

Toward an Ecologically Informed Paradigm for Thinking About Educational Reforms

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Abstract:

We are now at a turning point where the political language relied upon for promoting social justice and economic progress over the last five hundred years now prevents us from recognizing the cultural roots of the ecological crisis. The Classical Liberal theorist could not have anticipated that the economic forces their ideas unleashed would now become a major contributor to changing the chemistry of the world's oceans, to spreading toxic chemicals across the land, and to creating an individually centered lifestyle dependent upon consumerism. Nor could they anticipate a world population moving toward ten billion people who are faced with radically diminished resources. This article makes the case that the limitations of liberal thinking—its ethnocentrism to which is given only lip service, its failure to recognize that the ecological crisis is also a crisis in cultural ways of knowing, and its failure to recognize the deep cultural assumptions it shares with the market liberals and libertarians—should now give way to an ecological paradigm as the basis for thinking about educational reforms. The ecological paradigm informed by the thinking of Gregory Bateson avoids the ethnocentrism of both social justice and market liberals, human-centeredness, the myth of the individual's intellectual autonomy, and the authority of print-based abstract thinking. In their place, the ecological paradigm brings into focus interdependent relationships, how language carries forward the misconceptions of earlier eras, and an awareness that the diversity of the world's cultural commons represent alternatives to the environmentally destructive consumer culture that is now being globalized—ironically, in the name of progress.

The False Promises from the Past that Undermine a Sustainable Future

The use of words and phrases such as “individualism”, “empowerment”, “transformative learning”, “critical pedagogy” and so forth, are intended to signal to readers that they are about to encounter the latest thinking of a liberal educational reformer. Unfortunately, this vocabulary, along with its underlying deep cultural assumptions that exclude other vocabularies is better suited to clarifying the life-threatening challenges we now face, is still in the grip of centuries-old ways of thinking. Writing on the influences of

liberalism on educational policies, practices, and discourse requires acknowledging that there are two traditions of liberalism: the liberalism focused on social justice issues and the neo or what I prefer to refer to as the market liberalism that is focused on economic globalization and maximizing profits for the few at the expense of the environment and the many. Both traditions of liberalism share many of the same deep cultural assumptions. The assumptions they share in common—that rational/critical thinking leads to a linear form of progress, that this is a human-centered world, that the individual is the basic social unit and source of intelligence, that traditions must be overturned in order to free the forces of innovation and individual emancipation, that technologies are both culturally neutral and the expression of progress, and that these assumptions should be the basis for promoting on a global scale the West's approach to social justice and economic development. That the latter is often in conflict with the former is ignored in the same way that the western thinkers who laid the conceptual basis for these assumptions also ignored their ethnocentric biases.

John Locke's epistemology marginalized the importance of traditional knowledge and established the conceptual basis for the ownership of private property (including as much as the individual could acquire). His ethnocentric and abstract thinking was matched by the ethnocentrism and abstract thinking of Adam Smith (who wrote the important yet neglected *A Preface to Moral Sentiments*), as well as the thinking of John Stuart Mill, and more recently John Dewey and Paulo Freire. They also shared other core assumptions still in vogue among both social justice and market liberals—assumptions that demonstrate how different genres of liberalism are still in the grip of a past that was unaware of environmental limits. Then and now references to the need for critical thinking to focus on what needs to be conserved as well as changed are still missing. What has become part of the litany of liberal educators is promoting the students' ability to engage in critical thinking in order to change the world—as if scientists, technocrats, and market liberal politicians are not changing the world fast enough. Critical thinking and transformative learning are now the mantra of the liberal educators guiding UNESCO's project of promoting sustainability thinking in teacher education programs around the world—which is yet another example of ethnocentric thinking. To fully understand this criticism, one needs to recognize the diverse cultural traditions that strengthen community, have a smaller ecological footprint, and have enabled people to live largely non-monetized lives.

One of the problems is that the word “liberalism” is a context-free metaphor. That is, it is the outcome of abstract thinking that has become disengaged from the historical experiences that shaped its earliest social justice priorities. Thus, Ayn Rand’s idea that individuals should recognize and live by a rationally based ethic of selfishness and that capitalism represents the economic system that best allows a lifestyle of selfishness to be fully realized. Her brand of liberalism holds that altruism and government regulations undermine both the basic rights of the individual and social progress. She also promoted critical thinking as essential to recognizing how governmental efforts to provide a safety need for the disadvantaged is a violation of the individual’s basic right to fail. Today’s Tea Party activists are relying upon another liberal idea that has been widely promoted by educational reformers: namely, that individuals should construct their own knowledge and values. Scientific facts, knowledge that has been revised over generations of experience and varies from culture to culture, are to be ignored in favor of the individual’s subjective decisions. Underlying the thinking of social justice liberals, market liberals, libertarians, Tea Party activists, and the followers of Dewey and Freire is that their various approaches to educational reforms are assumed to lead to social progress (which is another context-free metaphor).

