

Title: The Ideology that Explains Cultural Domination as the
 Outcome of Nature Selection

Author: C. A. Bowers

One of the criticisms of Dewey, Piaget, and Freire is that they took-for-granted the late nineteenth century Social Darwinian view of cultures as evolving from a primitive and backward to an advanced and progressive way of knowing. That each of them urged that their respective one-true approach to knowledge should be universally adopted (ironically, in the name of democracy) indicates the other key assumption they held: namely, that we in the West have nothing to learn from the less evolved non-Western cultures—cultures I would prefer to think of as differently developed. The current effort on the part of university faculty in many disciplines to make Nature’s process of natural selection the new explanatory framework—in literature, psychology, anthropology, political science, and computer science—suggests that the misconceptions and dangers of this approach need to be made explicit again. Unlike the Social Darwinism that Dewey, Piaget, and Freire relied upon to explain their more advanced approaches to knowledge, today’s constructivist theorists have the choice of at least three different interpretations of evolution to justify their proposals for educational reform.

The critical questions that need to be asked by any educational theorist who relies upon one of the three theories of evolution are: “Which one is the most scientifically based?” and “Which one most effectively accounts for the diversity of the world’s cultures—particularly the cultures that have developed ecologically sustainable beliefs and practices?”. The answer to these questions, as I will attempt to show, will help to clarify a characteristic shared by all three interpretations of evolution: namely, how they lend ideological support to the Western approach to creating a world monoculture. That is, the answer to these questions will bring out the double bind of using a theory of evolution to give legitimacy to highly reductionist approaches to knowledge that are the greatest threat to ecological sustainability and cultural diversity.

Assessing the ideological and ecological implications of three different interpretations of evolution brings into focus a number of issues these educational

theorists, as well as other reform-minded thinkers, should consider. As there are fundamental differences between the three accounts of evolution, the question of which one is valid becomes a central concern. There is also the question of whether the three accounts of evolution avoid the limitations of the Social Darwinism of the late nineteenth century. Additionally, there is the question of whether an evolutionary based explanatory framework makes both the educational and political processes we associate with a democracy little more than misguided thinking. In light of Kevin Kelly's observation that Nature's agenda is "out of our control" (1994, p. 471), the ideal of an educated citizenry being essential to a democratic society may not fit Nature's agenda for ensuring the survival of the fittest. Before examining the three interpretations of evolution being given prominence by different groups, it must be acknowledged that important debates among evolutionists, such as the one precipitated by the field research of Stephen Jay Gould, will not be considered. Nor will the arguments that a Darwinian interpretation of evolution ignores that the universe and the Earth's organisms are too complex to be explained by the interplay of mutations and the selective power of the environment, and thus that the evolution is thus the outcome of intelligent design (i.e. God).

In my most recent book, Mindful Conservatism: Rethinking the Ideological and Educational Basis of an Ecologically Sustainable Future (2003), I discuss the ways in which computer scientists are predicting (indeed, working toward) the replacement of humans by computers in the process of evolution. I also discuss how these futuristic thinkers, such as Hans Moravec, Gregory Stock, Ray Kurzweil, and Kevin Kelly, predict how the upcoming take-over by computers will make cultural diversity a thing of the past, like an extinct species. The book also contains an extended discussion of E. O. Wilson's more mainstream interpretation of how genes create minds, and how minds create cultures—and how the whole process is governed by the process of natural selection that dictates that the fittest minds (and cultures) survive longer and leave more off-spring. Wilson conclusion that the theory of evolution should replace all of the world's religions, and that scientists should be the judges of what beliefs and values warrant holding is also discussed at length. I also point out that Wilson is not alone in holding what Wendell Berry has called the latest expression of a science-based imperialistic agenda (2000, p. 31). Other scientists such as Richard Dawkins and Lee

Silver, along with philosophers such as Daniel Dennett, also embrace this expression of scientism—which is really an ideology disguised as science.

