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Cosmology, Education and Sustainability – Is There a Fit?

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Moderated by Ann Dale

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Ann Dale on January 27, 2003, 01:29 PM:

Welcome panelists and audience members to our three-day discussion on Cosmology and Education: Is there a fit? Today we will be discussing cosmology, Wednesday, environmental education, and on Friday, education and sustainability: from theory to practice. This is the second of a learner-led dialogue by MEM student, Cate McEwen, and I am delighted to be moderating what I think will be a very informative dialogue on the 'meaning' of education, or more broadly, life-long learning and sustainability.

Cate, could you begin by giving us a working definition of 'cosmology' to kick-start our discussion?

Cate McEwen on January 27, 2003, 01:34 PM:

For the purposes of our discussion, cosmology refers to the articulation of “the story of the universe so that humans can enter fruitfully into the web of relationships within the universe” (Swimme and Berry, 1992,p.23). Cosmology is what gives a culture and its members its fundamental sense of where they come from, who they are, and what their personal role is in the bigger picture of the universe – “a story that is understood to explain the sacred relationship between the way the world is and the way human beings should behave” (Primack, p.1, <http://ircamera.as.arizona.edu/NatSci102/images/extcosmo.htm>).

Rick Kool on January 27, 2003, 01:36 PM:

Humans seem to have a need for master narratives, for stories that explain how things work- both physically and in the realm of human relationships, in the realm of the moral. It is no surprise that the two are connected: the physical is linked to the moral.

For the world's religions, these master narratives are delivered through humans from a source that is beyond human. By going beyond the human for the core of the narrative, it is left for humans to argue, critique and try to understand the meaning of the stories.

Eric Weiss on January 27, 2003, 01:38 PM:

Human beings, in order to have a sense of who they are, have to have a sense of what is valuable to them. As Charles Taylor suggests, to have an "identity" is to know where we stand in a space of values. The beauty of the Universe Story is that it shows us our place in an evolution, and so, with the right interpretation of that evolution, we can orient ourselves in value space by orienting ourselves in physical space.

Eric Weiss on January 27, 2003, 01:40 PM:

On the other hand, if our examination of physical space doesn't in some way disclose the relevance of some Divine principle, then it doesn't give us the moral orientation that we need.

Rick Kool on January 27, 2003, 01:40 PM:

"...can orient ourselves in value space by orienting ourselves in physical space."

Is the former dependent on the latter? Does one have to have a cosmology to have a morality? Does morality grow from cosmology, or do we see the cosmos as a reflection of how we see our relationships with others? Perhaps a bit of a chicken and egg question?

Ann Dale on January 27, 2003, 01:40 PM:

Some of you are talking about 'stories' and others about 'the story'. Heather, do you have any comments on this, before we start with our first question.

Heather Eaton on January 27, 2003, 01:41 PM:

Berry's horizon of concern is the ecological crisis in light of the universe and planetary processes; He sees the universe story as the macro dimension of the evolutionary reality, and because there has not been a functional macro dimension there has not been a functional story in which humans can orient their lives and understand human-earth relations.

Bruce Morito on January 27, 2003, 01:41 PM:

A cosmology articulates the most fundamental concepts and principles a person believes describes how the universe works and is ordered, as one of the fundamental contributors to shaping a person's or people's identity and understanding of their relationship to the world, it orders what and how we see, what importance we place on the various things we perceive and how all those things are fundamentally related.

Aaron Milavec on January 27, 2003, 01:42 PM:

In reality, however, we live in a society in which there is the clash of cosmologies: On a warm spring day, I volunteered as a parent-aid at my daughter's preschool. At snack time, everyone went outside. The dozen kids spread blankets on the lawn and chatted together amiably as various snacks were distributed. Then a disturbance occurred. Six agitated kids got up and backed away from the blankets crying, "Ants!" In response, two resourceful boys rushed in and began stomping on the ants, assuring their companions, "We'll kill them." One little girl tried to stop this killing. "No," she appealed to her companions, "don't kill them. They are our friends!" In this schoolyard exchange, the dominant cosmology (DC) expressed

itself—that humans (“the supreme creation of God”) have the right to kill, routinely and remorselessly, any insect or animal perceived to threaten their well being. My daughter expressed her alternative cosmology (AC)—that these ants were “friends” (“creatures of God”) sharing similar wondrous DNA development and endowed with certain inalienable rights to life, liberty, and the pursuit of happiness (“by the same Creator”).

Eric Weiss on January 27, 2003, 01:46 PM:

Aaron - I wonder what the relationship is between those ants having their own DNA, on one hand, and their possession of rights, on the other. Is it having DNA that confers rights, or is it something else?

Aaron Milavec on January 27, 2003, 01:48 PM:

Eric -- I refer to DNA by way of calling to mind our common heritage. The difficulty is that our western civilization has never taken this unity of the universe seriously because of our anthropocentrism both in our biblical religious and our Greek humanist traditions. We see the human as a princely resident on a planet that is completely lacking in any inherent rights that must be respected by humans. If there are any rights toward the natural world obliging the human it is obligations that we owe to them, not to the non-human world. The universe as such has no psychic, moral or spiritual dimension.

Eric Weiss on January 27, 2003, 01:43 PM:

There are two important senses of cosmology that sometimes get conflated. Bruce is right in a deeper sense, but there is also "physical cosmology", or the story told by the "hard" scientists. The story of physical cosmology, by itself, does not perform all of the functions that cosmology, in a larger sense, performs.

Henri Lock on January 27, 2003, 01:47 PM:

I was surprised, the other day, in conversation with my 9 year old daughter how the alternative cosmology appears to find expression in young children... that they have, at a basic level, a profound knowledge of the issues concerned. We were listening to an interview on radio of a marine biologist who spoke of the noise pollution in the ocean (Seismic testing, military exercises, boating noise) and how it is severely affecting marine animals (including beaching of whales with bleeding eardrums, etc.) My daughter exclaimed: "Daddy, people are so stupid! Don't they realize that animals can live without people, but people needs animals to live?" I thought, way to go girl!

Eric Weiss on January 27, 2003, 01:50 PM:

Aaron - You say, "The universe as such has no psychic, moral or spiritual dimension." I find that a remarkable statement, and I wonder if you could expand on it a bit.

Aaron Milavec on January 27, 2003, 01:54 PM:

Eric -- Not defending this but calling attention to the clash of cosmologies. You referred to "physical cosmology", or the story told by the "hard" scientists. Oftentimes this is presented as "without morality." In effect, however, it is very committed

Bruce Morito on January 27, 2003, 01:50 PM:

I think Aaron is quite right to indicate that there is a plurality of cosmologies working. The assumptions of some here seem to be that the present dominant society doesn't have a cosmology. But I suggest that there is a strongly developed and defended one stemming from the Modern period, which is being challenged by ecology. It is also that cosmology that separates concerns of science from those of morality and spirituality. So, part of the educational issue is whether and how to bring these elements back together again.

Ann Dale on January 27, 2003, 01:45 PM:

How does 'cosmology' differ from paradigm or worldview?

Eric Weiss on January 27, 2003, 01:48 PM:

Ann - you ask how cosmology differs from paradigm or worldview. It seems to me that those terms are all used very loosely, and there is no clear differentiation among them. Why is that question important in this context?

Ann Dale on January 27, 2003, 01:50 PM:

Eric, I think that we need to clarify our terms in order to communicate to wider publics what we mean. This is not my 'normal' area of inquiry, and thus, I am searching for links to what I know, being the lateral thinker I am. And I know the terms are used very loosely, but does not a 'cosmology' imply some spiritual base as well.

Heather Eaton on January 27, 2003, 01:48 PM:

It depends on who uses the word 'cosmology' and why. There is a significant conversation about cosmology that has nothing to do with worldview (they claim) and there is a specific conversation on cosmology, or reconstructive postmodern evolutionary cosmology that is very similar to worldview in the cosmology includes but is not reduced to worldview. Many worldviews are not cosmological in horizon, and nor do their use the 'story' of the universe from which to derive basic values and life-orientations.

Rick Kool on January 27, 2003, 01:50 PM:

Ann, could it be simply put that a cosmology grows out of a set of observations, explanations and understandings that can be articulated, while a worldview is more likely to be under the surface of thought, less able to be grounded in observation or explanation, more fundamental in some way than a cosmology. One's worldview in some ways limits, or puts constraints around, what one could articulate in a cosmological framework.

Ann Dale on January 27, 2003, 01:51 PM:

Rick, does it seem to you then that one's cosmology comes from 'inside', whereas paradigms and worldviews are taught from the 'outside'?

Eric Weiss on January 27, 2003, 01:53 PM:

Ann - In one of its uses, cosmology does imply some spiritual base. But if you pick up a textbook on physical cosmology, say a treatise on the operations of the four fundamental forces in the first few

microseconds of the Big Bang, or a treatise on the formation of galaxies and stars, it says nothing, at least on the surface, about spirituality. I am very interested in exploring what has to happen before the story told by the physical cosmologists can be turned into a cosmology in the larger sense that you are using.

Ann Dale on January 27, 2003, 01:55 PM:

Eric, I read somewhere that 95% of the world's physicists believe in the concept of God, is that a possible clue?

Aaron Milavec on January 27, 2003, 01:59 PM:

Ann -- Study recently published show that among "eminent scientists," belief in a "personal God" is down from 27% in 1960 to 7% in 2002.

Ann Dale on January 27, 2003, 02:01 PM:

Ah, I should have known better to ask a question of a psychotherapist:) Perhaps cosmology, then, is a higher order that one 'grows into' with age, wisdom and experience?, that it is the artificial separations and dualities that we live with, that are a problem? And thank you, Aaron, for that information.

Rick Kool on January 27, 2003, 01:55 PM:

I think that the two are closely linked, and that the basic assumptions about how the world works, inherited from the cultural whispers we hear from our youngest infancy, can severely limit our conception of the universe. The fact that we are now looking critically at a revolution in our understanding of our place in the universe is a result of revolutionary thinkers shaking up our assumptions, our worldview, and allowing us to see things and ourselves in a new way.

Heather Eaton on January 27, 2003, 01:57 PM:

It seems to me that we could spend a long time exploring uses of cosmology. But in terms of Berry, Swimme, Teilard de Chardin, etc. the use of cosmology is as a functional cultural narrative based in what is known about the universe. But not as a detached observer, but a participant in the 'story', from cosmos (a set of observations) to cosmogenesis - an unfolding reality that encompasses the human drama. Cosmology in this sense is the macro-horizon, the larger story to which we refer for guidance, life-orientation, and understanding basic human earth relations. This is why cosmology is relevant to sustainability.

Eric Weiss on January 27, 2003, 01:57 PM:

Well, it seems to me that there are two important questions that the physical cosmologists bracket out in doing their work. There is, first of all, the question of consciousness and its role in the evolution. Second, there is the question about the overall meaning of evolution, its source and its goal. Physicists, as people, may believe in God. But they do their work in abstraction from that belief.

Rick Kool on January 27, 2003, 02:00 PM:

Aaron, what would the scientists say about an impersonal god?

Aaron Milavec on January 27, 2003, 02:05 PM:

Rick -- When many scientists use the term "God," they are doing so in the way that Einstein meant it, namely, the total unified field of physical laws in the universe--very different from the God of the bible.

Ann Dale on January 27, 2003, 01:56 PM:

Shall we move to our first question of today, after that lively introduction.

What is the difference between Teilhard de Chardin's understanding of evolution and the role of human beings with Thomas Berry's vision of "The Great Work"?

Eric Weiss on January 27, 2003, 02:00 PM:

I'm not aware of any significant theoretical differences between Teilhard and Berry in their understanding of the evolutionary process. But there is a practical difference. Teilhard is focused on the deeper theoretical issues, and on the long-term outcome of evolution in a Divine epiphany. Berry is more concerned with our current moment in evolution, with the ecological catastrophe we are facing, and with the need to articulate the foundations of a new, sustainable civilization, which can enter into mutually enhancing relations with the other participants in the biosphere and the cosmos.

Rick Kool on January 27, 2003, 02:03 PM:

Eric, would you see the difference you articulate between the two to be a matter of where they were/are on the timeline, with Berry seeing more of a sense of urgency to help develop the transition to the ecozoic age. When de Chardin was writing, to use the phrase of Herman Daly, the world was still essentially empty of humans in terms of global impact. Berry writes when the world is full.

Heather Eaton on January 27, 2003, 02:03 PM:

Tom Berry's interest in cosmology is primarily with respect to the ecological crisis. They both saw the human as the consciousness mode of the universe and as a fulfillment of the evolutionary process. They agreed on the sacred dimension of the universe, as a spiritual, physical and psychic reality, that matter and spirit are intimately bonded. Berry parts company with Teilhard de Chardin in that Berry is not dedicated to the Christian tradition, but in religious consciousness and experience of all religions. Berry does not agree with T. de Chardin's anthropocentrism, and Berry is interested in the functioning of the entire life-processes - the integrity of the whole and does not see the universe as existing for the fulfillment of the human alone.

