Cultivating Wisdom: Towards an Ecology of Transformation

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We stand at a critical moment in Earth’s history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise.... The choice is ours: form a global partnership to care for Earth and one another or risk the destruction of ourselves and the diversity of life. (The Earth Charter, 2000)

As you read these words, an area of tropical forest roughly the size of a football field has been lost. Imagine this in your mind as clearly as you may. You are in the midst of a dense, humid forest filled with life. The sounds of insects and birds are all around you. The smell of plants and soil permeates all. Sunlight filters through the thick, green foliage above. Then – it is gone: burned, cut-down, or bull-dozed to the ground. Of course, in reality, this lost forest – as you reach this point in the paragraph, nearly five football fields in area – is spread across our immense planet. It is difficult to perceive the destruction directly, even if we endeavor to be attentive to it. Nonetheless, it continues, night and day. Yet, it is not just tropical forests being lost; there are the great, boreal forests of the north and the temperate rainforests of Chile, the Pacific Northwest of North America, and parts of Europe, Asia, and Australia¹. Meanwhile, as you finish reading this paragraph, a quarter square kilometer of once-fertile land has become

¹ According to the Convention of Biological Diversity, each day, nearly 110 km² of primal forest is lost, an area slightly smaller than that of San Francisco. (http://gbo3.cbd.int/the-outlook/gbo3/biodiversity-in-2010/terrestrial-ecosystems.aspx)
desert. By the time you finish reading this entire chapter, another species may have become extinct – a unique fruit of billions of years of evolution, gone forever.

Though at times it may be difficult for us to perceive it, in part because it is so painful to maintain full awareness of the reality, there can be little doubt that humanity is facing the greatest ecological crisis in its history. More commonly, perhaps, we understand phenomena such as global climate change, the acidification of oceans, pollution, the depletion of aquifers, and the mass extinction of species as an environmental crisis. Yet, as Wendell Berry has observed, “The world that environs us, that is around us, is also within us. We are made of it; we eat, drink, and breathe it; it is bone of our bone and flesh of our flesh” (1993, p. 34). This is true not only in a physical sense, but also from a psycho-spiritual perspective. Thomas Berry notes that humans came “into being at the most advanced stage of the Cenozoic Era because we couldn’t exist in a less beautiful world. To bear the burden of intelligence and responsibility that we have, we need the solace of the natural world” (as cited in Reason, 2001, p. 14). We are sustained, not only by our physical environment, but by the aesthetic, even spiritual, qualities of the world “that environs us.” In destroying the creative, life-nurturing matrix that has midwifed our consciousness into being, we also undermine our psychic sustenance. The destruction of the Earth’s life-sustaining systems, then, has repercussions for human consciousness. At the same time, both our mode of cognition and our way of perceiving the world contribute to the perpetuation of the crisis. The external world and our internal worlds – intricately interwoven – mutually interact and shape each other.

Ecology can be understood as the study of relationships. Our current crisis is ecological in the sense that it is fundamentally a crisis of relationships: the relationship between humans and the greater community of life on our planet (and the wider cosmos itself); the relationship of
humans with each other; and the way our worldviews and modes of consciousness affect these relationships in all their aspects (and how, in turn, these affect consciousness). As Arne Naess observes, ecology includes “both internal and external relations” (Naess & Rothenberg, 1989, p. 36). Leonardo Boff and Virgilio Elizondo similarly affirm that an integral, holistic understanding of ecology explores the relationships between environmental, social, mental, and cultural phenomena: “For an integral ecology, society and culture also belong to the ecological complex. Ecology is, then, the relationship that all bodies, animate and inanimate, natural and cultural, establish and maintain among themselves and with their surroundings” (1995, p. x). In a complementary fashion, Esbjörn-Hargens and Zimmerman’s Integral ecology uses Ken Wilber’s four quadrant AQAL (all quadrants, all levels) analysis to characterize the “anthropogenic ecological crisis” as the result of a complex interaction of the four terrains (or quadrants) of experiential, cultural, behavioral, and systemic phenomena “and their various levels of complexities” including “fractured consciousness, unsustainable behaviours, dysfunctional cultures, and broken systems. To identify only one or a couple of these contributing factors and hold them up as the main culprit will not help anyone to effectively address these crises” (2009, pp. 299-300).