In addition to these two schools of evolutionary/cultural theory, there is a third school of thought about Nature’s plan for our future. It will be given more attention here as it allows for the possibility of human choice—which makes it more attractive to educational theorists who are driven, like Dewey and Freire, more by a messianic spirit than by superior genes. This third interpretation of evolution, or what Brian Swimme and Thomas Berry call the “universe story” is gaining a significant following among certain sectors of the religious community, members of the general public interested in eco-spirituality, and educational theorists. Because of its broad popular appeal, I shall examine in greater depth the Swimme/Berry interpretation of evolution as it is the one that appears, on the surface, to avoid the genetic determinism of the Wilson/Dawkins school of thought, and the “out of our control” thinking of the computer futurists. Relying on the ideas of Gregory Bateson would have avoided the double binds that appear in any theory of education that is based on the theory of evolution that supposedly explains why some cultures survive while others do not. Why Bateson’s ideas avoid the double binds inherent in the different evolution/culture theories will be taken up elsewhere. Here the focus will be on the conceptual underpinnings of the educational reforms proposals that are an extension of the basic ideas of Dewey, Piaget, and Freire.

Neither Swimme nor Berry are scientists, which may account for why they give their account of evolution a more spiritual interpretation. Swimme earned his doctorate in mathematics, having written his dissertation on “Singularities in the N Body Problem,” and is now Director of the Center for the Story of the Universe at the California Institute of Integral Studies. Thomas Berry founded the History of Religion Program at Fordham University, and served as President of the American Teilhard de Chardin Association. Together they wrote The Universe Story (1992), which is both a history of the origin of the universe and the development of life on earth, and of the developmental stages of human culture.

The Universe Story is meant to be more than the narrativization of the universe’s 15 billion year history. Rather, the main purpose of Swimme and Berry is to place the ecological crisis within the larger context of the life forming processes that have led to

the biologically diverse world as we now know it. Their concern is that the modern industrial approach to production and consumption now threatens to destroy the natural systems that human life depends upon. Whereas the other two interpretations of evolution suggest that human decisions are irrelevant, Swimme and Berry see humans as at a critical juncture. In effect, they argue that the future direction that evolution will take depends upon whether humans choose entering a new era they call the Ecozoic phase of evolution or continue to perpetuate the life-destroying Technozoic era. The Ecozoic era, they point out, will require a fundamental transformation of consciousness, one that recognizes that the entire planet is interdependent and governed by the same life producing forces. This transformation of consciousness will also require, as they put it, that “the human community becomes sacred through its participation in the larger planetary community” (1992, p. 257).

Their view that human choice will determine whether evolution will follow the path dictated by either the Technozoic and Ecozoic era, as well as their appeal for a change in human consciousness, leads inevitably to a discussion of the role that education should play. And in suggesting that education has a role to play in contributing to a more ecologically sustainable future, they are again departing from the geneocentric interpretation of evolution articulated by Wilson and the computer-centric interpretation of Moravec, Dyson, and Kurzweil. The argument of Swimme and Berry that human agency can direct the future course of evolution represents a radical departure from the more widely accepted view that it is the environment that selects the life forms that are to survive and reproduce themselves through future generations. Thus they need to explain the process of evolution in a way that allows for the efficacy of human choice. And they do this by introducing the idea that evolution is based on what they call the “Cosmological Principle.” This principle, they claim, is characterized by “differentiation, autopoiesis, and communion throughout time and space and at every level of reality” (p. 71).

Differentiation is simply another term for the process of mutation and niche selection, and is a core feature of the mainstream interpretation of evolution articulated by Wilson (1998) and Richard Dawkins (1976). Autopoiesis, which refers to the self-organizing characteristics of all organisms, is also essential to the mainstream

interpretation of evolution. But communion is not. Swimme and Berry summarize the nature of communion as being related—“for relationship is the essence of existence” (p. 77). This understanding of communion (relationships) as a defining characteristic of life could have been achieved by using the word ecology. However, the use of communion has a more theological connotation that is essential to their way of framing citizenship within the Ecozoic era. They also want to go beyond just introducing a religious theme: they want the principle of communion to frame how evil is understood. As they put it:

The loss of relationship, with its consequent alienation, is a kind of supreme evil in the universe. In the religious world this loss was traditionally understood as an ultimate mystery. To be locked up in a private world, to be cut off from intimacy with other beings, to be incapable of entering into the joy of mutual presence—such conditions were taken as the essence of damnation. p. 78