Eric Weiss on January 27, 2003, 02:05 PM:

Rick - I think that what you are saying is right. It does depend on where they are in the timeline. Teilhard de Chardin, Sri Aurobindo, Jean Gebser - they all saw modern civilization as problematic, and they all envisioned some new possibility for human existence, but none of them were right in the midst of the crisis like we are. None of them really felt the enormity of the ecological destruction.

Aaron Milavec on January 27, 2003, 02:08 PM:

Heather and Eric -- I strongly agree. Teilhard has various soft spots. To begin with, his system lacks metaphysical sophistication.

Henri Lock on January 27, 2003, 02:06 PM:

One difference I detect between Teilhard and Berry is that Teilhard appears more optimistic about Western progress and the role of the human within it. Berry, on the other hand, has a more skeptical stance towards Enlightenment optimism, in face of the ecological crisis and the role of the human in that crisis.

Rick Kool on January 27, 2003, 02:09 PM:

Interesting point, Henri... is there a relationship between Teilhard's scientific training and orientation that leads to a more optimistic or hopeful position, as you write, and Berry's more deeply theological orientation (with the science coming on afterwards) that leads him to be more skeptical?

Eric Weiss on January 27, 2003, 02:08 PM:

Heather - Your way of differentiating Berry from Teilhard is very useful. I would like to say just a small word in defense of that old Jesuit, Teilhard: he was rather anthropocentric, but he wouldn't, I think, go so far as to see the universe as existing for the fulfillment of the human. Rather, he saw humans as just the current stage on the privileged axis of evolution. I think it is very hard to make sense of evolution if we do not acknowledge some sense in which human beings function as a temporary and local maximum for the values which evolution is trying to maximize.

Heather Eaton on January 27, 2003, 02:13 PM:

Eric- thanks for your reply, however I don't agree. Teilhard de Chardin saw the universe in terms of a Cosmic Christ, moving from alpha to omega, for the sole purpose of the resurrection of the human. He saw matter as part of that fulfillment. Berry sees matter and all life as following its own inner dynamism and destiny, its subjectivity and integrity. The goal of the universe is the universe, and he does not share the cosmic Christ imagery as it is anthropocentric.

Eric Weiss on January 27, 2003, 02:15 PM:

Heather - This is an interesting discussion, and I would have to go back to Teilhard to really sort things out, but Teilhard does say that every physical reality has its own, conscious interiority, and all interiority is ultimately brought together in the Omega point. I like the Cosmic Christ precisely because it generalizes the Christian idea into something less personal. The Cosmic Christ is just the force that drives the movement of evolution, and so it is there in all physical process, not just human process.

Aaron Milavec on January 27, 2003, 02:16 PM:

Henri -- Agreed. You say it better than me.

Cate McEwen on January 27, 2003, 02:12 PM:

Heather - you make the difference between the visions of Teilhard de Chardin and Berry clear. Throughout Teilhard's life the Church would not allow the publication of his work yet he dutifully would not

renounce his faith. However, in his writings, he seemed to support pluralist views, in theory - King mentions that, "Teilhard saw need for greater unity, not as conformity but unity of complexity with respect for pluralistic differences - unity not by external pressure and force but by the powers and energies of love", Berry, by all his knowledge and background and acceptance of the diversity of all life seems to bring diversity together for its strengths.

Eric Weiss on January 27, 2003, 02:13 PM:

Regarding Teilhard's lack of metaphysical sophistication: yes, that is a problem. It is interesting, though, that Sri Aurobindo, who has a much more sophisticated metaphysical understanding, came up with conclusions very similar to those of Teilhard. Also, his idea of the intrinsic association of consciousness with matter is very much supported by the work of Alfred North Whitehead, and others who do have the metaphysical sophistication to make them stick.

Henri Lock on January 27, 2003, 02:14 PM:

Rick -- I don't think it is Berry's theological orientation that presses him to be more skeptical -- if anything it is his training as a cultural historian with a fine appreciation of the capacity of human destructiveness that leads him to his skepticism.

Ann Dale on January 27, 2003, 02:28 PM:

Are there any catalysts for awakening this new worldview, this acceptance and belief in a new cosmology?

Eric, do you think that as young children we have an innate cosmology that we lose touch with?

Aaron Milavec on January 27, 2003, 02:36 PM:

Ann -- Yes, there are new catalysts--Peter Raven of the Missouri Botanical Gardens has addressed scientific groups under the title *We Are Killing The Earth.*" Other knowledgeable scientists such as Norman Myers, E. O. Wilson, and Paul Ehrlich have told us the same thing. Recently over a thousand of the most illustrious scientists have issued *A Warning to Humanity*. The introduction states: "Human Beings and the Natural World are set on a collision Course. If not checked, many of our current practices put at serious risk the future that we wish for human society and the plant and Animal Kingdoms, and may so alter the living world that it will be unable to sustain life in the manner that we know."

Eric Weiss on January 27, 2003, 02:37 PM:

I think, rather darkly, that the main catalyst that is operating to awaken a new worldview is the utter misery that people are now experiencing in industrial civilization. People are unhappy, afraid, and depressed. The ideas of the new cosmology have, for some people, the properties of a medicine. They awaken people from an a-cosmic catatonia into a sense of vital participation.

Henri Lock on January 27, 2003, 02:38 PM:

I look to my children to see evidence of an emerging worldview -- distilled into child-like simplicity. Again, my daughter declared at 4 years old (after watching 'Babe') that from that moment on she was going to be a vegetarian -- that she could not stomach eating animal stuff. Is it a function of our age that a child expresses such a sensibility? Are the repeated messages of ecological disaster a catalyst for the shaping of a new response, under girded by a new cosmology? Hopefully.

Ann Dale on January 27, 2003, 02:39 PM:

Eric, can such a negative catalyst bring about change? Surely, people would feel disempowered, disengage and anomie?

Eric Weiss on January 27, 2003, 02:42 PM:

Ann - I have noticed that most people don't change unless they are forced to do so. That is what makes evolution (physical and spiritual) so rough. It seems to me that our civilization is so locked into its self-destructive and addictive patterns, that only major disruptions - individual and collective - can inspire a large-scale change of course. What we need to do is to spread seeds that can take root in the new conditions that are emerging.

Heather Eaton on January 27, 2003, 02:39 PM:

There are thousands of catalysts!! Inspiring people, including the concerns of many 'young' people, the odd decisions by politicians who will take ecological concerns seriously and alter economic priorities, and immense amounts of research. As I see it, people need to see signs of change, not only at the level of cultural critiques and visions.

Eric Weiss on January 27, 2003, 02:39 PM:

I have, in the recent past, met a number of people who have stumbled across the New Cosmology and have been hit as if with a revelation. I am very impressed with the religious power of the story. It actually seems to inspire a conversion. Have any of you noticed this phenomenon and wondered about it?

Cate McEwen on January 27, 2003, 02:40 PM:

Eric - your point of where people are coming from is critical - they are needing hope. A new cosmology offers that. The woes of the ecological crisis are catastrophic and the forecasts are bleak, yet a faith in a new cosmology offers hope, a vital human virtue.

Aaron Milavec on January 27, 2003, 02:41 PM:

Eric and Ann -- Yes, Eric, it is true: utter misery that people are now experiencing in industrial civilization.

As for children, Ann, remember that the majority of the children were impassive as the ants were being stepped on and killed by their "friends." Whatever innate cosmology children may have is completely swamped by enculturation.

Rick Kool on January 27, 2003, 02:44 PM:

There is a tremendous need, in my opinion, for faith communities to confront this new orientation towards cosmology.

Once, I was giving a workshop on classification theory to a grade 7 class from a religious (Christian) school. While I thought I'd keep evolution out of it and just work on the mechanics, the kids wanted to know why I 'believed' in evolution. Their belief in the genesis story as taught to them was accepted on 'faith', they told me. When I brought their attention the range of creation stories among the world's

peoples, all accepted based on 'faith', and asked them whose faith is the correct faith, they looked quite puzzled.

We have to see that there is a multiplicity of stories from which we need to derive ways of living in the world. But discarding stories which don't work any longer, which might have worked in a world empty of humans but don't work in a world full of humans, is a difficult project indeed.

Henri Lock on January 27, 2003, 02:44 PM:

I've been holding small discussion groups here at the University of Victoria on topics like Voluntary Simplicity, Deep Ecology, Sustainable Living -- the recurring experience is the awakening to a new sense of hope, arising out of a new sensibility and the knowledge that action on the micro-scale affects the macro.

Cate McEwen on January 27, 2003, 02:44 PM:

There are many catalysts to awaken people to the ecological crisis and the need for change. But change to accepting a new cosmology, as discussed here, requires a complete change in worldview by the individual. Catalysts for this sort of change can be personal loss, mind-altering drugs, and the quest for knowledge. How are others exposed to this vision?

Eric Weiss on January 27, 2003, 02:45 PM:

Going back to your earlier question -- I don't think that all children are born with an innate cosmology - or, if they are born with one, there is nothing special or pure about it. We each come into this life with certain tendencies pre-determined (as any parent will tell you), but I don't place much credence in the idea of the intrinsic innocence of infants.

Heather Eaton on January 27, 2003, 02:47 PM:

People are moved by inspiration, such as the new cosmology, and by suffering. I agree that the faith communities, if sufficiently concerned by the ecological crisis, would be a very powerful social influence. It is very difficult to shift those who have made commitments to values and a worldview that excludes the earth. I say this from much experience! On the other hand, when religious folks shift paradigms, they become extremely powerful catalysts!!

Ann Dale on January 27, 2003, 02:48 PM:

Eric, you have hit upon an important point, and one that I have experienced personally. When do we learn, when do we develop, through pain? These can be points of transformation, if we chose, but we are taught to avoid pain and pursue pleasure at all costs. It is in embracing the paradox that enlightenment occurs?

Aaron Milavec on January 27, 2003, 02:48 PM:

Eric -- I had anticipated your response to Ann, but you express it much better.

Bruce Morito on January 27, 2003, 02:50 PM:

I'm not a big fan of catalytic conversion; it sounds like we are looking for some kind of immediate gratification or alleviation of our fears. Although I am often tempted to utilize doomsday scenarios, they often are ineffective, especially if people in general learn to adapt and are still well-off. This is where we are today. We adapt to the disasters by going outdoors less often to avoid the sun, buy bottled water to avoid drinking tainted water, get prescriptions for the drug that will numb us to the suffering caused by a devastated physical and human environment. Although I think we need a many-leveled approach to changing things, it seems to me that shifting the way we behave, because our critical thought and deliberative moral commitment lead us there, is the surest and most certain approach. I think we have to place concerted effort in the institutions that control knowledge and education to be genuinely critical and to aid us in identifying what is of fundamental value to us.

Heather Eaton on January 27, 2003, 02:53 PM:

Bruce - I can unite! To shift economic priorities at the institutional level would shift more than the hundreds. or is it thousands.. of times I have presented the 'new cosmology and ecology' to those who are not walking four hours a day for water.

Rick Kool on January 27, 2003, 02:55 PM:

Bruce, have you read Earth by D. Brinn? He paints a picture of a near-future world where people have adapted to continued environmental destruction. But the interesting part of this sci-fi book is the depiction of the rise of Gaia-based earth religions who take a pretty damning and violent response to the inability of society and mainstream religions to address the issues of environmental destruction.

Ann Dale on January 27, 2003, 02:44 PM:

Such interesting points, whether cosmology or cosmologies are innate, and we are enculturated out of them? Can there ever be a grand narrative, or rather, given the nature of post-modern societies, there are grand narratives, but grounded in a over-arching cosmology based on being one with the universe, love and compassion for all life?

Aaron Milavec on January 27, 2003, 02:46 PM:

My own catalyst came from Daniel Quinn. A dozen persons have changed my life. But only a few books. The Story of B by Daniel Quinn (1996) is surely the most significant among the latter. This book is deceptive. On the surface, the book appears to be a fictional story about a priest who has been sent to modern-day Germany to discover whether the man known as "B" is the antichrist. Just below the surface, however, one is gently pushed into a seductive rehearing of the Cain and Able story that reveals the hypocrisy of Western Civilization: "You are captives of a civilization system that more or less compels you to go on destroying the world in order to live." This book, along with the author's earlier Ishmael (1992) and My Ishmael (1997), have become book-circle classics.

Have others here been revolutionized and inspired by him???

Eric Weiss on January 27, 2003, 02:49 PM:

Aaron - I haven't read Quinn's work. My own catalyst was the works of Alice Bailey, the early twentieth-century Theosophist. She teaches a doctrine of "hylozoism" - the idea that the whole universe is alive and evolving together - which is very much like that of the New Story.

Rick Kool on January 27, 2003, 02:50 PM:

Aaron, Ishmael also had an influence on me... so did Schumacher's Guide for the Perplexed!

One of the difficulties with catalysis is that in our culture, knowledge is much more valued than action. To say that we understand something, to read something and talk about it, is often sufficient to get one success in academe or publishing. But to take our words and turn them into an action, that is hard, scary, and not always appreciated by society. We live in a world where one can be intimate with ideas and completely incapable of action.

Ann Dale on January 27, 2003, 02:51 PM:

I have read Quinn's work, and so has my beloved son, however, one work that has most inspired me and gave me tools to transcend some personal tragedies is Victor Frankel's Man's Search for Meaning.

