the growing interest among some members of the middle class in cutting back or dropping out entirely from their previously chosen career path that held out the promise of life at the upper level of the consumer pyramid in order to live a less hurried and less externally controlled lifestyles is. This small trend of adopting a life of voluntary simplicity is now being strengthened by what can be called the lifestyle of involuntary simplicity as automation, outsourcing of jobs (even for white-collar workers), and corporate decision makers abandon what remains of older notions of a social contract that provided for retirement benefits in exchange for a life of work and loyalty to the corporation in order to achieve greater profits.

The cycle of working in order to consume is now beginning to be replaced by a new cycle where growing unemployment and the loss of retirement and health benefits will lead to less consumerism. Even though market-liberals and fundamentalist Christians are promoting the idea that poverty reflects personal weaknesses, along with the re-emergence of the social Darwinian idea that the poorly adapted genes of individuals as well as the memes of businesses, will lead to their extinction, there is still the existential question of how to sustain daily existence when the sources of money begin to fail. The dominant ideologies, in effect, can no longer be relied upon to use the instruments of government to distribute wealth in a more socially just manner, nor can it be seen as safeguarding local communities from the destructive impact of international corporations that exploit the local environmental commons and the basis of local economies. Without a knowledge of the nature of the local cultural and environmental commons, and thus of how to re-orient daily life toward what is a more sustainable existence, people faced with a life of involuntary simplicity will spend more hours in front of the television, playing computer games, and experiencing various forms of depression—which will continue to pour money into the coffers of the medical and pharmaceutical industries. Involuntary simplicity, in effect, is a life of poverty that goes beyond the lack of the material basis of existence.

The challenge is whether public schools and universities can be reformed in ways that address what people should know in order to move from thinking of wealth in terms of money to thinking of wealth in terms of mutually supportive relationships, and in participating in the various aspects of the commons that lead to the development of personal talents. In effect, the question is whether educational reforms can reduce the human impact on the self-renewing capacity of natural systems, as well as enable people to live a post-industrial existence. As the majority of educators at all levels of formal education, as well as most environmentalists, still take-for-granted many of the same deep cultural assumptions that still underlie the efforts of market liberals to enclose what remains of the commons, the challenge is especially daunting. I still hold out the hope that as the scientific evidence that further documents the loss of species, the rate of global warming, the consequences that are resulting from the chemical changes in the world's oceans, this segment of society will begin to recognize how it is complicit in deepening the environmental crises, as well as in globalizing the Western model of development.

The following represent possibilities for curriculum reform that will provide students the language for making explicit the various expressions of the cultural and environmental commons that still exist in their communities—as well as the knowledge of why the diversity of the world’s cultural and environmental commons needs to be sustained. In effect, the following curriculum proposals address what needs to be learned in a post-industrial world—one in which the market and its underlying technologies are viewed as supporting the commons rather than as further enclosing them. An example of how modern technologies can support the cultural commons without further degrading the environmental commons is the introduction of solar powered LED lamps that are replacing kerosene lamps in rural India. The micro-banks that support local producers and markets, as well as a wide range of energy efficient technologies, represent other examples that point the way to understanding that post-industrial cultures will involve a shift from an emphasis on profits and the autonomous individual required by a market-oriented culture to cultures that are more intergenerationally connected and thus more aware of their responsibility for not undermining the mutual support systems that future generations will need to rely upon. The following discussion of curriculum reforms is also based on the recognition that fostering an understanding of cultural and natural systems as interdependent ecologies will not likely be taken on as a responsibility of churches, most families, businesses, or the media—which leaves formal education as the one possibility that might rise to the challenge, as it did after long delays in addressing the deep cultural assumption of a male dominated culture.

Themes and Issues in a Cultural Commons Curriculum

Many classroom teachers and university professors initially may have difficulty identifying the different expressions of the cultural commons that need to be brought to the attention of students. And in not being able to easily recognize the cultural commons they will have difficulty in engaging students in a discussion of the many forms of enclosure. Even the professors who have made the criticism of capitalism a central focus seem unable to recognize the commons as representing the on-the-ground alternatives. This initial lack of awareness and only marginal interest is likely to replicate how educators initially responded to the efforts of feminists who were critical of those aspects of the cultural commons that were based on cultural assumptions that privileged men over women. What we can learn from that centuries-long inability to recognize unjust taken-for-granted cultural patterns is that the process of

naming is the first step in transforming consciousness from a condition of existence based formulaic beliefs and practices to becoming explicitly aware—and to critical reflection. If classroom teachers and university professors take seriously the impact of our hyper-consumer culture on the viability of natural systems (and this is a big if), and if they recognize the current rate of dependence upon consumerism, the easiest way of identifying the cultural commons that are being targeted as new niche markets is to look at the number of magazines that are used to advertise how different commons activities can be upgraded through the purchase of new products.

The preparation of food, which varies from culture to culture, is represented in a variety of magazines as being elevated in social status on the basis of acquiring the latest appliances, cooking utensils, and following the most exotic recipes. Outdoor activities ranging from gardening, fishing, hiking, bird watching, camping, tennis, as well as other sports, are also the targeted markets of magazines that reinforce the message that purchasing the latest products will increase performance and communicate to others one's higher social status. Wood working, house repairs, quilt making, weaving, healing practices, and so on, also have their own magazines filled with advertisements. Even extremist groups are targeted by magazines that promote the latest in lethal weapons, camouflage gear, and hate literature. Indeed, it seems there is nothing in our culture that cannot be turned into a new market opportunity.

I am not suggesting that this is the only or even the best starting point for identifying the activities within the community that fit the definition of being part of the cultural commons. Even if this is not the starting point, it would still be useful at some point in introducing students to the nature of the local cultural commons to have them examine what is really being promoted in these special market magazines. The following is intended as a beginning list of the activities and interests that represent the cultural commons in different regions of the country. Because of the diversity of bioregions and ethnic cultures, it is impossible to provide a complete list of activities that are examples of the cultural commons. Even if the website were to contain such a list, it would still not be the best way to introduce the students to the possibilities of a less consumer existence. If the current educational problem of presenting students with abstract knowledge that appears to them as irrelevant to their lives is to be avoided, then the introduction to the local commons should not begin with an abstract list. Rather, the introduction should be based on a more ethnographic approach that

will bring the students into face-to-face relationships with the different mentors and other people engaged in cultural commons activities. This involves going out into the community, as well as bringing people into the classroom, with the purpose being to hear personal stories of how they discovered their interests, how they were dependent upon intergenerational knowledge shared by mentors, how their activities give them a sense of community, and how they are dealing with the market forces that are attempting to enclose the intergenerational continuities by substituting consumer products for the development of personal skills and interests.

The key point is that the discussion of different groups as well as their activities that help to renew the cultural commons should not be based on reading textbooks or relying upon computer websites, as both have a limited usefulness. Learning from people who are participants, and who have a clear understanding about the differences between consumerism and community self-reliance, will help the students to think more deeply about what areas of the cultural commons are most relevant to their own talents, interests, and need for supportive relationships. This more ethnographic, face-to-face approach to learning can only take students so far in understanding the cultural forces that have contributed to the widespread ignorance of the commons, and that are promoting their further enclosure. Students also need to learn about how various groups beyond their local communities, both in the past and currently, have promoted in the name of progress and other higher values the enclosure of the world's diverse cultural and environmental commons. The students also need to confront the double bind that is inherent in the Western approach to progress where the further enclosure of the cultural and environmental commons is equated with achieving greater progress while this materialistic and money-dependent approach to progress contributes to the spread of poverty by undermining the local intergenerational knowledge, and to the destruction of the natural systems that the world's people depend upon.

Depending upon the students' maturity, the initial step in introducing them to the cultural commons is to provide a brief explanation of the difference between money-dependent activities and those that are less or entirely free of a monetized relationship. This basic difference needs to be connected with activities and relationships that are part of the students' daily experience. This initial vocabulary, where the words "commons" and "market" (that is, what has to be purchased or paid for), contains the fundamental tension that needs to be

explored further as the students move through the educational process. This limited vocabulary, in effect, provides the initial understanding of what separates the activities and relationships that strengthen the commons from the many ways in which the student is dependent upon the market—with some forms of dependency being valid while most others create artificial dependencies that limit the students' personal development and connectedness with community. In both commons and market-dependent relationships, there are key features of the students' experience that need to be made explicit. This can be achieved by providing the verbal space that will enable students to articulate the following: the form of meaning they experience in both commons and market-dominated activities and relationships, their feeling of dependency or development of personal skill and talents, and their awareness of how commons-based experiences differ from market-dominated experiences in terms of ecological impact. Indeed, students at all age levels should be encouraged to consider the ecological impact of their activities. This should become second nature, and thus begin to replace the cultural myth that humans can survive the destruction of the environment they depend upon.

For skeptics that doubt that young students can understand how language illuminates and hides the cultural patterns that need to be made explicit, they need to consider how many teachers in the early grades provided an equally limited yet powerful vocabulary for identifying the gender based relationships, activities, and social roles that had been ignored for hundreds of years. To reiterate a key point, it's at the later stages of the educational process that the cultural differences in the nature of the cultural commons can be introduced, as well as the economic, ideological, and scientific/technological forces that are enclosing the commons. It is vitally important that students understand the importance of how the intergenerational forms of knowledge strengthen the mutual support systems within the community, as well as have a smaller ecological footprint. Later, the more potentially controversial issues surrounding the economic, ideological, and technological developments can be introduced. Support of the more community-centered and environmentally committed members of the community needs to be gained before the forces that are enclosing the commons become part of the classroom discussion. What many educational reformers do not understand is that they need to establish that they are helping to conserve intergenerational traditions that strengthen community and that help to ensure the prospects of future generations. This will help to counter the faux

conservatives critics who are actually in the market-liberal tradition that is committed to expanding markets by further exploiting both the cultural and environmental commons. More later on this critical issue.

Here I would like to provide an initial list of activities and interdependent relationships that fit the definition of the cultural commons, as well as a brief description of how they are being enclosed—that is, how they are being integrated into a money-dependent economy. The list, which should be expanded or revised in terms of the local culture, might be especially useful for teachers who, having introduced students to the nature of racial and gender prejudice, take on the task of introducing students to the even more daunting challenge we now face in pursuing community-centered alternatives to an economic system that is ecologically unsustainable. Even though I am providing a list, it is intended only as a guide for how teachers, at various levels of the educational process, can begin with the ethnographic approach. The emphasis of this approach on the description of experiences that previously went largely unnamed and thus not thought about, and can later move to a the more theory-based examination of ideologies and economic practices—as well as examining why highly educated people continue to promote in the name of progress and freedom the practices that are degrading the environment.

Food

If teachers go to the website of Slow Food USA or the website of the Center for Ecoliteracy, they will find a number of helpful resources for introducing students to a deeper understanding of the issues that are already being contested in public schools across the country. That is, whether industrially prepared foods, which have already influenced most students' eating habits by the time they enter the first grades, should be allowed in the school. Depending upon the students' maturity and background knowledge, other issues need to become part of the discussion of the various cultural traditions in the students' community connected with the growing, preparation, and sharing of food—including how these traditions differ from the more individualized experience of eating at an industrialized fast-food outlet. The Slow Food website is especially useful in terms of providing the larger cultural context for discussing the difference between intergenerational and industrial approaches to the growing, preparation and sharing of food—as well as how industrial approaches are enclosing this important part of the cultural commons.

The larger cultural context includes differences in how the characteristics of the bioregion in which the student's community is situated have influenced what have become the traditional foods of a cultural group—including their knowledge of where and in which season the sources of food could be grown or found. The earlier generations' methods of preservation as well as knowledge of how to prepare food in ways that reduced risks to health and to ensure a balanced diet also need to be compared with the industrial, chemically dependent, and now genetically engineered approaches to agriculture. Learning about different cultural contexts will also bring out other related aspects of the cultural commons, such as the ceremonies connected with the planting and harvest, as well as the narratives that carry forward family and community memories of mistakes in exploiting or acting out of ignorance of natural systems. Narratives still passed along within the students' community, which among many cultures were often sources of wisdom of how to live in ecological balance, also need to be discussed. The absence of these narratives within the students' families and community represents an important entry point for a discussion of how industrialized approaches to food contribute to the enclosure of this aspect of the cultural commons—thus, adding further to the students' dependence upon a consumer relationship with food.

At a later stage in the students' education there needs to be a discussion of the history of the industrialization of food, including developments in technologies, scientific discoveries, marketing strategies, and the legitimating ideology that represents industrially prepared food as healthier than the culturally diverse approaches to food that had been refined over generations of living within the limits of the bioregion. This complex and diverse set of traditions is also part of the cultural commons that are now under threat by market-liberals that are attempting to globalize the industrial approach to what food should taste like, with its excessive reliance on salt, sugar, and other artificial chemicals that extend the shelf-life of foods. As the differences are examined between intergenerationally influenced and industrial approaches to food (probably at the high school and university level), students also need to consider how each approach relates to the issues of community self-reliance, how the monetizing of food contributes to the spread of poverty both here and abroad, and the impact on natural systems of transporting food over thousands of miles. An important point that needs to be considered is the role that science, technology, and ideology play in further enclosing the ethnic traditions of growing and preparing food, and how the genetic engineering of seeds is contributing to the

loss of diversity of native foods in different regions of the world. There is also the question of how industrial foods are contributing to health problems that did not exist when cultures relied on local sources of food. For example, in the 1930's the diet of the Tohono O'odham (who live on a reservation near Tucson) relied heavily upon the locally grown tepary bean, and no one in the tribe had heard of diabetes. As the members of the tribe became more dependent on processed food, diabetes became a major problem that now affects nearly fifty percent of the adult population. Obesity is now being discussed as a problem that arises in different parts of the world when young people increasingly rely upon fast food.

One of the activities that would help to ground the discussion of the differences between traditional and industrially processed foods would be to have students investigate the variety of foods relied upon by indigenous cultures that lived in the bioregion before they were displaced by Anglo and Euro-Americans settlers. This discussion needs to highlight how the variety of foods developed by indigenous cultures enriched the diet of the Europeans as well as the range of food that we now take-for-granted in America. Another activity would be to identify the variety of fruit trees that the settlers planted when they established their farms and planted their gardens—and to compare the varieties then with what exists today. Another activity would be to check out the list of 700 endangered American foods on the website of Renewing America's Food Traditions, and to investigate which of the foods on the list still exist in their bioregion. Relying more on individual and community gardens, as well as traditional sources of food that are raised by different ethnic groups, will become increasingly important as the post-industrial culture adapts to a less money-dependent and less environmentally destructive lifestyle.

Creative Arts

An individual who happened to sit in on my talk on how neoliberal politicians are undermining the cultural commons while at the same time privatizing poverty sent me an email that described how a group of local musicians represented an example of a commons approach to one of the arts—in this case playing traditional Irish music. As he explained, “people who wish to play Irish music can come to the jam session and play whatever notes they can. Hopefully, someone at the session will give them an occasional pointer. In a kind of musical gift economy, no money exchanges hands for instruction.” A survey of the other arts in the community can begin by identifying the mentors and groups that promote various forms of

artistic expression that are only minimally dependent upon the money economy. Who are the women and men in the community that have developed their talents as musicians, potters, weavers, dancers, actors, poets, painters, and sculptors? To what extent has their development depended upon being mentored—often in situations similar to the description of learning from others performing traditional Irish music? And how many local artists that have been mentored are willing to mentor others? What is the difference between paying a fee to mentors who are not totally independent of the money economy and purchasing a ticket to watch a play or another form of artistic performance? Young students can be introduced to this aspect of the cultural commons by inviting various artists to give demonstrations for the class, and also to talk about how they were attracted to being a potter, painter, actor, and so forth. It would also be useful to have the artist talk about what they think their contribution is to the community—as well as how being part of a community of artists is different from being an individual consumer of the arts. These early discussions, which may be very elementary and general, nevertheless provide students with what may be their first encounter with a different vocabulary than what they encounter through the media. And it is this different vocabulary that will enable them to be a more discriminating observers of the difference between the arts that represent personal talent and aesthetic judgment that strengthen community ties, and the arts that are used to promote products and to differentiate the social status between groups.

As the students progress to the point where they begin to grapple with how this aspect of the cultural commons differs from the arts that are now being used, along with sex, to promote consumerism, it would be useful for them to be encouraged to think about the difference between folk art (including what has been integrated into built environments and local festivals) and high-status art that is promoted through various media and by experts that make public judgments about the difference between significant and insignificant art. Again, if students are encouraged to connect their classroom discussions to what they have observed in their communities, distinctions will begin to emerge that will be important to them as individuals.

Still later in their learning about this aspect of the cultural commons, they should be introduced to the role that the arts play in indigenous, more ecologically-centered cultures. This would involve learning how ceremonies in many cultures involve the participation of the entire community—in the performance of the dance, music, dress, and so forth. For example, it

would be useful for students to consider the cultural importance of how these participatory arts give individuals an opportunity of self-expression, carry forward in highly symbolic form the collective memory of the community, as well as provide for an atmosphere of thanksgiving for nature's bounty (such as the rain dances of the Hopi, and the dances that celebrate the renewal of other members of the human/Nature community). Considering how other non-consumer oriented cultures use the arts to transform the everyday experiences in ways that connect the members of the community to a more intergenerationally connected symbolic world will provide a basis for thinking about what is being reinforced in the different artistic performances in the students' culture.

At the high school and university level, students should begin to think about the social messages that are implicit in films, television programs, video games. How do these hidden messages influence individual consciousness and thus expectations in daily life? Do they promote consumerism, the quest to be glamorous, the need to surround oneself with the consumer products that communicate success and the achievement of social status? How do the industrial uses of the arts contribute to the silences that lead so many adults to be unaware of the various arts that are part of the cultural commons—and do not require a huge income to participate in? There is also a need to begin thinking about how different ideologies influence what constitutes good art—as well as its social purpose. There is also a connection between how non-Western cultures use the arts as part of daily life, including their role in the local economy. An important question is what happens to these artists when their communities become increasingly dependent upon tourism in order to participate more fully in a money-dependent economy?

Ceremonies and Narratives

Ceremonies and narratives are an important part of the cultural commons, and in many cultures they play an important role in the intergenerational renewal of the culture's environmental ethic. The values and ways of thinking they carry forward differ from culture to culture. They may carry forward the environmental wisdom accumulated over generations of learning from the life-cycles that characterize the bioregion they depend upon, and they may carry forward the moral values that are to govern both relationships with strangers and with members of the community. As recent history reminds us, ceremonies and narratives may also

reinforce the idea of racial superiority, the national sense of how wrongs can be reversed by conquering other countries, and the vision of an imperialistic future.

The differences in the values reinforced by different cultural ceremonies and narratives can be seen in how some indigenous cultures of the Pacific Northwest, as well as the Ainu (the indigenous people of Japan) understood the spiritual significance of the salmon, and how the return of the salmon in the rivers would be celebrated for providing moral guidance for how humans should live in the world. In these cultures, the appearance of the first salmon would lead to days of ceremony, including feasting and dancing. And as no salmon were caught during these days, a large number of salmon were able to navigate their way to where they would lay their eggs. In effect, not only did the ceremony renew a moral/spiritual connections between the practices of the cultural and environmental commons, it also ensured the continuation of the cycle of life that the salmon and people shared together. The ceremonies and narratives in such cultures as Nazi Germany and the American Klu Kluk Klan represent how the pathologies of the human mind can be constituted, renewed and past on to future generations. As Alasdair MacIntyre pointed out in After Virtue (1981) narratives connect the individual to the culture's memory in ways that influence both the values that the individual will hold but also the individual's moral reference points for establishing a self-identity.

As is the case with most aspects of the cultural commons, it is necessary to begin with identifying the various ceremonies and narratives that are central to the various groups in the students' community. In certain instances it may be wise to raise the more controversial issues later in the students' education. Again, it needs to be emphasized that recognizing the different traditions of ceremonies and narratives establishes a better basis of community support for when the controversial issues become part of the class discussions. The starting place for students in the early grades, however, is with introducing students to the different traditions of narrative that many students will have encountered in a more surface way in children's literature books. These would include the classic narratives that go back to the early Greeks, the Norse and Germanic tribes, and the narratives of indigenous cultures in North America. The different forms of narrative can be discussed, as well as the moral message they were intended to convey. The similarities and differences between these traditions and the modern narratives that the students are likely to have encountered in animated film can also be discussed. What students are learning is that narratives are part of the cultural memory, that

they represent earlier ways of thinking and that they played an important role in the education of the young before the time of literacy, and that they are the source of images of human experience that are often referred to today in different contexts.

It should also be possible in the early grades to have the students collect information on the different ceremonies taking place in the community, and to identify the cultural group that sponsors them. This survey of ceremonies and sponsoring group brings out yet another tradition that promotes community solidarity and memory. In later grades it should be possible to begin examining important issues related to these community ceremonies, such as: What is the cultural origin of the ceremony, and what was its original purpose-- to celebrate a victory, the harvest that warded off starvation, some major cultural achievement or discovery, the end of foreign occupation, etc.? How has the ceremony, which has its roots in the distant past of another country, undergone changes in the American context? Does the ceremony in the American context retain cultural traditions that no longer exist in the country of origin--that is, has it become a communal form of nostalgia and a romanticizing of the past? There are other questions that need to be explored, such as whether the ceremony helps to retain the silences about the injustices carried out by the people whose achievements are the focus of the ceremony? The celebration of the centennial of the pioneers that made the Oregon Trail an indelible part of the history of the American West, and the recent celebration, with all of its regional ceremonies, of the Lewis and Clark expedition, both contributed to the displacement of the indigenous cultures from their homelands—yet that part of the story is largely ignored. As the expression of a collective memory of the cultural commons, it's necessary that the students recognize the expressions of courage, self-sacrifice, and mutual support—as well as the wrongs done to others.

The ways in which the ceremonies and narratives are being enclosed by market forces also need to be examined before students graduate from or drop out of high school. The enclosure may take different forms, such as a ceremony being taken over by military or corporate interests, and by being turned into a marketing opportunity by local businesses. There are other narratives that have been repressed by corporate interests, such as the stories of the labor movement, and anti-war movements. The narratives about the civil rights and feminist movements are still a vital part of the cultural commons in many communities across the country. But there are other forms of narrative that are particularly prone to being turned

into a commodity—first as a movie and then as a wide range of gadgets, toys, clothes with movie derived logos, and so forth. Enclosure may also result from other cultural pressures, such as the targeting of youth as consumers engaged in the constant struggle to own and display the latest trend dictated by peer pressure. This emphasis on youth as being the most receptive market for the latest technological innovation further alienates them from having an interest in the narrative and ceremonial traditions of their parents and grandparents. In effect, the rate of technological change, particularly in areas where the microchip is the basis of the technology, undermines different areas of the cultural commons—with hardly anyone under the age of thirty recognizing the loss, much less its significance. The illusion of being an autonomous individual, which characterizes so much of the culture of youth that now serves the interests of market forces, is being further reinforced by the widely held idea promoted in teacher education programs that students should construct their own knowledge and determine their own values.

