EARTH ETHICS, EARTH LITERACY, AND THE COMMUNITY COLLEGE

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Summary

The article below will explore the current environmental crisis on Earth in all its various dimensions, with special attention given to the community college role in understanding and fostering sustainable solutions for this crisis. Miami Dade College, the largest community college in the United States, will be examined in detail in terms of its efforts to integrate Earth Literacy and Earth Ethics into its curriculum and instruction as a way to help understand the concept of sustainability and the environmental challenges facing Earth and its life support systems. The article will end with speculations about the future directions of community colleges related to sustainability and the environment.

1. Introduction

In terms of the Earth and its future, there is little doubt that the planet is in crisis and that no matter how sustainability is defined, it remains a distant hope. In the World Scientists’ Warning to Humanity of 1992, over 1700 of the world’s leading scientists and the vast majority of Nobel laureates in the sciences warned of a litany of planetary ills which threaten Earth. In 1997, in Kyoto, Japan, scientists again warned humanity. There are numerous other iterations and evidence of the state of Earth such as those from the United Nations Environment Programme (UNEP), the Millennium Ecosystem Assessment, the Scientific Committee on Problems of the Environment (SCOPE,) and more. The consensus among scientists is that Earth is threatened by human action. They state, “We … warn all humanity of what lies ahead. A great change in our stewardship
of the earth and the life on it, is required, if vast human misery is to be avoided and our
global home on this planet is not to be irretrievably mutilated.”

![Figure 1](image-url) a) Moon from Apollo 11 b) Earth Western Hemisphere

Data from NASA’s Lunar Prospector spacecraft supports the impact theory first proposed by William K. Hartmann and Donald R. Davis, in 1975. They theorized that when Earth formed 4.5 billion years ago, other smaller planetary bodies were developing. One of these impacted Earth during Earth’s growth process, blowing out molten debris. A portion of the debris went into orbit around Earth and aggregated into the moon. While made of the same stuff as Earth, it is clear that the moon evolved into a relatively lifeless satellite and lacked the crucial factors which have allowed Earth to evolve and develop life systems. The two images above show the dramatically different potential futures for Earth – life or less life.

Humanity is conducting a sustainability experiment in which Earth and humanity itself are at once the subject and the control. Humans are experimenting with Earth and human existence with little caution or responsible safeguards. There is no other planet to practice with or run to if this experiment gets the better of the experimenters. Following the Precautionary Principle for this experiment would seem to be the logical course of action, particularly when knowledge about outcomes is limited and the impact is potentially harmful. Yet, humans continue to act as if there were no problem.

Some skeptics of science have noted that predictions of large-scale systems failure have not occurred and they conclude the predictions are false. Paul and Anne Ehrlich point out in their *Betrayal of Science and Reason*, that data and factors change, life is dynamic, and science continually restructures what is known to fit current data. Science is not based on faith and belief and therefore, does not inflexibly hold to notions that are not supported by new data. However, it is unreasonable to say that this ability, actually, requirement, of science to adjust to new data does not mean that there is no basis for prediction, that there is nothing certain or known. The fact that science admittedly does not know everything gives no weight to the claim that it knows nothing. While scientists
may be discussing the rate of global warming, no significant portion of the scientific community claims there is no global warming.

For the purposes of this article, it is a fundamental assumption that Earth is in crisis and that the Sixth Extinction is real. It is a given that humanity’s fate is inextricably linked to the fate of its home planet. The article assumes that there is still time to turn the situation around. It comments on the role of one segment of higher education, the community college, considers its function in relation to sustainability, and critically views the largest community college’s efforts. It further explores how the community college relates to other institutions of higher education and how its role situates it to exacerbate or ameliorate Earth’s predicament. The article looks at the influences that have shaped the current efforts at Miami Dade College whose size, location, and role in the community college movement make it an important case. It also considers the paradigmatic shifts and underlying principles needed to make changes for a sustainable future, and views Earth Literacy and Earth Ethics as underpinnings of the efforts at the College. Finally, the article concludes by looking at alternative future directions that are viable within the Community College context.

Bibliography

Berry, Thomas. (1999). *The Great Work: Our Way into the Future*. New York: Bell Tower/Random House. [Berry discusses the roles of economics, religion, education, and jurisprudence as essential parts of the new Great Work of restoring the human relationship to the planet to coincide with the ecozoic age. Universities and education in general are seen as vital to the restoration of such a relationship.]

Boff, Leonardo. (2005). *Cry of the Earth, Cry of the Poor*. Maryknoll, New York: Orbis Books. [Boff makes a compelling connection between social justice and ecology. He recognizes that Earth cannot heal without healing the human social fabric. Most shocking is that indigenous peoples have been murdered in order to get to the natural resources in their habitats.]


Callicot, Baird and Rocha, Fernando J. R. da. eds. (1996). *Earth Summit Ethics: Toward a Postmodern Philosophy of Environmental Education*. Albany New York: SUNY Press. [This is an excellent collection of philosophical articles on Earth Ethics, from a wide range of authors, who were part of the Porto Alegre pre-conference held before the 1992 UN Conference on Environment and Development in Rio de Janeiro, Brazil. The papers cover many significant aspects of the discussion of ethics related to Earth.]
Callicot, Baird. (1999). Beyond the Land: More Essays in Environmental Philosophy. Albany, New York: SUNY Press. [Callicot discusses Aldo Leopold’s ideas as they relate to the debates within environmental philosophy and how new scientific knowledge impacts Leopold’s land ethic. Callicot offers an important discussion on intrinsic value as applied to the environment as environment is traditionally understood.]