Eric Weiss on January 27, 2003, 02:55 PM:

The enormity of the issues that we face often leaves me in despair - especially when I am thinking that human beings are responsible. But when I look at myself and at those around me, I realize that we are really much less evolved than we like to imagine. Teilhard grants humans the privilege of self-conscious reflection, but we attain that lofty height only rarely. Most of our behaviors are dictated by circumstance, and are little more than automatic responses to stimuli. This may sound depressing, but when I begin to realize just how un-evolved we are, I realize that what is happening on the planet is, in some sense, happening through us. We are the agents for a radical transformation of the biosphere. Perhaps we might put more of our faith in the Cosmic Christ?

Aaron Milavec on January 27, 2003, 02:58 PM:

Thanks for all your responses re. Quinn.

In some ways, I find that a "New Cosmology" brings about an empathy with the natural world such that I suffer. As the natural world is diminished, I suffer. My daughter lept into action because she sensed the suffering of the ants. So, in a deep way, I believe Eric is correct, pain can and does lead to action (if and only if one's cosmology changes with it).

Bruce Morito on January 27, 2003, 03:00 PM:

While I am very much myself moved through inspiration, I find it is the hard work of critical inquiry and dialogue that makes for the most effective means for bringing about environmental change as an educator. Few are interested in my inspirations. All must be interested in the rational critique of the dominant paradigm and in protecting those values most fundamental to them (identity, self-esteem, health). An ecologically directed analysis of these elements, I think, is the most effective means for transformation on policy and other institutional levels of change.

Heather Eaton on January 27, 2003, 02:54 PM:

Thanks for the engaging conversation folks, and all the best to each may the universe inspire us!

Ann Dale on January 27, 2003, 02:55 PM:

Closing comments, everyone. May the peace of the deep running wave always be with you.

Eric Weiss on January 27, 2003, 02:55 PM:

A most enjoyable encounter. Thanks to you all.

Cate McEwen on January 27, 2003, 02:56 PM:

Thank you everyone - for your insights and comments, much appreciated.

Henri Lock on January 27, 2003, 02:57 PM:

Thank You All

Day 2: Environmental Education in forum **Cosmology & Education** at **Royal Roads University Discussion Forums**.

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Ann Dale on January 29, 2003, 01:24 PM:

Welcome to Day 2, where we will be talking about environmental learning. One of the things I have wondered about is what are the learning outcomes of environmental learning, what constitutes environmental literacy, and we'll get to that topic when we move to our third question.

Cate, before we begin, can you give us a working definition of environmental education?

Cate McEwen on January 29, 2003, 01:25 PM:

We need definitions for three related subjects – environmental education, earth education, and transformative learning. For the purposes of our dialogue today, we'll use the following meanings:

“Environmental education is defined as education, formal and informal, which:

- Cultivates an understanding of our relationship to our environment;
- Fosters knowledge, skills and attitudes that people can use throughout their lives to understand and act responsibly and respectfully with regard to the environment;
- Includes an awareness of the economic, social, political and ecological factors which shape our environment,
- Acknowledges the relationship between quality of life and the quality of the environment”
(<http://eecom.ca>).

“Earth education is the process of helping people live more harmoniously and joyously with the natural

world. Earth education aims to accomplish what environmental education set out to do, but didn't: to help people improve upon their cognitive and affective relationship with the earth's natural communities and life support systems, and begin crafting lifestyles that will lessen their impact upon those places and processes on behalf of all the earth's passengers"(http://www.eartheducation.org).

Transformative learning refers to a radical restructuring in perspective, a new paradigm, in which learning keeps concerns for the planet always at the forefront, in keeping with the ecozoic vision and the human-earth relationships. It involves a comprehensive and integrated perspective to be found within cosmology. Fundamental to transformative learning is an awakening to the celebration of the gift of life and the sense of the sacred" (see O'Sullivan, 1999).

Ann Dale on January 29, 2003, 01:28 PM:

Cate, I need to know what 'ecozoic' means. Ann J., what does environmental education mean to you, and others?

Cate McEwen on January 29, 2003, 01:30 PM:

Ecozoic era, has been coined by Thomas Berry, to be that period or epoch we are now entering in which the integral functioning of the natural world is central and forefront to all actions and decisions. Unlike anthropocentrism which places the individual human's interests first, ecocentrism places all within the community of earth.

Bruce Johnson on January 29, 2003, 01:31 PM:

Good definitions to start with, Cate.

Ann Jarnet on January 29, 2003, 01:35 PM:

Environmental learning, for me, is all about learning about anything in a new way. Munju Ravindra of Parks Canada made the following comment which I quoted in the Framework for Environmental Learning (see document at <http://www.ec.gc.ca/education/framework/pdf/EC-ELS-E.pdf>): "One shouldn't be learning about the environment, but rather 'learning environmentally'" (p. 9). So, this can apply to physical education, to music, to english literature, to home economics, to running a business, to patenting a new invention -- indeed to everything.

Ann Dale on January 29, 2003, 01:37 PM:

In reply to Ann J., I have always thought that teachers are critical in teaching us whether we are a part of the environment or apart from the environment.

Bruce Johnson on January 29, 2003, 01:39 PM:

Ann D., while what you say may at first seem like a good idea, it is part of what has contributed to the failure of environmental education to make any real difference after 30 years of effort. If we are serious about helping people change the way they affect the systems of life on the planet, then we have to be more specific and purposeful in what we are all about and are trying to accomplish.

Ann Dale on January 29, 2003, 01:34 PM:

Shall we kickstart today with our first question?

What is the role of environmental learning in affecting change in existing worldviews through new cosmology? Bruce J., and others, any thoughts?

Bruce Johnson on January 29, 2003, 01:36 PM:

Right now, I would have to say not much. The purpose of most of what passes for environmental learning is not to change existing worldviews; in fact, one could argue that much of it is designed to reinforce the dominant social paradigm. What should be the role of environmental learning? First, to reveal that there are other worldviews to consider. In earth education we want to help people see that there is an alternative worldview, a different path, one in which you can try to live as if other life matters. Second, to help people understand how natural systems work so that they can better make decisions. Third, to put people in direct contact with the systems and elements of life, to let them make personal connections with our common home, the earth. While we should not, and indeed can not, force people to adopt a new worldview, we must, and can, at least let them see that there is another way.

Rick Kool on January 29, 2003, 01:38 PM:

Also, without wanting to go on too long, environmental education is about educating for relationship: relationships between people, and between people and their physical and social environments. In understanding relationships- ecological and social- and in understanding the reality of relationships (even though you can't touch them), we come to understand something about the nature of the world we live in.

But for me, always, environmental education is not just about knowing things... it is clearly about doing things. About acting as much as one can in congruence with one's knowledge.

Ann Jarnet on January 29, 2003, 01:40 PM:

I agree with Bruce J., that we are talking about what environmental learning "should" be. Just as we are about to enter into an Ecozoic era, we need to transform ourselves, to learn differently, to get away from the notion of "education" as being something to "prepare" one for making an economic contribution to society. Education, and therefore environmental education, should be about knowing our universe, developing a relationship with it, making a commitment to "mutual enhancement" as Thomas Berry says.

Cate McEwen on January 29, 2003, 01:40 PM:

Bruce J., that seems an important issue on the exposure of different worldviews. To expand one to know there are other possibilities, and to contemplate these differences - that in itself is a step towards acceptance of differences. These differences are so essential to creating a strong common union of community, where possible.

Cate McEwen on January 29, 2003, 01:43 PM:

Moffet, (The Universal Schoolhouse), in wanting to overhaul education, states that a holistic education is needed, one that aims to nurture the development of the individual, consciousness and social responsibility. Do we really find this in environmental education or is it too fragmented wanting to teach

specific aspects, e.g. climate change, water use, etc.

Rick Kool on January 29, 2003, 01:43 PM:

Environmental education can, in some way, be used (as van Matre and the earth education movement does) to address issues of worldview.

Hannah Arendt wrote, in *The Human Condition*, about what the impact of the ability to travel quickly elsewhere on the planet, and then what the impact of first space shots would be- she talked about world alienation, and earth alienation, the feeling of not being at home anywhere, first on earth, and then in the cosmos.

One job of environmental education might be to help people feel at home... of course, that is a job of most religions and a major thread through much of the Old Testament.

By bring kids into the natural world, and while in the natural world presenting both information, experience and reverence, one likely has a real impact.

Cate McEwen on January 29, 2003, 01:46 PM:

Rick - that feeling of belonging is key to everyone's sense of self. I think cosmology can give a sense of place. A sense of place in family, community, regionally, and within the community of beings on earth and within the greater universe.

Ann Jarnet on January 29, 2003, 01:47 PM:

Cate, I agree that there is a problem with an "issues-based environmental education". And that's what seems to get financial support, education for the flavour of the day. The problem is that often no link is made to anything else, all these issues remain as disconnected stovepipes. Still, I'm all for taking advantage of whatever wave comes by to try to push things a little further while devoting energy to provoke interest and commitment to a different world view. I struggle with this as a bureaucrat, but I feel that this is what I have to do -- for now!

Cate McEwen on January 29, 2003, 01:50 PM:

Ann J., it is a reality as to where the dollars come from, yet earth education would be quick to state how they do not get corporate financing.

Still, to be effective we need achievable goals and how to measure them. In thinking of the role of environmental learning faced with today's ecological crisis, some suggest we consider very strongly spiritual education that rests on personal growth - Moffet - suggests such educating will solve more social ills and material problems than any other sort of education orientation.

Ann Dale on January 29, 2003, 01:44 PM:

To be a little provocative, shouldn't all learning involve exposure to difference, or diversity of worldviews and paradigms? What makes environmental learning different? I have heard some commonalities-- relationship and holistic?

Bruce Johnson on January 29, 2003, 01:45 PM:

Since Cate did such a nice job of introducing definitions for three key terms, it would be good to use them

that way. When talking about all three, environmental learning would be appropriate, so that when someone mentions environmental education, we are talking specifically about it and not earth education, etc. Does that make sense?

Ann Dale on January 29, 2003, 01:53 PM:

I agree with Bruce J.'s suggestion above. And I would assume that environmental learning includes both formal and informal?

Bruce Johnson on January 29, 2003, 01:48 PM:

Rick, I agree.

Ann D., maybe all learning should involve exposure to different worldviews or paradigms, but in reality standard education systems are much more geared toward indoctrination into the dominant social order with its accompanying worldview.

Jean Robitaille on January 29, 2003, 01:46 PM:

Sure, I think that environmental education is more than knowledge. That's also the development of values, skills and desire to involve action. But to act, children have to have a kind of framework to interpret the world. The problem is that teachers have different conceptions which are sometime very different. There's need for a basic common view of what makes the world the way it is and what can be done to make it better.

Rick Kool on January 29, 2003, 01:47 PM:

A question appropriate for this group is the question of the appropriateness of spirituality in education, and in particular environmental education.

Bruce, how does earth education approach the question of reverence?

Bruce Johnson on January 29, 2003, 01:53 PM:

Rick, in earth education, we include reverence as a key component of all of our programs. We include four understandings (ecological concepts), four feelings (joy, kinship, reverence for natural communities, and love) and four processing components (internalizing understandings, enhancing feelings, crafting more harmonious lifestyles, and participating in planning and action). So reverence is very important.

Rick Kool on January 29, 2003, 01:50 PM:

Bruce J., the use of the word indoctrination is strong... but you may be correct. usually, indoctrination is used when one is trying to close down thought and narrow possibilities, where there is only one right answer to a question and other answers are perceived as being dangerous. Does most environmental education act in an indoctrinative fashion?

Bruce Johnson on January 29, 2003, 01:57 PM:

Rick, talking about indoctrination, I was referring to education in general, not environmental learning or environmental education specifically.

Ann Jarnet on January 29, 2003, 01:53 PM:

Spirituality and education? Perhaps it might be easier to deal with the notion of developing a deep inner life and that can be done partly through education. I feel that deep inner life comes from giving someone time and space (i.e., privacy and avoiding over-stimulation and over-direction) so that children (and grown-up children) can reflect, imagine, pursue thoughts.

Teilhard, I believe, had the time and space to develop an inner life. I'm not sure where Pierre Leroy took the following quote – he doesn't say so in the edition of *Le Milieu divin* I have. The quote reflects a deep inner life (the place where no one can stop you, the place where your imagination can flourish:

"You should have seen me as in profound secrecy and silence I withdrew into the contemplation of my "God of iron", delighting in its possession, gloating over its existence. A God, note, of iron; and why iron? Because in all my childish experience there was nothing in the world harder, tougher, more durable than this wonderful substance. There was about it a feeling of full personality, sharply individualised... But I can never forget the pathetic depths of a child's despair, when I realized one day that iron can be scratched and can rust... I had to look elsewhere for substitutes that would console me."

Quoted from the biographical note by Pierre Leroy s.j. in Teilhard's *Le Milieu divin*, Fontana books, 1957, p.18.

That was self-taught environmental learning, I believe.

Rick Kool on January 29, 2003, 01:53 PM:

Cate, should all education be spiritual? And Whitehead, early in the last century wrote:

"The essence of education is that it be religious.