There is yet another question that needs to be explored by students before they leave the classroom-- with its potential for a wide ranging examination of cultural practices that might not be tolerated in most other social settings. The question is: What are the narratives and ceremonies that embody the experiences of the current generation that merit passing on to future generations? That is, what is the story line of their generation that might be relevant to future generations of youth that will be facing the more constricted choices caused by a degraded environment and a post-industrial culture? And a second question is: what skills and wisdom would they like to become mentors of.?

At the university level, the tradition of ideas that have marginalized and in many instances denigrated the positive role that ceremonies and narratives have played in carrying forward the collective memories of how to live in morally coherent relationships with others, and how they have contributed to the expansion of the industrial, consumer-oriented culture. The sources of these ideas that have helped to create the distinction between high- and low-status knowledge that can be traced back to the earliest Western philosophers, as well as to the political and economic theorists that articulated the importance of eliminating all moral barriers to the expansion of free markets. What needs to be considered is how these traditions of thinking have led to the pattern of dichotomous categories where rationality, in its contemporary scientific and critical modes of expression, has led to dismissing other cultural

ways of knowing, particularly those represented in ceremonies and narratives, as sources of superstition and ignorance. Some of these cultural ceremonies and narratives, as mentioned earlier, were indeed destructive, based on prejudices, privileged the economic interests of local elites. But the blanket treatment of all forms of knowledge that are carried forward in ceremonies and narratives as sources of ignorance has led to the failure to assess their worth in terms of the contribution they make in enabling different cultures to live within the limits of their bioregion and to sustain a process of democratic decision making about which traditions are essential to living less money-dependent lives.

Students need to think about the moral and ecological criteria that are to be used in judging the ceremonies and narratives that are part of their own cultural and environmental commons, as well as how the ceremonies and narratives of other cultures contribute to less environmentally and colonizing patterns of existence. A strong case can be made that the deep cultural assumptions underlying the traditions of Western philosophy, including political and economic theory, have the same messianic (colonizing) tendencies that are found in Christianity. These cultural assumptions (which were discussed earlier) have also been largely responsible for the development of the industrial, consumer culture that has had such a destructive impact on natural systems. Yet, their taken-for-granted status has contributed to the failure of providing students with the background knowledge necessary for distinguishing between destructive and life-enhancing ceremonies and narratives. Is the Armageddon that many American anticipate based on a narrative that enables people to live in less environmentally destructive and money dependent ways? Are the narratives of current scientists who are predicting that we are entering a post-biological phase of evolution, where humans will be replaced by computer networks, to be taken seriously as more people sink into poverty and a state of hopelessness? What is the significance for our cultural commons of the ceremonies that mark the remembrance of Martin Luther King, Jr.'s achievements and vision? The larger concern raised by these questions is that there are few opportunities in a university education where these specific questions can be considered from an historical and cross cultural perspective.

Moral and Spiritual Commons

This is an aspect of the cultural commons that is more practiced in daily life, than understood—except when the moral norms are ignored or deliberately violated. It is also an aspect of the cultural commons that may not be shared by all the members of the community because of ethnic and religious differences. While some groups may have a complex and shared spiritual commons—music, traditions of dealing with various forms of oppression, understanding of what is sacred (including places), ceremonies that celebrate special events in the life of the group, and the personal inspiration derived from a tradition of hope and working for social and ecojustice—they may be marginalized in terms of the larger community’s understanding of who is to be included in the moral commons. Basically, the moral commons, which may differ from group to group, involves that shared expectations of moral reciprocity—that is, relationships that are mutually supportive, based on trust, and are non-exploitive. The relationships that Martin Buber referred to in terms of I-Thou would be part of the moral commons—and, in terms of his interpretation, it can also be understood as one of the forms that the spiritual commons may take. Examples of enclosure (that is, turning the moral commons into an exploitive relationships that may lead to monetary benefits) include transforming the I-Thou relationship into an I-It relationship where the Other becomes useful in terms of meeting pre-conceived expectations, or a personal need. Other examples include the moral norms that prevent exchanging information about someone else’s personal life into data that can then be sold to various segments of the market culture. It also includes being honest, mutually supportive, and reliable in terms of providing assistance in some future situation.

As these aspects of the moral and spiritual commons differ widely among members of the community, with certain moral values shared more than others, it is important for people to be explicitly aware of them. Most of the moral commons, as well as the spiritual commons that are shared by different groups, are part of the taken-for-granted cultural patterns—and thus are difficult, as mentioned earlier, to be aware of. Thus, the need to name these patterns, and to help students understand why they are important to the well-being of the community—and to each individual’s sense of what constitutes meaningful relationships.

Incorporating the spiritual commons into the curriculum, which should be delayed until the later grades, is relatively easily in that it would involve students learning how different religious and spiritual traditions understand the commons—such as special and highly

symbolic days and events that transform the members of the group from the routines of daily life to an awareness of being connected to a broader and more elevated purpose. To put it more briefly, learning about the differences in the spiritual commons would involve learning from representatives of various religious traditions about what they regard as sacred and what they understand to be representative of the spiritual commons. It would also involve learning how the members of the different religious traditions think about the ways in which their traditions are being enclosed. For teachers and professors who share the late Francis Crick's skepticism about the non-measurability of spirituality, I suggest that they read Rabbi Michael Lerner's The Left Hand of God (2005) for one of the deepest understandings of the connections between spirituality and the values that sustain the cultural and environmental commons. A starting place for acquiring the background knowledge for helping students to understand how other religious traditions understand the commons is World Views and Ecology: Religion, Philosophy, and the Environment (1994), edited by Mary Evelyn Tucker and John Grim. And in some instances, it should involve learning how different religious groups reconcile the adoption of market values and practices with their core religious beliefs.

Learning about the moral commons, which should start in the early grades, begins with not only naming the pattern of moral reciprocity in different social and environmental contexts but also participating in discussions of personal experiences that arise when different norms that are usually taken-for-granted are ignored or deliberately violated. The challenge will be to identify the different situations in which the moral norms govern the relationship and activity—which may range from the moral commons that are an aspect of an athletic event, an artistic performance, a conversation, the passing of strangers, the person that has been victimized—and the victimizer, the young and old, and so forth. Documenting the many expression of when the moral commons is being kept alive, and even expanded, should also include considering the many cultural forces that are undermining the moral commons –and even the spiritual commons. This may include considering the many ways in which the consumer culture, with its emphasis on individualism, progress, and instant gratification, contributes to the enclosing of the moral commons. The enclosure may take the form of indifference toward mutually supportive relationships, communicating contempt for what is regarded as a constraint on individual freedom or the imposition of an unwanted sense of moral accountability toward others. The pressures and cultural assumptions that underlie “road rage”

would be a good place to start in terms of helping students understand the cultural roots of a growing disregard for sustaining the moral commons. The excessive claims of scientists that have strayed onto the slippery slope of scientism also needs to be examined as a threat to the moral commons—and this area of inquiry should also consider the nature of the moral commons that would be the outcome of taking seriously that natural selection determines which expression of moral reciprocity is the better adapted.

Landscapes

This word can be used to refer to many different aspects of the cultural and environmental commons. While the word has a specific meaning for artists, it can be more accurately understood as the patterns of cultural and natural phenomena that we encounter with all our senses. That is, as sight, sound, smell, and touch. Thus, the landscapes we move through are experienced as multi-dimensional; they are even part of our memories and stories. Among the other words that are often used to refer to different aspects of landscapes include “habitat,” “place,” “nature,” “scenery,” and “built environments.” Each of these words indicates a particular perspective and tradition that foregrounds what is relevant while putting out of focus other aspects of the landscape—which is always local in that it is an inextricable part of what humans’ experience.

The multiple ways in which landscapes are enclosed by different cultural values and ways of knowing make them an important part of commons education—especially if students are to acquire the vocabulary that will enable them to articulate their concerns about the different ways in which landscapes are being transformed by market forces. In the broadest sense, landscapes include the fields, streams, grasses and trees, mountains, and sky—as well as the built environment of fences, roads, buildings, planted fields, and so forth. Streets lined with in-your-face bill boards and the seemingly fixed chaos of architectural styles are also examples of landscapes, as are the rows of near identical houses and the lone farm house whose starkness is not softened by flowers and shrubs.

Rural and urban landscapes also possess the combined elements of culture and nature—with their respective forms of enclosure having a direct impact on human experience. Farmers who want to squeeze the maximum profit from the land too often eliminate the vegetation along the sides of their fields, and in the process eliminate the habitat needed for

birds, field animals, and other species that make up the local food web. The use of seeds that have been genetically altered to resist herbicides such as Roundup also alter the landscape in multiple ways that affect our experience of the fields as part of the landscape; but the destructive impact on the web of life that goes deep into the soil is what should be recognized—but most often goes unnoticed, especially when the uniformly planted fields appear free of “weeds.” Urban landscapes are also affected by the beliefs and values that have their roots deep in the dominant culture. The urban landscapes may communicate that consumerism is the dominant activity and the basis of human relationships, and they may also be read as the expression of a value system that values the new over the old—which is too often the conscious intent of the architects and business owners. In both rural and urban landscapes, there are constant visual reminders of the power of modern technology that are imposed on what was a natural landscape.

The complex nature of landscapes, particularly how nature and culture merge together in daily experience, is touched on in only the most superficial way in most environmental education classes. The changes in local habitats, the sources of pollution in nearby streams and lakes, and the strategies for restoring degraded environments such as wetlands which are the main foci, seldom touch on the nature of the cultural commons—and how they represent alternatives to the various forms of enclosure that have such a destructive impact on natural systems. In effect, the students are given only half of the vocabulary that is needed to address the systemic sources of the deepening environmental crisis. The silences result in a limited ability to exercise communicative competence, especially when the promoters of a further expansion of the industrial, consumer-oriented culture justify new forms of enclosure by invoking the god words of “progress,” “freedom,” “patriotism,” and “innovation.” Given the current state of the silences that characterize the treatment of the cultural commons in high school and most universities, I will suggest how the concepts and vocabulary essential to democratic decision-making about conserving sustainable landscapes can be introduced at several level in the educational process.

In the earliest grades there are a number of characteristics of rural and urban landscapes that can be introduced, as well as the characteristics of landscapes that have not been fundamentally altered by cultural practices. Drawing upon the students’ experience in different landscapes, such as shopping malls and parking lots, forests, open fields, street corners, etc.,

can provide the contexts for discussing what the student experiences in terms of smells, sights, sounds, and tastes. Getting students to pay attention to their own senses in these different landscapes, and to name what they are aware of, is the first step in getting them to become more aware of their surroundings. At this level of education, it is also possible to have them keep a record of the different animals, birds, and insects they encounter in these different settings. Of course they should not be expected to know their Latin, scientific names. What is more important is to note the nature of the environments they inhabit, and thus how different environments (high-rise buildings and streets filled with cars, open fields, parks, rows of suburban houses, back-ally dumpsters, et.) influence which animals and birds will likely be found.

As students move into the middle and upper grades it should be possible to introduce how different cultural ways of knowing have influenced the human impact on the landscape. Where were the trails of the indigenous cultures, and how do they differ from the modern system of roads and freeways? What cultural assumptions and values account for these differences? How does the modern approach to agriculture differ from how indigenous cultures met their need for food, medicine, and other daily necessities? Perhaps more important would be to have students investigate how modern agriculture, including corporate approaches to agriculture, have contributed to the disappearance of native grasses and other plants. How the use of chemicals have reduced the number of pollinator insects would also be important to investigate.

Other aspects of local landscapes that have been shaped by Western assumptions include how painters have represented landscapes at different times in American history, the source of ideas that led to imposing on the landscape the rectangular grids that are so visible from the airplanes as one crosses the country; the ways in which architects and builders often ignore using local materials and designing buildings that fit the local context; the influence of different religions and ideologies on conserving landscapes or exploiting them for economic purposes. This latter theme needs to be refined so that the question becomes: How do different religions, including non-Western religions, represent humankind's responsibility toward the environment? And the further refinement about the relation of ideologies and landscapes leads to asking: Do ideologies such as neo-liberalism, social justice liberalism, Marxism, libertarianism, socialism, conservatism (in the tradition of Edmund Burke and Wendell Berry)

provide clear moral guidance on what are appropriate and inappropriate ways of relating to the land?

The many ways in which landscapes are enclosed (monetized and privatized) would include examining how they are represented in the media (including the movies and television commercials, the Western tradition of an individual perspective and how this reinforces the experience of being an independent observer of the landscape, the way in which the vocabulary as well as the technologies of the industrial, consumer-oriented culture enclose both the vocabulary necessary for naming and thus recognizing the non-monetized value of local landscapes as well as how technologies such as iPods, laptop computers, and video systems now built into cars reduce awareness of the landscapes their users are moving through. These technologies not only insulate their users from the sounds and smells, but also from the plants, animals and other aspects of the visual landscape. And what their attention is focused on are the media products of the consumer culture—which are the result of other forms of enclosure of the cultural commons.

Built Environments and Craft Knowledge

The design, use of materials, and craftsmanship (is there a gender neutral alternative to this word?) in most of the world's cultures have been dependent upon the intergenerational knowledge that is passed along and added to as each generation introduces its own improvements and modifications. That is, the knowledge basic to what is called vernacular approaches to built environments, such as buildings and the layout of social space for different kinds of human activity, was part of the cultural commons. The design and aesthetic embellishments often were an expression of the culture's religious cosmivision—which reflected the culture's understanding of its deepest origins in the past, and which also provided the moral guidelines for living in the cultural and environmental commons.

The modern industrial approaches to the design and construction of built environments is profoundly different from the vernacular approaches that were less influenced by monetized relationships such as the design team, sources of technologies and building materials, and paid workers that often have little or no connection with the local culture. In recent years, there has been a reaction to the industrial approach to the design and use of building materials, with more attention now being given to local context, achieving greater energy efficiencies, and the use of local building materials. One example of this shift can be seen in what Sim Van Der Ryn

and Stuart Cowen advocate in their book, Ecological Design (1996). The five principles of design include the following:

First Principle: Solutions Grow From Place

Ecological design begins with the intimate knowledge of a particular place. Therefore, it is small-scale and direct, responsive to both local conditions and the local people. If we are sensitive to the nuances of place, we can inhabit without destroying.

Second Principle: Ecological Accounting Informs Design

Trace the environmental impacts of existing or proposed designs. Use this information to determine the most ecologically sound design possibility.

Third Principle: Design With Nature

By working with living processes, we respect the needs of all species while meeting our own. Engaging in processes that regenerate rather than deplete, we become more alive.

Fourth Principle: Everyone is a Designer

Listen to every voice in the design process. No one is participant only or designer only: Everyone is a participant-designer. Honor the special knowledge that each person brings. As people work together to heal their places, they also heal themselves.

Fifth Principle: Make Nature Visible

De-natured environments ignore our need and our potential for living. Making natural cycles and processes visible brings the designed environment back to life. Effective design helps inform us of our place within nature.

The fourth principle, “Everyone is a Designer,” needs to be qualified in order to take account of the way in which many people raised in an industrial, consumer-oriented culture bring this form of consciousness to how they think about design and to their aesthetic judgments. In reducing people to a wage earner and a consumer, many individuals have become rootless and thus short term inhabitants of place. The result is that their knowledge and commitment to place (in the way Van Der Ryn and Cowan are using the word) is more likely to be superficial, leaving them thinking of place as where they live in relationship to schools, freeways, and mega-stores. When rootless individuals have more money or access to credit cards than knowledge of the local cultural and environmental commons, their sense of good design will more likely reproduce the garish mix of houses and commercial buildings that are often better suited for other climates and cultural traditions.

There are many ways of introducing students to the differences between local knowledge of sustainable built environments that has been accumulated over generations of living in a bioregion, and the forms of knowledge that lead to buildings that fit the assumptions of the industrial culture. And like learning about the other areas of the cultural and environmental commons, observing, thinking and discussing the differences helps to develop the vocabulary and awareness necessary for participating in the democratic decision making about what is being lost as a result of the further expansion of the market culture.

And like the encounters with other areas of the cultural and environmental commons, this process of developing the concepts that highlight relationships, and the vocabulary that fosters awareness of what was previously largely unrecognized and thus unspoken, learning about built environments and the differences between a knowledge of a craft and the industrial mode of production can begin in the early grades. Students can discuss the differences between their own experience of assembling something that has been industrially produced and the experience of a craft person such as a weaver or potter that they have observed and listened to. This kind of learning situation is also the starting point for learning about the different mentors in the community, including the extent that the mentors rely upon a knowledge of local materials, the intergenerational traditions they learned from, and their way of understanding of how traditions of creativity, from jazz to folk music, are both sources of empowerment and individual expression. It should also be possible to introduce in an elementary way the complex nature of context such as weather patterns, physical nature of the environment, the plants and animals, and the traditions of adopting the design and placement of building to the local setting. This can be introduced by showing pictures of rural houses in Japan, of the dwellings that the Dogans have adapted to fit the region of Mali that they have inhabited for generations, and of modern buildings where the temperatures require the use of air conditioning (which can be compared with the approaches to cooling living spaces in the vernacular designed buildings). Differences in aesthetic judgment can be introduced by having students discuss the difference between the pictures of the interior spaces and furnishings of a Japanese rural dwelling (including pictures of their tools) and pictures of the rooms and furnishings of a typical American house. Young students are capable of observing and articulating what they see as the differences, and even to beginning a discussion of the differences in cultural values and approaches to individual development.

As students move into the middle grades, it should be possible to begin examining the ecological consequences of relying upon modern, industrially dictated design principles and use of materials that do not take account of the characteristics of the local environment or the traditions of the local culture. The high-rise glass encased buildings, such as the ones built in the new capital of Brazil, in Malaysia, and other regions of the world, require vast amounts of energy to cool them. Students need to consider where the energy comes from, and what effects the dams that are the source of the energy have on local ecosystems—including the local people. As these people are displaced by the damming of the local river, where are they displaced to, and does their loss of knowledge of how to live in communities that are largely outside of the money economy lead to their further impoverishment? The discussion can be brought home by asking students to consider the difference in how people interact when shopping in a mega-store such as Wal-Mart and shopping in the small shops along the main street in their local community. In discussing the connections between built environments, spaces in which people interact, and the strengthening or the loss of a sense of community, they are learning to think relationally—which means how the participants in cultural and natural ecologies interact in supportive and destructive ways.

At the university level, it should be possible to learn about the impact of different ideologies, including religions, on the local traditions of design and craft knowledge. Which ideologies still promote the industrial system of design and production that continue to marginalize the ability of craft persons to make a living in the local economy? Which ideologies are sensitive to cultural differences in knowledge systems, and promote the importance of conserving the world's linguistic diversity? This becomes an especially important concern when it is recognized that many of these local languages encode knowledge of how to live within the limits of the local ecosystems (which has been tested over many generations), and that this knowledge has influenced the nature of the local built environments which, in turn, influences the culture's impact on the landscape. In some instances, there is evidence that humans have been living in the same bioregion for hundreds of years without fundamentally altering the capacity of local ecosystems to renew themselves.

The university is also where the history of ideas that relate to different aspects of built environments as well as the importance of crafts need to be part of the curriculum. And these histories can be approached from the perspective of different cultures—but the one theme that

should connect them is the rise and spread of the West's industrial, market-oriented form of consciousness, and how this form of consciousness continues to undermine the diversity of the cultural and environmental commons. As this theme is brought into focus in these different histories, the question that should be raised relates to the role that Western universities have played in the ongoing process of cultural colonization that we now refer to as globalization.

Teachers do not need to view themselves as lacking the knowledge necessary for introducing these and other aspects of the cultural and environmental commons. They can invite speakers such as architects, landscape architects, and urban planners that have different ways of thinking about built environments. They can also invite trades people to discuss their understanding of building materials, the difference between the form of work dictated by an assembly process and a craft such as wood working, and the traditions they rely upon in framing, wiring, and installing the plumbing system in a house--and how they understand their responsibility. Out of these presentations will come the questions and the issues that may be of central concern to the practitioners of these arts and skills. The contrasts between traditions and modern approaches, as well as the continuities between them, are present in nearly every aspect of daily experience, and the key to making these contrasts and continuities part of the curriculum is a commitment to helping the students understand the connections between dependence upon consumerism, the deepening ecological crises, and the alternatives to the poverty and depression that accompanies a lack of knowledge of the activities and mutual support systems that are part of the local commons.

As pointed out earlier, an important part of the curriculum is the lived culture that is too often ignored because the teacher and professor have accepted the idea that the face-to-face, intergenerationally connected and largely non-monetized aspects of community have too low of status to be worthy of learning about. The practices that reflect the differences between commons-based experiences and those that have been monetized and commodified, which are part of most peoples (including students) everyday life, are what need to be the focus of classroom discussions and questioning—with the teacher continuing to remind students that the major issue we now face is whether we are promoting cultural beliefs and practices that will further degrade the natural systems that we depend upon—including the natural systems that operate on a scale that is often beyond the capacity of our technologies to repair or to provide substitutes for.

Technology

All cultures rely upon technologies. But as Jacques Ellul points out in The Technological Society (1964), there are fundamental differences between the technologies of modern Western cultures and those of non-Western cultures. One of the basic differences is that many non-Western technologies do not undermine the local cultural and environmental commons in the way that many modern Western technologies are designed to do. This difference can be accounted for by the fact that the modernizing technologies of the West are increasingly relied upon as the engine for expanding the economy. What is little understood is that while many of these Western technologies have made an important contributions to the quality of everyday life in both the West and non-Western countries, some technologies, such as computers, electricity, print, the internal combustion engine, and so forth, have a Janus nature in that they contribute both to the vitality of the local cultural commons while at the same time strengthening the economic forces that are enclosing them.

While public schools and universities provide the conceptual basis for developing new technologies, including more ecologically sustainable technologies, there are few classroom teachers or university professors that encourage students to learn about the cultural transforming nature of different technologies, how they impact the local commons in different cultures, and how they contribute to the West's market liberal project of economic globalization. The result is that most students graduate from public schools and universities with the mistaken idea that new technologies are both the expression of progress and are, at the same time, a culturally neutral tool. This taken-for-granted way of thinking about technology effectively depoliticizes for the vast majority of people the different uses of technology, as well as the all important question of who benefits from their adoption. Introducing students to thinking about different aspects of the cultural commons (i.e., food, arts, narratives, landscapes, build environments, and so forth) as was discussed earlier will inevitably involve bringing up issues that surround the impact of different technologies. However, if technology is not given special attention, student may get the idea that technology is inherently progressive in nature and thus beyond the need for questioning.

Starting in the early grades, several areas of misunderstanding about the nature of technology need to be addressed directly by raising questions that can be answered as students reflect on their own experiences (this leads to another example of giving words to what is

otherwise part of the taken-for-granted background experience). A widely held view is that technologies, such as the cell phone and the computer, are sources of empowerment and convenience. In order to bring out how different technologies mediate human experience (that is, both facilitate and reduce or even eliminate aspects of human experience) students should be asked which aspects of experience are facilitated by different technologies—such as how a cell phone enables them to communicate by voice and now to send pictures. The other question that their own experience will help to illuminate is what cannot be communicated that is part of face-to-face communication (that is, how non-verbal communication influences how relationships are understood, as well as the importance of social context). As many of these patterns of non-verbal communication are taken-for-granted the teacher may need to name the different patterns of non-verbal communication and perhaps even to point out the cultural differences. The question of what cannot be stored and communicated through a computer can also be addressed at this level, particularly if the teacher provides the vocabulary for making explicit the way in which the students' own experience often takes social context and tacit forms of understanding into account—and what happens to social relationships when they are not.