Swimme and Berry suggest that there is another characteristic of evolution that has been overlooked in the other interpretations. That is, they explain the process whereby natural selection fits an organism to a particular niche in a way that invests the organism with intentional choice. Their example is the evolution of the horse and the bison, which they claim involved a choice on the part of the horse to evolve in a way that made survival dependent upon speed of movement. The bison evolved its more massive physical features by making the choice to stand and confront its enemies. Unlike the two previous interpretations of evolution being considered here, Swimme and Berry need to introduce intentional choice into the process of natural selection in order to make the case that humans have a choice between a Technozoic-life-destroying future and an Ecozoic-life-sustaining future.

It is especially important to note that the introduction of communion and choice, which are essential to their interpretation, are not found in the mainstream scientific versions of evolution. We have only to recall Wilson’s explanation of how genes carry the instructions that give organisms their distinctive form and capabilities—including mental processes that produce culture. Wilson attempted to avoid presenting a form of genetic determinism by suggesting that genes co-evolved with culture, but he constantly follows his gene-culture coevolution with statements such as the following:

Thousands of genes prescribe the brain, sensory system and all the other physiological processes that interact with the physical and social environment to produce the holistic properties of mind and culture. Through natural selection, the environment ultimately selects which genes will do the prescribing. 1998, p. 137
italics added

It is also important to note that Swimme and Berry also acknowledge natural selection as “life’s power to sculpt diversity in a creative fashion” (p. 127). In another statement that is consistent with the mainstream theory of evolution they write that “natural selection is a survival of the ‘fittest’ in the sense that the genes enabling one particular phenotype to succeed relative to all others are selected and passed on” (p. 128).

The problem that Swimme and Berry do not address is how to reconcile human choice with the amoral, non-rational dynamics of natural selection — which Swimme and Berry acknowledge as dictating the survival of the fittest . Another problem they overlook is that human choice and communion occur within a human time frame that is profoundly different from the time frame within which natural selection works. The efforts of Swimme and Berry to humanize the inexorable dynamics of natural selection thus seem little more than wishful thinking that may or may not have any influence on meeting the test of natural selection. Perhaps the predictions of Moravec, Stock and the other techno- utopians that computers will replace humans will prove to be more accurate. Nature (the interplay between genes and the environment) may not reward the efforts of environmentalists, but instead reward the corporations working to impose a monoculture of taste and values on the world. It may even be possible that Nature’s fittest will prove, over time, to be the dictators who do not flinch at imposing repressive policies on the weakest members of their societies. In short, even if one accepts that evolution selects the better adapted cultural developments, the life-span of individuals who make judgments about what represents the outcome of natural selection in the area of culture is too limited to accurately predict what Nature has selected for survival.

Having accepted evolution as the total explanatory framework , Swimme and Berry have no real basis for claiming that human choice can influence the outcome of natural selection. Swimme, for example, sees not contradiction in basing the following statement on an evolutionary account of the survival of the fittest:

The center of the cosmos is each event in the cosmos. Each person lives in the center of the cosmos. Science is one of the careful and detailed methods by which the human mind came to grasp the fact of the universe's beginning, but the actual origin and birthplace is not a scientific idea; the actual origin of the universe is where you live your life. 1996. p. 112 italics in the original

Swimme's life-affirming words may appeal to members of the affluent middle class who are searching for a sense of meaning in an increasingly materialistic world, but they seem to be more New Age than consistent with the evolutionary paradigm that is the basis of their story of the universe. Indeed, his statement suggests that every kind of behavior is what the cosmos is doing, and that the cosmos will sort out the fittest from the rest.

Ideological Implications

It needs to be recognized at the outset that adopting any of the three theories of evolution contributes to extending the explanatory power of science into the symbolic domain of culture. For all its contributions to improving the quality of life, and to expanding our knowledge of natural phenomena, the scientific mode of inquiry is too limited to explain the evolutionary basis of mythopoetic narratives, meaning, values, and daily practices of different cultures. The claim that cultural patterns are "memes" that are determined in the micro-ecologies within which genes pass on their life building instructions simply reflects the hubris of scientists who do not recognize the limitations of science.