Pray, what is religious education?

A religious education is an education which inculcates duty and reverence. Duty arises from our potential control over the course of events. Where attainable knowledge could have changed the issue, ignorance has the guilt of vice. And the foundation of reverence is this perception, that the present holds within itself the complete sum of existence, backwards and forwards, that whole amplitude of time, which is eternity. "

Cate McEwen on January 29, 2003, 01:53 PM:

Rick - your point is interesting. Bob Jickling stated that he would rather his children learn to be open minded, to be analytical, and research their topic, rather than be fed sustainable development dos and don'ts. Better to nurture creative, investigative thinkers than learners by rote.

Ann Jarnet on January 29, 2003, 01:57 PM:

Ann D., asks if environmental learning refers to both formal and informal education. I believe it really refers to life-long learning, way beyond classroom walls. Every place we go to provides us with an opportunity to learn, to ask questions, to question the answers, to challenge.

Cate McEwen on January 29, 2003, 01:58 PM:

Ann J., James Moffet suggests that to be spiritual is to perceive our oneness with everybody and everything and to act on this perception. It is to be whole with oneself and the world. Moffet wants education to nurture this development of self. It is found in Montessori schools, and at a university level

John Miller teaches meditation to his education students for the value of contemplative time.

Rick Kool on January 29, 2003, 01:57 PM:

What I've always like about earth education is that it is completely focused on achieving its goals. There really are no other environmental education programs like it. While I've never taken a workshop in its delivery, I have read most of van Matre's work. When Bruce J. summarizes the earth education approach in one short paragraph, he is demonstrating the coherence of this program, a coherence that few if any others have. While you may not agree with all that van Matre writes, you cannot fault him for not thinking his subject through.

And just outside my window here at Royal Roads University, there are two beautiful Bewicks wrens calling for each other.

Bruce Morito on January 29, 2003, 01:58 PM:

Hi All. Just arrived. Since the issue of indoctrination has arisen, I think many environmental education practitioners are in the same business of indoctrination, equally as intolerant of the scientific and technological approach as it is with them. Education, or the drawing out, I believe has two important components: thought and experience. Thought needs to be rigorous and critical, endlessly critical. Experience needs to be as exhaustive as possible to provide thinkers with as great a base of information as possible. In this process, values cannot be inculcated or taught without doing the same thing as the other indoctrination system does. They need to be worked through in critical inquiry and acquaintance with the Earth, such that the appropriate values and world views are allowed to emerge.

Cate McEwen on January 29, 2003, 02:02 PM:

Bruce M., how well put. This is one reason why the vision of Teilhard and Berry resonant with me personally is because underlying the vision is a great compassion for life, it all its diversity. We need to embrace the uniqueness and differences of human communities as adding strength to the larger common union - the human community, and step it further to the community of all beings. And always, we want people to think for themselves, because lies creative thought.

Bruce Johnson on January 29, 2003, 02:03 PM:

Bruce M. , I agree that we need to be careful not to slip into indoctrination. One of the environmental education criticisms of earth education is encompassed in the line: "We teach how to think, not what to think."

That implies that in earth education we teach people what to think. We feel, though, that we give people something to think about, their relationship with the earth and its life.

Ann Dale on January 29, 2003, 01:58 PM:

Rick, whose religion would prevail? I had a comment from a close colleague in the audience yesterday on our discussion on cosmology--that there did not seem to any room for different religions--Buddhism, for example.

Rick Kool on January 29, 2003, 02:01 PM:

Ann D.,... I don't think Whitehead, good Anglican that he was, really had any one religion in mind. It is

that sense of duty, or obligation, that was important- to people, to the world (and he was a deep ecologist long before the word was used, I think), and to time (he was really interested in time). The quote about reverence is beautiful, I think, in placing the object of reverence to eternity here in the moment.

Jean Robitaille on January 29, 2003, 01:59 PM:

One of the most important goals of education, in our current world crisis, is to give hope to the learners, to make them realize that they have the capacity to change their own world first. The issue is not who is strictly environmental or strictly social, all are linked together. Environmental education is systemic education based on the conscience of those relations.

Rick Kool on January 29, 2003, 02:04 PM:

Jean is right... part of the spirituality of environmental education must be hope- not necessarily optimism (which is the rather uncritical belief that all will turn out for the best), but the hope that change can occur, that we can engage in what the Jewish faith refers to as t'shuvah, or turning. We have faith that as individuals we can turn our direction for good.

Without hope, as the Greek story of Pandora's box demonstrates, we are sunk.

Cate McEwen on January 29, 2003, 02:05 PM:

Jean - this is so important, particularly in light of all the challenges. By giving people the capacity to create change - do you mean that problem-solving skills, analytical approaches, etc are a component of environmental learning?

Bruce Morito on January 29, 2003, 02:05 PM:

The kind of religiosity those of the Whitehead sort would advocate is not a directly educable type. The types of religious or spiritual awakening that is involved here comes by way of working through to an understanding, not being taught it. Aboriginal people and many of those in the East use indirect methods as students have to deal with the facts before them and the inner voice that can only be heard indirectly. This is why I would see education of spiritual matters only of an indirect sort. Many Aboriginals, particularly Anishnaabe and Dene speaking call it coyote teaching. In Zen, ko-an are used.

Bruce Johnson on January 29, 2003, 02:11 PM:

Cate, rather than giving people the capacity to create change we are really talking about helping them realize that they have that capacity already and that change might be a good thing. Focusing on personal actions first rather than larger issues is one way of helping to achieve that.

Ann Jarnet on January 29, 2003, 02:05 PM:

I'm intrigued with the notions of reverence and hope (as articulated by Bruce J. and Jean). It makes me feel that environmental learning must be done in a hopeful and reverential/respectful way (the old way of blame, shame is so anti-pedagogical).

Bruce Johnson on January 29, 2003, 02:06 PM:

I would imagine that we are all in this business because we have hope. I know if I didn't have hope I could easily think of other ways to spend my time!

Ann Dale on January 29, 2003, 02:07 PM:

Common themes emerging are relationship, holistic, hope, diversity, compassion and reverence?

Bruce Johnson on January 29, 2003, 02:09 PM:

Ann D., to your list of themes I would add change. While I don't want to force anyone to change but rather to open them up to seeing and considering the possibility, I will feel I was not successful if in the end there is not change.

Rick Kool on January 29, 2003, 02:12 PM:

Good summary Ann D.,... and how do we bring this back to Cate's interest in cosmology? Some writers would argue that cosmology's job, as espoused in scriptural writings, is to make us feel at home in the universe- to give a sense of the understandability of the universe. Science has given us understanding, but not a sense of home in the universe. Can environmental education broadly speaking take this on, the job of helping young people and others feel at home, using the power of hope, of relationship, of reverence, of understandings, of direct experience with nature and with the small/indirect voice one can hear in the silence...

Ann Dale on January 29, 2003, 02:08 PM:

Shall we move on to our second question of the day?

How do informal and formal education systems bring in the dimension of awe in the unknown, the unseen and the unmeasured?

Ann Jarnet on January 29, 2003, 02:09 PM:

Bruce, I have very dark moments when I think there is no hope. I continue because to stop would be wrong -- even if things are pretty bad, I need, as a person, to live my life a certain way.

Ann Dale on January 29, 2003, 02:12 PM:

Ann J., isn't one of our oldest archetypes, the forces of light and the forces of dark (Lord of the Rings), and that perhaps deep learning occurs when they are held in tension?

Cate McEwen on January 29, 2003, 02:12 PM:

Creating a sense of awe - there are examples to be found of the deep cosmological awareness in indigenous culture where there is celebration of the wonders of the world.

Rick Kool on January 29, 2003, 02:16 PM:

Cate, I'm sure that all religions and cultures have a "deep cosmological awareness", not just in indigenous

culture. Can you think of one that does not celebrate, in some way, "the wonders of the world".

It's not just in the celebration, though, but in the deeds that result.

The Buddhist/Taoist cultures of China, with their sense of harmony of nature, was responsible for the deforestation of northern China before the 15th century. It is said that the scholars of that time used up the forests for charcoal, so that they could write about the need for harmony with nature.

Jean Robitaille on January 29, 2003, 02:16 PM:

Cate, environmental education is interesting because it focuses on a pedagogical approach based on reverence, empathy with life, responsibility and engagement. Action (problem solving, analysis, role playing, are necessary because they invite the learners to realize that there's different point of view in each concern. The problem is that it is often more easy to find economics and social arguments than ecological ones.

Bruce Morito on January 29, 2003, 02:13 PM:

Ann D., the awe of the unknown I think begins with the presentation of the facts as we know it and the lacunae in our explanations. A thorough and deep appreciation of the discoveries of science coupled with the experience of the Earth's power through direct acquaintance, sets up a deep problem for students. How do they, indeed, how do we as educators, deal with these facts, lacunae and direct awareness? I find that the problem when skillfully articulated is what brings students and myself to an ever developing commitment to protect and reverence that which continues to evade understanding.

Ann Jarnet on January 29, 2003, 02:14 PM:

Ann D., education systems don't even deal with "sense of wonder and awe" when it comes to nature or to the universe. Indeed, I think that demonstrating a sense of awe is devalued, it is seen as being unsophisticated, and it is denigrated. During our consultation with over 5500 Canadians between 1999 and 2002, Environment Canada heard over and over again about how important it was that environmental learning impart a sense of awe and wonder. There's a yearning out there for that to be valued, I think, but we're talking about a small minority of people who feel this way.

Ann Dale on January 29, 2003, 02:16 PM:

Bruce M., so is the role of educators to create the space and place, and capacity for learners 'own awe' to emerge?

Bruce Johnson on January 29, 2003, 02:14 PM:

How do formal and informal education systems bring in the dimension of awe in the unknown, the unseen, and the unmeasured? Formal education systems often avoid bring in any sense of "awe". Informal education is sometimes better at that. "Awe", I think, is something that comes from direct, personal experience. We can help people get that feeling through setting up situations in which it is more likely to happen, but we cannot teach it.

Ann Jarnet on January 29, 2003, 02:18 PM:

Ann D., yes, yes, yes, deep learning can occur in our dark moments. I have no empirical knowledge to back me up here, but I have often felt that all those people in my networks who care deeply about their

universe and their place in it have come there from a place of hurt, anxiety, grief... those things can make us focus in a different way, they can contribute to the development of our mindfulness.

Bruce Morito on January 29, 2003, 02:23 PM:

Ann D., If you are addressing my comments, yes, I think that we need to allow the values to emerge, not be taught, partly because values are things closely identified with who we are. To try to inculcate values is to try to shape what properly belongs to the autonomy of individuals, in my view.

Bruce Johnson on January 29, 2003, 02:18 PM:

Ann D., yes, I think that is an important (though not the only) role for us - to provide opportunities to experience awe.

Cate McEwen on January 29, 2003, 02:16 PM:

Creating a sense of awe is found in many of the earth education activities. David Oliver comments on ontological knowing (i.e. inarticulated thoughts, sensibilities, feelings) expressed through mystical experience – metaphor, poetry, drama, dreams, music whereas technical knowing expressed in analytic/linear explicit language and diagram. It seems the methods of ontological knowing need to be tapped into more often to create the sense of wonder.

Bruce Morito on January 29, 2003, 02:19 PM:

Bruce J., and Ann J., I think that the potential for awe is to be found in the science we teach and even the economics we foist on our students. It's just that we don't critically assess it deeply enough. When we do relentlessly critique the belief systems assumed in these world views, we begin to see that they are world views and become much more empowered to see the limits of them. We can at the same time become far more awed at the complexity and vastness, perhaps even the mystery, of the cosmos.

Bruce Johnson on January 29, 2003, 02:22 PM:

Bruce M., yes, reading about and seeing images of the universe and what we are learning about it leaves me in "awe". But we can also experience "awe" closer at hand, in the bug we normally step on or the beauty of a smog-free sky.

Rick Kool on January 29, 2003, 02:22 PM:

A sense of awe is an interesting idea as a result of environmental education. I think that many of us would find this something that we work towards, but don't always hit. Of course, awe is a term freighted with religious connotations. A sense of speechless smallness in front of something much more ultimate.

Ann Jarnet on January 29, 2003, 02:23 PM:

Bruce J., talks about potential for awe in science and economics. I couldn't agree more. I think that often educators feel inadequate about their capacity to do this. Short anecdote: my four-year old nephew was taken to Montreal's Biodome last week with his day-care group. When I asked him what he saw, he said, "Caillou" (that tiresome little cartoon Charlie-brownish fellow). How awful for the Biodome to use that kind of edutainment instead of exposing the children to the bugs, animals, plants that are there -- that whole notion of needing to "beef up" an event with something totally unrelated. If educators were more

confident, they wouldn't need props like that.

Cate McEwen on January 29, 2003, 02:25 PM:

Bruce M., your point of awareness and reflection echoes with the development of consciousness that some like James Moffet would suggest is one of two critical ingredients in any educating. (the other being development of culture, again in an awareness sense and also social responsibility). The development of the consciousness of the individual can lead to a greater awareness and more encompassing view of community, both human community and earth community.