Another feature of some technologies can also be introduced in the early grades, but deserves to be considered in more depth at later stages in the educational process. That is, some technologies alienate people from each other, while other technologies enable people to develop further their personal interests and talents. Both the assembly line approach to production, as well as the increasing automation of work, contribute to the alienation of the worker from needing to exercise personal judgment and from mastering a craft. An assembly line can be simulated in the early grades in a way where students are responsible for only one segment of the production process—and they can then be asked to discuss how this affects their relationships with others as well as their sense of responsibility for aesthetic judgment and quality of workmanship that goes into the process production. The assembly line could be set up in terms of preparing a meal, or painting a picture where each student is responsible for using a specific color.

A third feature of technology that can be introduced in the early grades is the way in which some technologies enable people to exercise control over others, and contribute to undermining the cultural and environmental commons. The advertising on cereal boxes can be

discussed as an example of a non-mechanical technology that influences what children will want to eat for breakfast, and how the images on the box and the use of sugar and other chemicals leads to rejecting the breakfast they might be based on the intergenerational knowledge of the parents or grandparents (which is an example of the cultural commons). Comparing the technologies that are the basis of “fast food” available in the school cafeteria and at the local McDonalds with the technologies associated with the slow food experience (local gardens, meals prepared by and shared with parents, ethnic tastes, and so forth) will also help students in the early grades to be aware that different technologies are not a neutral tool—and that they may limit important aspects of experience.

As students move into the higher grades the issue of whether new technologies are always the expression of progress needs to be examined. And this question should lead to an exploration of the political, economic, and ecological impact of different technologies. Again, the discussion needs to be framed in a way that enables the students to assess different ways of thinking about technologies with what they have experienced in daily life—but not been asked to reflect upon before. These discussions may range from how automation, and the ability to locate the technology in a low-wage region of the world, reduces the need for the parents’ knowledge as a skilled machinist, to how other technologies reduce the need for physically demanding labor that have no redeeming characteristics. It might also include a discussion of the forms of knowledge that are made irrelevant when the farmer purchases genetically engineered seeds, and how the use of the iPod reduces important dimensions of the bodily experiences that are part of being aware of the sights, sounds, and smells of the local environment. There are also questions about how different technologies affect interpersonal relationships, where one stands in the social status systems, who benefits and who loses in the use of different technologies, and how different technologies have influenced the use of language and patterns of thinking.

At the university level, the history of ideas that led to marginalizing technology as an important part of cultural studies needs to be given a central place in the students’ education. Students also need to learn about the differences between the technologies of cultures that have developed in ways that are more centered on living within the limits and possibilities of their bioregion, and the technologies that facilitate the process of colonization and have contributed to massive and possibly irreversible changes in the Earth’ ecosystems. How the development

and use of different technologies have been influenced by a culture's mythopoetic narratives and, in the West, by different religious beliefs and ideologies also needs to be studied. And as modern science has become increasingly a source of new technologies that lead to new markets that further enclose the commons, students need to learn to distinguish between science and scientism, and how the latter leads to the development of technologies and markets that are both ecologically, politically, and morally problematic. The current efforts to explain how cultures are subject to the same process of natural selection that operates in the biological world would be just one example of the growing influence of scientism. Efforts to provide a scientific explanation of consciousness and to develop drugs or to locate the genes that affect both consciousness and memory are other examples that easily come to mind. The proposal to create a "gene-rich" line of humans that will perform the intellectually challenging tasks of society, while the "naturals" will be responsible for the hard work, is yet another example of scientism. As science now has such a direct impact on many aspects of cultural life, the question of what are the limits of scientific knowledge needs to be discussed—especially now that science provides the basis for the rapid advances in the development of surveillance technologies that are threatening our traditional freedoms

In effect, the study of the history of different technologies and their impact on the different cultural and environmental commons, their role in colonizing other cultures, and all the other impacts need to be understood as both involving political and moral decisions. And developing the vocabulary necessary for recognizing and articulating the issues connected with the introduction or abandonment of a technology is the chief goal for this part of the students' education. To make the point in another way, learning about different forms of technology and how they impact the cultural and environmental commons is necessary if people are to begin to democratize technological decisions. An example of how the public schools and universities have failed to adapt their curricula in ways that would enable their graduates to have an informed voice in deciding whether an important part of the cultural commons is to be enclosed by recent advances in computer technology is the way in which our personal behaviors (consumer habits, travels, interactions with others), as well as the ideas we communicate over the cell phone or as an email message, are now under constant surveillance by corporations, government agencies, and even by other individuals we do not even know. The transformation of what previously was our private life has now become data that is evaluated for a number of

reasons—and by people and computers that use criteria we are not aware of. Increasingly, the evaluations of the data gathered on our personal lives are based on concerns about national security and the marketing of products. Individual privacy, at least in most Western countries, has long been valued as an essential part of the cultural commons. An aspect of the cultural commons that is overlooked in current discussions of the sale of personal data are the traditions that led people to make a distinction between what information about one's private life could be shared only within the family, and what could be shared with the larger society. The collecting of data on what previously was considered the private life of individuals for the purpose of economic gain is yet another example of how moral fabric of the cultural commons is being undermined.

The loss of privacy, in most instances, is directly tied to another tradition of our cultural commons that is also being undermined: namely, the right of the people to vote on what constitutes an appropriate and inappropriate use of this technology. Students need to consider the differences between a democratic and a surveillance society, as well as how a surveillance society impacts the cultural commons. There is also the question of the differences between a surveillance society and a police state—or what more properly should be called a fascist society. And this question should lead students back to a consideration of how the diversity of cultural commons across America represents sites of resistance to the many ways computer technologies contribute to the centralization of political and economic power in the governmental agencies and corporations that collect and share the data.

Another issue that needs to be the focus of a discussion on the part of the faculty is whether the curricula taken by students going into computer related fields should include in-depth discussions of the moral and political issues that are raised by each new advance in the surveillance capacity of computer-based technologies. Do university graduates working to develop the technologies that will collect information on the products people purchase, that collect data on peoples' searches on Google, that can listen in on our cell phone conversations, understand that there are moral and political issues connected with the introduction of each new technology? Or do they simply assume that all forms of technological innovation are the expression of progress—and that there are no good reasons for questioning progress.

Civil Liberties

The form that civil liberties take in English speaking countries, as well as the different approach taken in other countries, can be traced back to historical events that led to the creation of laws that limited the power of government by codifying the rights of individuals. Among the historical events that contributed to the establishment of civil liberties that have become part of our cultural commons included the signing of the Magna Charta in 1215 by King John, the abuse of power by a variety of absolute monarchs, the wars in Europe between 1485 and 1789 that were driven by religious differences between powerful despots, and the Enlightenment thinkers that laid the conceptual foundations for democratically elected governments.

As our civil liberties are under attack from a variety of sources, including the growing dominance of market liberalism, the spread of surveillance technologies, and religious fundamentalists that want to overturn the separation of church and state as well as our checks and balances system of government, it is vitally important that students understand how what remains of our civil liberties are being enclosed. They should also understand the consequences they will face if we proceed down this slippery slope. This aspect of the cultural commons needs to be introduced in high schools and university classes.

If students do not understand the nature of the civil liberties that previous generations have relied upon, and worked to extend to minority groups, the cultural and environmental commons will be further undermined—for the sake of profits and control by authoritarian groups. These civil liberties include habeas corpus which protects from unlawful restraint by government, the rights of individuals guaranteed in the Constitution, the separation of church and state, an independent judiciary (that is, free of market and religious ideology), the presumption of innocence until proven guilty, rule of law, and so forth. The focus of learning about this critically important part of the cultural commons should be on the nature and origins of our civil liberties, as well as on the different ways they are being threatened and thus enclosed. It is important to reiterate an important characteristic of the political process: if the students (and later as voters) cannot name them and do not understand their importance, they will be unable to resist their elimination. It is more likely that they will not even be aware that certain of their civil liberties have disappeared. Unthinking patriotism, which serves the interests of politicians that seek power by playing on the fears of the American people as well as pursue policies that make these fears appear legitimate, leads, as we have just witnessed, to

the willing surrender of our rights to privacy to the Nation Security Agency. The use of Orwellian language contributes to the current trend whereby the people who are speaking out in defense of our civil liberties are being increasingly represented as un-American.

When our traditions of civil liberties cease to be part of the cultural commons, decision making will be then centered in the hands of powerful political and corporate elites who will collaborate with religious extremists who will provide the governing moral codes that will justify ignoring the spread of poverty and environmental devastation. Local democracy and the diverse traditions of intergenerational knowledge that are the basis of community self-sufficiency will be replaced by the market forces that will separate the righteous from the unrighteous (for the religious fundamentalists), the better adapted from the less well adapted (for the proponents of natural selection), and those who are driven by competition from those who have been marginalized or do not have the competitive drive to make profits the primary goal in life. The important point to be made here is that the loss of our civil liberties will coincide with the further enclosure of the cultural and environmental commons—and as this process accelerates, the further degradation of the natural systems we depend upon will lead to the kind of economic chaos that will lead people to demand an even greater centralization of power in a government that is responsible for the crises in the first place.

Language

The examples given above of how to connect language and concepts with the different levels of the students' experience and background knowledge also serve as models of how to introduce students to other aspects of the cultural commons that are now being enclosed. An aspect of the cultural commons that is often overlooked as an example of what is shared on a non-monetized basis and available to everyone not limited by the culture's class system and prejudices is the way in which language is being enclosed, and thus the ability to articulate issues and values that are essential to sustaining the tradition of local decision making. The enclosure of language can result from new technologies, from the marginalization of collective memory as a result of an emphasis on progress and the sense that the past (and the language that sustained it as memory) are sources of backwardness, and from different modes of inquiry and the narratives they promote-- such as science and its narrative of evolution. Carl Sagan argues that the scientific mode of inquiry is the only one that is self-correcting and thus is

universally valid—and that all traditional ways of knowing and valuing are examples of backwardness and superstition. E. O. Wilson, as well as computer scientists such as Ray Kurzweil, argue that evolution should replace all existing religious traditions. Market-liberal and Christian fundamentalists have a different vision of the future. As they come to power we can see how their policies repress the language used to articulate social justice and environmental issues, as well as the languages of non-Western cultures.

At the high school level it should be possible to examine what words and patterns of thinking would be silenced or marginalized by taking-for-granted the cultural assumptions about the autonomous individual, a mechanistic model of life processes and relationships, and an anthropocentric way of thinking about human nature relationships. And at the university level the way in which different disciplines are based on different assumptions, along with the vocabulary that supports them, can lead to asking whose language is being suppressed or marginalized. For example, do disciplines such as psychology and cognitive science marginalize the languages that reproduce the differences in cultural ways of knowing—including the language they use to pass on the intergenerational knowledge of their cultural and environmental commons? How does the theory of evolution, when extended as the basis for understanding which set of cultural memes are better adapted for survival, marginalize the importance of indigenous languages, or the language necessary for clarifying the limits of evolution as an explanatory theory. What does the metaphor of “meme” serve to illuminate and hide? Does it marginalize the language necessary for justifying a democratic form of society, or does it contribute to the revival of social Darwinism? How do courses in economics marginalize the language that is used in mutual support activities where work is returned rather than paid. And does the language of mainstream Western philosophy marginalize the language necessary for thinking and communicating about the commons? Each of the disciplines can be examined in terms of how its vocabulary illuminates and hides—with what is hidden being an example of enclosure.

Other Characteristics of the Cultural Commons

The enclosure of knowledge that sustains non-monetized relationships and ways of doing things increasingly results from the high-status knowledge promoted in universities and research institutes that contribute to the expansion of the market-oriented culture. Even the

traditions of scholarship that were examples of the cultural commons, (that is shared on a non-monetized basis) are no under threat. This long-standing tradition is being enclosed as recent changes in copyright laws now recognize scholarly writing as private property. Other examples of the enclosure of the cultural commons that allowed for the free exchange of knowledge and discoveries is being undermined by the merging of scientific research with corporate interests. This has resulted in the early patenting of research results and the growing sense that new knowledge must have market value. Even old knowledge that used to be freely available at the local library is being digitized and sold as a consumer product. There are other forms of enclosure that affect the traditions of knowledge that enabled members of the community to be more self-sufficient and thus less dependent upon a money economy.

Having students attend a county fair would provide an opportunity to identify the range of knowledge that enables different members of the community to grow different kinds of flowers, practice the various needle crafts as well as weaving and fiber arts, preserve a wide range of food—from berry jam to chutney, care and feed a wide range of domestic animals, and perform on a variety of musical instruments. The country fair represents just part of the varied practices of intergenerational knowledge that sustain the local cultural commons, and each area of knowledge and craft skill can be the focus for examining how the forces of modernity and consumerism is contributing to their enclosure. Other crafts might include boat building, cabinet making, and designing children's toys. The knowledge connected with various games that range from playing chess, many card games, to soccer is also passed along from generation to generation—but are now being enclosed by becoming part of the growing computer-mediated market place.

The mutual support systems of the community, which range from various forms of volunteerism to working on community environmental restoration projects, also need to be examined if the students are to acquire an understanding of the relationships and activities that are often accompanied by a sense of “giving back” and of being part of a mutually supportive community. The general silences in the media and most areas of the curriculum at both the public school and university level about these non-monetized forms of personal and community enrichment are a major factor in enclosing these aspects of the cultural commons. But the hyper-consumerism, as well as the low paying jobs that force millions of people to work at several jobs in the same day, reduces the time that people have for participating in

various activities that sustain the vitality of the local cultural commons. In effect, the growing dependency upon a money economy that is both addictive, and that reduces the free time necessary for non-monetized pursuits, represents yet another form of enclosure. Free time, which we seem to want more of--yet are unable to attain, is a part of the cultural commons that is essential to the continued renewal of the other aspects of the cultural commons. If there is no free time, then it becomes impossible to participate in the other commons activities.

Education that Sustains the Environmental Commons

When environmental education is treated as a separate course it generally approaches from a scientific perspective the question of how humans are impacting natural systems. While the larger issue of what is happening on a global scale is always a background concern, the main focus is generally on the changes taking place in local ecosystems. The curricular focus thus varies with the characteristics of the local bioregion. Specific issues such as the rapid disappearance of sagebrush may be the focus in schools located in the prairie regions of the country, while the pollution of the air is likely to be a focus in densely populated urban areas, and the changes in the chemistry of local lakes, streams, and oceans being the focus in nearby schools. Regardless of the bioregion, there are more general issues that are studied in environmental education classes. These include the nature of invasive species, how the loss of habitat contribute to the loss of species—which, in turn, will focus on different kinds of habitat and species loss. In the Northwest, the focus may be on changes in the nearby stream beds that limit the ability of salmon to reproduce themselves, how the clear cutting of forests reduces the habitat needed by different species of birds and small mammals, and how the dams and changes in water temperature impact the number of salmon that return to spawn. Across what was formerly the great plains covered with native grasses, the focus now may be on the loss of species that result from the use of herbicides, the impact of irrigation on local aquifers, and the farming techniques that contribute to the loss of topsoil. In other bioregions, the main focus will reflect essentially the same set of relationships: namely, how the different manifestations of the industrial culture, with its reliance upon toxic chemicals and more efficient technologies, impacts the local environment. In the New England states bordering on the Atlantic Ocean, the environmental education class may address the changes in the use of technologies and the chemistry of the water that are affecting the number of lobsters and other species of fish that

local economies depend upon. Even though the focus on how changes in local habitats affect the diversity of species may differ from bioregion to bioregion, students are learning how to collect data on changes occurring in the local ecosystems and to understanding the characteristics of healthy ecosystems. In many instances they are learning how to restore degraded ecosystems by relying on scientific research.

Increasingly environmental education courses are incorporating what is being learned about mapping green spaces, how to understand the environmental issues that need to be taken into account in various approaches to development, and how environmentally oriented architects are designing buildings that are more energy efficient and less polluting. Some environmental education instructors even encourage students to learn how public officials make decisions that may or may not take into account the impact on natural systems. While there are many important issues discussed in environmental education classes, there are silences that reflect the silences in the education of the science professors that teach the courses that constitute the major area of academic concentration and the pedagogy-related classes that are required as part of the environmental education teachers professional studies.

These silences include a knowledge of the diversity of the world's cultural commons, the nature and importance of what remains of the local cultural commons that represent alternatives to the environmentally destructive consumer-dependent lifestyle—that, ironically, scientific knowledge has helped to expand on a global basis. As pointed out earlier in the chapter, if environmental education is understood as a stand-alone course it is likely that the silences will be perpetuated. And the result will be that students, when they reach adulthood, will continue to think that environmental issues are important but will not recognize that their consumer dependent lifestyle makes their environmental concerns little more than a ritualistic word game. More importantly, the silence about the nature and importance of the cultural commons, as well as a knowledge of the different forms of enclosure that result from new technologies and the spread of market-liberal policies that are packaged under the misleading label of conservatism will reduce their ability to recognize when different aspects of the cultural commons are incorporated into the industrial system of production and consumption. In effect, when environmental education does not include the changes occurring in the world's diverse cultural commons, it leaves students with a basic misunderstanding: namely, that working to restore habitats, to reduce pollution, and to introduce the technological changes

necessary for limiting the rate of global warming should be the main focus of environmental stewardship.

Unfortunately, these laudable goals leave out the importance of understanding the cultural assumptions that still give conceptual and moral legitimacy to the industrial culture that is now being globalized. They also ignore the importance of learning that part of the answer to the global crises we are now facing, which includes growing poverty as more people are forced to live within a money-dominated economy as well as the decline in natural resources that humans depend upon, can be found in the non-monetized, mutual support systems in the local communities. And in not understanding the many ways in which the industrial consumer-oriented culture, along with its legitimating ideology, are enclosing what remains of the local cultural commons, the possibility of widespread political support for resisting various forms of enclosure is lacking. This failure of local democracy to protect the local cultural and environmental commons can be seen in the way in which energy-oriented corporations, with the aid of Congress and the President, are degrading local environments wherever there is the possibility of finding new sources of energy necessary for the support of the gas-inefficient SUVs and super-sized houses. The failure of local democracy can be seen where the industrial culture is enclosing other areas of the cultural and environmental commons—from processed foods, municipal water systems, to the privacy of individuals. As stated earlier, understanding the cultural assumptions that have marginalized an awareness of the cultural commons as sites of resistance to the industrial culture, as well as the ideas and values that now justify its globalization, require the participation of classroom teachers and university professors who are knowledgeable of a variety of disciplines—including what is problematic about the assumptions they have been based upon and how they need to be transformed.

Chapter 6 The Ideological Context of Commons Education

If there is any hope of making the transition to a less consumer-dependent future, and thus to one that is more ecologically sustainable, it will be necessary to recognize the sources of resistance that lie ahead. One of the criticisms that will come from people who are in denial about global warming and the other forms of environmental degradation is that the educational reforms being suggested here will have the effect of politicizing the process of learning. Just as many people still think of technology as a neutral tool, that language is a conduit for communicating objective information, and that continual progress is our manifest destiny, they also embrace the idea that education is (or should be) a politically neutral process. There will be, in addition, other more ideologically and religiously based sources of resistance to educational reforms that contribute to the revitalization of the cultural and environmental commons. Before examining these latter sources of resistance, it is first necessary to consider the misconceptions that underlie thinking of education as a politically neutral process.

Recognizing the political nature of educating students about the largely non-monetized aspects of the local cultural and environmental commons is essentially correct. However, the widely held idea that it is possible to have a non-political form of education is a combination of ignorance, romantic thinking, and indoctrination that is still perpetuated by many classroom teachers and university professors. In order to put in perspective why we should not protest what is as inevitable as learning to speak and think in the conceptual categories we acquire from our cultural/language community, it is first necessary to understand what can be called the micro-level of politics. Basically, the political nature of language can best be understood in terms of Michel Foucault's way of understanding the exercise of power, which he describes at the micro-level as an "action upon an action". That is, an action such as the spoken word and even a glance that communicates astonishment or disagreement can lead to a change in the behavior, thinking, and even self-confidence of the other. The micro-level of political action is the same as the micro-level of exercising power in human relationships—and even in relationships with the environment. The spoken or written word, for example, led the European immigrants to believe that they were "pioneers" in a vast wilderness even though they encountered on nearly a daily basis the inhabitants of the land. Similarly,

referring to the environment as a “resource” caused many individuals to think in terms of exploiting it for profit. But an “action upon an action” , such as taking the child’s hand or calling out to her/him, may prevent the child from walking in front of an oncoming car. And exposing the lies of a politician, which is also an example of exercising power in Foucault’s sense, may contribute to some voters engaging in a more reflective judgment. As is often observed, when a lie has been exposed the politicians begin to issue press releases that are also part of the ecology of power that is both a reaction to the earlier exposure, and an effort to put critics on the defense. When an action involves the use of racist language the exercise of power over the other may undermine her/his self-confidence—or lead to a greater sense of determination to prove the other wrong, as well as a racist.

The key point is that the political, when understood as the exercise of power where an action changes the action of the other, is neither inherently constructive nor destructive. It is as inevitable as the way in which people use words and body gestures to communicate with others. What is not inevitable, however, are the ideas and values that influence how power is exercised—and thus the intent behind the exercise of power. And the intent may be unconscious or conscious, depending upon whether it is rooted in taken-for-granted prejudices and cultural assumptions, or based on a well thought out set of political priorities.

Most people who argue that education should not be political tend to think of the political in more traditional ways, such as associating with the macro-level of political parties and their social agendas, with the policies of government, and with the pursuit of special interests. When the micro-level of politics is understood as operating at the level of language, which is metaphorically layered and carries forward the insights and misconceptions of earlier generations, its influence can be seen on every level of the macro-level of politics—from reducing governmental funding of family planning and justifying wars of aggression in the name of democracy and freedom to enacting environmental legislation. Language, whether used in print, spoken, or in non-verbal body patterns of communication—is never politically neutral. It always affects the thoughts and actions of others; sometimes in constructive and sometimes in destructive ways. It may even be used in ways that create a sense of ambivalence about what is

being communicated. The complement communicated in the tone of voices that is interpreted as patronizing is an example that most people have experienced, which leads to the question of what action is an appropriate response.

The discussion here of the political nature of education, including educational reforms that strengthen the cultural commons in ways that resist the further expansion of the environmentally destructive industrial culture, will focus on the micro-level of political action that accompanies the use of words and concepts in every educational context. Later, the ideological and religious dimensions of the political will be discussed, as well as the strategies that educational reformers will need to consider. Some ideological and religious groups will be especially hostile to the idea of strengthening the cultural and environmental commons, even when it is justified on the grounds of contributing to a sustainable future. While people holding other ideological or religious beliefs will be sources of support. The key to the success of implementing the educational reforms is being able to understand the assumptions of these different groups and to be able to speak to their assumptions.