There are, however, other reasons for caution in adopting any of the three explanations of cultural evolution. A careful examination of the computer-centric and genocentric interpretations of evolution, as well as the universe story of Swimme and Berry, brings out an important limitation in their thinking. Namely, all three envision evolution leading to a world monoculture. The Wilson and the Swimme/Berry interpretations are sensitive to the ecological crisis, yet both of their accounts are based on assumption that, regardless of cultural developments, it is Nature that selects the fittest to survive. Wilson wants to make scientists the ultimate judge of which cultural beliefs and patterns will meet the test of Darwinian fitness. Swimme and Berry envision

the world's cultures organizing themselves to fit the "single story" of the evolution of the universe. "The primary purpose of education," according to them, "should be to enable individual humans to fulfill their proper role in this larger pattern of meaning". They go on to claim that "we can understand this role in the Great Story only if we know this story in its full dimensions" (1992, 256). While Swimme's claim that "each person lives in the center of the cosmos" may suggest that cultural diversity is part of the unfolding of the cosmos, the underlying epistemological framework is Western science's theory of evolution. In effect, Swimme and Berry are claiming that there is only one story, and, by extension, that the stories of other cultures are to be abandoned in favor of the one that claims that natural selection "shapes life at a fundamental level" (127). Their references to Muslim, Hindu, and Confucian cultures might suggest to the casual reader that they are committed to a culturally diverse world. Nevertheless, it needs to be kept in mind that the main theme they keep coming back to throughout their book is that Western science has given us the only true story—namely, that life and culture are formed through natural selection.

Aside from the failure of all three theories to account for how cultures reproduce themselves in ways that are consistent with their mythopoetic narratives, and for how many oral cultures have attained a far more ecologically-centered existence than the supposedly more advanced Western cultures, there is the even more serious problem of expanding the theory of evolution into a total explanatory framework. The micro level of natural selection, where better genes produce better organisms that are able to reproduce themselves over many generations, can too easily lead to the extrapolation that at the macro level the better memes (cultural beliefs and patterns) have met the test of natural selection and become encoded in the institutions that represent the cutting edge of the evolutionary process. That is, the scientific account of why some organisms survive while others do not is easily translated into an ideology, as we have witnessed since the latter part of the nineteenth century, that justifies the destruction of local self-reliant cultural traditions in the name of progress.

While ideologies do their work in the immediate here and now, natural selection works over a longer time frame than what humans can individually experience. Humans simply cannot determine what will survive over the long term, but they can find in the

theory of natural selection the metaphors that legitimize their activities and institutions as being consistent with Nature's design process. These metaphors include "competitive," "better adapted," "fittest," and, now, "sustainable." These metaphors can easily be incorporated into the language of Classical Liberalism, which is the guiding ideology underlying the West's economic systems.

In today's world, arguments for globalizing a consumer/technology dependent lifestyle, the right of the WTO to nullify the process of democratic decision making at all levels of government, and the right of corporations to destroy the economic basis of local communities and the resource base of Third World cultures, can all be justified on the grounds that the basic life forming processes are being expressed when the strong (the fittest) displace the weakest (the unfit). Swimme's mantra ("the center of the cosmos is each event in the cosmos") can easily be adopted by heads of corporations and the decision makers in the WTO and World Bank. It can also be adopted by the various constructivist learning theorists. That is, the knowledge that is constructed by the individual, and by the experimental inquiry of the social group, can also be interpreted as what the cosmos is doing. And who can argue about how the cosmos is expressing itself?

It is unfortunate that Swimme and Berry chose evolution as an explanatory framework for suggesting that the direction of cultural development in the West needs to be changed. Their argument that choice, communion, and an ecologically sustainable form of consciousness are subject to the process of natural selection gives support to an updated and thus supposedly more scientifically rigorous version of Social Darwinism. If the environment determines the fittest, then choice becomes what the markets dictate, communion becomes the sense of participating in an interconnected global economy, and sustainability becomes a matter of beating back competitors by exploiting cheaper labor and the natural resources of Third World cultures. They could have made a stronger case for alerting the public to the dangers of following the present course of experimental and unrestrained technological development, and for their understanding of the changes that will lead to lifestyles governed by a deep commitment to moral reciprocity between humans, between humans and Nature, and between cultures. The ideas of Gregory Bateson, the literature on different cultural approaches to revitalizing their traditions of self-sufficiency, and the critiques of how international economic agreements are

undermining local democratic traditions and patterns of self-reliance would have provided the insights, evidence, and sense of hope that Swimme and Berry want to engender through their story of the universe. Instead of the omnipresent background message that Nature decides, the reader would have encountered examples of on-the-ground efforts of people in different cultural contexts to live less ecologically destructive lives.