Bruce Johnson on January 29, 2003, 02:28 PM:

Bruce M., the idea of whether or not we teach values is an important one. Many years ago I had a parent accompany his son's class to our Earthkeepers program, after which he talk the school's head that he wanted to program shut down because we were teaching different values than he wanted his children to be exposed to - he believed that the earth is here for humans to use as we see fit and he wanted that to be taught to his kids - the school convened a group to look at the values the school wanted to teach and decided to keep the Earthkeepers program, teaching that we are part of nature - he pulled his children out of the school, but no one else did likewise.

Ann Dale on January 29, 2003, 02:26 PM:

My list is now longer--reverence, compassion, diversity, holistic, relationship, hope, awe and change. As an educator may I add another? Creating the "facilitating conditions" for all of the above.

Shall we move on to the last question for today?

What would be the desired outcomes of a cosmology curriculum?

Bruce Johnson on January 29, 2003, 02:31 PM:

What would be the desired learning outcomes of a cosmology curriculum? The ultimate outcome would be that thousands of years from now the earth is a healthy planet for life and that humans are around to be a part of that.

Cate McEwen on January 29, 2003, 02:32 PM:

Maria Montessori was a strong advocate of cosmology to be taught at an early age - "If the idea of the universe is presented to the child in the right way, it will do more for him than just to arouse his interest, it will create in him admiration and wonder, a feeling loftier than any interest and more satisfying. The knowledge he then acquires is organized and systematic, his intelligence becomes whole and complete because of the vision of the whole that has been presented to him, and his interest spread to all, for all are linked and have their place in the universe on which his mind is centered" (Montessori 1973 p.10).

Bruce Morito on January 29, 2003, 02:32 PM:

I would hope that a sense of wonder generated from needing to know but knowing that we cannot know would produce attempts at formulating our cosmologies with an eye to listening to others as to how they can inform us. As we begin to see how limited our own perspective is, we can see others and the Earth that is speaking through them as partners in creating our cosmological commitments.

Jean Robitaille on January 29, 2003, 02:33 PM:

If we want to change the world, it's important to know where we come from and most importantly, where we are going. Each year I ask to my student to imagine their world (economic, social and environmental) in 20 years if things continue to happen as they are happening now. Their vision is totally catastrophic. I think I'm the only one to ask these kind of questions to my student at my university. People are in their own head, dealing with their own problems, without time to look at those essential questions. If we take time to ask student to describe the world they want to live in, it's totally different. And what can they do to create their wishful vision. The answer is through personal projects, class projects, and community projects with a common view of where we want to go. Just take time to think and imagine...

Cate McEwen on January 29, 2003, 02:36 PM:

Jean, the concept of creating a vision of where one wants to go or of what one wants to create is both empowering for the individual and for initiating action. Without a vision, it is hard actions are not focused. The vision can always change, but the importance is that there be one to enable action.

Ann Dale on January 29, 2003, 02:33 PM:

Bruce J., could you provide some more detail around your mega learning outcome that we might be able to measure in the present?

Ann Jarnet on January 29, 2003, 02:35 PM:

Not being a curriculum developer (but Jean Robitaille is!), I would only say that a desired outcome for a cosmology curriculum would be to have the learner experience and absorb enough to merge facts with demonstrated respect and a profound hopeful vision for the future, as well as a commitment for continued learning and competent action. Hard science has its place here (making room for emerging science or knowledge, of course), and can be combined with whatever resonates with an individual, based on her capacity, abilities. Whatever happens, it must make room for others than those who are privileged (physically, intellectually, economically, socially).

Bruce Johnson on January 29, 2003, 02:37 PM:

Hmmm... I suppose it might be difficult to get funding for such a long term evaluation project. The best evidence of worldviews are actions. As we all know, it is easy to espouse but much more difficult to do. There are signs all over showing that people are changing lifestyles to lessen their impact, but if we are truly successful, we should see much more than smaller cars and more recycling - we would see a fundamentally changed society.

Bruce Morito on January 29, 2003, 02:35 PM:

Bruce J., - Sorry to backtrack, but I hope I didn't say that we should not teach values; I think we should not try to teach values directly by inculcation, but through indirect means that produce realization. Perhaps too much of a deep ecologist.

Bruce Johnson on January 29, 2003, 02:43 PM:

Bruce M., - I didn't mean to imply that I thought you were espousing that we don't teach values. In the US at least, though, there are those who do say that. The values clarification movement of the 70's gave way

in the 80's to many who said the role of schools is not to teach values. Of course, anyone with an understanding of the history and structure of schooling knows that is completely false. Schools teach values all of the time - reading is good, being kind to your classmates is good - the catch is that the kind of values we are talking about in environmental learning are generally not held by most of the adults (teachers and parents) in our schools. That is where it gets particularly tricky.

I agree with you that we should expose rather than indoctrinate when it comes to values.

Ann Dale on January 29, 2003, 02:39 PM:

Bruce J., and others, what are the critical skills educators need to impart to get us where you think we should be, that is, smaller cars?

Cate McEwen on January 29, 2003, 02:44 PM:

Edmund O'Sullivan wants to see an entire cosmological perspective to education, wherein different subjects are taught within the context of the universe story and the human earth community. For example, a lesson in history, would not be an isolated window of human history but be within the context of the story of the evolution of the universe.

Cate McEwen on January 29, 2003, 02:45 PM:

Bruce J., and Bruce M., on values - there is a definite sensitivity to teaching cosmology - any one - and so the point may be that several must be exposed.

Bruce Morito on January 29, 2003, 02:48 PM:

Cate: choosing which cosmologies to adopt would be extremely dangerous. A problematic approach where students are exposed to a number and then asked to construct a most suitable one for themselves might be a better approach.

Bruce Johnson on January 29, 2003, 02:46 PM:

Ann D., simply put, we need to help people understand our place in the universe (perception)and in its systems, how those systems work (for instance, how energy flows and materials are recycled, both in nature and in our societies), to see how we fit into those systems and impact them and other life that depends on them, to care, and to believe that they can do something about it personally.

Jean Robitaille on January 29, 2003, 02:47 PM:

An important point is to make every learner realize that behind each relation we have with human beings or natural elements, there's someone or something who shares the same needs as me. When I'm in my village and I buy something from the shoe maker, I look him in the eyes and he look at me the same way. We know that the exchange is good. But when my shoes come from the Phillipines or elsewhere, I never see the shoe maker. Education must focus on this point. Empathy, solidarity, an consequences to our actions are essential learning.

Bruce Johnson on January 29, 2003, 02:48 PM:

Cate - interesting idea - teaching a lesson in history in the context of the evolution of the universe. Teachers I work with would immediately ask, what would that lesson look like? We need to provide models (visions). Does Sullivan provide a model?

Ann Jarnet on January 29, 2003, 02:49 PM:

Ann D., I'm wondering if "critical skills" is the place to start. For the formal education system, I think teachers need: support from systems that what they do is important, critical (this means school boards, parent-teacher associations, school custodians, school principals, cafeteria staff, school secretary, teacher associations, school administrators groups, neighboring homes, businesses, etc. -- in other words, a total systemic approach). In the same way that I reject the argument "let's teach the kids the right thing, they'll grow up and do it right", so I reject leaving everything on the shoulders of educators themselves.

So, apart from support, they need training (in-service and pre-service). This means a radical change in the way Faculties of Education operate; in the way that teachers' unions function and support teachers (wonderful Québec example of a union leading the way in environmental learning for its members who are teachers, day care workers, and hospital workers).

They need knowledge themselves, they need to be clear about their values. They need motivation (incentive, some might say). They need recognition.

For non-formal and informal life-long learning, some of the above could apply and I think then we're looking at a broader systemic approach that involves community leaders, volunteer workers, private and public sector support and encouragement as well as participation (not interested in having just your money -- your participation is even more important in the long run). This is where Ed O'Sullivan's transformative learning stuff applies, I believe.

Ann Dale on January 29, 2003, 02:49 PM:

Closing comments everyone, and may I ask you a question? What seminal or ovarian work inspired your beliefs? Mine is Man's Search for Meaning by Victor Frankel. Thank you one and all.

Cate McEwen on January 29, 2003, 02:51 PM:

Bruce J., one place you could look is ecozoic curriculum, sponsored in part by the Ontario Institute for Studies in Education (OISE) where Edmund O'Sullivan works - the site is available in my abstract on this e-dialogue site - it offers many different subjects within the context of cosmology

Bruce Johnson on January 29, 2003, 02:51 PM:

Bruce M., I agree. We need to expose people to new worldviews or paradigms or whatever one would like to call them. That is difficult to do, though, when the dominant paradigm hates to be challenged.

Bruce Morito on January 29, 2003, 02:52 PM:

My inspiration actually has been Kant, in an indirect way. Like Ann J., I think developing critical skills is crucial. Kant ended up in awe of the starry heavens above and the moral law within.

Jean Robitaille on January 29, 2003, 02:53 PM:

The Common Good by Ricardo Petrella

Cate McEwen on January 29, 2003, 02:54 PM:

Thanks everyone for a very engaged dialogue - looking forward to more with all of you on Friday. An article on Brian Swimme and his strong comments on Pierre Tielhard de Chardin piqued my awareness.

Ann Jarnet on January 29, 2003, 02:54 PM:

An event which triggered things for me was a lecture by Jean Vanier on compassion, on privilege. Participation in a discussion group on ecopsychology helped me shape my thinking (the thoughts of Robert Greenway on developing a new language to articulate our relationship with the universe -- Robert Greenway is an organic farmer in Washington State -- formerly a wilderness leader, and someone who coined the phrase "psycho-ecology" back in the 1960s.

Daniel Quinn's Ishmael series helped; Thomas Berry and Brian Swimme's The Story of the Universe; David Abram's Spell of the Sensuous.

Bruce Johnson on January 29, 2003, 02:54 PM:

Seminal works for me: Leopold's Sand County Almanac, Van Matre's Acclimatization, Quinn's The Story of "B", and The Little Prince.

Bruce Johnson on January 29, 2003, 02:55 PM:

This was fun; "talk" to you on Friday.

Ann Jarnet on January 29, 2003, 02:56 PM:

Cate, you're an inspired woman. Ann D., an inspired mentor. This has been just great. I can't wait until Friday.

Jean Robitaille on January 29, 2003, 02:58 PM:

Nice to be with you. Will be there Friday. Thanks!

Day 3-Cosmology, Education and Sustainability in forum **Cosmology & Education** at **Royal Roads University Discussion Forums**.

To visit this topic, use this URL:

http://forums.royalroads.ca/cgi-bin/ultimatebb.cgi?ubb=get_topic:f=18;t=000006

Ann Dale on January 31, 2003, 01:32 PM:

On Wednesday, we had a lively discussion about the role of environmental education in affecting change, and the desired learning outcomes of a cosmology curriculum. Common themes that emerged were reverence, compassion, diversity, holistic, relationship, hope, awe and change, and creating the enabling conditions for all of these to emerge.

Shall we leap into our first question today? What are the obstacles to effecting change in dominant worldviews, myths and paradigms?

Bruce Johnson on January 31, 2003, 01:32 PM:

Worldviews are (often) deeply held. They are also often exclusive, in that they don't place value in others' worldviews. In other words, people often see their worldview as the "right" one, therefore others' worldviews must be "wrong". Challenging someone's worldview can be seen as "evil".

Eric Weiss on January 31, 2003, 01:34 PM:

It seems to me that the primary obstacle that we face in trying to teach a new worldview is the fact that we are all totally enmeshed in the industrial system, and that the industrial system basically requires us to adopt a technoiz worldview. Even using computers, as we are doing for this dialogue, puts us into a technoic frame of mind.

Ann Dale on January 31, 2003, 01:36 PM:

And sometimes we don't even realize the dominance of those worldviews, that is, they operate at a sub-unconscious level?

Rick Kool on January 31, 2003, 01:36 PM:

I would think it true to say that worldviews are more than (often) deeply held... they are usually held so deeply that, until you are made aware of them, you don't even know that there are other ways of seeing the world.

It is a part of maturation, as Piaget pointed out: at times of growth, to go through a process of what he called accommodation, a time where your previously-held construct about how something worked no longer was useful. This can be quite a shock to people. If it is hard to help students accommodate new data into previously held mental schemata, how much more difficult, and how much more disturbing, it is for adults to change how they see the world.

Rick Kool on January 31, 2003, 01:37 PM:

I'm not sure you can teach a new 'worldview'... for those with some mental flexibility, perhaps worldviews evolve through one's life. For others, a change in worldview might be a synonym for a breakdown, a mental collapse, a time of great chaos necessitating the complete reorganization of ones values.

Bruce Johnson on January 31, 2003, 01:38 PM:

Rick, to take the Piaget angle a bit further, we don't have a worldview and then live life accordingly, the

way we live our lives is how we "construct" a worldview.

Ann Jarnet on January 31, 2003, 01:38 PM:

I believe that one of the major obstacles is "fear". Fear of change. And, when one realizes the extent of the change required, the fear becomes immense. It's understandable that people "numb" themselves and can't go beyond "knowledge".