The earlier discussion of how language carries forward and thus reproduces today many of the values and patterns of thinking that were taken-for-granted in the past was more than an introduction to the political nature of language. While the political was only indirectly touched upon, the key reasons for understanding how the use of language represents an action upon an action were clearly spelled out. Here I shall only reiterate them.

(1) the root metaphors such a patriarchy, mechanism, individualism, and so forth, provide the conceptual or interpretative framework that influences how certain aspects of everyday reality will be understood—while other ways of understanding are marginalized or excluded entirely. Patriarchy foregrounds the positive attributes of men while marginalizing the possibility that women may possess the same attributes. As an interpretative framework, mechanism leads to an emphasis on observing, collecting data, experimentation, judging increases in efficiency and control; but it excludes considering the nature and sources of values and the influence of different cultures on ways of knowing. What a taken-for-granted root metaphor enables us to think, as well as what it

hides in terms of awareness, represents how language involves the exercise of power—often in ways that the speaker or writer is unaware of.

2. The way in which the root metaphor influences the process of analogic thinking that occurred in the past, and that, over time, is reproduced in a highly reductionist way in such image words “data”, “intelligence,” “individualism”, is also the expression of the micro-level of the political process. For example, if the approaches of other cultures toward the determination of intelligence had been taken, rather than assuming that it could be measured by having students take an English-based test, perhaps we would have avoided many of the injustices that resulted from the ethnocentric biases that were built into the test. Similarly, the image word “tradition” carries forward the analogies that Enlightenment thinkers unquestioningly accepted. Today, when it is not associated with holidays, many people view it as the source of backwardness, special privileges, and what stands in the way of progress. If the Enlightenment thinkers had used the many forms of craft knowledge that were flourishing in their day, as well as the increasing reliance upon literacy perhaps the word tradition would have carried forward an entirely different meaning. This may have led more people today to recognize that we need to resist the undermining of such political traditions as the separation of church and state, an independent judiciary, and the system of checks and balances. This more complex understanding of traditions also might have led more people to think of traditions in terms of which ones strengthen community and have a smaller environmental impact, and which traditions carry forward injustices that were taken-for-granted in the past. The inability today of market and social justice liberals to identify and argue for renewing the traditions underlying our legal and democratic systems is yet another example of how the politics of language played out centuries ago continue to influence current ways of thinking that are putting us on the slippery slope that is leading to an authoritarian future.

3. The political nature of language can also be seen in the process of primary socialization. When a child or older person is learning something for the first time, the significant other communicates in body language and through the spoken word how the new situation or process is to be understood. Primary socialization may also take the form of learning something from a book or a computer monitor. The first time encounters may include the definition of the work that is to be done, the nature of

technology, the meaning of the commons, and so forth. Regardless of the situation, when the individual that is learning something for the first time has been given a limited vocabulary or words that carry forward the misconceptions of earlier generations, she/ he will lack the communicative competence necessary for avoiding formulaic thinking. This process is inherently political, just as giving the individual an expanded vocabulary that fits more accurately the complexity of what is being learned leads to greater communicative competence is also political, but in an empowering way. When the public school or university curriculum is silent about the cultural mediating characteristics of computers, the nature of the commons, and the history of Western ideologies, the silences also serve as an action upon an action that contributes to the students inability to recognize the issues that should be given critical attention. Similarly, the silence (that is, lack of language and concepts) may also leave students with an inability to even recognize how different aspects of the cultural and environmental commons are being enclosed through a further expansion of the industrial culture. And in not being able to recognize how aspects of everyday life that were freely available (or nearly so) are being integrated into the money economy that many people are less able to participate in, the students (and later as voting adults) will lack the linguistic means for challenging how the quest for profits leads to the spread of poverty and the loss of community self-sufficiency.

In effect, the silences in the curriculum limit the expression of local democracy. What is generally overlooked by public school teachers and university professors is their mediating role in the process of socialization, and thus their responsibility for providing the language and concepts necessary for being able to engage in the political discourse that too often leads to the market-liberal fundamentalists privileging the agenda of corporations over the interests of local communities.

4. The language that is central to commons education is highly political, but its use may lead to sources of support from unlikely sectors of the community. And is likely to be scorned and criticized by groups that would, at first glance, be viewed as sources of support. The word “commons,” as pointed out earlier, refers to what is shared within the community on a non-monetary basis (or largely so). This includes the communal wealth

of intergenerational knowledge, skills, activities, mutual support systems—and other aspects of daily life that the community has democratic control over.

While there are always a critics that wants to claim, on the basis of having imposed their own interpretation on the one article they have read, that I am even promoting the intergenerational knowledge that passes on racist, exploitive, and environmentally damaging practices, I need to emphasize again that the social/ecojustice criteria identified earlier needs to be the basis for assessing what needs to be renewed and what needs to be challenged and rejected. Ironically, many groups that also work to achieve greater social justice are likely to be critical of commons education as it is not based on a theory derived from European thinkers. As many of these social justice advocates share many of the same cultural assumptions that also underlie the industrial culture they criticize, they are also likely to react negatively to any suggestion that many forms of intergenerational knowledge contribute to sustaining the cultural and environmental commons—and that sustaining the cultural and environmental commons fits more with the form of conservative thinking found in the writings of Edmund Burke, Michael Oakeshott, Wendell Berry, and Vandana Shiva. Among these liberal social justice activists, the word “conserve” is still wrongly associated with economic forms of exploitation, and with preserving the special interests of social elites.

The deep and inherently political implications of the word “commons” may be recognized by other members of the community—particularly those that are engaged in mutual support activities and in conserving what remains of the non-monetized activities and skills. In recent history, the word “commons” has always been used in conjunction with the word “enclosure”, which also has powerful political connotations. From the perspective of the community that relies upon both the cultural and environmental commons, it means transforming the wealth of relationships and interdependencies into a monetary form of wealth that excludes people whose skills and talents are no longer useful in an increasingly digitized industrial system. At the same time, for the members of the community that are dependent upon consumerism and are able to participate fully in a money-based economy, enclosure is viewed as an opportunity to grow the business, to ensure they stay employed, and to consume even more.

It is difficult to judge how educational reforms that focus on how what remains of the cultural and environmental commons are being enclosed would be viewed by the diverse political groups spread across the country. There are several elementary schools in rural Vermont that have made the themes of food, ecology, and community the central focus of the curriculum from the first to the sixth grade. And there are an increasing number of public schools that now promote as part of their curricula the growing and preparation of food, and an understanding of how the use of intergenerational recipes differ from industrial prepared food. Concern about the problem of obesity among youth has led to efforts to place junk food and drinks with what is more nutritious. But this does not involve a critical examination of the process of enclosure of parental guidance about what constitutes a healthy diet.

Public schools that are promoting place-based education, which includes learning about the local environment as well as how the community is addressing local environmental issues, also represent an introductory approach to commons education. However, place-based education fails to present a more comprehensive understanding of the local cultural commons, as well as how it is being enclosed by the industrial, consumer-oriented culture. University courses that focus on community development, including the micro-economic possibilities with communities, also provide students with a partial introduction to the importance of the commons. However, what is missing in all of the approaches mentioned above is a comprehensive theory that takes account of cultural assumptions that underlie the industrial culture, the role of language in reproducing these assumptions even in the thinking of social justice advocates, an understanding of the diversity of the world's cultural and environmental commons, and a historically informed understanding of the ideological forces that continue to influence the different forms of enclosure that are legitimated in the name of progress. It is this comprehensive theory that helps to ensure that the different sources of tension and conceptual double binds between the commons and the modern forms of enclosure are part of commons education.

To reiterate a key point, it is not the politicizing of education that is important; rather, it's the ideology and the cultural assumptions it is based upon that have a greater influence on whether the student, as an adult, takes-for-granted the myths that equate

progress and individual success with living a life of excessive consumption. Given the current rate at which poverty is spreading, with nearly sixty percent of Americans now living from paycheck to paycheck, and given the rate of environmental changes such as global warming, it is important to have a clear sense of how to judge whether the different approaches to commons education meet what can be called the principles of eco-justice. In earlier writings I identified five criteria that an eco-justice or what is now being referred to as a commons approach to education should meet. More recently, Rebecca Martusewicz and Jeff Edmundson have added a sixth criteria, and have elaborated on the other five in a far clearer way than my original effort. These criteria include:

1. The understanding of local and global ecosystems as essential to human life, as well as the recognition of the deep cultural assumptions underlying modern thinking that undermines those systems.
2. The recognition and elimination of environmental racism, such as the dumping of toxins in the communities of economically and socially marginalized peoples.
3. The recognition of how Western patterns of hyper-consumerism reproduce the exploitation in the Southern hemisphere by the North for resources--both natural and human.
4. The recognition and protection of the cultural commons; that is, the intergenerational practices and relationships of non-monetized mutual aid (relationships that do not require the exchange of money as the primary motivation for the relationship). An ability to think critically about what aspects of the cultural commons need to be reformed or renewed. Understanding the many ways in which the cultural commons are being enclosed—that is, being integrated into a money economy.
5. The recognition, protection, and establishment of earth democracy—that is, the decision making practices established to ensure the renewal of water, soil, air, plant life, and other living creatures in natural systems, and necessary to socially just communities. Earth democracies are sustained by virtue of the spirituality and wisdom in many traditional and indigenous cultures that have created sustainable communities in balance with natural systems over hundreds of years.

6. The recognition and emphasis that local knowledge and practices should leave future generations a viable and healthy environment. (2005, pp. 72-73)

Education that meets these eco-justice criteria should now be part of what the general public, as well as educators at all level of formal education, should take for granted. But this is not the case. Although many indigenous cultures have not had to spell out these eco-justice criteria, but have relied upon narratives, ceremonies, and mentoring as a way of intergenerationally renewing their wisdom of living in sustainable relationships with the environment, it is necessary in our culture to put the criteria into print. This is the first step in initiating the political dialogue the people in the West must face up to having, and which must now be undertaken by people in non-Western cultures that are adopting the West's consumer dependent lifestyle.

It would seem that the key words in the above list of guiding criteria would be widely viewed as non-controversial. No one should be in favor of environmental racism. Morally-centered people should also be against a lifestyle that requires the "exploitation of the Southern hemisphere." The "commons" and the importance of conserving the "practices and relationships of non-monetized aid" are what all people rely upon in varying degrees—even when they have not heard about the commons. "Earth democracy" is a new phrase that will be unfamiliar to most people in mainstream culture; but they are constantly reminded that we are a democracy—even as our democratic institutions come under even greater stress from the vary forces that promote so vigorously the enclosure of the commons. It would seem that it would not be too difficult to extend the idea of democracy to the non-human forms of life that also must have the right to reproduce themselves. If we were to have a national policy of extending democratic rights (that is, the right of self-renewal) to the Earth's ecosystems, rather than imposing our interpretation of democracy on cultures that do not share our view of individualism, the entire world would benefit.

The last criteria has a number of phrases — "local knowledge," "future generations," and "healthy environment" that one would think would not be widely controversial—even among the segment of the public that cannot name the three branches of the federal government, but are instead focused on the coming of Armageddon. However, when these phrases are no longer represented as abstractions, but

used to judge everyday lifestyles, they become highly controversial. The suggestion that peoples' values and daily practices should be guided by a responsibility for living by these phrases, the phrases too often become the flash-point that degenerates into friend and enemy form of politics—with the environmentalists represented as the enemy. It is truly astonishing that such a highly educated (which is different from well educated) and technologically developed people would be so reactionary and so dependent upon cultural myths that are constituted before there was an awareness of environmental limits.

This assessment of the political realities that commons-oriented teachers and professors will face may appear as too daunting. Ironically, what may be a continuing source of motivation in the face of so many social groups resisting the cultural changes that a sustainable future will require is keeping in mind the rate of global warming, the viability of the world's fisheries, the loss of topsoil and growing scarcity of potable water, and the increasing number of people (even in America) that are unable to meet their basic needs in a money-driven economy. What is important, however, is not to prejudge where people stand on environmental issues, and on the need to become as individuals, families, and communities less reliant on consumerism. Business Week, for example, recently published an article criticizing corporations for deliberately targeting youth as an exploitable market. People who drive the massively oversized SUVs and pickups around the streets of the community may be aware of environmental issues but seemingly are unable to conceptualize the connections between their hyper-consumerism and wasteful use of energy and the changes occurring in the environment. Their seeming indifference to altering their environmentally destructive lifestyle may also be attributed to their inability to recognize the non-monetized activities and relationships that are available in the community.

While it is important to learn about the belief systems and economic interests of individuals and social groups in the community that are overtly hostile to commons education, it is also important to adopt a more positive stance toward the diverse groups that make up the community. Unwarranted criticism will likely turn off individuals and social groups that may be learning for the first time about the nature and ecological importance of the cultural commons. There are so many cultural myths that adults have been educated to base their lives upon that are now being challenged by

recent events--such as the assumption of life-time employment, a government that will protect our democratic institutions and not justify its policies through the use of lies, and a tradition of medicine that has as its highest priority the health of the people rather than profits for the pharmaceutical industries—that an educational process that helps to recover the knowledge, skills, and traditions of mutual support may receive widespread support in the community. As public schools and universities have not included learning about the many sources of empowerment in the cultural commons, the public generally does not have the background to know what to expect. The most often comment I hear from highly educated people when I mention the commons is that “we cannot go back to an earlier time.” Many other people respond to this most ancient of human practices and moral code with a blank stare, followed by a change in subjects. However, the people who participate in the arts, community gardens, mentoring relationships, various crafts such a weaving and wood working, volunteering in a wide variety of support activities, and so forth—represent a support group that needs to be involved in helping to connect the students with the various expression of commons activities within the community. What needs to be kept in mind in assessing the sources of support and resistance is that the sources of support are likely to be in the minority; which leaves the commons-oriented educators with the task of winning support from the consumer-oriented majority that sill believes in the myth of unending progress—even as many of them barely keeping up with their credit card and house payments.

Competing Ideologies and Other Language-Based Misconceptions

An inevitable aspect of any educational process is the use of words and concepts that explain relationships. It is also inevitable that many of the words and concepts will lead to misunderstandings. Earlier it was pointed out how different root metaphors, such as mechanism, progress, and patriarchy, influence which analogies will prevail in understanding new phenomena, and how these analogies, over time, become simplified as image words--such as referring to the mind as a machine, data as the outcome of objective observation, and mankind when referring to all of humanity. When infants learn the language of their culture, their patterns of thinking are influenced by these earlier interpretative patterns of thinking, just as the patterns of thinking of many adults

become largely formulaic when they use words in ways that reproduce the analogy taken-for-granted by other people. Educators as well as the media are powerful sources of mis-education in that they pass on many of the misconceptions of earlier generations that are reproduced in the use of language. Because these misconceptions are widely shared, there is an ongoing process of mutual reinforcement—and marginalization of people who challenge the misconceptions. An example is the way William Buckley Jr. was for decades referred to as a conservative even though his magazine, The National Review, was used to promote the free-enterprise system that further encloses the commons. Referring to new technologies that deskill workers and lead to further unemployment as examples of progress is as widespread and as mindless as referring to an economic system that receives massive government subsidies as the free-enterprise system. Religious groups working to undermine the separation of church and state continue to be wrongly identified as social conservatives, and the members of congress working to undermine environmental legislation are mislabeled by journalists as conservatives. And a professor who has written on the metaphorical nature of language and thought uses the word “progressive” to refer to environmentalists who are engaged in conserving species and habitats. The list of examples of how words carry forward the misconceptions of previous generations and of other members of society could be extended endlessly.

If our culture was based on a single root metaphor (or mythopoetic narrative), which is the case with many indigenous cultures that have learned to live within the limits of their bioregions, we would not have so many root metaphors that are now a major source of the misconceptions that often become a taken-for-granted part of our thinking and everyday discourse. As the non-Western cultures adopt more of our technologies and consumer expectations, they are also coming under the influence of our taken-for-granted interpretative frameworks. The result is that many of these cultures are beginning to experience the conflict between the members of the culture that want to sustain their cultural and environmental commons and the Westernized thinkers that reject the intergenerational knowledge as an impediment to being modern and a consumer of trendy products. Again, it must be recognized that not all the intergenerational knowledge in these non-Western cultures, especially their various forms of racial and gender bias, should go unquestioned—and basically reformed.

The point here is that the diversity of ways of thinking within our culture, as well as how the languaging processes that carry forward the misconceptions that have their origins in the root metaphors that were constituted in the distant past, create a special challenge for commons-oriented educators. In order to communicate with these various groups who, in many instances will not recognize the misconceptions they have based their lives upon, it will be necessary to understand the nature and origins of their misconceptions. It will also be necessary to find a language that will lead them to engage in a discussion of why it is important to revitalize the cultural and environmental commons. This challenge is made even more difficult by the fact that classroom teachers and university professors also need to address the misconceptions that were passed on during their own educational experience—and that continue to be reinforced by the media, by colleagues, and by the general public.

A starting place for addressing two misconceptions that now serve as particularly powerful obstacles to understanding the nature and importance of revitalizing the cultural and environmental commons is in how the political labels of liberal and conservative are misused. Public schools and universities, with few exceptions, do not require that students read the classical liberal theorists such as John Locke, Adam Smith, and John Stuart Mill, nor the philosophical conservative thinkers such as Edmund Burke, Michael Oakeshott, T. S. Eliot, and, more recently, Wendell Berry. The result is that most of the American public is unable to recognize when the labels are associated with the wrong set of ideas. Equally important is that they have no understanding of why it is important to use the labels in an historically accurate manner.

The second fundamental reason that the labels are misused can be explained in terms of the earlier discussion of how language simplifies earlier analogies that may be based on still earlier misconceptions. These misconceptions are then reproduced by later generations. The continual misuse of the language transforms it into a form of formulaic thinking where the words become totally abstracted from the context they were originally supposed to clarify. The current misuse of conservatism and liberalism has now reached Orwellian dimensions, with conservatism now standing for a market-liberal and imperialistic agenda, while liberalism is being slandered for having a political agenda that includes achieving greater social justice in communities and for conserving species and

habitats. Media personalities promote both the need for free-markets and the need to reduce the social justice role of government while calling themselves conservatives. Media personalities that identify themselves as liberals criticize the market-liberal agenda of economic globalization.

Few people seem capable for breaking out of this formulaic (mindless) way of misusing these two most important political terms by asking the self-identified conservatives what they want to conserve with their transformative technologies and unrelenting quest for profits. Even fewer seem able to consider that the political agenda of self-identified liberals and progressives is to conserve our democratic institutions, the gains made in the area of social justice, and to conserve the viability of the Earth's ecosystems so that the prospects of future generations are not diminished. Working to achieve even further gains in these areas can also be understood as strengthening the cultural and environmental commons—which is basically a matter of conserving the achievements of the past and ensuring the prospects of future generations. This fits both with the conservatism of Burke and the community/environmental conservatism of Wendell Berry.

An example of the formulaic thinking that now dominates our political discourse can be seen in the current labeling of such groups as the CATO and the American Enterprise Institutes as conservative. Instead of repeating the misconceptions promoted through the media and by academics, I suggest that the reader engage in a revolutionary act: namely, check out how these two so-called conservative institutes describe themselves on their web sites. According to the website of the CATO Institute: Today, those who subscribe to the principle of the American Revolution—liberty, limited government, the free market, and the rule of law—call themselves by a variety of terms, including conservative, libertarian, classical liberal, and liberal. We see problems with all of those terms. “Conservative” smacks of an unwillingness to change, of a desire to preserve the status quo. Only in America do people seem to refer to free-market capitalism—the most progressive, dynamic and ever changing system the world has ever known—as conservative.... The Jeffersonian philosophy that animates CATO's work has increasingly come to be called ‘libertarianism’ or ‘market liberalism.

The self-description of the American Enterprise Institute also raises the question of why it is continually referred to a bastion of conservative thinking. According to its web site, “The American Enterprise Institute for Public Policy Research is dedicated to preserving and strengthening the foundations of freedom—limited government, private enterprise, vital cultural and political institutions, and a strong foreign policy and national defense”. Other examples of the misuse of the word conservative can be found in how individuals that label themselves as “neo-conservatives” promote the imperialistic agenda of the government, and write about the virtues of capitalism—which has as its primary purpose the further enclosing of the cultural and environmental commons. If one is concerned with using our political language in ways that foster accountability rather than obfuscation, then George Gilder’s Wealth and Poverty (1981), and Michael Novak’s The Spirit of Democratic Capitalism (1982), and the current writings of William Kristol (editor of the Weekly Standard) should only be described as proponents of free markets and for limiting the role of government in addressing social issues.

An even more extreme example of Orwellian language is to refer to President George W. Bush, along with his fundamentalist and evangelical political base, as conservatives. Ironically, as we witness the many ways in which environmental legislation has been rolled back, corporations given a larger role in formulating new policies and modifying earlier legislation that placed restrictions on the abuses of corporations, tax benefits for the already wealthy while public services and support for America’s marginalized groups are cut back, no one seems to ask the most basic question of these so-called conservatives. The question is a simple one, and the answer, if people cared about accuracy and accountability in what our political labels should stand for, is that they want to strengthen the free market system. As the CATO Institute correctly states, the policies of the past and current Bush administration are in the market-liberal tradition that has its roots in the ideas of John Locke, Adam Smith, and, more recently, the ideas of libertarians and University of Chicago economists such as Milton Friedman.

The same formulaic thinking leads to referring to many evangelical and fundamentalist Christians as “social conservative.” Yet their political agenda, which they claim is derived from a literal, that is, a supposedly infallible interpretation of God’s word as found in the Old Testament (as well as their current communication with God), is

to work for the overturning of the separation of church and state, to elect members of Congress and a president that will support their fundamentalist's moral codes, and to overturn the tradition of an independent judiciary. Their claim to be God's agents on earth until the Second Coming leads them to have an absolute certainty about their political goals—and an equally absolute sense of moral legitimacy that makes compromise, negotiation, and dialogue within a pluralistic democratic society the ultimate betrayal of their God-given responsibilities. When we include their efforts to overturn legislation that secures the freedom of choice of previously marginalized and unprotected social groups it becomes even more difficult to justify referring to them as conservatives. A more accurate label would be reactionary extremists, or as anti-democratic fundamentalists

What is important to understand about the current misuse of our two most important political terms is that liberalism and conservatism became a formulaic way of branding different constellations of values and policies relating to the role of government before there was an awareness of environmental limits. That is, before there was an awareness of the extent of the environmental crises, and that we need to conserve the cultural and environmental commons as a way of reducing our human impact on the viability of natural systems, the word had become identified with the interests of corporations and the wealthy and privileged classes. As most journalists and media personalities, as well as the many academics that misuse the terms, do not have a knowledge of the history of political theory, the misconceptions have simply been passed along from generation to generation. And because of this lack of historical perspective on the two traditions of thinking, few people have understood that the cultural assumptions that are now taken-for-granted by today's faux conservatives are also the assumptions that gave conceptual direction and moral legitimacy to the industrial, consumer-oriented culture that is now turning what remains of the world's diverse cultural and environmental commons into market opportunities. To recall these assumptions: **change** is inherently progressive—which the industrial culture ensures through technological innovation and the continual quest for profitable markets; that the **autonomous individual** is the basic social unit—thus, in being free of the interdependencies of community life is increasingly dependent upon consumerism to meet the needs of daily

life; that this is an **anthropocentric** world—meaning that the value of the environment is to be measured in monetary terms; that **mechanism** best characterizes both the systems of life and the systems of industrial production—which, in turn, leads to emphasizing efficiency, experimentation, and measurable outcomes; that **economism** is the basis for determining the value of all aspects of life; and that **evolution**, when used to explain cultural developments, provides a scientific explanation of why global capitalism is the better adapted economic system. What is difficult to understand is why this pattern of thinking, and the values and assumptions it is based upon, is identified as conservative—particularly as it undermines the natural systems we depend upon as well as the intergenerational knowledge that provides alternatives to being increasingly dependent upon the industrial systems of production and consumption.