In *The Tao of Liberation: Exploring the Ecology of Transformation* (2009), Leonardo Boff and I analyze these complex interactions in depth. We observe that the interwoven economic, political, and cultural systems of domination and exploitation that impoverish the Earth and destroy its diverse ecosystems simultaneously impoverish the great majority of the planet’s human inhabitants. Social and environmental degradation are inextricably linked; indeed, they may be considered as manifestations of a single underlying pathology. Similarly, the systemic pathology – which we characterize as a global dis/order – is also a manifestation of
both individual and collective worldviews and modes of consciousness, while these in turn are shaped by the same systems they undergird. Culture, consciousness, systems, and behaviours interact through complex webs of reciprocal causality.

Not only is it important to understand the integral, ecological nature of the crisis, the word “crisis” itself is worthy of deeper consideration. Times of crisis can be moments of immense creativity, times of grace when new opportunities emerge. Crisis has both negative and positive connotations. The Chinese ideogram translated as crisis, wei-ji, is composed of the characters for danger and opportunity (Capra, 1982). This echoes the observation of the Earth Charter cited initially, that our current crisis (or interconnected crises) is a time of both peril and promise. This is not simply a paradox; the very dangers we face may stimulate us to look deeper, seek out the roots of the pathologies at work, and mature as a species – to become wiser members of the Earth community.

The English word – crisis – derives from the Greek krinein, meaning to separate. It implies a choice between distinct alternatives. Joanna Macy and Chris Johnson (2012) speak of this choice in terms of three stories that coexist simultaneously in our time. The first story – that of “Business as Usual” – promises the continuation of an industrial growth society where limitless economic expansion creates a consumer paradise for all. This story is essentially an illusion – a false choice – that masks the second story, that of the “Great Unraveling” of the ecological and social systems sustaining life and human civilization. If we continue on our current path of unbridled consumption and quantitative growth and fail to rise to the challenges of the moment, the possibilities for the future may be immeasurably diminished. Alternatively, though, we can choose the path of the “Great Turning.” David Korten speaks of this choice when he writes:
By what name will our children and our children’s children call our time? Will they speak in anger and frustration of the time of the Great Unraveling… or will they look back in joyful celebration on the noble time of the Great Turning, when their forebears turned crisis into opportunity, embraced the higher-order potential of their human nature, learned to live in creative partnership with one another and the living Earth, and brought forth a new era of human possibility? (Korten, 2006, p. 3)

While bringing about the Great Turning calls for knowledge – including technical know-how and innovative new approaches to problems – it also requires deep transformations in the way we perceive reality and the way we relate to one another and the wider Earth community. Moreover, the Great Turning may call for a transformation in our very mode of consciousness. This may be understood in terms of the need to cultivate an integral, ecological wisdom. Over the course of this chapter, I will first explore the relationship between worldviews, cosmologies, and this kind of wisdom. In so doing, both the roots of our current crisis and the essence of this wisdom will become clearer. I will then consider ecological wisdom from the perspective of various integral ecologies to further clarify some of its key characteristics. Finally, I will seek insights from a variety of educational approaches and theories to seek out concrete ways to evoke, educe, and cultivate the kinds of wisdom that can enable humanity to move away from perceptions, ideas, habits, and systems that perpetuate injustice and destroy our planet’s capacity to sustain life while at the same time finding new ways of living that enable the physical, emotional, and spiritual needs of all people to be equitably met in harmony with the needs and well-being of the greater Earth community.
Worldviews, Cosmologies, and Wisdom

In considering the ecological crisis, we may find hope in observing that the most critical problems we face as a species – not only ecological destruction, but also the continued threat of nuclear war as well as deep poverty and social inequality – are essentially of our own making. It is not as though an asteroid were hurtling towards us with no chance of escaping disaster. The very fact that the crises we face are largely human-made implies that it is within our power to address them in a meaningful way, particularly if we act in a wise and timely manner. “We can choose life. Dire predictions notwithstanding, we can still act to ensure a liveable world. It is crucial that we know this: we can meet our needs without destroying our life-support system” (Macy & Brown, 1998, p. 16).

While the path to a sustainable future may at first seem difficult to envision, we do not lack the technologies and expertise needed to address the problems we face. For example, in Plan B 4.0, Lester Brown (2009) describes a concrete course of action that would enable humanity to reduce net carbon dioxide emissions 80% by 2020, eliminate poverty, restore the Earth’s natural systems so that they regain their health, and prevent human population from growing beyond 8 billion people. All of this is possible, albeit difficult, to achieve.