Scientists are now claiming that the rate and scale of environmental change means that we may have only a few decades before we become overwhelmed by rising levels in the world’s oceans, droughts and the increasing scarcity of potable water that will doom hundreds of millions to a level of poverty where life itself cannot be sustained, and the disappearance of species that rivals earlier mass extinctions. The majority of liberal educators seem not to recognize the connections between the deep cultural assumptions that underlie their interpretation of progress and how these assumptions guide policies and actions that are exacerbating the crisis—especially as these assumption are being embraced by other cultures that want to identify themselves as becoming modern and technologically developed.

The language of liberalism is like the early stages of a Tower of Babel discourse, with widely diverse groups using seemingly the same vocabulary of liberalism to achieve radically different social, economic, and colonizing agendas. What the followers of Classical Liberalism (Locke, Smith, Mill), of today’s social justice liberals (Ayers, Dewey,

Freire, Gadotti), and of the libertarian liberals (Rand, Norquist, the Republican alliance of Tea Part activists, corporate heads, and the military establishment) all ignore is that the ecological crisis has moved from being the focus of scientific research and publications to massively impacting people's daily lives. Fisheries are disappearing, droughts are spreading and jeopardizing the food security of entire nations, glaciers are melting at a rate that is threatening the prospects of billions of people. In the face of these immediate threats, it is necessary to ask whether there is an alternative paradigm that avoids the following: the ethnocentrism inherent in all genres of liberal thinking, the deep cultural assumptions derived from liberal thinking that underlie the industrial/consumer culture that is a major contributor to accelerating the rate of environmental change, and the Social Darwinian thinking that prevents many liberals from recognizing what can be learned from other cultures, including the traditions within our own dominant culture, that are more community rather than consumer and individualistic centered.

There are many indigenous cultures that have developed what can be referred to as ecological intelligence. That is, they learned by carefully observing the cycles of life-renewing processes within their bioregion, and this knowledge was then encoded in their languages. They also learned how to adapt their technologies and rituals in ways that did not destroy these ecological cycles of renewal. Of course, there are many indigenous cultures, as Jared Diamond points out in his book, *Collapse: How Societies Choose to Fail or Succeed* (2011) that failed to recognize how ecological uninformed practices and values were leading to their demise.

The important point here is that there is a small group of scientists and others who are beginning to understand the characteristics of ecologies in ways that take into account cultural practices and how even modern individuals exercise a limited form of ecological intelligence. The leading thinkers who are rescuing the concept of ecology from scientists who have traditionally understood it as the study of natural systems, which reflected a radically limited way of thinking, are now associated with the biosemiotic movement, and with the followers of the ideas of Gregory Bateson. For educators willing to move beyond the double bind thinking of Classical and contemporary interpretations of liberalism, and to explore the educational reform implications of Bateson's ecological interpretative framework, his insights on the role of language are especially critical. Chapter 2 of my

recent book, *Perspectives on the Ideas of Gregory Bateson, Ecological Intelligence, and Educational Reforms* (published by the Eco-Justice Press, 2011) pulls together his ideas on language that are interspersed in various places in his *Steps to an Ecology of Mind* (1972), which many find difficult to understand because of their own taken for granted liberal/Enlightenment assumptions. Why Bateson rather than the writings of the biosemiotic thinkers should be the starting place for educational reformers is that Bateson's ideas help to clarify the how cultural practices, including the role of language, need to be understood as ecologies. The emerging field of biosemiotics provides a way of understanding all natural systems, including cultural practices, as semiotic systems that are dependent upon the constant exchange at different levels and of kinds of information—chemical, temperature changes, genetic, silences, metaphorical, patterns of metacommunication between people, and so forth. But as biosemiotics is now dominated by scientists, the cultural/linguaging processes so crucial to initiating substantive educational reforms are given less attention. I will reverse their orientation by presenting the characteristics of an ecological paradigm of understanding that avoids the ethnocentrism, Social Darwinian bias, and deep cultural assumptions that represent the individual as an autonomous, rational/critical thinker and the rest of the world, in Cartesian fashion. as unintelligent and as a non-participant in the dynamic nature of all living systems.

The cultural assumptions shared by different interpretations of the liberal agenda that were mentioned at the outset have no place in an ecological paradigm. But this paradigm provides a way of understanding how these assumptions continue to be perpetuated in the language of the classroom and in the media generally. It also brings into focus what the liberal myth of individual freedom has hidden: namely, that one of the most unique characteristic of all forms of life is that existence involves relationships. And this holds for the misleading metaphor we use to refer to the “individual,” and the other misleading metaphor we associate the basic need of the individual for “freedom.”