The fundamentalist and evangelical Christians can, in turn, find Biblical passages that explain how living a God-directed life leads to vast riches for some, and why others remain impoverished. Thus, conservatism, for them, means living by the word of God, and preparing for Armageddon which will be preceded by chaos and destruction—which will include the environment. Market-liberalism thus contributes to fulfilling two promises that shape their vision of the end-of-time: that the separation of the rich and poor (the saved and the eternally damned) and the destruction of the environment are signs of God’s ultimate plan. For them, conservatism means supporting market liberal politicians that are working with corporations to advance their imperialistic economic agenda—as the spread of American dominance clears the way for converting the world’s population to Christianity. The opening of new markets means new opportunities to spread the Christian message of how to earn eternal salvation. Again, the question needs to be asked: How does the impact of this twin market-liberal and fundamentalist Christian agenda contribute to conserving the local knowledge of self-sufficiency necessary for living within the limits of the natural environment?

What is conservative about the current efforts of these faux conservatives to transform what remains of our democratic and pluralistic society into a monolithic and increasingly surveillance-based society? Obtaining a majority of justices on the Supreme Court that believe in the doctrine of “original intent” would open the door to declaring unconstitutional legislation relating to public health, workplace safety, environmental

protection, and a host of other functions of government that were not anticipated by the men who wrote the Constitution. Referring to Supreme Court justices that want to impose the doctrine of original intent as conservatives overlooks that their real objective is to eliminate governmental regulations that restrict the free enterprise system. Hidden behind the Orwellian language that suggests that these justices will not be extremists is the extremist agenda of market-liberal ideologues that want to transform the world's diverse cultures into a global market. Conserving the many forms of political consensus that have been reached over the last 200 and so years, and transformed in to legislation, is what they want to overturn. Even as the market-liberal government, supported by Christian extremists that ignore that the core features of Jesus' politics were pro-social justice and anti-imperialistic, undermine the traditions of habeas corpus, protecting the private lives of individuals from government surveillance, and limiting free speech and assembly, the shapers of public opinion continue to mis-educate the public—and ironically, themselves.

The double bind created by the mislabeling of the market-liberals and fundamentalist and evangelical Christians as conservatives is that the environmentalists, the proponents of revitalizing the cultural commons, and the people working to reverse the social injustices rooted in the industrial system of production and consumption, identify themselves as liberals and progressives. George Lakoff, a linguist at the University of California and the founding senior fellow at the Rockridge Institute, refers to the environmentalists as progressive thinkers, and the CATO Institute as a conservative think tank. While Lakoff's message is important-- namely, that those who control the vocabulary control the outcome of political debates, he along with most other environmentalists and social justice advocates continue to identify one of the most progressive (that is, change oriented and technologically innovative) economic systems that world has ever known as conservative.

Educational reformers that are concerned with social justice issues and the threat posed by the current expansion of American imperialism also base their recommendations for reform on the same god-words that Lakoff and other self-identified progressives support: individualism, progress, critical thinking, freedom, and emancipation from tradition. As they never identify which traditions should be renewed,

one has to assume that they mean emancipation from all traditions. What their shared ethnocentrism leads them to overlook is that these god-words of progressive thinking are viewed in many non-Western cultures as undermining their cultural commons—and that the promoting them is yet another expression of cultural imperialism. They also overlook that these god-words are also embraced by market-liberals, as the ideal of market-liberals is the individual that is free (that is, ignorant) of the traditions of the local cultural commons. In lacking the knowledge and skills that contribute to living a less consumer dependent life (that is, being emancipated from the traditions that are the basis of interdependent communities) the individual is then more easily manipulated into being the reliable consumer that the industrial system requires.

There is another consequence of market-liberals identifying themselves as conservatives. That is, they can more easily demonize the word liberal, which in turn serves to demonize the efforts of social justice advocates, environmentalists, and people engaged in commons strengthening activities. This latter group contributes to the linguistic confusion by continuing to identify with an abstraction whose historical roots are in the thinking of John Locke and a partial reading of Adam Smith. The market-liberals gain from this linguistic confusion in another way. Many people, especially people that feel increasingly marginalize by an economic system that is increasing their insecurity and, at the same time, feel increasingly left behind by the rate of technological innovation, have a natural inclination to think of themselves as wanting to conserve what seems to be stable and secure in their lives. In effect, the rate of technological innovation and economic changes is confronting them with an increasing number of unknowns. And a natural response is to support the politicians and to believe the shapers of public opinion that identify themselves as conservatives. The failure of public schools and universities to have introduced them to the core ideas and values that separate the traditions of liberal from conservative thinkers also contributes to the general public's inability to recognize the mindless linguistic mess that now serves to make them more dependent upon consumerism—even as their incomes become increasingly jeopardized by downsizing, outsourcing, and cutbacks in the government safety nets.

Given the misconceptions that are now reproduced when the term “liberal” and conservative are used in the media and by politicians and preachers, the question

becomes: How should classroom teachers and university professors that are engaging students in a discussion of how to address issues related to the cultural and environmental commons deal with these widespread misconceptions? Should they perpetuate the misconceptions and thus help to keep intact the Orwellian tradition in American politics where words mean the opposite of what their meaning should be? That is, should educating students in ways that help to revitalize the cultural and environmental commons, as well as helping them to understand how to participate in the politics of limiting the different forms of enclosure, be identified as a liberal form of education? Would identifying commons education, or even the traditional approach to environmental education, with liberalism and progress weaken or gain support in the local communities?

That the term “liberalism” has taken on a number of negative images for many Americans is not the reason that educators working to revitalize the cultural and environmental commons should avoid labeling themselves as liberals. If commons education is to gain the support of the local community, educators will need to take seriously Wendell Berry’s advice about the use of language. In Standing By Words (1983) he identifies the three conditions that should guide the use of language. And his general advice, which echoes Confucius’ wisdom about the need to rectifying the use of language in order to rectify our relationships, has particular relevance for how we use the political labels of liberal and conservative. To paraphrase Berry, the use of a political label should meet the following criteria:

1. It must designate its object precisely.
2. Its speakers must stand by it: must believe it, be accountable for it, and be willing to act upon it.
3. This relation between speaker (and writer), word, and object must be conventional; the community must know what it is. p. 25

When we use these criteria to assess which political label is the more accurate descriptor of educators working to renew the cultural and environmental commons, we find that the label that has its roots in the thinking of John Locke, Adam Smith and, more recently, the social Darwinism of Herbert Spencer, is fundamentally misleading. To recall an earlier observation: both market-liberalism and social justice liberalism are based on the culturally-specific assumptions about the autonomous individual, the

progressive nature of change, an anthropocentric view of nature, and mechanism as a model for understanding organic processes—including the nature of the brain. As old formulaic ways of thinking are so difficult to change, I will also restate what separates market-liberalism from social justice liberalism. While the main goal of market-liberals is to turn more of the world's cultural and environmental commons into exploitable markets, the social justice liberals, while being critical of the inequalities that result from the profit-oriented industrial system of production and consumption, take-for-granted the same assumptions about the autonomous individual, the progressive nature of change, and so forth. They focus on issues of achieving greater equality among individuals—in the work place, in the consumer culture, in the political arena, and in education.

What is particularly noteworthy about their approach to education is their support of the ideas found in the writing of John Dewey, Paulo Freire, and the more recent constructivist learning theories, leaves students without the language necessary for understanding the diversity of the world's cultural and environmental commons. The ethnocentrism of these constructivist thinkers leads them to engage in the equally imperialistic agenda of imposing their one-true approach to knowledge on the world's different cultures--scientific inquiry for the followers of Dewey, critical inquiry for Freire and his current followers, and the romantic idea of the constructivists learning theorists that students should construct their own knowledge in order to be free of external control. A prime example is how liberal educational reformers now argue that “environmental citizenship (should be) a truly planetary one” as Moacir Gadotti put it. This leading Brazilian proponent of Freire's ideas also argues for an extreme constructivist approach to learning. The educational alternative to what he refers to as “cultural transmission” is facilitating “the grand journey of each individual in his interior universe and in the universe that surrounds him.” (2002, p. 8). Before we agree with him that “cultural transmission” can be or should be replaced by students relying upon their “interior universe” as the source of knowledge, we need to remind ourselves, and Gadotti, that learning the language of the culture we are born into provides the interpretative frameworks that will be taken-for-granted –and that aspects of this taken-for-granted cultural way of knowing will both frame the conceptual categories that we rethink, such as racial and gender bias, and continue to be the basis of thinking and acting. Gadotti's

own statement demonstrates this point. He has recently become aware of the ecological crises, but he continues to perpetuate the gender bias in his use of the masculine pronoun as well as the argument for continuing the imperialistic agenda of liberals by stating that “globalization in itself does not pose problems, since it constitutes an unprecedented process of advancement in the history of humankind” (p. 8).

Given the reality that different forms of liberal/progressive thinking have dominated both public schools and universities in America for decades, the vocabulary necessary for understanding the how the cultural and environmental commons represent alternatives to the growing spread of poverty and environmental degradation has either been marginalized to the point of silence. Or it has been so misrepresented that it now carries the stigma of representing everything that stands in the way of progress and individual freedom. Even the mislabeled conservative educational reformers, such as the promoters of the Great Books, should be viewed as opponents of the many forms of knowledge that are intergenerationally renewed within the cultural commons. They promoted print-based knowledge over oral traditions and mentoring, learning the ideas of the great thinkers of the West who contributed to the widespread bias against the cultural commons, and the ethnocentrism that has been one of the hallmarks of Western imperialism—which the faux conservatives have now taken on as their primary mission in conducting the “long war” against any individual or groups that opposes their agenda.

The challenge for environmental educators, as well as the growing number of commons-oriented educators, that continue to identify themselves with liberalism is begin the task of rectifying their use of our political vocabulary. And that would be to identify themselves as social and ecojustice activists. As they begin to examine more closely how the knowledge and skills that sustain a less money-based lifestyle is intergenerationally renewed, the emphasis on mutual support in developing commons-related skills and talents, and the moral framework that emphasizes carrying forward the social and ecojustice achievements of the past and the responsibility for not diminishing the prospects of future generations, perhaps it will dawn on them that educating for the renewal of the commons fits Edmund Burke’s core conservative idea. Namely, that the present generation is part of a social contract which involves recognizing that they are participants in “a partnership between those who are living, those who are dead, and

those who are to be born” (1962 edition, p. 140). There are other aspects of Burke’s ideas that we would now regard as the anti-democratic thinking of his times. But his idea that we are intergenerationally connected and thus responsible, as well as his warning that local communities are best suited to determine whether innovations represent a genuine form of progress, need to be taken seriously. Similarly, the conservative critiques of the industrial system of production, including the modern forms of technology, by Michael Oakeshott should also help clarify further that commons education fits more with the traditions of philosophical conservatism than with the market and even social justice liberalism. One of Oakeshott’s central criticism is that the rational approach to developing new technologies undermines craft knowledge—along with the network of community support that sustains the craft. And if the names of Burke, Oakeshott, and T.S. Eliot are not familiar to environmental and the new commons educators, then they should familiarize themselves with the environmental and commons writings of Wendell Berry, Vandana Shiva, Gary Snyder, Helena Norberg Hodge, Gustavo Esteva, and G. Bonfil Batalla. In no way can these writers be called liberals as they are focused on how the intergenerational support systems that address the issues related to poverty, the degradation of the environment by a market economy that has no self-limiting moral principles, and the connections between local decision-making and sustainable local economies. Their conservatism does not fit the social justice liberal’s stereotype of the conservative as the defender of the status quo, of privilege, and of a socially stratified society.

As both market and social justice liberals tend to view innovations as the expression of progress, what the genuinely conservative thinkers have to say about innovation may further help to clarify why commons-oriented educators should identify themselves as environmental and ecojustice conservatives. Burke, for example, observed that “a spirit of innovation is generally the result of a selfish temper, and confined views” . And elsewhere in his Reflections on the Revolution in France, he wrote that “a state (or community) without the means of some change is without the means of its conservation.” In more contemporary terms, his statement brings out that commons-oriented educators need to help students recognize that the same critical reflection that leads to the innovation should be used to examine which traditions of community self-sufficiency the

innovation will undermine. Another change in Burke's wording is that it would be more accurate to say that innovation is largely driven by the desire for new markets and profits—though recent concerns about the level of environmental degradation is also leading to innovations that contribute to more sustainable commons.

Wendell Berry is perhaps the best example of an environmental/commons-oriented conservative thinker who is equally aware that innovations need to build on the genuine achievements of the past, and that they must be assessed in terms of whether they contribute to a sustainable future. In the following quotation, taken from The Unsettling of America: Culture & Agriculture (1986 edition) he introduces the distinction between the “exploiter” and the “nurturer” to put in contemporary terms Burke's insight about our intergenerational responsibilities.

The exploiter is a specialist, an expert; the nurturer is not. The standard of the exploiter is efficiency; the standard of the nurturer is care. The exploiter's goal is money, profit; the nurturer's goal is health—his land's health, his own, his family's, his community's, his country's. Whereas the exploiter asks of a piece of land only how much and how quickly it can be made to produce, the nurturer asks a question that is much more complex and difficult: What is its carrying capacity? (That is, How much can be taken from it without diminishing it? What can it produce **dependably** for an indefinite time?) The exploiter wishes to earn as much as possible by as little work as possible; the nurturer expects, certainly, to have a decent living from his work, but his characteristic wish is to work **as well** as possible. The competence of the exploiter is in organization; that of the nurturer is in order—a human order, that is, accommodates itself both to other order and mystery. The exploiter typically serves an institution or organization; the nurturer serves land, household, community, place. The exploiter thinks in terms of numbers, quantities, ‘hard facts’; the nurturer in terms of character, condition, quality, kind. Pp. 10-11 (italics in the original)

Ironically, the misuse of our political language results in using the conservative label to describe the mind-set and activities of the “exploiter” while the nurturer is referred to in the media and in most of our political discourse as a liberal—at term that has its roots in the thinking of John Locke who first articulated why private property is more important than conserving the commons. In his best selling handbook for liberals,

Don't Think Like an Elephant (2005) George Lakoff also reinforces the idea that the liberals are the nurturers, and that the conservatives are the exploiters. This is now a common-sense way of thinking for most people who identify themselves with liberalism, and who have not thought about how the deep cultural assumptions underlying both market and social justice liberalism are also shared by the industrial culture that is rapidly enclosing the cultural and environmental commons. That the environmentalists are the true conservatives is too new of an idea for most people—even for thoughtful people such as the reporter for a national newspaper that reported that the conservatives in Congress were organizing to overturn the Endangered Species Act, and that liberal environmentalists would be resisting this effort. And the recent attention being given to the importance of the cultural commons has also failed to cause the shapers of public opinion, including journalists and academics, to make the connection between liberalism and the industrial culture's need to further exploit the public's consumer addiction, and to recognize that nurturing is at the core of all relationships that sustain the cultural commons. In effect, understanding the sources of resistance to commons education will require being aware of how critics continue to be unconsciously influenced by the language that encodes the misconceptions of the past—even the recent past when few people had a conceptual understanding that non-monetized activities and relationships in their communities were examples of the cultural commons that had a smaller environmental impact.

Identifying Strategies that Will Gain Community Support

As a commons-oriented curriculum involves both identifying the mutual support traditions of social groups that enable them to be less dependent upon consumerism, as well as developing a critical understanding of the different forms of enclosure, there is a potential for controversy. “Progressive-minded” colleagues and individuals in the community are likely to object to any reference to “conserving traditions”—even though their daily lives depend upon them. And the members of the business community and other market liberal groups are likely to charge that any critical examination of the various forms of enclosure of the cultural and environmental commons in the classroom is un-American—and thus a source of comfort for our enemies. There is also the potential for controversy if teachers introduce students to the way in which language

carries forward the misconceptions of the past—misconceptions that often continue to be the parent's as well as the public's taken-for-granted way of thinking. Introducing students to the scientific evidence of the degraded state of natural systems such as the world's fisheries, sources of potable water, topsoil, forest cover, the impact of global warming on the world's ice fields, and so forth, may also be going too far for many parents that have based their lives on the assumption of an infinite expansion in their ability to consume. And if the word evolution is mentioned in classroom discussions, it is likely to elevate the level of controversy within the community.

Just as questioning the gender bias that was widespread in the dominant culture led initially to controversy (which continues among certain segments of society), the even more complex cultural changes that will be required to living a post-industrial existence will generate even more forms of resistance—especially since the current dominance of the industrial, consumer-dependence culture is what is being challenged. Misrepresenting the nature and purpose of a commons-centered approach to education will simply lead to even more controversy. For example, if the various forms of enclosure are examined critically in ways that make it appear to the public as the promotion of a liberal agenda in the classroom, the widely held view of liberalism as a demonic form of thinking will create totally unwarranted controversy—especially by market liberal students that are now being funded by market liberal institutes (both of which misidentify themselves as conservatives) to collect evidence for charging that public schools and universities are indoctrinating students. This re-emergence of McCarthy-era tactics, we need to remind ourselves, is yet another example of the Orwellian linguistic deception where the promoters of turning what remains of the commons into market opportunities, as well as global imperialism, identify themselves as conservatives. Given the degraded state of the democratic process that seems to be accelerating across the country, it is even more important that classroom teachers and university professor need to follow Berry's advice by using political labels in ways that “designates (their) object precisely.”

That is, a commons-oriented curriculum needs to be described as conserving the intergenerational knowledge, skills, and relationships that strengthen the mutual support within the community. Simply referring to this curriculum as conservative will be misunderstood as most people have been conditioned to associate the word with how

Congress, the courts, and the president now promote the interests of corporations over the need to fund education, housing for the poor, and other needs at the community level. As mentioned earlier, by branding themselves as the conservatives the market-liberal and Christian fundamentalists have made it difficult even for those who understand that they are working to conserve communities and the natural systems to identify with the political label that most accurately describes their agenda. Given the way our use of political language has been corrupted, it is absolutely necessary that, when using the words conserving or conservative, that they be connected to examples of non-monetized relationships and activities. It is also important, at the same time, to make the point that these two words have special significance in an era when the sustaining capacity of natural systems are in decline and when democratic institutions are being purposely eroded by the powerful alliance of market-liberal politicians, lobbyists for corporations, and religious extremists. These groups interpret the industrial mantra of “progress” to now mean eliminating the different voices that make a democracy so vital, as well as eliminating the constraints that earlier political consensus of a diverse public have placed on the ability of corporations to exploit their workers, the environment, and the consumer. In this changing climate, education needs to pass on the background knowledge of the traditions that are essential to conserving our democratic institutions, such as an independent judiciary, the separation of powers between the three branches of government, and the Constitutions—including habeas corpus and the other gains made in the area of social justice.

The use of these two words should be seen as an opportunity to re-educate people who have been poorly served by the media and by their own classroom teachers and professors. This process of re-education should also include referring to the need to conserve habitats, species, and the world’s linguistic diversity. After nearly 40 years of warnings about overshooting the sustaining capacity of natural systems an increasing number of people are becoming aware that changes in the environment may pose a future threat. While most of these people continue their consumer-dependent lifestyles pretty much unchanged, they may be nearing the point where they begin to realize that conserving in the face of an uncertain future should be taken seriously. However, no re-education will take place when the words conserving and conservative are left up to the

interpretation of the parent, colleague, or member of the community. There is still too many references in the media, and by educators generally, to the conservative in government that grant giant subsidies to corporations, that promote an imperialistic foreign policy, and that reduce or eliminate entirely support for the nation's economically marginalized.

As only a small number of students take a course in environmental education, and as most of the teachers and professors in other subject areas continue to ignore the life-changing nature of the growing ecological crises, many of today's citizens view environmentalists as alarmists and as seekers of national attention. It is unlikely that the members of the community that drive the oversize pickups and SUVs, and are aggressively supportive of sending American soldiers to fight and die in wars that have as their primary purpose protecting the nation's access to the sources of energy that we use so wastefully, can be won over to the idea that our future depends upon revitalizing the cultural and environmental commons. But other members of the community that previously have viewed environmentalists as engaged in activities unrelated to their own lives may become sources of support when they learn about the nature of commons education, and how it strengthens local democracy and the non-monetized relationships and activities within the community. Even owners of small businesses that are coming under pressure from the mega stores such as Wal-Mart, Target, Home Depot may realize that an educational emphasis on strengthening the self-sufficiency of the local community should be supported.

Perhaps the most effective approach to gaining support within the community that initially may not understand an approach to education that provides alternatives to consumerism is to invite artists, local farmers, crafts people, men and women in the trades, people who volunteer in a variety of ways, and members of local churches that have a more social justice agenda to participate in various phases of the curriculum. Their participation will help students to recognize the resources of the community as an alternative form of wealth that is not threatened by automation and the other uncertainties connected with an increasingly globalized economy. The participation of members of the community, in speaking from their personal experiences, will further help to ground the discussion of the various forms of enclosure in terms of how it impacts real

people. And the discussion of the complex relationships and interdependencies that are expressions of the cultural commons, as well as the way different forms of enclosure are hidden, may contribute to a greater appreciation on the part of the community participants of what the students are learning. In too many instances, part of the enclosure of the cultural commons is achieved by demeaning the possibility that adults have anything meaningful to contribute to the youth that has been so thoroughly indoctrinated into believing the new is better than what existed in the past. For adults to observe students take seriously how their non-monetized and more community-centered activities represent alternatives to the competitive, often depersonalized existence reinforced by the industrial/consumer-dependent culture would represent a welcome change. The criticism that some Third World activist are now making about the community destructive nature of education that has students learn about different parts of the world while ignoring the importance of learning about their own bioregion and culture also is relevant to our own situation. The focus on the intergenerational skills and knowledge of the local community, and the involvement of community members in different phases of the cultural commons curriculum, will help to initiate a community-wide discussion of the connections between conserving and even revitalizing different aspects of the cultural commons and living a more ecologically sustainable lifestyle. To make the point in a way that is more in line with Rabbi Michael Lerner's way of thinking about the political and ecological crises we are now facing, rather than fostering criticism of the public schools and universities because they have essentially a critical message, a commons-oriented approach would emphasize the many ways the solutions are being practiced within the local community. But they too often go unnoticed because the media and the educators place give more attention to what is negative. Breaking the silence would further contribute to the survival of these the various expressions of the cultural commons that are now under threat of being identified as yet another niche market.