It seems unlikely that we will rise to these challenges, however, unless far more people sense the urgency and importance of the great transformations required and that this awakening, in turn, translates into the political will to undertake this great work of our time. For all of this to occur, Brown notes that we will need a new mindset – a new way of seeing and understanding our world – to truly address our current crisis. David Selby concurs, noting that meeting our challenges requires that we move beyond the current worldview that “is somehow distorted,
deeply destructive in its impact, and quite insufficient either to understand what is happening to the planet or to do anything fundamentally about it” (Selby, 2002, p. 78)

We all hold basic – though often unconscious – assumptions about the very nature of reality, including the nature of transformation and change. These assumptions may influence our ability to perceive the problems we face and also limit our imaginations, making it more difficult to conceive of a path toward sustainability and well-being. Nonetheless, we seldom question these assumptions, in part because we may not even be aware that we hold them. Each of us, however, has learned to see the world in a particular way – each of us has a worldview2.

A worldview may be defined as “a comprehensive model of reality” combining “beliefs, assumptions, attitudes, values, and ideas” (Schlitz, Vieten, & Miller, 2010, p. 19). To illustrate the way a worldview can limit our perceptions and ability to act, Ed Ayres (1999) recounts the story of James Cook’s first encounter with Australia’s aboriginal people. When the ship Endeavour came into Botany Bay on Australia’s east coast, it was, in the words of the lay historian Robert Hughes (1988), “an object so huge, complex, and unfamiliar as to defy the natives’ understanding” (p. 53). Indeed, it would appear that the local inhabitants simply could not see the ship that entered the harbor because they had no way of fitting such an object into their worldview. So they continued to fish as though the ship were invisible – and indeed, in some sense, perhaps, it was invisible to them. It was only when members of the Endeavour’s crew boarded smaller landing craft and headed toward shore that most of the local inhabitants

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2 In this text, worldview is used in both an individual and collective sense (the latter often being called a “collective worldview” or paradigm). The integral ecology of Esbjörn-Hargens and Zimmerman (2009) understands worldviews as belonging primarily to the cultural or “we” quadrant of the Wilberian AQAL model, but they also manifest in the individual “I” or experiential-phenomenological realm. Cultural worldviews – or paradigms – obviously influence, and to some extent shape, each individual’s worldview and consciousness, yet the worldview of each person is also unique.
fled and hid in the trees while two warriors stood their ground. Only on seeing the canoe-like boats – something within the scope of their own experience – could they react.

We find ourselves in a very similar situation. As Ayres observes, the Earth’s human inhabitants “are being confronted by something so completely outside [their] collective experience that [they] don’t really see it, even when the evidence is overwhelming” (1999, p. 6). Yet it is probably equally reasonable to posit that we are unable to conceive of a path toward sustainability because our imaginations have been constrained by a particular understanding of reality – by our cosmovision or worldview. As Albert Einstein (as cited in Barr & Tagg, 1995, p. 12) notes that “the significant problems we face cannot be solved at the same level of thinking we were at when we created them.” We need new forms of cognition rooted in a new vision of reality – perhaps even a different mode of consciousness – to address our most urgent crises and create an authentically just and sustainable human society living in harmony with the wider Earth community.

Another way of thinking of worldviews – particularly considering their often unconscious nature – is in terms of something resembling a dream. As the great cultural historian and Earth scholar Thomas Berry writes in his foreword to Transformative Learning, we can conceive our collective cosmovision in terms of a dream insofar as it can “be thought of as coming to us from the unconscious depths of the human, from the realm that is revealed to us in our dreams” (O’Sullivan, 1999, p. xii). As O’Sullivan later notes, Berry is “trying to develop the notion that we are not motivated and energized at the level of ideas but by the deeper recesses of dream structures” (1999, p. 3). On the one hand, a collective dream – a shared worldview or paradigm – can inspire a whole civilization and energize its creative action. Berry often used a phrase borrowed from Carl Jung: The dream drives the action. Yet, “we must also recognize that few
things are as destructive as a dream or entrancement that has lost the integrity of its meaning and entered into an exaggerated and destructive manifestation.” Indeed, O’Sullivan maintains that “no dream or entrainment in the history of the earth… has wrought the destruction that is taking place in the entrainment with industrial civilization” and that our current collective dream “must be considered as a profound cultural pathology” that requires a “correspondingly deep cultural therapy” (1999, p. 3).

In a similar vein, cultural historian Theodore Roszak (1992) astutely observes that our current crises must be seen as “more than a random catalogue of mistakes, miscalculations, and false starts that can easily be made good with a bit more expertise in the right places.” The very beliefs, values, and assumptions – or worldviews – underpinning our society are pathological in nature – constituting a collective form of delusion. Therefore, “nothing less than an altered sensibility is needed, a radically new standard of sanity that… uproots the fundamental assumptions of industrial life” (p. 232).