Eric Weiss on January 31, 2003, 01:41 PM:

Ann J., what you say about fear makes sense to me. Part of what antidotes fear is hope. When we are speaking of an ecozoic civilization, what are we really saying? Do we mean an essentially industrial system that is somehow made sustainable? Or do we have in mind a completely different way of life, one that is closer to the Earth. But if we want to get closer to the Earth, does that mean going back to the miseries of pre-technological existence? What is the change that we are actually visualizing here? Only if we can put together a convincing image of where we are heading can we get people to accompany us on our journey.

Eric Weiss on January 31, 2003, 01:39 PM:

I think that the question about what the obstacles to change are is a very deep one. In my previous post, I referred to the fact that the industrial system, on which we are utterly dependent, is inextricably intertwined with a technozoic approach to the world. But how can we change that?

Bruce mentioned the psychological difficulties in getting people to change. And that is certainly an important factor. But when we add that psychological resistance to the practical resistance, the difficulties begin to seem insurmountable. In truth, I am coming to the conviction that nothing will change the world views of "most people" except the inevitable and immanent ecological crises that we are facing.

Aaron Milavec on January 31, 2003, 01:39 PM:

How can one teach or change a worldview when the forces of aggressive capitalism seem insatiable. As the readily available non-renewable resources begin to give out, the cost of garnishing resources will increase in direct proportion to their scarcity. The increased cost of production will be passed on to the consumer. Real wages will drop. The standard of living of all wage earners will drop. Social unrest will occur.

Persons who have been led to believe in progress and to demand more and better products will be reluctant to accept less and less. The powerful industrial nations and the large transnational corporations will promote binding trade agreements bent upon insuring a steady supply of raw materials for their industrial development while denying it to others. Raw power and military intervention will then be used in order to insure that the economic and social elites do not have to suffer from the growing menace of scarcity.

But this is just to delay the end. For, as non-renewable natural resources become scarcer and growing numbers fall below the poverty line, then even the industrialized nations will feel pressure to reduce their measures to control pollution. In so doing, peoples everywhere will suffer a decline in their prospects of good health, a decline in their experience of clear water and clean air, a decline in their standard of living.

Cate McEwen on January 31, 2003, 01:41 PM:

There seems to be an evolution of its own that changes worldview - e.g. thinking of society that once believed the earth flat, then believing that the earth was the centre of the solar system, now believing so strongly in the value of science the exclusion of other knowledge, evolving further to believe in the vastness of the universe (and there are more examples) - these changes come about with significant influence and create changed views - mystics and philosophers are so important to changing worldviews and yet it is done within the existing context of society

Ann Dale on January 31, 2003, 01:42 PM:

Eric and Aaron, are there not critical moments in life, such as marriage, giving birth, losing a child, losing a parent, that allow windows to open for transformation of worldviews.

Aaron Milavec on January 31, 2003, 01:45 PM:

Ann J., you speak about the fear of "missing out." As the whole world is suffering signs of collapse, middle-class American teenagers still aspire, by and large, to own their own cars by the time they graduate, and their proud parents want to save and scrimp to help make this possible for them to achieve. After all, owning one's own car was the status symbol that gave these parents an enormous sense of emotional well-being in their youth and they want their children "to enjoy the best things life has to offer." They want to still believe, after all that has happened, that America is "the land of opportunity" and, accordingly, they naturally wanted to secure their share of the good life before all the oil wells run dry. Thus corporate greed will be matched, in the end by family pride bent upon providing children with the best that life has to offer. As for their grandchildren, who knows? There may be no tomorrow for them!

Ann Jarnet on January 31, 2003, 01:45 PM:

Ann D., I believe that critical moments can help us break through to another level of consciousness. And it could be related to the "fear" factor I was speaking of earlier. When a crisis hits, whatever fears we had (founded or unfounded) are totally displaced to make room for the event we are trying to manage. Perhaps that "fear" of change disappears or is diminished, making room for an openness to something else.

Aaron Milavec on January 31, 2003, 01:42 PM:

The hardships of living on a dying planet in a world of increased scarcity will only redouble those who believe that more aggressive measures must be taken.

Ann Jarnet on January 31, 2003, 01:42 PM:

Perhaps I can add a bit more to the "fear" issue. I might feel that if I change my behaviour (having the knowledge, knowing I should change, but hesitating) I will miss out, that I will be marginalized, that the little I have will be taken away. I believe these are pretty fundamental things, and that they contribute to the paralysis.

Ann Dale on January 31, 2003, 01:47 PM:

Ann J, I agree, and are there ways for educators to 'teach' people to optimize these moments of possible transition, what we refer to here at RRU as 'teachable moments'.

Bruce Johnson on January 31, 2003, 01:49 PM:

Ann D., as educators we can create situations in which teachable moments are more likely to happen.

Ann Jarnet on January 31, 2003, 01:55 PM:

Ann D., perhaps these can be used as teachable moments -- and I think there are even more opportunities through day-to-day activities. If one approaches education with respect, love, mindfulness, the subject matter can be secondary. Under these conditions, an occasional "teachable moment" becomes more powerful because the relationship between the educator and learner is stronger, more solid.

Aaron Milavec on January 31, 2003, 01:52 PM:

I believe, as an educator, in teachable moments. But I still see my daughter in the school yard, vastly outnumbered and unheard.

The dozen kids spread blankets on the lawn and chatted together amiably as various snacks were distributed. Then a disturbance occurred. Six agitated kids got up and backed away from the blankets crying, "Ants!" In response, two resourceful boys rushed in and began stomping on the ants, assuring their companions, "We'll kill them." One little girl tried to stop this killing. "No," she appealed to her companions, "don't kill them. They are our friends!" In this schoolyard exchange, the dominant cosmology (DC) expressed itself—that humans ("the supreme creation of God") have the right to kill, routinely and remorselessly, any insect or animal perceived to threaten their well being.

Rick Kool on January 31, 2003, 01:42 PM:

Great religious leaders, and perhaps great revolutionaries, have been able to shake people out of a previous way of looking at the world and present a new way, a compelling way, or making sense.

One of the key attributes of all great change-agents is that what they do is find students, and turn those students into teachers, who find students....

Aaron Milavec on January 31, 2003, 01:56 PM:

Rick, isn't environmental education also a threat to enjoying eating at McDonalds and having my own car. Young people are sensitive to these things. They don't want care for the environment to limit their "good life."

Jean Robitaille on January 31, 2003, 01:56 PM:

Rick, I'll agree. I think we can't be totally apolitic. Just the act of teaching is political. Just advise your students that you propose a world view model to them and that they must be critical and develop their own opinion and their own vision of the world. There's so many messages that students help with.

Ann Jarnet on January 31, 2003, 01:58 PM:

Aaron, your post regarding McDonald's reminded me of how my feminist views used to get on my family's nerves. I used to hear "with all this feminist way of doing things differently, you're spoiling everything for us -- we can't enjoy anything."

Eric Weiss on January 31, 2003, 01:46 PM:

I have been truly amazed at the tenacity with which people hold on to their world views -- even in the face of overwhelming evidence as to their inadequacy. Yes, there are moments - such as births and deaths - that create openings. But the conceptual structures that underlie techno-scientific thinking are so deep that even people who espouse a supposedly ecozoic viewpoint usually do so within the context of science and technology. I think that only major disaster or major miracle will change the self-destructive course of the immense, world-spanning, bio-mechanical apparatus in which we live, move and have our being.

Cate McEwen on January 31, 2003, 01:47 PM:

Affecting change - what about higher consciousness - is this not a tool for affecting change? Teilhard believed strongly in this power of evolution of the human.

Eric Weiss on January 31, 2003, 01:50 PM:

Cate, yes, higher consciousness. I have been engaged in a deep study of the work of Sri Aurobindo. Sri Aurobindo did for the tradition of yoga what Teilhard did for Catholicism - he put it into the context of an evolving universe. And he is clear that the only thing that will really help us to move forward in evolution is to cultivate a higher consciousness. But that is arduous work and, at this particular stage, it seems to be something that is done only by isolated individuals. If we could imagine some way to do that collectively, it might be a significant breakthrough. But I think that we have to do our individual work first, before that larger possibility might manifest.

Ann Dale on January 31, 2003, 01:51 PM:

Eric, I always wondered in my psychology classes why we studied illness and so little focus on health. Are there any studies of what makes people different, less susceptible to the dominant paradigms, such as (and I may be making a big assumption) all of the panel.

Rick Kool on January 31, 2003, 01:54 PM:

Ann D., I remember as a kid in Boston first running across Abraham Maslow and his then new book, 'Towards a Psychology of Being'. Here was the first psychologist that seemed to say it was important to study the healthiest people he could find, rather than basing psychology on pathology (as Freud seemed to do).

I'd be interested to go back to Maslow's work and see how his "subjects" would have dealt with questions of changing, or modifying their world views!

Eric Weiss on January 31, 2003, 01:54 PM:

Ann D., I'm not aware of any such studies (although they may exist). But I wonder who would fund such a study? As Jean pointed out, we are trying to compete with saturation conditioning from the mass media. And the same people who own and fund the media also are the principle funders of research grants. The situation is really daunting. Your question is interesting, though. What is it that makes some of us less susceptible to the dominant conditioning. Any ideas?

Jean Robitaille on January 31, 2003, 01:48 PM:

To answer to the first question, I think that one of the major obstacles is that the media is a very strong vehicle for dominant values. They are owned by the big corporations. Their messages are seen as

natural. Own a big car, eat McDonalds, be cute and sexy, work to make more money to be able to spend more and more—these are the things you have to do to be happy! Media's education is a very important challenge.

Cate McEwen on January 31, 2003, 01:52 PM:

Jean, I agree with you. And Eric spoke Monday of people needing to make sense of what is valuable to them. Modernists have a very material value system, largely influenced by corporate systems of advertising. Still there is growing awareness to transcend such a value system.

Rick Kool on January 31, 2003, 01:50 PM:

According to Dilthey, the experience of human life necessitates some stable system of meaning... this is what he calls a worldview. He says that they involve three sequential components:

- A "cosmic picture" arising from life experience
- Values: Ideals, the highest good, principles for living
- "Formation of the will": Conduct or behavior

Mother Culture (to quote from Ishmael) gives us answers to these components, descriptions of the meaning of the world that are deeply part of who we are. Changing them intellectually, as many of us do, is not the same as the revolutionary force of really apprehending that our old way of understanding is dangerous/damaging/wrong...

Environmental education is feared in some circles (the political right) precisely because we talk about things like critiquing the western worldview.

Ann Dale on January 31, 2003, 01:57 PM:

I 'hear' many obstacles to affecting change, and for me, the main theme appears to be one of dominance, let's now turn the glass upside.

"What are the most effective strategies for overcoming these obstacles." And, to repeat Eric's question, "What is it that makes some of us less susceptible to the dominant conditioning. Any ideas?"

Rick Kool on January 31, 2003, 01:57 PM:

St. Thomas Aquinas wrote that we know things better through love than through knowledge. Perhaps, as we care more for those things that we love than those things we know, we need to be developing a curriculum more of love, than of knowledge. The downside of that would be that, it seems, love can attach to anything: from a sunset to a muscle car.

Eric Weiss on January 31, 2003, 01:58 PM:

One of the ways that I make myself feel better about these issues is to reflect on just how un-evolved human beings actually are. We are barely up from the cognitive level of the animals. We are mostly controlled by our needs and desires, with just a little spicing by practical thought. Our intellects are puny instruments in the hands of mighty forces. We like to think that we can steer evolution, but it seems pretty clear to me that we are just caught up in its mechanisms. I sometimes think of human beings as the instrument through which Nature is cleansing the Earth to prepare for a new phase of creative work.

Bruce Johnson on January 31, 2003, 01:59 PM:

Ann D., ahhh... let's get down to the practical. People are most open to alternative worldviews, or at least to modifying their worldviews, when theirs doesn't seem to be working or doesn't seem to fit in some situation. So as people see the world's problems mounting, the number of people open to examining their worldviews or considering others grows.

People are also much more open to examining their worldviews or looking at alternative worldviews if they see the invitation to do so as non-threatening. The first step is realizing that one has a worldview and to know what that is. That means changing perceptions. Along with that is the realization that there are other worldviews that are legitimate and that one can make choices about how one lives.

Rick Kool on January 31, 2003, 02:01 PM:

Ann D., as I wrote earlier, to overcome these challenges we have to look at successful agents of large-scale change.

And we have to remember that there are likely very good reasons for worldviews to be hard to change... for the most part, they have worked in the past and all expectations are that they should work again in the future. They get us into trouble when the world changes and our thinking doesn't. There are many examples from the history of science. A more recent instance is, for example, Daly and Cobb write about the necessary transition from an empty- to a full-earth economics. The old model worked for a long time- it doesn't now.

Ann Jarnet on January 31, 2003, 02:02 PM:

How does one overcome the obstacle of fear?

Certainly NOT by a shame and blame approach. The great school of ridicule has not solved anything. Compassion. Patience (I know how difficult this is because most of us who care about the environment realize that the progress made is slower than the speed of degradation). Example (not preachy). Caring. Acknowledging suffering (in the way Thich Nhat Hahn does) -- letting that suffering come through (I am convinced that those who resist are suffering).