While the discussion here has been mostly about what would be included in the cultural and environmental commons curriculum—particularly at the public school level, it should also be kept in mind that Burke's view of conservatism, and I think that of Berry and Shiva, includes taking responsibility of ensuring the genuine cultural achievements of earlier generations are not lost because of the misconception that progress can only be

attained by ignoring or attaching all traditions. If taught from a non-ethnocentric perspective, traditional academic disciplines such as art history, literature, various sciences, economics (particularly history of economics), history, anthropology, philosophy, religious studies, political theory, and so forth, have an important contribution to making to providing depth and perspective to commons education. In addition to providing an understanding of the genuine artistic, technological, political, and scientific achievements of our own distant path, if these areas of inquiry were to include a comparative cultural perspective students would have a better grasp of the genuine achievements of other cultures—particularly their ways of living within the limits of the environments they depended upon. Anthropology, if focused on how some cultures destroyed their local habitat and disappeared, would also be highly important in terms of helping students examine their own cultural traditions, including their taken-for-granted assumptions, in terms of whether they represent the same mistake of not being able to adapt to the unique characteristics of the natural systems their future depends upon. A knowledge of how other cultures disappeared or survive only in an impoverished condition may challenge the students' hubris and sense of being exceptions to the iron law of nature that dictates that cultures will not survive the destruction of the environment they depend upon. This sense of exceptionalism, which is passed on by many parents and by most democratic if not all republican politicians, represents one of the most questionable legacies of an unexceptional people.

The intergenerational knowledge that has been mentioned so frequently as being at the core of the cultural commons, and the knowledge of how to live within the limits of the natural environment, includes an historical knowledge of how the arts developed in the past—as well as how they can enrich aesthetically the life of the community, as well as contribute to the development of individual talents and interests. Learning to play both classical and folk music, to perform the best in the history of live theatre and to collaborate in the writing and production of new plays, will avoid an over-emphasis on the local—which may become very rigid and parochial. Similarly, a knowledge of the history of economic and political theory is essential for understanding the ideological forces that now make the further monetization of the cultural and environmental commons appear as the working out of inevitable historical forces.

Just as the other traditional courses in philosophy, history, religious studies, and so forth, need to be re-oriented so the focus is less on the progressive nature of Western culture and more on how the traditions of the past contributed to marginalizing how people thought about the commons, courses in economics and political theory also need to focus on how the West's industrial culture became such a commons destroying force. Courses in history, in addition to introducing students to the history of environmental thinking, should help students understand the ideas, events, and technologies that contributed to the enclosure of commons of different cultures. The role that religion has played in how the natural environment and social justice issues were understood at different times in the West is vital to understanding the dangers today of large numbers of Christians giving their support to the current American agenda of economic imperialism.

The list of reasons could be easily expanded for why it is important for students to have an historical knowledge of the development of mainstream American culture, as well as the knowledge of the role that other cultural groups have played both in sustaining their own traditions as well as influencing the woof and warp of daily life in communities across America. This historical knowledge of conflicts, exploitations, misunderstandings, cooperation, social justice achievements, continuing threats to our civil liberties, becoming long-term dwellers, technological achievements and expressions of hubris, and so forth, are also essential if the participants in the community's commons are to avoid letting subjective judgments become the driving force in local decision-making. The broader background knowledge is absolutely necessary if the participants in sustaining the local commons are to take seriously the ecojustive criteria that were identified earlier. Knowledge of the cultural and environmental commons that now are under threat from the industrial culture that is expanding by accelerating the rate of global warming, the rate at which the world's fisheries are in decline, and the spread of toxic wastes, has to be sufficiently broad based that the participants have an informed understanding of what needs to be conserved as well as what needs to be transformed in ways that contribute to the prospects of future generations. They also need this broad knowledge of their own culture as well as that of others if they are going to recognize the exploiters and the nurturers in their own community, and in the larger world that has become increasingly intertwined.

Chapter 7 Toward a Culturally-Grounded Understanding of Teaching and Learning

The inability of many environmental educators to recognize the contradictions in identifying themselves as liberal and progressive thinkers as they work to conserve species and habitats extends to their embrace of constructivist theories of learning. This widely shared contradiction can be traced to several sources. The emphasis on experimental inquiry, which is the core feature of science, represents the student as constructing knowledge that is based upon empirical evidence. There is, however, more to scientific inquiry than most scientists recognize—or are willing to acknowledge. Given this lack of awareness, their students (the future environmental educators) in turn reproduce the silences of their professors in their own way of thinking about how knowledge is acquired and tested.

The history of scientific successes in overturning long held misconceptions about natural phenomena has contributed to the well deserved confidence in the knowledge gained through experimental inquiry. But this history of achievement, including the increasingly dominant role it has been accorded by academics in other fields—as well as by the general public, has also contributed to the hubris that has limited the ability of many scientists to examine the limits of scientific inquiry. The late Carl Sagan expresses this hubris when he writes in The Demon Haunted World: Science as a Candle in the Darkness (1997):

The scientific way of thinking is at once imaginative and disciplined. This is central to its success. Science invites us to let the facts in, even when they don't conform to our preconceptions. It counsels us to carry alternative hypothesis in our heads and see which best fits the facts. It urges on us a delicate balance between no-holds-barred openness to new ideas, however, heretical, and the most rigorous skeptical scrutiny of everything—new ideas and the established wisdom. This kind of thinking is also an essential too for a democracy in an age of change.

One of the reasons for its success is that science has built-in, error-correcting machinery at its very heart. Some may consider this an overbroad generalization, but to me every time we exercise self-criticism, every time we test our ideas against the outside world,

we are doing science. When we are self-indulgent and uncritical, when we confuse hopes and facts, we slide into pseudoscience and superstition. P. 30

The title of Sagan's book suggests what Wendell Berry has referred to as the imperialist intent of modern scientists who see no limits on what they can explain.

Sagan, however, is not alone in representing science as the one-true source of knowledge that the entire world should adopt. E.O. Wilson, perhaps America's most eminent environmental spokesperson, argues in Consilience: The Unity of Knowledge (1998) that all of the world's religions must now be replaced with the master narrative given us by modern science—the theory of evolution. He further makes the case for the imperialism of scientific knowledge by stating that “science for its part will test relentlessly every assumption about the human condition and in time uncover the bedrock of moral and religious sentiments”. (p.265) In a chapter titled “Dr. Crick's Sunday Morning Service,” the Nobel Laureate holds out the promise that in the future science will enable us to “understand more precisely the mechanisms of such mental activities as intuition, creativity, and aesthetic pleasure, and in so doing grasp them more clearly...” (1994, p. 261) It is important to note that both Wilson and Crick refer to the brain as a machine. Other scientists that exhibit this same hubris can easily be cited, such as Lee Silver's recommendation that scientists should genetically engineer a “Gene Rich” human that will be able to manage the symbolic systems within the culture.

The hubris of many Western scientists is not simply a matter of verbal self-congratulations and false promises that should have been as frightening to the scientific community as they should be to the general public. It was not just in Germany that scientists worked to create a racially superior society. In the United States, Canada, Denmark, Sweden, Great Britain, and France, scientists promoted the new science of “eugenics” which led to the forced sterilization of people deemed to be morally and mentally deficient. This practice was not stopped until the 1970s. Other examples of scientific hubris include the intelligence testing that privileged the speakers of English over other cultural groups. Today, this hubris is evident in the efforts to genetically engineer monster-size salmon that will soon be released into the ocean, as well as the Bt corn. When the latter sheds its pollen, it is then carried by the wind across fields where a number of unanticipated and uncontrolled-for changes are set in motion—including

exploding the stomach of butterfly larva. These examples, as diverse as they are, share a common connection: namely, they all represent the role the Western scientists continue to play in the expansion of the West's industrial system—which has as its primary goal the enclosure of what remains of the world's diverse cultural and environmental commons. When the entire record of Western science is taken into account, its genuine achievements need to be put into perspective by also considering the cultural bias of most scientists as well as their role in contributing to the expansion of the environmentally destructive practices that have changed the chemistry of the Earth's natural systems. It needs to be remembered that the scientists' concern about the growing ecological crisis only goes back fifty or so years, and this new found scientific focus has only come about after the scientifically and ideologically based industrial culture had already degraded many natural systems beyond the point of recovery—at least in our life time. In light of the Janus nature of scientific achievements, Sagan's idea that science is self-correcting before it becomes a destructive force needs to be reconsidered. It is also necessary to recognize that most scientists take-for-granted many of the same cultural assumptions that the industrial culture is based upon.

This point brings us back to the problem identified at the beginning of this chapter, which is the failure of scientists, and the future environmental educators sitting in their classes, to recognize that the ideas, values, and modes of inquiry cannot be totally separated from the influence of the culture into which they were born. When this is recognized it becomes possible to see how the culture's taken-for-granted assumptions influence the thinking of scientists—such as the current tendency of many scientists to use machine metaphors in referring to the brain, to seek new discoveries in the name of progress (which they interpret a linear in nature), to assume that scientists can escape entirely their culture's interpretative frameworks in order to make “objective” observations, and to engage in the incessant drive to re-engineer natural systems in order for them to be integrated into the industrial system of production and consumption.

There is another troubling aspect of modern science that is partly the result of the hubris of scientists and partly the result of the public's inability to discriminate between science and scientism. This has to do with the way in which the growing dominance of science has contributed to undermining the different cultural ways of recognizing what is

sacred in the environment. While Sagan and Crick would consider any discussion of the sacred as throw-back to earlier superstitions, to an era of darkness, what many cultures regarded as sacred spaces carried the moral/spiritual imperative that they were not to be exploited. Part of Crick's argument is that there is no empirical evidence of the sacred; while E.O. Wilson, in claiming the religions are simply adaptive behaviors, wants to turn the theory of evolution into the world's sacred narrative. While the current language of proponents of extending the theory of evolution into the area of cultural values, ideas, and practices now includes such phrases as "Darwinian fitness," and "better adapted," the bottom line is best described by the hallmark phrase of social Darwinism, which was the "survival of the fittest."

The science classes that are part of the professional requirements of environmental educators, in addition to the above silences, are also the source of another silence that supports the constructivist view of how students learn. This silence is what helps to perpetuate the widely held view that Sagan summed up with the two words: pseudoscience and superstition. Thinking that other cultures, as well as the belief systems in our own culture, are backward and thus undeserving of being taken seriously is yet another example of the ethnocentrism that most scientists share with academics in other fields. Unfortunately, this is not just another harmless misconception shared by the supposedly best educated in our society. This ethnocentrism has led to the genocide of indigenous cultures, to efforts to colonize other cultures to our way of thinking and to our dependency upon a money economy—even when they have little opportunity to earn a living wage, and to transform their subsistence lifestyle into one of impoverishment.

In terms of the main themes of this book, the ethnocentrism must also be understood as contributing to the enclosure of the language and knowledge systems that are the basis of the cultural commons of other cultures. The ignorance on the part of our students, which is part of the legacy of the bias exhibited in Sagan's statement about non-scientific ways of knowing, has combined with the message that non-Western cultures are inferior. And this has helped to shape the consciousness of the youth of many non-Western cultures that now seek the trappings of the West's consumer lifestyle. In rejecting their own cultural traditions in order to identify with the values of the West, they are also abandoning their responsibility to renew the cultural and environmental

commons that they will be increasingly dependent upon as the industrial culture of the West reaches the self-renewing capacity of natural systems (with important ones already in decline).

Because the scientific method is so central to how environmental educators think about the acquisition of knowledge, many of them are in a literal sense pre-disposed to accept without question the constructivist theories of learning that are often a distillation of the ideas of John Dewey, Paulo Freire, and Jean Piaget. One of the ironies is that these learning theorists, with the exception of Piaget, made critical inquiry central to acquiring knowledge that was supposedly free of the influence of traditions. Yet they did not think critically about the cultural assumptions that their respective one-true approach to knowledge was based upon. This lack of critical reflection about their own assumptions, combined with the way most professors of education represent the ideas of Dewey and Freire as examples of cutting-edge, progressive thinking, has resulted in most environmental educators being unable to recognize the limitations of constructivist theories of learning. Being able to recognize the limitations of Dewey's theory of learning is made even more difficult for environmental educators because of Dewey's reliance on the same scientific method of inquiry they learned in their science classes.

As I have written extensive critiques of the constructivist learning theorists such as John Dewey, Paulo Freire, Moacir Gadotti, and their many followers, I shall only summarize here the chief shortcomings of their theories that have particular relevance to environmental and other educators that are introducing students to the nature of the cultural and environmental commons—and to the many forms of enclosure. The most extensive critiques of these theorists can be found in Rethinking Freire: Globalization and the Environmental Crisis (2005) and The False Promises of Constructivist Theories of Learning: A Global and Ecological Critique (2005).

John Dewey

The cultural and environmental commons, as was previously pointed out, are as diverse as the world's cultures and bioregions. In addition, the mutual support systems and intergenerational knowledge vary in accordance with the culture's long-term experience of place—including the cycles of renewal of the natural systems they depend

upon. Instead of recognizing the world's diversity of knowledge systems, Dewey and his followers have argued that there is only one legitimate approach to knowledge: experimental inquiry. Dewey had traveled widely—Japan, China, Russia, and Turkey. Yet he was unwavering in his insistence that experimental inquiry, and the cultural assumptions it was based upon (and which he did not recognize), must be adopted by all cultures.

The best example of his cultural imperialism can be found by reading Reconstruction in Philosophy, which was based on the lectures he presented at the Imperial University in Japan in 1919. Dewey had been invited by the Japanese students that had studied with him in America; but his audience was representative, to use Dewey's pet phrase, of an "unreconstructed" traditional Japanese culture. This culture was not oriented toward continual change and a reliance upon experimental inquiry as the basis for determining the usefulness of ideas and values. "Change," he told his Japanese audience, "is associated with progress rather than with lapse and fall." He also warned his audience that a spectator approach to knowledge could only be avoided by adopting the experimental method of inquiry, which would enable them to continually reconstruct experience. And on the nature of moral values, Dewey stated that "growth is the only moral end." Nowhere in his writings do we find him acknowledging that there are other cultural ways of knowing that enable the people to live in a sustainable relationship with their environment. These cultures were either denigrated by Dewey as being primitive, based on memory that becomes an obstacle to the scientifically based reconstruction of experience, or engaged in the intellectually dead-end of a spectator approach to knowledge.

There is another characteristic of Dewey's theory of learning that goes unnoticed by most professors of education that future environmental educators will learn their Dewey from. That is, Dewey adopted the social Darwinism of his day to explain the differences in cultures. Instead of recognizing that cultures develop in different ways, he relied upon the widespread misreading of evolution that represented cultures as evolving in a straight line from primitive to the more evolved culture that Dewey assumed he represented. This interpretative framework is especially important to understanding the source of Dewey's ethnocentrism and his hubris. In perhaps the book that most

environmental educators will read (or at least parts of Democracy and Education), he explains the nature of intelligence shared by the least evolved people, which he refers to as “savages.”

In other words, knowledge is a perception of those connections of an object which determine its applicability in a given situation. To take an extreme example; savages react to a flaming comet as they are accustomed to react to other events that threaten the security of their life. Since they try to frighten wild animals or their enemies by shrieks, beating of gongs, brandishing of weapons, etc., they use the same methods to scare away the comet—so absurd that we fail to not that savages are simply falling back upon a habit in a way that exhibits its limitations. P. 396

Dewey’s evolutionary framework, which corresponds to the re-emergence of Darwin’s theory of natural selection that is now being used to explain which cultural memes are better adapted and thus able to pass their memes on to future generations, can become a source of confusion for environmental educator who are helping students to understand why the most scientific and technologically “evolved” culture may be the better adapted culture.

Dewey’s understanding of the nature of tradition also reinforces the way in which tradition is understood among scientists who view it as a constraint and thus something that must be surpassed through new discoveries and technological inventions. The problem is that this Enlightenment view of tradition becomes an obstacle to understanding the nature of the cultural commons—which is dependent upon the renewal of intergenerational knowledge. Dewey recognized the importance of traditions to the process of experimental problem solving, but only if traditions have an instrumental value in adding to an understanding of the problematic situations that needed to be reconstructed. His most positive way of representing traditions is to view them as habits. In Democracy and Education, he explained the significance of a habit by saying that “it means formation of intellectual and emotional disposition as well as an increase in ease, economy, and efficiency of action.” (p. 57) While admitting that a habit (or disposition) may contribute to continued growth, his criticisms of traditions generally is more direct and categorical. The following distinction that he makes between traditions and the

method of intelligence is what students sitting in a philosophy of education class are likely to remember:

Habits reduce themselves to routine ways of acting, or degenerate into ways of action to which we are enslaved just in the degree in which intelligence is disconnected from them. Routine habits are unthinking habits; 'bad' habits are habits so severed from reason that they are opposed to the conclusions of conscious deliberation and decision. As we have seen, the acquiring of habits is due to an original plasticity of our natures: to our ability to vary responses till we find an appropriate and efficient way of acting. Routine habits, and habits that possess us instead of us possessing them, are habits which put an end to plasticity. P. 58

In The Quest for Certainty (1929), Dewey went even further in representing habits (traditions) as fundamentally at odds with the method of intelligence that is associated with the need for growth and efficiency in reconstructing experience. There he writes that "knowledge which is merely a reduplication in ideas of what exists already is the world may afford us the satisfaction of a photograph, but that is all." (p. 137) Conserving habits (traditions) connected with our civil liberties, as well as the habits (traditions) of craft knowledge and skill as well as the habits of mutual support within the community were to be discarded according to Dewey's vision of a society continually undergoing the process of social reconstruction.

Dewey placed great emphasis on the importance of participatory decision making in coming to an understanding both of the nature of the problematic situation as well as the plan of action for reconstructing it. What he did not understand, and what his followers have largely ignored because of the deep cultural assumptions they share with him, is that many aspects of the cultural commons that enabled people to be less dependent upon a money economy had been refined over many generations, and that its taken-for-granted status is a source of empowerment. And within some cultures many aspects of this intergenerational knowledge carried forward deep prejudices and sources of exploitation. Dewey's blanket rejection of all habits (traditions) that are not part of the immediate problem solving process represents the same error that has largely been overlooked in the thinking of other constructivist learning theorists such as Paulo Freire and his many followers: namely, in not being able to identify which traditions need to be conserved and which traditions need to be reformed or rejected entirely.

There is another aspect of Dewey's thinking that would also reinforce a powerful cultural message learned in many of the environmental educators' science classes. That message is that science has enabled the industrial culture to expand through the development of new technologies that have their roots in scientific discoveries. As many scientists still adopt the view that they are not responsible for how society uses their discoveries, few environmental educators will hear their science professors discuss how science contributes to the hyper-consumerism that is having such an adverse impact on the environment. Nor are they likely to hear their science professors discuss when science becomes scientism, or how the general public's lack of education about the limits of scientific knowledge has contributed to undermining the religious traditions that cautioned against the dangers of excessive materialism overwhelming the need to address social injustices.

Dewey's emphasis on the experimental method is also shared by scientists and technocrats that are engaged in a continual search for new and more profitable technologies. Indeed, the mantra of both Dewey and the industrial culture that is so dependent upon scientific discoveries is "progress." In Liberalism and Social Action (1935), Dewey claimed that the failure of liberalism was in reinforcing the idea that intelligence is an attribute of the individual—and not social. His criticism of capitalism, and the industrial system it created was similar. He urged that the integrated network of science, capitalism, and modes of industrial production should be brought under the control of a social intelligence that grows out of a participatory democracy. But Dewey's insistence that the experimental mode of inquiry was the only legitimate approach to knowledge meant that his understanding of democracy would require the exclusion of other approaches to knowledge. On the symbiotic relation between science and growth of industry, Dewey was very clear and emphatic. Writing in Reconstruction in Philosophy, he explained the interdependency in the following way:

It is equally true that the needs of modern industry have been tremendous stimuli to scientific investigation. The demands of progressive production and transportation have set new problems in inquiry: the processes used in industry have suggested new experimental appliances and operations in science; the wealth rolled up in business has to some extent been diverted to endowment of research. The uninterrupted and pervasive interaction of scientific

discovery and industrial application has fructified both science and industry, and has brought home to the contemporary mind the fact that the gist of scientific knowledge is control of natural energies. These four facts, natural science, experimentation, control and progress have been inextricably bound up together. P. 42

The current attempt by environmental philosophers and educators to claim that Dewey was an unrecognized environmental thinker fails to take account of his efforts to promote the mode of inquiry that was essential to the development and expansion of the industrial culture; and the only way it could expand was by enclosing the cultural and environmental commons.

Even though the cultural and environmental commons were more robust in his day than now, it would be unfair to criticize him for not understanding the importance of the cultural commons, and the many forms of knowledge they depended upon. But the environmental commons were being rapidly exploited by industrialists and others interested in economic gain. As I point out in The False Promises of Constructivist Theories of Learning, Dewey ignored the destruction of the native forests and the vast herds of bison, just as he did not find problematic the genocidal policies of the American government toward the indigenous cultures spread across the land. These are serious limitations that help put in perspective his more constructive contributions, such as his arguments that intelligence is enhanced as the entire community is involved in the decision-making process. But even this insight is compromised by his insistence on the efficacy of the experimental methods for solving all problems, and by his reductionist way of representing the nature of traditions. If he had bothered to undertake a micro-ethnography of the traditions that he re-enacted in daily life, as well as the everyday traditions of the people of diverse cultural backgrounds that he passed on the streets of New York City and Chicago, his legacy might not be the obstacle to commons education that it now is.

Before explaining why environmental and other educators should also resist Paulo Freire's vision of an emancipatory approach to education, which is based on an even more extreme constructivist theory of learning than Dewey's, it would be useful to summarize the aspects of Dewey's theory of learning that undermine both the cultural and environmental commons.

1. The diversity of the world's cultural and environmental commons would be undermined if Dewey's one-true approach to knowledge were to be universalized. Dewey, it needs to be remembered was an ethnocentric thinker. His emphasis on the empowering nature of experimental inquiry did not take account of how many of the environmental and social justice problems we now face are based on taken-for-granted assumptions—and that would not be recognized as problematic and thus in need of reconstruction.
2. Dewey's view that traditions only have instrumental value within the context of current problem solving situations strengthens the already widespread prejudice against understanding the complex nature of traditions—and thus the need to recognize the traditions that have a smaller ecological impact and that contribute to the mutual support and self-sufficiency within the community.
3. Dewey failed to learn about the actual differences in cultural ways of knowing, but relied instead upon a cultural evolutionary framework for identifying the different stages of development from that of savages to communities that rely upon the experimental method of problem solving.
4. Dewey failed to recognize the impact of the industrial culture on the environment, and that he shared many of the same deep cultural assumptions with the industrial culture that he praised as furthering scientific inquiry.

Paulo Freire

There is a similarity between the argument of Sagan and Wilson about the emancipatory power of science and Freire's emphasis on critical reflection as the source of empowerment in the life-long project of emancipation. Like Sagan and Wilson, Freire and his many followers are also ethnocentric thinkers, which leads to their emancipatory approach to education being both messianic and imperialistic—and always justified in the name of freedom, individualism, progress, and democracy. Another similarity between the scientists, Dewey and today's other constructivist-oriented educators, as well as

Freire is that they have little knowledge of their own culture—particularly the cultural assumptions they share with the industrial/consumer oriented cultures that are overshooting the sustaining capacity of the natural environment. And like the scientists that still embrace the Enlightenment assumption about the inherently progressive nature of rational thought, Freire also viewed emancipation as an unlimited project that leads to progress. While Dewey made growth its own end, Freire made emancipation its own end—with each generation faced with the challenge of emancipating itself from what the previous generation had achieved.