Chardin, Teilhard de. (1965). Building the Earth. New York: Avon Books. [de Chardin attempts to unite Christianity and science, asserting that humans are “terrestrian,” i.e., residents of Earth. The author is considered by many involved with Earth Literacy as essential and foundational in the shift to unite spirituality and science.]

Cohen, Arthur, and Brawer, Florence. (1982). The American Community College. San Francisco, California: Jossey-Bass Inc. [This is a standard, though dated, text on the North American community college. The historical changes, growth, shifts in missions, changes in policies, and impact on education are well discussed in this classic work.]

Dewey, John. (1997). Experience and Education. New York: Simon and Schuster Inc. [Dewey is essential reading in education. He was one of the first American educational philosophers to advocate experiential learning. While others in this theme have criticized him for too much reliance on science and scientific method, he is foundational to the beginnings of critical learning and cross disciplinary education.]


Kuhn, Thomas. (1969). The Structure of Scientific Revolutions. Chicago. University of Chicago Press. [Kuhn is most cited for his definition of paradigm and description of paradigm shifts in science. He is foundational reading in the philosophy of science and essential to correctly understand the often overused and misused term – paradigm.]

Leaky, Richard and Lewin, Roger. (1995). The Sixth Extinction. New York: Random House. [This book is an investigation into the rapid destruction of the planet’s bio-diversity caused by humans. The authors convincingly suggest that Earth is losing so much bio-diversity, so rapidly, that it is legitimate to call the contemporary moment an extinction period – the sixth in geological history.]

Leopold, Aldo. (1949). A Sand County Almanac. New York: Oxford University Press. [Leopold is considered foundational to the North American discussion of Earth Ethics. His land ethic says that a thing is right when it tends to preserve the integrity, stability and beauty of the biotic community and wrong when it does otherwise. Leopold also extends the notion of community to include the non-human elements.]

Orr, David. (1992). Ecological Literacy: Education and the Transition to a Postmodern World. Albany, New York: SUNY Press. [Orr cogently discusses sustainability, education, and knowledge. He proposes a pedagogy of place and makes a forceful case for the damage that unchanged education can create. The author believes and states that all education is fundamentally environmental education.]

Roueche, John E. and Suanne D. (1997). Between a Rock and a Hard Place: The At-Risk Student in the Open-Door College. American Association of Community Colleges: Community College Press. [This is a review of the elements of the community college open access policy and how colleges overcome the drawbacks and help students. It is important to note the criteria they use include treating the student holistically especially in areas of non-curricular support. They also note the special challenges of educating the non-traditional student, which most community college students are.]
Shellenberger, Michael and Nordhaus, Ted (2005). “The Death of Environmentalism,” www.grist.org/news/maindish/2005/01/13/doe-reprint/ [This is a very provocative article that questions the fundamental assumptions and actions of traditional environmental groups. It has caused a great backlash but also has opened a needed discussion about holding actions, lack of success, and isolationism of the traditional groups. Traditional environmental groups, (for example, the World Wildlife Fund and the Sierra Club) are out of touch with the values and needs of people outside of their constituency.]

Swimme, Brian and Berry, Thomas (1994). The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era- a Celebration of the Unfolding of the Cosmos. New York: Harper Collins. [Swimme, a physicist, and Berry, a historian and theologian, combine the new cosmology and sacredness. They see the universe as an ever-evolving, interconnected community. Their work is an underpinning for Earth Literacy.]

Tooan, David. (2001). At Home in the Cosmos. Maryknoll, New York: Orbis Press. [Where Fritjof Capra brings eastern theology and quantum physics together, Tooan attempts to unite western Judeo-Christian theology and current science. He tries to move beyond the philosophical attitude of de Chardin and make more practical connections. This is clearly a deep Christian perspective that sees literacy detaching man from nature and human ethics not keeping pace with new scientific discoveries and knowledge.]

Union of Concerned Scientists (2005). “Restoring Scientific Integrity.” www.ucsusa.org [This is one of many position papers found on the UCS website. The World Scientists’ Warning to Humanity and other important resources are published at this website. It is an important watch-keeper organization.]

United Nations Environmental Programme. www.unep.org [This is the official website for UNEP and as such is an immense and current resource for educators at all levels. This and UN Decade of Education for Sustainability are essential sources for anyone connecting to this EOLSS theme.]

Wackernagel, Mathis and Rees, William. (1996). Our Ecological Footprint: Reducing Human Impact on the Earth. Gabriola Island, B.C., Canada: New Society Publishers. [These authors make the case that traditional cost accounting economics is fallacious because it only looks at profit derived from the difference between traditional costs and income. They say that only a system that accounts for ecological impact, resource cost, and waste impacts can accurately reflect true economic reality and adequately demonstrate the real and complete costs of human actions.]

Wilson, Edward O. (1984). Biophilia. Cambridge, Massachusetts: Harvard University Press. [This book details Wilson’s much quoted notion that humans have an innate love of nature. Articles from this book punctuate the readings in the Green Studies courses at Miami Dade College. Wilson to some appears too anthropocentric and is vulnerable to such criticism as here he suggests that because we have not discovered all of the potential (to humans) of the natural world we should be cautious of its early disappearance.]

Biographical Sketch

Bradford Stocker, has been an educator for almost forty years. His experience ranges from pre-school to graduate school and all levels in between, crosses many disciplines, and includes many alternative learning programs and methods. He has been a Fulbright Scholar and has had professional experience in a number of cultures. His research has included challenging the use of technology in education, humor in teaching, and most recently the incorporation of Earth Ethics and Earth Literacy into the college curriculum and institutional culture of Miami Dade College. He leads many faculty development experiences in these areas and presents and writes on the subjects. He is currently pursuing a post-doctoral certificate in Ecology and Human Spirit.