While changing both individual consciousness and collective worldviews is essential to effectively address the ecological crisis, this does not negate the need to also transform behaviours and systems. As Esbjörn-Hargens and Zimmerman note, “transformation of individual consciousness cannot occur without supportive changes in body, culture, and eco-social systems” (2009, p. 7). Similarly, Arne Naess observed that change must occur simultaneously, both “from the inside and from the outside, all in one” (Naess & Rothenberg, 1989, p. 89). In discussing worldviews and ecological wisdom this complex interplay of systems, behaviours, consciousness, and culture must always be kept in mind. Recognizing this complexity, however, does not lessen the importance of transforming worldviews in processes of systemic change. As Lewis Mumford noted: “Every social transformation… has rested on a new
metaphysical and ideological base; or rather, upon deeper stirrings and intuitions whose rationalized expression takes the form of a new picture of the cosmos and the nature of [humanity]” (as cited in Goldsmith, 1998, p. 433)

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Cosmology is closely related to the idea of worldviews; it can be understood as the exploration of the origin, evolution, destiny, and purpose of the universe. Humans may have begun the cosmological endeavor nearly 300,000 years ago (Swimme, 1996) when our ancient ancestors gathered together under the night sky to ponder the great mysteries of the world, to tell stories, and to celebrate rituals. They may well have contemplated the same deep questions that have been posed through countless millennia: How did the world come to be? What is our place in the cosmos? What is our relationship to the other beings who inhabit the Earth? And, how are we to live harmoniously with each other and with the greater community of life of which we are members? All of these are cosmological questions that help situate humans within the cosmos that both birthed us into being and sustains us.

While cosmologies can influence and shape worldviews, a cosmology tends to be more systematic in nature and have at its foundation some kind of scientific, religious, or philosophical framework – in particular, a story of the universe’s origins. In many ways, cosmology is the myth underlying the way we live where “myth” is understood as a story giving meaning (which may or may not be literally true). As such, it profoundly colors our perception of reality, including our assumptions about the relationship of humans to the wider Earth community, our understanding of consciousness (including to what extent consciousness is unique to humans or whether it is an essential dimension of all reality), and the nature of change itself.
Thomas Khun observed that cosmology provides us with a shared worldview that permeates everything, giving meaning to our lives (Heyneman, 1993). Historically, every human culture has had a cosmology that orients it and imbues it with a sense of purpose. Yet, as Louise Steinman points out, “In the West, there is no longer one Big Story which we all believe in, which tells us how the world was made, how everything got to be the way it is, how we should behave in order to maintain the balance in which we coexist with the rest of the cosmos” (as cited in Heyneman, 1993, p. 1). Indeed, not only may there be no unifying story, many may simple lack any kind of “Big Story” at all.

Leonardo Boff and I (2009) explored in depth the process through which the culture of modernity effectively lost a functional cosmology, a process which began about four hundred years ago with the Enlightenment and the scientific revolution initiated by thinkers like Copernicus, Galileo, Descartes, and Newton. By the end of the 19th century, the scientific orthodoxy of the day viewed the universe as a vast, infinite expanse composed of lifeless matter with no overarching form or beginning, where all phenomena arose from the random interaction of atoms, a universe doomed to a slow death via the inescapable laws of thermodynamics.

Mathematician and philosopher Bertrand Russell, reflecting on what seemed to him to be a random and purposeless universe, concluded that, “the soul’s habitation” could only be safely built “on the foundation of unyielding despair.” More recently, geneticist and Nobel laureate Jacques Monad observed that we are alone in the “universe’s unfeeling immensity, out

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3 A more complete citation of Russell can be instructive to illustrate the loss of a functional cosmology that provides a sense of meaning and purpose: “That man is the product of causes which had no prevision of the end they were achieving; that his origin, his growth, his hopes and fears, his loves and beliefs, are but the outcome of accidental collisions of atoms; that no fire, no heroism, no intensity of thought and feeling can preserve an individual life beyond the grave; that all the labors of the ages, all the devotion, all the inspiration, all the noonday brightness of human genius, are destined to extinction in the vast death of the solar system; and that the whole temple of Man’s achievement must inevitably be buried beneath the debris of a universe in ruins – all these things, if not quite beyond dispute, are yet so nearly certain, that no philosophy which rejects them can hope to stand. Only within the scaffolding of these truths, only on the firm foundation of unyielding despair, can the soul’s habitation henceforth be built. (as cited by Sheldrake, 1988, pp. 6-7)
of which [we] emerged by chance. [Our] destiny is nowhere spelled out, nor is [our] duty.”