Bateson's famous saying that the “map is not the territory” is a key to understanding that there is no such entity as an autonomous individual, and that students and even the most creative thinkers do not construct their own ideas. Language as Bateson and others have pointed out is metaphorical, and that the analogs that frame the meaning of such words as “individual”, “data”, “intelligence”, “woman”, “progress”, “technology”, and so forth were

settled upon in earlier times, and in cultural contexts, that lead to these words now carrying forward the earlier ways of thinking—including misconceptions, silences, prejudices. When the infant learns to think and communicate in the metaphorical language of her/his linguistic community, the historically derived patterns of thinking become taken for granted. Over time some of these earlier meanings are recognized as too constrictive and as sources of injustice, which then leads to adopting new analogs. This process of revising the meaning of words seldom involves revising the deep root metaphors such as progress, individualism, mechanism, anthropocentrism, economism, and so forth. The best example of how current interpretations of liberalism continues to perpetuate these deep root metaphors is that the word (metaphor) “tradition” still carries forward the failure of Enlightenment thinkers to recognize the traditions that sustained the skilled crafts people and others who sustained the cultural commons of their day.

Ecologies, even ecologies of bad ideas or what Bateson refers to as ecologies of weeds, are sustained through various forms of communication. But unlike the liberal assumptions that represents individuals as rational actors in a non-intelligent world, Bateson claims that what circulates through all ecologies are differences which make a differences. The bosemiotic thinkers, such as Jesper Hoffmeyer and Wendy Wheeler, translate Bateson’s famous saying into the language of semiotics and the emergent world of ongoing information exchanges. Bateson further argues that these difference are the basic units of information that lead to responses by the Other. The differences which make a difference, such as how toxic chemicals interact with the genetic codes regulating the development of the immune system, and as the teacher observes students texting messages (to cite just two examples), leads to communication that is interactive. The Other responds, which then become a difference that leads to further exchanges. For examples, at the micro level of the ecologies within the human body, the receptors in cells respond to what is being communicated at the level of chemical/electrical processes. It is an interactive form of communication of information, and not a matter of thinking and acting on an inert world. Perhaps it is easier to recognize what Bateson means by a difference which makes a difference being the basic unit of information, and how it leads to interactive responses, by considering how a soccer player responds to the differences in the other players’ behavior, which lead in turn to a dance in the interactions of the players. New ideas may also be the

difference which makes a difference in thinking and behavior—or in the awareness that the use of genetically modified seeds that resist Roundup has an adverse impact on the environment which in turn is communicated through the growth of pesticide resistant super-weeds. Everything in both natural and cultural ecologies communicate in response to differences which make a difference, and there are consequences that follow. But the misconceptions and silences encoded in the language of the culture may lead to the consequences that are life threatening to go unnoticed. That is, many of the differences which make difference in the viability of natural systems to support life are going unnoticed—which brings us to the question of how language inherited from the past continues to influence awareness.

The ecological paradigm of thinking leads to recognizing that what liberals represent as individual freedom should be more accurately understood as individuals **always** being in a relationship with the Other—another person or group, changes in the natural environment, the history of their own cultural ecology—including the ecology of its guiding languages, unjust and exploitive acts by others, behaviors that are mutually supportive, and so forth. Bateson's saying about maps (metaphorical language systems constituted in the past) not accurately representing the territory (today's problems and possibilities—including social injustices and ecologically unsustainable policies), also clarifies why the liberal view of individualism, including how individuals think about and use language, is also a product of abstract theory that has been repeated over the centuries. In order to maintain the myth that rational/critical thinking is free of cultural influences and thus of ethnocentrism, it is necessary, as Michael Reddy pointed out, to think of language as a conduit in a sender/receiver process of communication. This is the view of language reinforced at all levels of formal education, in the use of digital technologies, in the media, and in everyday conversations.

When Bateson's observation about the map/territory disconnect is related to what we now understand about the nature of metaphorical thinking, it becomes clear that when supposedly autonomous thinkers engage in critical and transformative learning they are reproducing with only minor variations the conceptual maps of an earlier era when there was no understanding of environmental limits—and no understanding that not all cultures equate the hyper-rate of change with progress. An ecological perspective brings out that

words, whether spoken or written, have a history, and that they are metaphors whose meaning were framed by the earlier selection of analogs that reflected the power relationships, misconceptions, and silences of earlier times. When a person is born into a language community, she/he learns to think in the metaphorical language inherited from the past. As we are witnessing, some of these earlier analogs are being revised—such a how thinking of a woman as an artist and mathematician (excluded possibilities in terms of earlier analogs), that wilderness as a sign of a healthy ecosystem (rather than wild and needing to be brought under technological control).