Freire's view of emancipation leading to unlimited progress and freedom is based on the assumption that there is nothing in the culture that is worth conserving—other than the process of critical reflection. With many scientists now concerned about the deepening ecological crises, they are now spokespersons for conserving species and habitats. But they have not yet made the connection between conserving the non-monetized traditions of local communities (the cultural commons) and conserving the self-renewing capacity of natural systems. Understanding the symbolic nature of culture, for most scientists, is still their Achilles' heel, and this weakness is reproduced in the science classes that are taken by environmental educators. This silence, in turn, contributes to the environmental educator's willingness to accept Freire's silence on the nature of culture as something more complex than what students need to be emancipated from. This silence, when reproduced in an environmental education class or in other classes, contributes to enclosing the language needed for exercising communicative competence in resisting the further spread of market forces.

Freire shares many of the same misconceptions and prejudices that are central to Dewey's way of thinking. Like Dewey, he relied upon the social Darwinian interpretive framework of the last century for explaining different stages in cultural development. The social Darwinian assumption of linear stages of cultural development from primitive to the most evolved stage where critical reflection is exercised is taken-for-granted by Freire, and it leads him to identify the indigenous cultures living in the interior of Brazil as stuck in the most primitive, animal-like stage of development. Although they existed for hundreds, even thousands of years by adapting their cultural commons to fit the sustaining capacity of the local environmental commons, Freire refers to them as living

lives where “their interests center almost entirely around survival.” He referred to this stage of evolution as involving a “semi-intransitivity of consciousness.” The next stage of cultural evolution involves, according to Freire, a “transitivity of consciousness.” The final stage of cultural evolution, which he identified himself with, is characterized by what he termed “critically transitive consciousness.” (1973, pp. 17-19) This most advanced stage of cultural evolution is characterized by the exercise of critical reflection, democracy, and dialogue—with the latter two god-words notably missing in how his followers respond to criticism. With regard to the many references in the writings of both Dewey and Freire about the importance of democracy, neither was able to recognize the a democracy may involve divergent ideas and values—and neither Dewey nor Freire were able to give an account of how to protect the rights of people who dissented from the majority point of view. With the Constitutional protections of dissenters becoming rapidly eroded by market-liberal and Christian fundamentalists, this area of silence in the thinking of Dewey and Freire becomes increasingly important-- especially when constructivist-oriented classroom teachers reproduce this same silence in their classes.

In perhaps his most famous book, Pedagogy of the Oppressed (translated from Portuguese in 1968), Freire explains how the process of emancipation from the world by the previous generation is to be achieved—and why this process is essential for achieving the fullest realization of the individual’s humanity. This statement is so extreme in its implications that it should not be paraphrased. As stated by Freire,

Human existence cannot be silent, nor can it be nourished by false words, but only by true words, with which men transform the world. To exist, humanly, is to name the world, to change it. Once named, the world in its turn reappears to the namers as a problem and requires of them a new naming. Men are not built in silence, but in word, in work, in action-reflection. 1974 edition, p. 76

In his last book before his death, Freire states that the culture of the student needs to be recognized, but he followed this by claiming that the essential task of the teacher is to contribute to the freedom and autonomy of the student. In effect, he continued to support the statement he made in Pedagogy of the Oppressed, and referred to the culture of the student because he had learned that it was the politically correct thing to do. If he had really understood the differences in cultural ways of knowing, he would have recognized

that what he understood by individual freedom and autonomy might not be universally shared.

The other irony about Freire's radical constructivist approach to learning is that it is also based on many of the same cultural assumptions that underlie the industrial, consumer-oriented culture that is the source of exploitation and environmental destruction. And has been pointed out earlier, the illusion of being an autonomous, critically reflective individual, which his pedagogy fosters, is exactly the form of individualism that is dependent upon consumerism to meet daily needs. Equally important is that by rejecting all forms of intergenerational knowledge and skills, his pedagogy assumes that individuals, on their own, will be able to ask the important questions about what is taken-for-granted by the majority of members of the language community of which they are apart. That Freire himself was unable to recognize the gender bias in his own writings until late in his career indicates that even the most extreme advocates of critical reflection continue to reproduce many of the taken-for-granted assumptions of their culture. And for Freire, the list of taken-for-granted assumptions included the idea of the autonomous individual, that change is inherently progressive, that this is a human-centered world (Freire only became aware of environmental issues just before he died), and that critical reflection represents the most evolved form of consciousness.

Just as Dewey's method of intelligence is essential in certain contexts, critical reflection is necessary for identifying unresolved social and ecojustice problems. But neither Dewey nor Freire recognized the cultural imperialism that was an implicit aspect of their arguments that these two modes of inquiry were to be universalized. Freire's problem was partly due to his assumption that there are only one approach to acquiring knowledge. The other approach, which Freire and his followers referred to as "cultural transmission" and "the banking approach", were viewed as the source of oppression and self-alienation. One of his most famous followers coined the phrase "pedagogy of negativity" to emphasize the stand that teachers should take against education becoming in any way a process of cultural transmission. A more recent spokesperson of the Freirean mission of unlimited emancipation, Moacir Gadotti, attempted to merge the idea of a form of education that supposedly avoids the oppressive nature of cultural

transmission with the need to create a “pedagogy of the earth.” As Gadotti put it, education that achieves a “planatory citizenship” cannot “be as Emile Durkheim explained, the transmission of culture from one generation to the next,’ but (it should be) the grand journey of each individual in his interior universe and in the universe that surrounds him” (2002, p. 8). This is essentially the same idea that was central to Freire’s idea that humanization can only be achieved as each generation renames the world of the previous generation. Gadotti also reproduces Freire’s imperialistic idea that there is only one-true approach to knowledge, and that it should be universalized. What is amazing about the thinking of Freire and Gadotti is that if the process of cultural transmission were to be avoided entirely (which is an impossibility), individuals would have to create their own individualized language—which neither Freire nor Gadotti are able to do. Equally amazing in light of the importance of the diversity of the world’s cultural and environmental commons is the recommendation that the exploration of one’s subjective experiences would lead to a common form of “planatory citizen”.

What is less amazing is why so many educators have accepted the idea that there is an alternative to avoiding all forms of cultural transmission—or what can also be referred to as socialization. There is a simple explanation for the widespread acceptance that students can construct their own knowledge from direct experiences—and even their inner subjective universe. That is, this utopian ideal of what education can achieve, which even Freire, Gadotti, and their many followers cannot achieve in terms of their own lives, can be traced to the failure of public schools and universities to provide students with the language and an understanding of the theory that would enable them to recognize the multiple languaging processes that they interact with on a daily basis—and that reproduce the culture’s earlier ways of thinking. As pointed out in previous chapters, the way of thinking of change as the expression of a linear form of progress, that the individual is the basic social unit (Dewey did not go along with this one), that the rational process is free of cultural/linguistic influence, and that cultures evolve in a straight line from primitive to advanced and complex, is reproduced intergenerationally by being socialized to think in and use the layered metaphorical language that carries forward these interpretative frameworks. Even the ethnocentrism that is the hallmark of the thinking of Dewey, Freire, and their many constructivist followers, is part of the taken-

for-granted process of learning to think within the conceptual framework made available in the languaging processes that sustain daily life. Gregory Bateson's explanation of why people do not recognize the take-for-granted assumptions of others even when these assumptions are so culturally and ecologically problematic, is particularly relevant here. As he points out in Steps to an Ecology of Mind (1972), thinking occurs when differences are recognized. Because there were no real differences between the cultural assumptions held by Dewey, Freire, and their current followers, thinking in ways that made these assumptions explicit has not occurred—at least to this date.

It needs to be reiterated here that the cultural commons, which has an important influence on how the environmental commons is understood and cared for, is based on intergenerational knowledge—which can be variously understood as traditions or acquired through what is meant by cultural transmission (though this metaphor sounds too mechanistic to account for what really occurs). If environmental and other educators adopt the emancipatory pedagogy of Freire, which can also be understood as students constructing their own knowledge of natural and cultural processes, they are likely to ignore the importance of providing students an understanding of how past ways of cultural thinking and traditions became part of today's taken-for-granted reality. And in not learning the conceptual means for making explicit this intergenerational knowledge, and how it differs between cultures, the students will be less able to recognize what needs to be renewed and what needs to be reformed or abandoned completely. This seems to be a major misconception that Freire's followers continue to perpetuate: namely, that critical reflection also has the potential of helping students to recognize the empowering traditions that are now under threat by market forces and by ideologues that want to overturn our Constitution and what remains of the democratic process.

The following is a summary of how Freire's ideas contribute directly and indirectly to the enclosure of the cultural and environmental commons:

1. His argument that critical inquiry should be adopted by all cultures as the one-true source of knowledge and humanization is imperialistic; it also marginalizes the importance of learning about the differences in cultural knowledge systems.
2. Freire's emphasis on individuals constructing their own knowledge fails to take account of how the individual (Freire included) gives individualized expression to

- the cultural assumptions that are learned as part of becoming a member of the language community.
3. The goal of continual emancipation fails to take account of the traditions essential to our civil rights and to a sustainable commons that need to be intergenerationally renewed.
 4. Freire's social Darwinian framework contributes to his hubris and that of his followers, and thus to ignoring what can be learned from ecologically-centered cultures.
 5. The form of individual subjectivity that is reinforced by telling students to construct their own knowledge contributes to their lacking the skills and knowledge that would enable them to be less dependent upon consumerism.
 6. Freire's followers exhibit the same friend/enemy approach to criticism that is now a prominent characteristic of market-liberal and Christian fundamentalists. While these latter groups now exploit the democratic process that they have helped to weaken, the followers of Freire remain silent about the need to conserve the traditions that underlie a democratic society, such as separation of church and state, the separation of powers, an independent judiciary, and freedom from seizure and violation of privacy. Both the market-liberals and Christian fundamentalists as well as the followers of Freire claim to be agents of progress, though one of the expressions of progress is down the slippery slope toward an Orwellian/fascist society while the other leads to the nihilism that accompanies anomic individualism.
 7. The language essential to understanding the nature and importance of the cultural and environmental commons is not just relegated to the realm of silence; any one that attempts to use it will be labeled as a reactionary, a rabid anti-Marxist thinker, and even a fascist (Freire's followers have little background in political theory and thus tend to misuse these political labels, just as they mistakenly refer to one of the most transformative forces in human history, that is, the industrial culture, as the expression of conservatism).

The University's Contribution to Supporting a Constructivist View of Learning.

Most professors of education that promote a constructivist view of learning assume that the individual is the basic social unit. As this idea becomes recognized as untenable, some professors of education continue to hold on to the general idea that knowledge is a human construction as opposed to having a divine or non-human origin. They now identify themselves as social constructivists. To support their revisionist brand of constructivism, they identify the Russian linguist, Lev Vygotsky , as well as Peter Berger and Thomas Luckmann, as providing the theoretical basis for holding that knowledge is socially constructed. A careful reading of Vygotsky and the writings of Berger and Luckmann should lead to recognizing that the process of socialization, and the role of language in this process, does not adequately explain the symbolic differences between the intergenerational knowledge of different cultures. Nor do their writings adequately account for the different ways in which knowledge is shared and renewed. If education professors want to argue that knowledge and values are constructed rather than representative of an objective, external, and subjective reality, they should argue that students give individualized interpretations of the shared cultural values and patterns of thinking—with some individualized expressions being more original and cultural changing than others. In effect, they can make an argument that is supported by evidence from different cultures that students participate in the cultural construction and renewal of knowledge—with some students even becoming a reactionary force that clings to the misconceptions that traditions do not change. For a fuller account of the cultural construction of knowledge I suggest that the reader look at chapters 3 of The False Promises of Constructivist Theories of Learning.

There are a number of ways in which universities reinforce something half-way between the idea that students construct their own knowledge (or are at least responsible for what they originate and for acknowledging what is borrowed from others) and an awareness that what people take to be “reality” reflects a social consensus that changes over time. Both view contribute to the widespread sense of moral relativism—and to a form of individualism that is competitive and self-centered. This is the form of individualism that moves easily from being in the university classroom to being an ardent supporters of market-liberal domestic and foreign policies.

As I pointed out in The Culture of Denial (1997), most university courses reinforce the idea that with further education student's possess the potential to become autonomous thinkers. This misconception is further reinforced by a shared silence on the part of faculty that language is not really a conduit through which objective ideas and objective information is passed between individual thinkers. An additional source of reinforcement of the idea of individual autonomy is the emphasis on the authority of the printed word over the supposedly subjectively unreliable nature of the spoken word. Computer mediated learning further reinforces the idea of being an autonomous individual that makes a continual series of subjective choices about the possibilities to be explored on the internet. And then there is the influence of science that professors in other disciplines want to emulate by emphasizing the importance of data and objective knowledge—which has the effect of further marginalizing an awareness of the influence of culture on the individual's thinking and behavior. Even the professor's professors, including their professors that go back even further in time, are part of the cultural ecology that influences the silences and cultural assumptions that influence the students' ways of thinking. One of these intergenerational silences is the source of the ethnocentrism that is so widespread within the various academic disciplines. The perpetuation of the conduit view of language is also the result of this intergenerational silence, as well as the lack of awareness of the cultural and environmental commons.

The professors in areas other than educational studies and teacher education also reinforce a constructivist view of learning; but they is seldom buttressed it by relying upon the theories of Dewey, Freire, Piaget, or even the romantic accounts of progressive education classrooms. What the university curriculum represents as high-status knowledge, as well as what it represents as low-status by virtue of being left out of the curriculum (except in low-status courses such as folk studies) influences how students will think about the forms and approaches to knowledge that are empowering. The irony is that even though the everyday life of both students and professors involves participating in the various forms of learning that are part of the cultural commons, few are able to recognize the many ways in which they participate in the intergenerational knowledge of the household and local community. It is simply taken-for-granted. In addition, the common expressions such as the use of personal pronouns--“I think,” “I

want,” and “what do you want?” and so on-- continually reinforce the misconception that knowledge is acquired or constructed through the mental activity of the individual. And this Cartesian tendency to identify knowledge with thinking about an external world, which has also been influenced by other philosophers who argued that direct experience rather than traditions were the basis of ideas, creates a special problem for classroom teachers and professors that are attempting to introduce students to the nature and importance of the local cultural and environmental commons.

Pedagogical Implications of a Culturally-Grounded Understanding of Learning.

One of the consequences of being indoctrinated into the mythologies that surround the high-status knowledge promoted by universities, and reinforced in public schools, is the tendency to give ideas and procedures that are derived from abstract theory more credibility than what can be learned from careful observation of the cultural patterns that are reenacted in everyday life. The theories of Dewey, Freire, Piaget, as well as that of professors that are driven more by a combination of romantic and superficially understood theory, is that constructivist theories based on the idea that either the individual and immediate social group construct their own knowledge simply are not valid. Students taking the professional courses for becoming a teacher learn their theories, along with their ethnocentric silences (which is not corrected by the emphasis on multiculturalism) and then find themselves engaged in the multiple processes of communication and learning that are part of the local cultures. The theories they learn in their professional classes contribute to the silences and the prejudices that teachers consciously and unconsciously promote in the classroom. Most professors do the same in terms of reproducing the deep cultural assumptions and silences of the professors they studied under, and it is these liberal assumptions that reinforces the myth that students are at various stages of becoming autonomous and original thinkers.

The reality of every student/teacher relationship, including relationships between students and what is mediated through computer-based education, is that they are participants in multiple languaging processes. These include the culturally prescribed patterns of metacommunication that are so critical in terms of framing relationships and reinforcing the taken-for-granted prejudices that reflect gender, class, and racial differences. These languaging processes include the metaphorically layered language that

is both read and spoken—and that makes up both the formal and informal curriculum. Some of the students may be from cultures that place high value on family and cultural traditions, while others will be oriented to acquiring whatever is new and fashionable. There will be differences in religious backgrounds as well as daily experiences that are filtered through class, gender, and racial lenses. Their defining narratives will differ, as well as their more subjective expectations of what the future holds for them. And as the students move through the grade levels, and on into some form of higher education, they will encounter the same range of variation among the faculty—as well as a number of commonalities.

These differences influence that vocabulary that is privileged, as well as the analogies and theories they will be exposed to—often at a stage when they lack the conceptual background necessary for recognizing misconceptions and ideologically driven explanations. My own study of Western philosophy, at both the undergraduate and graduate level was representative of this process. The professors teaching the courses on Plato and Aristotle, as well as the ideas of Descartes, Hume, and Dewey—to cite just a few, did not mention the cultural commons; nor did they encourage their students to examine how these philosophers contributed to a form of consciousness that took-for-granted the human exploitation of the environment and the colonization of non-Western cultures. Looking back on my own early education, it is now easy to recognize how the limited thinking of my professors was a form of indoctrination, and not the high-status, rationally-based knowledge that they claimed it to be.

If a single reason has to be identified as to why the non-culturally grounded theories of learning of Dewey, Freire, and the other constructivist don't work it is that the languaging process connected with the print and verbal discourse carry forward in the different forms of metaphorical thinking which represented the form of intelligence (and unintelligence) of past generations. What was discussed earlier in chapters two and three needs to be taken into account here, including the earlier argument that different cultures are based on different mythopoetic narratives—or what I am referring to as root metaphors that provide the basic interpretative framework or frameworks of the culture. As both teachers and students think within the conceptual categories of their culture, with only minor variations in interpretation and in what will be made explicit and what will be

left implicit, there is no possibility of escaping the taken-for-granted traditions (habits) that Dewey thought were divorced from any active form of intelligence, and that Freire assumed could be transformed through critical inquiry..

If we start with a culturally-informed pedagogy and approach to curriculum, we find that there are many different approaches to both teaching and learning. Common sense dictates that group learning, individual inquiry, embodied learning, student observations, listening to narratives, and so forth, are forms of learning found in most cultures. Mentoring is also a source of learning that is carried on in both Western and non-Western cultures—and it can occur in a variety of areas of cultural life ranging from the arts, craft knowledge and skill, to learning the medicinal knowledge of plants, and to playing games, and so forth. All of these approaches to learning should be part of helping students to understand and to participate in the local cultural commons. Each of these approaches to learning, and they often involve more than one approach at a time, should be determined by the cultural context.

The taken-for-granted nature of most of the students' and teachers' cultural knowledge, as well as the continual process of cultural reproduction that accompanies the use of the different languages of the culture suggest that there is a special set of responsibilities that will set teachers and professors off from the other sources of learning in the community. That is, their role is that of mediators rather than that of indoctrinators, as in the case of the ideologically-driven interpretation of the constructivist teachers whose mission is to change the world that they largely misunderstand because of their reliance on pre-ecological states of awareness. The idea of a mediator suggests that there are different ways of thinking, different forces that are pulling cultures in different directions, and different ways of confronting the challenges of an expanding world population in a time of a rapidly degraded environment. These rather abstract ways of representing the differences as well as commonalities within and between cultures, and within ecosystems, can be understood in more concrete terms if we recall the earlier discussion of how ecojustice and renewal of the cultural and environmental commons could be introduced into the all areas of the public school and university curricula.

Recent announcements by scientists that the rapid rate of global warming, particularly its impact on the two polar ice shields and the glaciers covering most of

Greenland, may be within a decade of reaching a tipping point where changes in human activities will not be able to reverse or even slow down the increasing rate of global warming brings us back to considering the importance of the principles of ecojustice that should be a guide for educational reformers. To recall, the achievement of greater ecojustice involves initiating cultural changes that reduce environmental racism, that limit the exploitation of the resources and cultural colonization of non-Western cultures, that renew the cultural and environmental commons as alternatives to the further expansion of a money-based, consumer culture, that ensures that prospects of future generations are not diminished by the current generations destruction of the environment, and that non-human forms of life be understood as having rights within the larger ecosystems of which they are apart. The part of this ecojustice agenda that is critical to the achievement of the other five guiding principles is the one that focuses on the need to strengthen the cultural and environmental commons of local communities as a way of limiting, and hopefully reversing, the further expansion of the industrial/consumer dependent culture that is now spreading around the world. Recognizing the double bind in continuing to think of progress in terms of expanding markets and colonizing more of the world's cultures to adopt a consumer-dependent lifestyle suggests the larger conceptual, moral, and political framework that should guide the classroom and university professor's mediating role.

The extent of the ecological crises, which is partly attributable to the global impact of the high-status forms of knowledge promoted in Western universities, strongly suggests that teaching as a process of mediation needs to extend across university disciplines. The consensus within the various disciplines, unless it is based on an understanding of the cultural practices and beliefs that are contributing to the growing ecological crisis (which even the evangelical Christians now recognize) should no longer be passed onto the next generation as knowledge that can be relied upon for contributing to a sustainable future. It needs to be examined in terms of what contributes to meeting the principles of ecojustice—and this means, in part, what contributes to living less consumer dependent lives. This process of examining the assumptions underlying the consensus knowledge, and even the efforts as radical revisions that seldom address

environmental issues, is one of mediation—especially if the sustaining characteristics of the local cultural and environmental commons are being considered.

Teaching as a Process of Mediating

A point reiterated in earlier chapters is that the globalization of the West's industrial, consumer-dependent culture (which is now being vigorously promoted in China and India) is a major contributor to the enclosure of the world's diverse cultural and environmental commons—and thus is a major contributor to the global warming, the acidification of the world's oceans, and to the other dimensions of ecological crises. The curriculum reforms suggested earlier where the practices of the local cultural commons are examined in terms of their ability to enable people to live less money-dependent and thus more mutually supportive lives involves a mediating form of education which requires the teachers and professors that possess a historical as well as other background knowledge of the industrial culture. The achievements of the West's industrial culture, including the science it is based upon, simply cannot be rejected out of hand. Rather, the process of mediating between the local commons and the achievements as well as the destructive nature of the industrial culture needs to involve the same critical reflection that should be part of any discussion of the culture's traditions: namely, what needs to be conserved because it contributes to living less environmentally destructive and more morally coherent community-centered lives. In terms of the science, technology, and market-based industrial culture, the question that need to be asked is What are the genuine contributions of the industrial culture and what needs to be abandoned as destructive of the intergenerational knowledge essential to the well-being of different cultures and to their prospects for living sustainable lives. This process of mediating between the local and the global nature of the industrial culture strengthens the basis of local democratic decision-making. If members of the community are not aware of the traditions that are sources of mutual self-sufficiency and civil society they will not be aware of when they are being enclosed by the increasingly centralized power of a market controlled political system. The loss of privacy as well as the control that the World Trade Organization now exercises over local decision making are just two examples of the failure of local democracy.