Implications for Educational Theory

Most educational theorists – such as John Dewey, Paulo Freire, Peter McLaren, Peter Roberts, William Doll, and the other advocates of constructivist learning—are preparing students for participation in the global monoculture that requires constant change. As pointed out earlier, these theorists contribute to the modern mind-set that experiences change as the norm, and as the expression of progress. Indeed, their respective process approaches to education are claimed to be the well-spring of new ideas and values that will accelerate the rate of change. Their continual references to the reconstruction of experience and to transformative learning indicates that these educational theorists, in effect, share the same view of constant change that underlies all three interpretations of evolution. They also share in common with the three interpretations of evolution the assumption that their prescriptions for reform are to be universally applied. While they may give lip service to cultural diversity, they assume that their assumptions about the progressive nature of change, individualism, ongoing emancipation, and an anthropocentric world view are shared by all cultures. And like the interpreters of evolution they assume that they speak for all of the world's cultures.

What is needed today are not educational reforms based on the same deep cultural assumptions that underlie the current phase of economic globalization and cultural colonization—twin processes that are undermining linguistic/cultural diversity and are accelerating the destruction of natural systems. Educational reform should, instead, address issues connected with eco-justice that have implications for all cultures. The irony is that eco-justice is not based on the logic of Darwinian fitness where the contingencies of the environment select which organism and corporation is to reproduce itself over generations to come. Rather, it is oriented toward addressing the plight of

what, from a Darwinian point of view, would be viewed as the weakest groups in society and the most vulnerable cultures.

As mentioned earlier, the three interpretations of evolution emphasize that change is a constant, which is easily interpreted to mean that cultures undergoing rapid change are in a constant state of adapting to the contingencies of the environment. On the other hand, cultures oriented to conserving beliefs, practices and place-based technologies are viewed as backward, undeveloped—and as colonizing opportunities. Conserving cultures, even those that are ecologically-centered, are thus seen as on the verge of extinction. Yet, the only effective resistance to the current global expansion of the industrial mode of production and consumption is in local traditions of face-to-face, intergenerationally connected activities and forms of knowledge that have not been monetized. These community revitalizing traditions vary from culture to culture, and are under pressure from the products of transnational corporations geared to overwhelm their competition in real short-term tests of survival of the technologically and economically fittest. As the cultural and natural environments become increasingly shaped by these transnational corporations, asking the question “What do we need to conserve in an era of ecological uncertainty?” appears to be an irrelevant if not a reactionary question. But this is the very question that is at the center of an eco-justice and community building approach to educational reform.

Contrary to the conventional wisdom held by most educational reformers, asking the question “What do we need to conserve as the world moves closer to overshooting the capacity of natural systems?” is essential to democratic decision making. Reliance on a theory of natural selection that explains how the diversity of life has evolved from primitive to complex, and how certain cultures will survive while others will not, makes the question of what needs to be conserved appear to be irrelevant if not a reactionary position to hold. The assumption that the environment selects the better adapted culture supports the western cultural myth that equates change with progress, which is not the assumption that leads to resisting the economic and political forces behind the process of globalizing a consumer dependent lifestyle that is rapidly degrading the environment. Resistance to these forces is at the local level, in face-to-face relationships that involve non-monetized activities and patterns of mutual support. And revitalizing these

intergenerationally connected patterns of community that are the basis of moral reciprocity and ecological sustainability often represent acts of resistance to the domination of what has been industrially produced—which to neo-liberal thinkers appears as the most culturally evolved. Thus, genuine curriculum reforms must not be based on any of the three theories of evolution which become ideologies when extended into the domain of culture. Nor can they be based on the liberal assumptions that, in the name of progress and individual autonomy, undermine the cultural sources of resistance to the industrialization of everyday life.