What is being suggested here is that in recognizing that most of the language of liberalism (how traditions, individuals, intelligence, language, technology, and so forth are understood) is metaphorical and still carries forward the misconceptions and silences of earlier thinkers who did not recognize how relying upon print promotes abstract thinking that is ethnocentric and that undermines the exercise of ecological intelligence, we can then recognize important reforms that must be undertaken in the area of curriculum. The cultural assumptions identified earlier as being shared by different interpretations of liberalism—such as an anthropocentric world, individualism, progress, mechanism, economism, and so forth—are also root metaphors that influence thought and behavior across a wide range of cultural activity, and over hundreds of years. Some root metaphors are being challenged, such as patriarchy, while new ones are beginning to provide different ways of understanding, such as evolution (which supports the assumptions of the market liberals) and ecology (which helps us understand how mechanistic science can lead to misconceptions that threaten life itself). As evidence of the influence of root metaphors we have only to consider the role of Social Darwinian thinking in shaping the internal and foreign policies of Nazi Germany. Two more observations need to be made about the role of root metaphors: as powerful interpretative frameworks they control which vocabularies are conceptually coherent while at the same time marginalizing other vocabularies. They also operate below the level of conscious awareness, which is further aided by thinking of language as a conduit in a sender/receiver process of communication.

The metaphorical nature of words illuminate and hide. Root metaphors do the same, but operate on a scale that has global consequences—which we can now witness in the

globalization of the market liberal agenda. What is hidden by the language-controlling root metaphors underlying the industrial culture are the changes occurring in the natural system.

Educational Reforms that Address Social and Eco-Justice within an Ecological Paradigm

What are the pedagogical and curricular reforms that will help the younger generations avoid the conceptual grip of classical and current social justice and market liberal ideologues? The initial reaction to the curriculum reforms suggested at the end of the last chapter may lead teachers to claim that their professional courses did not prepare them to introduce students to an in-depth examination of the cultural patterns in their own cultural ecologies. They may also protest that there are no written texts on how to proceed. What needs to be understood is that a curriculum that focuses on the lived cultural ecologies of the students should not be derived from printed accounts, either in textbooks or on a computer screen. Rather it can be described by students if the teacher asks them the right questions that will bring to their attention patterns of communication and behavior that were previously taken for granted. The teachers' task is to name the patterns, and then engage students in the process of examining how the patterns affect other patterns, relationships, and long-term consequences.

What students will be learning are the key characteristics of ecological thinking: that is, learning to give explicit attention to what is being communicated in their relationships, both natural and cultural, that are that part of their embodied experiences. They will also be learning that the ecological conceptual framework is not ethnocentric, nor does it lead to a human-centered way of thinking and acting in the world. As students become aware of the metaphorical language of their own culture (including its history), and the differences that make a difference when foreign metaphors are introduced, they will then be able to recognize how the languaging processes that are taken for granted hide and illuminate changes occurring in the ecological systems they depend upon. As suggested earlier, naming the patterns that are part of the students' everyday experiences should be the starting place for in-depth discussions. From time to time the teacher may need to explain how the patterns connect and interact on each other. The cultural patterns most in need of careful examination include how language carries forward earlier ecologically uninformed ways of thinking, the differences between their daily experiences where they rely upon the non-

monetized cultural commons within their family and community and their experiences in the consumer/industrial culture, and the ways in which print based (including use of digital technologies) communication and thinking undermines awareness of relationships within local contexts. The teacher should also initiate a discussion, based on the students' ethnographic awareness, of the difference between when they exercise individually-focused ecological intelligence, social justice ecological intelligence, and sustainable ecological intelligence. Clarifying the differences will require the teacher providing some basic clues about how these differences are expressed in the students' experiences. The task of the teacher, in essence, is to help students become aware of the cultural patterns that are too often part of their taken for granted experience. And the ultimate concern is helping students become more explicitly aware of the differences between sustainable and unsustainable cultural patterns—in their relationships with others, within the larger world of cultures, and within the natural systems.

Summary:

If the above analysis were to be boiled down the most essential points it would be that liberalism, for all the gains made in moving us beyond the constraints of feudalism and early capitalism, carries forward too many of the assumptions that have contributed to the industrial culture that is now accelerating the degradation of the natural environment. The conceptual roots of liberalism are in print-based abstract thinking that failed in the past, and continues to fail today, in recognizing the cultural roots of the ecological crisis, and that different cultures have taken other routes to development that have had a smaller adverse environmental impact. Bateson and other thinkers have laid the groundwork for recognizing that all ecological systems, both natural and cultural, possess the observable characteristics that suggest the nature of educational reforms that must be undertaken. Engaging students in deep ethnographies of their own cultural patterns will enable them to make explicit the ecologically destructive patterns that they will otherwise continue to take for granted unless patterns and relationships are made explicit and examined in terms their environmentally destructive consequences, and their other life-enhancing possibilities.