Aaron Milavec on January 31, 2003, 02:02 PM:

Ann J. made the observation that we have to "learn environmentally" rather than learn about the environment. Sounds like the notion of "love" can/might be taught in this realm. Would need help seeing how "learning environmentally" might go. Ann?

Bruce Johnson on January 31, 2003, 02:06 PM:

Aaron, One part of that answer is to live and learn together. While changing perceptions of the world and our place in it, you live in the new worldview for a while, trying it out. That's what we do in SUNSHIP III, our earth education program for young adolescents.

Ann Jarnet on January 31, 2003, 02:06 PM:

Aaron, Rick Kool told me a wonderful story about a different way to write today's date: January 31, 02003. That makes me take a ten-thousand year perspective. Rick, perhaps you could tell the whole story if you

have time?? That to me is an example of learning environmentally.

Ann Dale on January 31, 2003, 02:07 PM:

Ah, a simple thing can sometimes make one think outside the box. Rick, can you tell the story?

Rick Kool on January 31, 2003, 02:11 PM:

The stories come from Stewart Brand...

The anthropologist/philosopher Gregory Bateson used to tell a story:

New College, Oxford, is of rather late foundation, hence the name. It was founded around the late 14th century. It has, like other colleges, a great dining hall with big oak beams across the top, yes? These might be two feet square, forty-five feet long.

A century ago, so I am told, some busy entomologist went up into the roof of the dining hall with a penknife and poked at the beams and found that they were full of beetles. This was reported to the College Council, who met in some dismay, because where would they get beams of that caliber nowadays?

One of the Junior Fellows stuck his neck out and suggested that there might be on College lands some oak. These colleges are endowed with pieces of land scattered across the country. So they called in the College Forester, who of course had not been near the college itself for some years and asked him about oaks.

And he pulled his forelock and said, "Well sirs, we was wonderin' when you'd be askin'."

Upon further inquiry it was discovered that when the College was founded, a grove of oaks had been planted to replace the beams in the dining hall when they became beetly, because oak beams always become beetly in the end. This plan had been passed down from one Forester to the next for five hundred years. "You don't cut them oaks. Them's for the College Hall."

A nice story. That's the way to run a culture.

Every time I've retold this story since I first heard it from Gregory in the 1970s, someone always asks, "What about for the next time? Has a new grove of oaks been planted an protected?" I forwarded the question to the authorities at New College—the College Archivist and the Clerk of Works. They had no idea.

Rick Kool on January 31, 2003, 02:14 PM:

The other part of the story is Stewart Brand starting the Long Now Foundation (think that's what its called)- they have a great web site. They want people to start to think in a much longer time perspective, a 10,000 year perspective (the time since the last glaciations), so they have made a clock that ticks once a year, and chimes once a century... and they put a 0 in front of our standard date to remind us of the future.

Aaron Milavec on January 31, 2003, 02:17 PM:

Rick -- Excellent story. Let's one see how future generations can somehow make a safe place for their

children's children. Yes!

Aaron Milavec on January 31, 2003, 02:09 PM:

Ann J., when one leaves the corporations aside and deals with the individuals, then compassion would seem right. Even managers fear that they need to support aggressive capitalism or they will lose their job, their home, their well-being. Same for young people preparing to enter a competitive world. Listening to the fear of being/acting differently.

Aaron Milavec on January 31, 2003, 02:12 PM:

Bruce J., seems like a nonthreatening way: "you live in the new worldview for a while." How does one set this up?

Ann Jarnet on January 31, 2003, 02:13 PM:

Aaron, it is individuals who run corporations, so there's a chance! Recently, a VP of Loblaws (major grocery chain in Canada) learned something about pesticides and health. His immediate response was to decide that as of spring 2003 Loblaws will no longer be selling pesticides in their garden centres. Well, you can just see the others hopping on one foot and then on the other, seeing if they can pull the same thing off for their enterprise.... IKEA, Electrolux in Sweden adopted the Natural Step and many other corporations followed the leadership of the inspired individuals who took the chance to make changes in the way they do business.

Rick Kool on January 31, 2003, 02:16 PM:

Aaron and Bruce J., what an interesting idea... we create parks where you can live/try out other world views... is this something like in 1984, when people were sent to the SW US to live like Indians or something (long time since I read the book).

But in fact, you could do something like this. I know that hundred or thousands of Germans come to NA every year to 'play' at being Indians. Could that play go deeper?

Bruce Johnson on January 31, 2003, 02:17 PM:

Aaron, we congratulate on reaching an important stage of life - adolescence - and invite them to "commencement exercises" to mark and celebrate the occasion. We also have them take stock of where they are in their lives, what they'd learned and experienced and who influential people have been. We point out that they have been living and perceiving things a certain way but that they will be making more and more choices of their own in the coming years - we want to help them see that there is another way to live, a different path that is hidden from view to most people, that they might want to consider in the choices they make.

They spend three days and two nights at the commencement exercises living a more environmentally sound lifestyle and making choices about the kind and amount of energy and materials they are using while learning to perceive things anew and learning how natural systems operate.

Aaron Milavec on January 31, 2003, 02:20 PM:

Bruce J., note the positive thrust, the sustained time together, the thoughtfulness. How about support

when they leave? From parents?

Bruce Johnson on January 31, 2003, 02:22 PM:

Aaron, during the commencement exercises, they meet frequently in sharing circles to process what they are doing/learning. These continue back at school and home - helping each other on personal quests - seeking out people living in more harmonious ways, enjoying natural places, making personal choices, etc.

Jean Robitaille on January 31, 2003, 02:04 PM:

When I ask my students what we must teach our kids in hope to live in a better world, they always answer me with:

- values
- skills,
- knowledge.

When we think of the education curriculum, usually the first thing is knowledge, skills and values. Maybe our educational programs have it upside down.

Rick Kool on January 31, 2003, 02:05 PM:

Whitehead wrote about the first phase of real learning being the phase of romance, when one falls in love with the object of study. At the root of a lot of what we've been writing about is the need to fall in love with the planet and its processes, with our fellow species, with other species.

Eric Weiss on January 31, 2003, 02:06 PM:

I've been thinking about how to overcome the obstacles to change for several years now, and I've pretty much despaired of conventional methods. I think that when the change comes, it will be a change in religious consciousness, rather like the change that made Europe Christian.

I'm not sure that we can use our minds to invent a new religion. I am increasingly convinced that the crucial question we need to ask ourselves and each other is this: What is the role of the Divine in the evolutionary process? Does God care about evolution? Does God intervene in evolution? Can we influence the evolutionary process by increasing our intimacy with the Divine factor. This Divine factor is what Teilhard called the Cosmic Christ, what Aurobindo called the Mother. I think that we need to be looking to those powers, rather than to our own ratiocination.

Rick Kool on January 31, 2003, 02:09 PM:

Eric, you're not alone in thinking that it will take a revision in fundamental visions of the world. Of course, who can predict when a new spiritual leader will come along. The recent founders of major faiths Joseph Smith/Brigham Young, or Bahau'lah, haven't provided their followers with a strong environmental direction. I mentioned Brin's Sci-Fi book *_Earth_*, with its description of the rise of Gaia religions. That's what it may take!

Eric Weiss on January 31, 2003, 02:10 PM:

Rick, I really like what you said about Whitehead. It's not so much about knowledge as it is about love. What is needed is not so much a new world view, per se, but an awakening of that in us which resonates with the Universal and with the Transcendent, an awakening of Soul. And the only we can awaken Soul in others is by awakening it in ourselves. And the only we can do that is by doing our own inner work, more or less cleaning up our emotional baggage, turning our minds away from everyday concerns and outwards and upwards towards other people, the environment in which we live, and towards That which contains and pervades it all.

It's interesting to experiment with writing in this vein. It makes sense to me, but it's not usually the way we talk in ecozoic circles. Maybe it should be?

Ann Dale on January 31, 2003, 02:12 PM:

Eric, we are trying to analyze the paradox of these kinds of dialogue, which are linear in structure, but may offer possibilities of making us think differently because they do not allow for linearity of thought, given the randomness of posting.

Cate McEwen on January 31, 2003, 02:14 PM:

Sometimes it seems certain words get people running far away and certainly love is one of them when speaking in otherwise non-intimate circles. But its a critical source of life energy nonetheless. Prana comes in to each of us at a high voltage daily, but it is up to each of us to choose to quiet ourselves and listen. Some have said that what's needed is self-love - for in achieving self-love one would not be able to commit so many offences to earth and the earth community.

Ann Jarnet on January 31, 2003, 02:18 PM:

Cate, you are so right. I remember when my colleague Ellen Hayakawa tried to get Environment Canada to talk about "spirituality in the workplace", people were scared away. When she actually got talking about "self-organization", which is what she really wanted us to do, people were less afraid. I asked her why she clung to the "spirituality in the workplace" -- her answer was never satisfactory. I believe that a more pedagogical approach is to avoid words that create barriers and let groups come up with the word that suits the discussion. That's how words like "warmship" get invented (I think perhaps a brandy or 4 also helps). :-)

Eric Weiss on January 31, 2003, 02:15 PM:

Ann D., what I'm asking about is whether or not we ecozoic folks ought to be speaking in a more spiritual way. The way things are now, we've pretty much given up on religious speech and turned that over to the Far Right. Maybe we should reclaim that territory. Maybe, instead of speaking about an Ecozoic Era, we should be speaking about a Theozoic Era. Teilhard, after all, understood all of evolution as an advance towards a Divine Consummation in Omega, shepherded by the Cosmic Christ. So why shouldn't we imagine this whole earth as a Cathedral to the Most High?

Cate McEwen on January 31, 2003, 02:20 PM:

Eric, I agree with you on spirituality as a basis of the ecozoic vision, but to bring in religion, when so many people are dissatisfied with the formal institution of religions, would one not run the risk of alienating people with such an association? Yet on the other hand, teaching cosmology without the divinization of

the earth loses a large part of the vision, I feel.

Ann Dale on January 31, 2003, 02:15 PM:

Again, I would love to have some research on 'early adopters', what makes them unafraid to change, to adopt new views? Maybe the greatest teaching moment of all is to teach young people that we all have boxes around our thought, and that there are ways to expose those boxes, and then give them skills to think outside the box?

Rick Kool on January 31, 2003, 02:20 PM:

Ann D., for research on early adopters, you can see Roger's book Diffusion of Innovation.

Ann Jarnet on January 31, 2003, 02:21 PM:

I guess there will always be "early adopters". Often they are the trailblazers in other ways (you know, the folks who want and can afford to pay \$1000 for a VCR when it first comes out, long before it drops to \$88 when the rest of us schleppers get around to buying one). How can that courage be taught? I know that wilderness leaders have the skills to bring out the courage that is innate in all of their clients. Gifted healers too.

Jean Robitaille on January 31, 2003, 02:23 PM:

Ann J., I'll agree, let the ideas come before the words make the people afraid.

Jean Robitaille on January 31, 2003, 02:21 PM:

I think that the best way to change our view is to be confronted by them. Involve people in projects where they have to observe, analyze and transform their reality in a good way. Paolo Freire give us a good example that we can change our vision of the world when we become an actor.

Eric Weiss on January 31, 2003, 02:21 PM:

I want to push this issue of spirituality. Yes, many of the moderns who inhabit the world of the corporation are scared away by that language, but the traditionalists, who are something like half of the population, are moved by it. And the moderns, just under the surface, may need that language as well. I guess I'm starting to think that avoiding spirituality is avoiding the very core of the planetary issue that we are facing.

Cate - as you say, people are dissatisfied with religion, but they are desperate for a spiritual connection.

Ann Jarnet on January 31, 2003, 02:23 PM:

To pursue the idea of healers: does the healer provide a safety net of some sort so that the newly-courageous can try and fail without drastic consequences?? Is that what an educator does?

Aaron Milavec on January 31, 2003, 02:25 PM:

Cate and Eric, those folks who gravitate toward formulating their "ultimate concern" by evoking "God," will only be drawn to a story that includes God and spirituality by way of healing the demise of the planet.

Not so?

Hence, many languages would be better?

Cate McEwen on January 31, 2003, 02:25 PM:

Eric, to deal further with the word spirituality - is it possible that a universal cosmology (as opposed to a cultural cosmology) could bridge the disciplines of culture, metaphysics, science, religion and history, with less alienation than otherwise spirituality in isolation may bring?

Eric Weiss on January 31, 2003, 02:26 PM:

Cate, I want to respond more fully to your post about religion. I am starting to think that we ought to stop worrying about whether or not we are alienating people, and just try to articulate the truth as clearly as we can. Teilhard's vision, out of which the whole ecozoic movement has grown, is through and through a spiritual vision. If we are going to surmount the formidable obstacles to the formation of a new civilization, we have to call in the help of some very major powers. Why not call on God Him/Her/Itself?

Eric Weiss on January 31, 2003, 02:29 PM:

Cate, I like the direction of your last post. What we need is a change of consciousness which is expressed in a new metaphysics, a new cosmology, a new religion, and so forth. I don't mean to isolate spirituality from cosmology and metaphysics. Rather I want to stop being timid about the spiritual implications of the New Cosmology.