As the new technologies are major factors in creating a globally connected economy, the process of mediating (that is, clarifying) the differences between the cultural and environmental commons become critically important. As the industrial culture is forcing more of the world's people to become dependent upon a money economy, it is important that the impact of this hegemonic culture on non-Western cultures be understood. The process of mediating between how students understand the impact of the West's industrial culture, and the different expressions of local resistance is important for a number of reasons. First, there are the moral issues connected with how our hyper-consumer dependent lifestyle contributes to the destruction of the habitat of other cultures, such as the toxins from mining operations that poison the local water supply, the changes in weather patterns that contribute to droughts, and the way in which international trade agreements privilege the industrial countries at the expense of local farmers and producers. Second, the moral issues relate directly to the political and economic issues connected with the migration of large populations from areas where a decent living can no longer be achieved. Third, turning environments that could at least provide for a subsistence living into waste lands is problematic for reasons having to do with how natural systems are interconnected.

The destruction of habitats are not just isolated situations, but have an impact on the living systems that are interdependent with neighboring systems. It's an interconnected world of ecosystems and cultures, and developing an ecological form of consciousness, which will differ from culture to culture, requires a process of education where questions can be asked, comparisons made, silences made explicit, and where different practices and values can be assessed in light of a world situation where progress can no longer be taken for granted. And the role of the teacher and professor as a mediator is to help students understand how their own taken-for-granted culture is influenced by the many ways in which the industrial culture is enclosing more aspects of their daily lives. This process of mediating between the traditions of the industrial culture and the traditions of the local cultural and environmental commons that are part of the students' taken-for-granted experience should also involve identifying both the genuine contributions of the industrial culture, including the more recent efforts to develop more

ecologically responsible technologies, and the new forms of dependency that are being created.

The process of mediating between traditions and innovations, between Western and non-Western patterns of thinking and living, between the silences and the explicit knowledge, between science and scientism, between a consumer dependent culture and cultures that have achieved a sustainable balance between market and non-market activities, and between local democratic decision-making and the economic and ideological forces behind globalization, seems better suited to where we are in terms of the uncertainties that are now introduced by the stage of ecological change that the world is now undergoing. There are a few certainties that now must be recognized. These include the impossibility of reversing the changes that are now taking place in the world's oceans, climate, and diversity of species and viable habitats. Another certainty is that if we do not reduce our dependence upon consumerism and the exploitation of the environment that the prospects of our own as well as future generations will be severely diminished. And a third certainty is the destruction of the cultural commons that enabled people in many cultures to live less money dependent lives will lead both to more poverty and to social unrest—and thus to increasing cycles of repression and warfare as the hegemonic cultures attempt to retain their wealth and power. And a fourth certainty, given the nearly forty percent of the American public that supports the efforts of market-liberal and Christian fundamentalists to dismantle what remains of our democratic institutions, is that the disruptions caused by environmental and economic changes will lead people to seek an authoritarian government that can enforce order on an increasingly chaotic society and world.

These certainties should prompt classroom teachers and university professors to take seriously their role as mediators in an era when the cultural assumptions that held out the promise of unending progress are now being challenged on so many fronts. What is less certain is whether public school teachers and university professors will recognize the threats that lie ahead, and will be able to re-educate themselves and others in how to live within in a post-industrial world of diverse cultural commons. As I have pointed out elsewhere, the more likely response will be to pursue the traditional areas of inquiry dictated by the academic discipline and to pursue individual areas of inquiry that will lead

to professional advancement within the department and field. And this will lead to yet another certainty: namely, that the most highly educated segment of our society will have failed to ensure the prospects of future generations and to help reduce the spread of poverty and misery of billions of people that are now being directly affected by the environmental changes that our lifestyle has contributed to.

For classroom teachers and professors that refuse to continue in a state of denial about the short and long-term implications of the ecological crises, as well as the crisis of an increasingly money-dependent lifestyle, there are the practical questions of how to introduce students at different levels of the educational process to an understanding of the cultural and environmental commons that need to be revitalized—as well as to the cultural forces that are undermining them. This task cannot be reduced in formulaic fashion by the creation of curriculum guides that are to be used on a national basis. The differences in local cultural and environmental commons rule this out. The conceptual differences in what each classroom teacher and university professor will bring to the framing and discussion of the commons and enclosure issues is also a potential source of miseducation—especially, when they lack an in-depth knowledge of both the local commons and the many ways in which the industrial culture engages in the process of integrating the commons into a money economy. However, if the following guidelines are followed, the problem of imposing the form of consciousness that contributed to the expansion of the industrial culture at the expense of the cultural and environmental commons can be reduced. That is, the following guidelines will help to develop the vocabulary and understanding of relationships that students need to acquire if they are contribute to reversing the slippery slope we are now on.

These include: (1) Developing the language and an understanding of the ecology of interactive relationships by naming the cultural patterns that otherwise would remain as part of the students' taken-for-granted experience of the cultural commons. Feminists demonstrated the importance of naming the cultural patterns that were based on age-old prejudices that were taken-for-granted by even the most educated segments of society. Naming the patterns brought them out of the collective silence and made them the focus of the public discourse on what constituted social justice. Helping students to recognize the difference between what they experience in terms of cultural patterns when they

participate in oral forms of communication and when communication is based on print, such as books and through the computer. Naming the differences between the experience of a meal shared with the family and an industrially prepared meal, between participating or having a consumer relationship with one of the arts, between practicing a craft and having to purchase a ready made object, between experiencing the open country side and seeing giant bill boards along the highway, between work that is returned as part of a mutually supportive community activity and work that is required in order to acquire money, between the experience of privacy and knowing that all personal activities are now under surveillance by corporations and the government, and so on--- provides the students with the language necessary for communicative competence for questioning what forms of enclosure need to be resisted. (2) The mediating role of the classroom teacher and university professor should assist students in understanding the relationships between various aspects of the cultural and environmental commons that are being enclosed for the purpose of profits and how the process of enclosure contributes to the further degradation of natural systems and to creating a greater dependence upon a money economy. (3) The classroom teacher and university professor (depending upon grade level) must be prepared to provide an historical understanding of the development of the cultural commons, an accurate representation of the natural systems that existed before they were impacted by various cultural forms of enclosure, as well as the scientific, technological, and ideological developments that gave rise to the industrial culture as we know it today.

As the individual's everyday experience of the cultural commons and the industrial culture are seldom entirely separate, the mediating role should discourage categorical thinking whereby what is purchased is always viewed as destructive of the cultural and environmental commons. What the students' need to learn is how to recognize the technologies and systems of production that contribute to the general well-being of the community, and those that deskill, impoverish, and degrade both the community and the environment. This same process of clarification should also extend to understanding the ideological and religious traditions that inhibit the achievement of ecojustice within the local community and in the larger world—and that now threaten what remains of our civil rights and democratic institutions. (4) Whenever possible, the

process of learning about the renewal of the cultural and environmental commons, as well as the various forms of enclosure, should be in the context of community participation—with mentors, with others involved in mutual support activities, and with political activists that are engaged in democratic forms of resistance.

If these general guidelines are followed, the biases and silences that were part of the education of classroom teachers and university professors will have less of a detrimental impact. It is when the learning process is mediated primarily through the printed word or other forms of abstract representation (and teacher/professor-talk is usually lacking in terms of the local context) that indoctrination takes place. By making the description of experiences that are generally not made explicit (that is, not named and not analyzed) the starting point, the process of learning and teaching become more mutual and less of a sender/receiver relationship.

As global warming accelerates, and as the sources of protein and potable water continue to decline, it will be necessary for teachers and professors continually to remind themselves that the high-status knowledge that have gotten us into this situation must not be imposed on the next generation. It will also be necessary for teachers and professors to continually remind themselves that the road to a post-industrial future can be traced back to the beginning of human history. The challenge today is to recognize a point Herman Daly made about the inability of natural systems to survive unlimited economic growth. His other point that has particular relevance for understanding the future possibilities of the world's diverse cultural commons is that the symbolic systems (the arts, narratives, face-to-face relationships) can be expanded indefinitely without destroying the natural systems we depend upon.

Afterword: An Example of Linguistic Complicity: How the Formulaic Thinking of George Lakoff Supports the Market Liberal's Agenda of Enclosing What Remains of the Commons

If you are concerned about conserving species and habitats, conserving what remains of the local cultural commons and the intergenerational knowledge it is based upon, and conserving such traditions as an independent judiciary, separation of church and state, and the separation of power between the three branches of government, it is important that you do not take George Lakoff as an authority on how to control the frame governing political debates. His best selling book, Don't Think of an Elephant: Know Your Values and Frame the Debate (2004), is an outstanding example of how authors often ignore the advice they want others to follow. Many of his insights about how right-wing extremists have succeeded in becoming the dominant force in American politics are essentially correct—including their long-term approach to establishing the institutes that serve as the incubators for formulating market-liberal policies, and the strategies for achieving them.

However, he ignores his own advice on the more critical issue of using the word “progressive” as the primary metaphor for carrying the fight to the “conservatives”. That is, by ignoring that the right wing extremists are actually a coalition of market-liberal and Christian fundamentalists, he has accepted their take-over (framing) of the word conservative. At the same time, he ignores that a number of the cultural assumptions that underlie what he represents as a progressive, nurturing approach to politics are also the same assumptions that underlie the industrial, consumer-oriented culture that the market-liberals want to expand on a global basis. What is particularly surprising is that the examples of conservative beliefs and values that Lakoff cites turn out to be the core features of the free-market system. He cites Adam Smith's principle of laissez-faire as one of the conceptual and moral foundations of the conservatives—but this did not lead Lakoff to question whether the policies based on the ideas of Classical Liberal theorists such as Adam Smith should be labeled as conservative. Ironically, the institutes that he mentions, such as the CATO and the American Enterprise Institutes, have posted

statements on their websites that their political philosophy should not be identified as conservative as that “smacks of an unwillingness to change”—as it is noted on the CATO website. Both institutes claim that they promote free markets and a diminished role for government. On an earlier CATO website posting titled “About Us” the point was made that only in America are people so uninformed that they identify the institute with a conservative agenda.

If Lakoff possessed a more historical understanding of the layered nature of metaphorical thinking, he might have realized that the same root metaphors of individualism, anthropocentrism, and progress as an inherent characteristic of change (along with the hubris of an ethnocentric way of thinking) that support his use of “progressive” as his legitimating metaphor are also taken-for-granted by the market-liberals. By directing his fire against what he thinks conservatism stands for, he forces the environmentalists and social justice advocates to identify themselves as progressive thinkers—even though there is nothing as progressive in terms of undermining important traditions (such as privacy, non-monetized relationships and activities) as the constant stream of technological innovations and the efforts to turn more of the cultural commons into the markets of an ever-expanding industrial/consumer-dependent culture.

Lakoff’s metaphor of the “strict father figure” cannot be traced back to the ideas of intergenerational responsibility that is at the center of Edmund Burke’s conservatism, now can it be found in the writings of such environmental conservatives as Wendell Berry and Vandana Shiva. If Lakoff had done his homework he would have found that the image of the “strict father figure”, as well as the idea that the rich should receive further rewards while the poor deserve to suffer further impoverishment, has its roots in the fundamentalist Christians’ understanding of a wrathful God. Deuteronomy 28 provides the analog for understanding the God/human as well as the rich/poor relationships that the fundamentalist Christians take-for-granted. The reductionist and dichotomous pattern of thinking that characterizes the fundamentalist Christians’ approach to such policy issues as gay marriage, reproductive rights of women, and the teaching of “intelligent design” can also be found in their claim to know the will of God—and to being God’s regents until the Second Coming.

If one follows current political events it should be abundantly clear that both market-liberal and Christian fundamentalists are working together to overturn the traditions of the separation of church and state, an independent judiciary, and the separation of powers between the three branches of government. They are making progress, to use Lakoff's favorite metaphor, in undermining the gains made over the last decades in the areas of social justice and, more recently, in environmental protection. Returning the economy to a free-market system that is governed by the supposed natural law of supply and demand, and winning more converts that declare Jesus Christ as their personal savior, is the "progressive" agenda of these two groups. If Lakoff had given attention to the actual political agenda of these two groups, it might have occurred to him to ask "What is it that the market-liberal and Christian fundamentalists want to conserve?"

Reactionary is not part of Lakoff's political vocabulary. Instead of referring to market-liberals and fundamentalists Christians as conservatives when, in fact, today's market-liberals want to go back to the Truths held several hundred years ago, and today's fundamentalist Christians want to go back to the Truths held several thousand years ago, he should have used the more accurate label of "reactionary." The fundamental difference between a conservative and a reactionary thinker is highlighted in the speech that Supreme Court Justice Antonin Scalia gave at the University of Chicago in 2002. In a speech titled "God's Justice and Ours," he acknowledged that he did not subscribe to "the conventional fallacy that the Constitution is a 'living document'—that is, a text that means from age to age whatever society (or perhaps the Courts) think it ought to mean." In effect, Scalia is claiming that the political consensus reached over the last two hundred or so years on social justice issues should not be conserved. Rather, the achievements of the democratic process must be rejected in favor of using the "original intent" of the men who wrote the Constitution as the guide for judging which laws are appropriate for the country to live by. The analog for understanding what reactionary means is the person such as Scalia that wants to go back to the "Truths" of an earlier time and thus claim that the achievements in recent years have no significance. A conservative in the Burkean tradition would want to conserve the political achievements of the recent past—including, within our historical context, the democratic process itself. Journalists and media pundits commit the same error that underlies Lakoff's context-free

use of the conservative metaphor by referring to Scalia as a conservative when it would be more accurate, in light of his ideas, to refer to him as a “reactionary extremist.” That is, he wants to force the nation to go back to an earlier way of thinking—one that could not anticipate the issues we now face. Lakoff’s use of conservative is context-free as he does not ask what the people he labels as conservative want to conserve.

There are a number of possible reasons that Lakoff reproduces the formulaic thinking that reduces our political categories to that of conservative and liberal. One plausible explanation is that he wants to ground the theory of metaphor as a branch of cognitive science, which leads him to argue that repetition in the use of preferred metaphors alters the synapses in the brain. As all languages illuminate and hide, which is an aspect of the process of framing which interpretative system is to be used, Lakoff’s scientific orientation marginalizes the importance of understanding the historical nature of how root metaphors (the meta-cognitive schemata) frame the process of thinking over hundreds, even thousands of years—and over a wide range of cultural practices. Examples of root metaphors in the West include mechanism, individualism, patriarchy, progress, anthropocentrism, and, now, evolution. The root metaphors of patriarchy and anthropocentrism (both still held by the market-liberal, fundamentalist Christian coalition) are being challenged by social justice advocates, while “ecology” is beginning to be used as a root metaphor by people concerned with conserving the environmental and the cultural commons.

If Lakoff had adopted an historical perspective on how metaphors carry forward over many generations the analogs that made sense before there was an awareness of environmental limits, and before the various forms of social inequalities were challenged, he might have avoided creating the linguistic double bind that he now wants to saddle social justice and environmental advocates with. That is, his use of “progressive” as the label for many groups, such as environmentalists and civil libertarians, precludes using the vocabulary that foregrounds the real political issues that are on the verge of being decided by the market-liberal and Christian fundamentalists’ understanding of what constitutes progress. Referring to progressive civil libertarians suggests that they are oriented toward change. This frame hides what they are really about, which is conserving the liberties and protections that the Constitution guarantees. Instead of using “progress”

as a context-free metaphor (that is, as metaphor that has no historically-grounded analogs) that market-liberals have a history of identifying with, Lakoff should have used social and eco-justice as his umbrella (root) metaphors. Civil libertarians are concerned with using the law to achieve social justice; while environmentalists are concerned with eco-justice (that is, conserving the cultural and environmental commons for future generations of humans and natural systems). Tagging environmentalists with the same context-free metaphor that the timber industry uses to justify cutting what remains of the old growth forests, and that corporations use to describe their special relationship with the Bush administration that allows them to help roll-back environmental legislation, is equally problematic.

Lakoff's insights into the connection between language (essentially vocabulary and the root metaphors that provide the interpretative framework) and communicative competence in the political realm is basically correct. His mistake, which he shares with most journalists, media pundits, along with other university graduates that should know better, is in not recognizing the many ways the different expressions of conservatism are an inescapable aspect of everyday life. These include temperamental conservatism which we all share in various ways: the food, conversations, friends, place-based experiences, degree of privacy, and so on, that we are comfortable with. This form of conservatism has no specific ideological orientation—but it is a form of conservatism shared even by ideologues that ignore their own experiences in rejecting all forms of conservatism. In speaking and thinking within the language of our cultural group, we carry forward (conserve) the taken-for-granted patterns of the culture's multiple forms of communication. Depending upon the culture, these taken-for-granted patterns may be given individualized expression, with some of the patterns being made explicit in ways that lead to reform or to conscious efforts at conserving them. There is also the misnamed "conservatism" that is based on the free-market, progress-oriented ideology promoted by the CATO and American Enterprise Institutes that emphasize the autonomous individual as the basic unit of rational decision-making and social change. And there is a long-standing tradition of philosophic conservatism that began with Burke, and has included critics of de-humanizing technology such as Michael Oakeshott. In America, philosophic conservatives presented the cautionary warnings that led to a

system of indirect democracy, checks and balances, separation of church and state. As environmental conservatives such as Wendell Berry and Aldo Leopold have appeared on the scene more recently, their writings can also be legitimately included in the category of philosophical conservatism. However, the oldest form of conservatism that needs to be revitalized is the conserving of the non-monetized intergenerational knowledge, skills, and activities that enabled people to live more mutually supportive and less money dependent lives.

Lakoff's limited political vocabulary not only misrepresents who his label of conservative is supposed to fit, but it also leads to a continuation of the intellectual poverty that now characterizes today's political discourse. Most university professors share Lakoff's formulaic misuse of the term conservative, which they use as the label for President George W. Bush's domestic and foreign policies, fundamentalist Christians, Supreme Court justices such as Scalia and Thomas, and the efforts of most corporations to promote the globalization of the West's industrial, consumer-dependent culture. A consequence of this formulaic thinking is that few university professors take seriously the need for university graduates to have a knowledge of the history of political thought in the West.

The cultural root metaphors of mechanism, individualism, progress, anthropocentrism, as well as the ethnocentrism that frames so much of the content of university courses, contributes to why so many graduates make what appears as the seamless transition from the classroom to working for the market-liberal goals of the Bush administration. Without this historical knowledge of what separates the tradition of philosophic conservatism from the thinking of classical liberalism, many self-labeled "conservative" students on university campuses are unaware that their ideas are derived from the classical liberal thinkers, plus more contemporary libertarian theorists. And many of the professors that continue to misrepresent what today's faux conservatives stand for fail to recognize that their liberalism shares many of the assumptions that underlie the industrial culture they criticize for the social and environmental injustices they perpetuate.

In light of the scale of environmental changes that are now impacting people's lives, what universities should be helping students to understand is the nature and

importance of revitalizing what remains of the cultural and environmental commons—for reasons that have to do with learning how to live more community-centered and less money dependent lives, with reducing our ecological foot-print by becoming less dependent upon industrial foods, health care, leisure activities, and so on, and with ensuring that the diversity of the world's cultural commons (including the diversity of cultural languages) are not further diminished. The potential of the world's diverse cultural commons to become sites of resistance to the further expansion of economic globalization is not learned in most universities. The importance of the cultural commons as alternatives to the very real possibility of ecological collapse that Jared Diamond writes about will continue to be marginalized by the way Lakoff reinforces the formulaic thinking of most university professors. The irony is that both the mislabeled conservatives and the self-identified liberals (again a form of mislabeling) possess the liberal vocabulary that came into existence before there was an awareness of environmental limits, and that there are different cultural ways of knowing. A further irony is that their shared liberal vocabulary, where the emphasis is placed either on the metaphors that justify expanding markets and profits or on addressing unresolved social justice issues that prevent people from participating more fully in a market economy, has been used in the past to further undermine the cultural commons with a consumer-dependent existence.

References

- Achebe, Chinua. 1959. Things Fall Apart. New York: Astor-honor.
- Bateson, Gregory. 1972. Steps to an Ecology of Mind. New York: Ballantine Books.
- Berry, Wendell. 1983. Standing By Words. San Francisco: North Point Press.
- _____. 1986 edition. The Unsettling of America: Culture and Agriculture.
San Francisco. Sierra Club Books.
- Bowers, C. A. 1997. The Culture of Denial: Why the Environmental Movement Needs a Strategy for Reforming Universities and Public Schools. Albany, N.Y.: State University of New York Press.
- _____. 2005. The False Promises of Constructivist Theories of Learning: A Global and Ecological Critique. New York: Peter Lang.
- Bowers, C. A. and Frederique Apffel-Marglin (editors). 2005. Rethinking Freire: Globalization and the Environmental Crisis. Mahwah, N.J. Lawrence Erlbaum.
- Burke, Edmund. 1962 edition. Reflections on the Revolution in France. Chicago: Gateway Editions.
- Crick, Francis. 1994. The Astonishing Hypothesis: The Scientific Search for the Soul. New York: Charles Scribner's Sons.
- Dewey, John. 1916. Democracy and Education. New York: Macmillan.
- _____. 1957 edition. Reconstruction in Philosophy. Boston: Beacon Press.
- _____. 1960 edition. The Quest for Certainty. New York: Capricorn Books.
- Ellul, Jacques. 1964. The Technological Society. New York: Vintage Books.
- Freire, Paulo. 1974 edition. Pedagogy of the Oppressed. New York: Seabury Press.
- _____. 1973. Education for Critical Consciousness. New York: Seabury Press.
- Ford, Marcus. 2002. Beyond the Modern University: Toward a Constructive Postmodern University. Westport, Connecticut: Praeger.
- Gadotti, Moacir. 2002. "Pedagogy of the Earth and Culture of Sustainability". Sao Paulo: Instituto Paulo Freire.
- Gilder, George. 1981. Wealth and Poverty. New York: Basic Books.
- Havelock, Eric. 1986. The Muse Learns to Write: Reflections on Orality and Literacy from Antiquity to the Present. New Haven: Yale University Press.

- Lakoff, George. 2004. Don't Think of an Elephant: Know Your Values and Frame the Debate. White River Junction: Chelsea Green Publishing.
- MacIntyre, Alasdair. 1984. After Virtue: A Study in Moral Theory. Notre Dame, IN.: University of Notre Dame Press.
- Martausewicz, Rebecca, and Jeff Edmundson. 2005. "Social Foundations as Pedagogies of Responsibility and Eco-Ethical Commitment." In Teaching Social Foundations of Education: Contexts, Theories, and Issues. Edited by Dan W. Butin. Mahwah, N.J.: Lawrence Erlbaum.
- Nash, Roderick. 1989. The Rights of Nature: A History of Environmental Ethics. Madison: University of Wisconsin Press.
- Novak, Michael. 1982. The Spirit of Democratic Capitalism. New York: Simon & Schuster.
- Putnam, Robert. 1993. Making Democracy Work: Civic Traditions in Modern Italy. Princeton, N. J.: Princeton University Press.
- Sagan, Carl. 1997. The Demon Haunted World: Science as a Candle in the Darkness. London: Headline Book Publishing.
- Van Der Ryn, Sim, and Stuart Cowan. 1996. Ecological Design. Washington, D.C.: Island Press
- Wilson, Edward O. 1998. Consilience: The Unity of Knowledge. New York: Alfred A. Knopf.