Cate McEwen on January 31, 2003, 02:31 PM:

Eric, I agree with your point. Its somewhat like fear, in how we fear alienating people, thus avoid the area. Fear, is a negative emotion, and is best dealt with by staying in the moment and letting it happen. The moment passes. The negative emotion dissolves. Is this similar to our fear of alienating people with terms like spirituality - should we just do it, despite the fear factor, let the fear happen and continue on with the spirituality focus?

Rick Kool on January 31, 2003, 02:30 PM:

Also to Cate, I'm not sure that the 'old' religions are so out of touch as we have made them out to be. There is power in those texts and traditions, a power that has to be adapted to our time. We've tried, in small ways, for example, to do more with the Jewish festival, just past, of Tu B'shvat, the new year for the trees. Honest, Jews have a new year celebration and ceremony for trees. There is a lot of potential when people engaged in mainstream faiths wake up, read the texts, think about the correct deeds that need to be done, and get on with it. The great modern rabbi Abraham Joshua Heschel used to say "Pagans exalt sacred things, the Prophets extol sacred deeds". It is the deeds we need, as we obviously have sacralized far too many things in our society!

Cate McEwen on January 31, 2003, 02:36 PM:

Rick, I agree, there is much to be gleaned and learned from the old texts. Some would argue that they are not contemporary enough for today's challenges - overpopulation, ecological crisis. My point was more that masses of modernists have turned their backs on institutional religions and so, in awakening people,

it will have to be a different avenue.

Aaron Milavec on January 31, 2003, 02:31 PM:

Eric and Cate , Agreed. Going further, I note that Teilhard went out of his way to avoid churchy language in his synthesis. In 'How I Believe', he is even more careful to indicate that he was trying to reach beyond the circle of believers. In some ways, we're always aware of the frailty of language.

Rick Kool on January 31, 2003, 02:25 PM:

A few years ago, I read a piece written by people from two first nations groups that help co-manage a large park here in BC. In their preface, they spoke about this particular area as being "their only rightful place on earth."

That knocked me out. Where was my rightful place?

And then, just before that, I was talking with Thom Henley (ReDiscovery Canada) about a meeting he had with a group of teachers and some first nations elders on the west coast of Vancouver Island. One elder woman asked the group the rhetorical question "When are you white folks going to start living like you plan on staying here?"

These two orientations come together... you're in your rightful place when you live like you plan on staying. That, I think, is an important part of our educational needs- to feel like we can stay here, on earth, and that it is right to do so. We need to reduce the earth alienation that Hannah Arenbt and others have spoken of by a return to feeling at home.

Ann Dale on January 31, 2003, 02:25 PM:

Shall we now move to our second to last question?

Are there models and examples of learning that have affected a transformative perspective of human-earth relationships?

Bruce Johnson on January 31, 2003, 02:35 PM:

Ann D., to your question: Are there models and examples of learning that have affected a transformative perspective of human-earth relationships?

We have been working in earth education to that end. We have had some successes and are continuing to explore new ways of opening the possibilities up to people.

Ann Dale on January 31, 2003, 02:29 PM:

May I introduce something one of my mentors (Henry Regier) and I have discussed in conversations about the importance of diversity for life--we have evolved from polythesism to monothesism, is this really progress?

Eric Weiss on January 31, 2003, 02:32 PM:

Ann D., your question about monotheism and polytheism is interesting. It would be interesting to pose

that question within a cosmological framework. Does the new cosmology tend to support monotheism (as Teilhard would suggest), does it support polytheism, or does it support some complex integration of the two (as Aurobindo would suggest)? I, personally, would like to see the new religion that is evolving as one that can comfortably contain non-theism, monotheism, and polytheism all together.

Rick Kool on January 31, 2003, 02:33 PM:

Eric, does it matter whether we see one god in all things, or many gods in many things... as long as we see the divinity in the world.

Eric Weiss on January 31, 2003, 02:36 PM:

Rick, theoretically, it doesn't "matter whether we see one god in all things, or many gods in many things," but practically it is very important. It's important psychologically that different people are able to relate to the Divine in a way that is appropriate to their stage of spiritual development, and it's important that people don't kill each other because they see the Divine differently.

Aaron Milavec on January 31, 2003, 02:37 PM:

Ann D., we have evolved from polythesism to monothesism, is this really progress?

When monotheism is melded with aggressive agriculture and commercialization, then that monotheism takes on aggressive qualities.

In India, I found many brands of monotheism (Shivites, e.g.) who are non-aggressive.

Again, even polytheism can be aggressive???

Rick Kool on January 31, 2003, 02:37 PM:

Eric, of course you are very right- we do kill each other over who god is and how many there are! But that is not necessary (although that too is a major change in worldview!).

Ann Jarnet on January 31, 2003, 02:32 PM:

Examples of learning that have affected a transformative perspective of human-earth relationships???
One might be the ecopsychology movement.

Check out www.ecopsychology.org -- here is their intro paragraph:

"Ecopsychology is situated at the intersection of a number of fields of enquiry, including environmental philosophy, psychology, and ecology, but is not limited by any disciplinary boundaries. At its core, ecopsychology suggests that there is a synergistic relation between planetary and personal well being; that the needs of the one are relevant to the other".

Relatively new, I'm not certain there's enough information out there to evaluate impacts yet, but it appears to me like something fascinating enough to pursue. If you can find anything to read by Robert Greenway... and Andy Fisher's new book Radical Ecopsychology is quite wonderful (expensive but wonderful).

Cate McEwen on January 31, 2003, 02:40 PM:

Ann J., I agree that ecopsychology offers an awakened perspective. Do you think it does enough for engendering a collective consciousness and self-love?

Ann Jarnet on January 31, 2003, 02:45 PM:

Cate asks: Do you think ecopsychology does enough for engendering a collective consciousness and self-love?

I don't know, Cate. It certainly starts from the personal -- my experience with ecopsychology is through a small group of people across the world who have been discussing the issue on a listserv since 1996. It has been an experience in community -- resulting in face-to-face meetings (on Saltspring island, by the way), in schisms, in reconciliation, in learning..... The collective contributes to the enlightenment of the individual, the individual contributes to the collective.

Ann Dale on January 31, 2003, 02:49 PM:

Ann J., what a price we pay for bringing the personal into the equation? And yet, perhaps we need to reconcile the personal with the professional, the mind with the heart, and the physical and the soul?

Ann Jarnet on January 31, 2003, 02:54 PM:

Ann D., what price??? Well, it depends on the risk. As a young public servant, I might have hesitated to move as I do now -- I have nothing to lose now -- what on earth are they going to do to me??? so, with that privilege -- the privilege of age, experience, credibility, supportive networks, self-confidence, I feel an obligation to take things beyond the limits that might be imposed...

Rick Kool on January 31, 2003, 02:35 PM:

This is a wonderful dialogue, really, and I'm sitting here, with Glenn Gould playing the Bach piano partitas on the CD, and the Bewicks wren outside the window, and feel very much in touch with all that is divine-Bach, the wren, Glenn Gould, and all of you!

Jean Robitaille on January 31, 2003, 02:38 PM:

An experience changed my vision of the world. I was in West Africa, in Guinea-Bissau, working on a project of creating a national park. A woman come to see me with a 6 month babe, totally unfed, like the photos we see from countries affected by starvation.

We need to replace the human being as a part of our worldview. I realize at this time there is a necessity to live in a good environment. Maybe we should let all the people who live in the industrial world discover the effects of their way of life—maybe that would change something. Not just by watching it on TV.

Rick Kool on January 31, 2003, 02:39 PM:

Jean is right..., I wonder if we *really* knew the impact of how we live on the world, if we could bear the weight, the burden, of that knowledge!

Aaron Milavec on January 31, 2003, 02:44 PM:

Rick, even now, I feel the discomfort and the pain of knowing that this computer, this building, this way of life requires that multi-national corporations have to daily harvest 30% of the worlds resources and exploit so many others in developing countries to make it possible for 6% of those in North America to have the "good life."

Ann Dale on January 31, 2003, 02:41 PM:

And panel, our last question for the day.

What does it mean to the individual to change one's worldview and how is the new understanding enacted?

Bruce Morito (Member # 560) on January 31, 2003, 02:46 PM:

Response to Ann D's last question. For the individual, I think the most important transformation is that which occurs slowly and surely in such a way as to develop systematically and in ways that are possible. To much inspirational change often results later in disillusionment. For this I think we need a community of thinkers and actors who can work constructively but critically together. I also subscribe to careful and systematic change, starting with where we are now and gradually working toward a new worldview based on a comprehensive incorporation of ecological facts and concepts.

Ann Dale on January 31, 2003, 02:43 PM:

And can we reconnect again to being 'leavers' rather than 'takers'?

Eric Weiss on January 31, 2003, 02:41 PM:

It seems to me that there were just three really major shifts in the way that people relate to the natural world - the change from hunting-gathering to agriculture, the change from village agriculture to city dwelling, and the change from city-state life to industrialism. If we want to see another really major change, it will have to move us out of industrialism altogether.

Eric Weiss on January 31, 2003, 02:46 PM:

Perhaps the most crucial element of a change of worldview is a change of values. After all, it is only a change of values that can bring about a change in patterns of activity. I want to suggest that the really important change we need to make is one that puts the Immanent and Transcendent Divine in the very center of our Individual system of values.

Rick Kool on January 31, 2003, 02:47 PM:

Will this change in worldview, so necessary, be through evolution or revolution. And we know so well from history that revolutions, for the most part, tend to eat up the revolutionaries (the US example being a significant departure from that model).

Is there time for the evolution to occur? There has to be, as I think that revolutionary changes are not what I want to live through. And yet, in my own way, I know I am changing and living the change (including now commuting 30 km a day on a bike as part of my commitment to low-carbon city

transportation).

Aaron Milavec on January 31, 2003, 02:49 PM:

I am affected by Berry's insistence that we need to take back our lives and return to the local economy and the neighborhood:

"How are they to protect themselves? There seems, really, to be only one way, and that is to develop and put into practice the idea of a local economy - something that growing numbers of people are now doing. For several good reasons, they are beginning with the idea of a local food economy. People are trying to find ways to shorten the distance between producers and consumers, to make the connections between the two more direct, and to make this local economic activity a benefit to the local community. They are trying to learn to use the consumer economies of local towns and cities to preserve the livelihoods of local farm families and farm communities. They want to use the local economy to give consumers an influence over the kind and quality of their food, and to preserve and enhance the local landscapes. They want to give everybody in the local community a direct, long-term interest in the prosperity, health, and beauty of their homeland".

Jean Robitaille on January 31, 2003, 02:52 PM:

Piaget said that we pass from a egocentric vision to a vision where we become part of the world.

We live in societies that infantize people and let them take care of their belly-bottom needs for a model of cooperation, of responsibility of sharing. We need to realize that we share the world, not own it.

Aaron Milavec on January 31, 2003, 02:53 PM:

For myself, too, I keep returning to gratitude for the earth, for the insects, for the animals, for the plants, for the wonder of it all. Oh, world of mine, you are the giver and the sustainer!

Eric Weiss on January 31, 2003, 02:54 PM:

Aaron, I appreciate your post about local food economies. That idea, and the ideas of people like Hawken and Lovins, make a lot of sense as ways of approaching a practical and gradual change.

It has been interesting for me to push the spiritual angle in this dialog. It is so hard for us modern academics to use God-language, but something in me is driving in that direction.

Aaron Milavec on January 31, 2003, 02:57 PM:

Eric, I'm a theologian. Whatever I write, from now on it, is absorbed in the overriding issue of finding the thin voice of God within the natural world.

Bruce Morito (Member # 560) on January 31, 2003, 02:56 PM:

One step we might take is to use the Trumpeter as a vehicle. A special issue on Cosmology an transformative learning would be welcome in the deep ecology community and I'm sure in the wider environmental community.

Ann Dale on January 31, 2003, 02:55 PM:

Concluding comments from everyone, and for me, it has been a pleasure to moderate this forum. And our thanks to each of you for your commitment, your passion, and your integrity. May we all meet on the other side of the Rainbow Bridge one day.

Jean Robitaille on January 31, 2003, 02:59 PM:

Just realize that happiness is easier we you live simply, when your ecological footprint is low and that there is more pleasure having a relationship with human and nature than to own human and nature. Joseph Ki-Zerbo said that African culture makes links with nature but industrial cultures make profit from it.

Eric Weiss on January 31, 2003, 02:56 PM:

Thanks to you all. 'Till we meet on the other side of the Rainbow Bridge . . .

Aaron Milavec on January 31, 2003, 03:00 PM:

Thanks for interacting. Courage to you all as you herald the "good news."

Cate McEwen on January 31, 2003, 03:00 PM:

Thank you all for these three days of dialogue. Its been proactive and intimate.

Ann Jarnet on January 31, 2003, 03:01 PM:

Lovely to talk with all of you. Thank you for your inspiration.

Aaron Milavec on January 31, 2003, 03:03 PM:

Ann and Cate, thanks for making this possible and for inviting me. It's so good sometimes not to feel so much alone.