Similarly, Nobel-prize winning physicist Steven Weinberg – who sees life as the outcome of a mere chain of accidents – concluded that we live in an “overwhelmingly hostile universe” which, to the extent it becomes comprehensible, also seems to become more pointless (Roszak, 1999, pp. 82-83). Over the past 110 years, new scientific insights in quantum physics, evolutionary biology, ecology, systems theory, and cosmic evolution have largely displaced the scientific foundations upon which this dysfunctional cosmology was built. Despite this, it continues to exercise considerable influence in the society of modernity – even among scientists and philosophers – as the views of Russell, Monad, and Weinberg illustrate.

Today, the “normal” experience of many living in modern industrial societies is one of a purposeless world that has become a collection of objects, no longer a community of living beings. In objectifying the world, however, we have also become objects ourselves. As Morris Berman observes, “The world is not of my own making; the cosmos cares nothing for me, and I do not really feel a sense of belonging to it. What I feel, in fact, is a sickness in the soul” (1981, pp. 16-17). Faced with a world largely emptied of meaning, many in modern affluent societies take refuge in a surrogate cosmology of consumerism (actively encouraged by corporate capitalism) that conceives the purpose of life as a race to buy and consume commodities extracted from a world that is reductionistically understood to be little more than a giant storehouse of raw materials.

Despite these serious problems, not all of the insights, values, and movements that arose with modernity are without value; nor should we conclude that we need to simply revert to an older, once-functional cosmology. Indeed, Ken Wilber (1996) argues that the changes brought about by modernity have made an important contribution to human dignity (what he calls the
“dignity of modernity”) through the differentiation of the “Big Three.” The first of these is the differentiation of the individual self or “I” from ones’ culture or society which helped give rise to modern democratic institutions including elected governments and human rights. Secondly, the differentiation of mind from nature may have contributed to movements for liberation insofar as “biological might” or brute strength could no longer serve as a justification for domination. Finally, the differentiation of culture from nature was the foundation for empirical science where truth was no longer subservient to the ideologies of a state or a religion.

In Wilber’s view, the “good news of modernity was that it learned to differentiate the Big Three” – i.e. self from culture, mind from nature, and culture from nature; “the bad news was that it had not yet learned how to integrate them” (1996, p. 126). Indeed, instead of simply differentiating, we actually came to dissociate them. Wilber concludes that our current ecological crisis is to a great extent “the result of the continued dissociation of the Big Three. We cannot align nature and culture and consciousness; we cannot align nature and morals and mind. We are altogether fragmented in this modernity gone slightly mad” (1996, p. 276).

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What might be some of the key characteristics of an ecological worldview, one that enables us to align and re-integrate nature, culture, consciousness, and ethics in a new way that simultaneously preserves “the dignity of modernity” and reconnects humanity to the wider community of life, and indeed the cosmos itself? Emerging insights from science – including systems theory, quantum physics, and the emerging story of the cosmos – as well as a variety of perspectives arising from deep ecology, ecopsychology, and ecofeminism together with other philosophical perspectives provide fertile insights into such a worldview. Based on both previous
research (Hathaway & Boff, 2009) and the basic principles of the deep ecology as outlined by Arne Naess (Naess & Rothenberg, 1989), some key facets could include:

1. **Relationality**: In an ecological worldview, all life on Earth is seen as interconnected and interdependent. Indeed, the essence of reality lies not in substances but rather in nested systems (or “holarchies”) and their relationships. The health of all life – including human life – depends on the health of Earth’s ecosystems, as well as the global atmospheric, oceanic, and climate systems. Humans, both by evolution (including the evolution of consciousness) and through their constant exchange of water, food, and air with other life forms are intimately connected to all life and the Earth itself. This sense of ecological relationality may extend further to encompass the interconnection of all phenomena characteristic of the Buddhist idea of “interdependent co-arising” as well as insights from both quantum physics and systems theory. In such a view, causality is understood as complex, allowing for creative emergence of truly novel phenomena through dynamics of self-organization or autopoiesis.

2. **Intrinsic value of life**: Whether or not humans are seen as having some kind of “special” or “unique” role in the Earth community, an ecological worldview understands that the “flourishing of [both] human and non-human life” has “intrinsic value” and non-human life forms have value “independent of the usefulness these may have for narrow human purposes” (Naess & Rothenberg, 1989, p. 29). This sense of intrinsic value may even extend further to include entities not normally understood (in modern scientific terms) to be “living” such as rivers, mountains, or even rocks. Indeed, an ecological worldview is often characterized by a larger, more inclusive, sense of life itself and may even consider Earth itself to be in some sense alive or similar to a living organism.
3. **The value of diversity:** “Humans have no right to reduce” the diversity of life forms “except to satisfy vital human needs” – i.e., those essential to life – and generally speaking, even this exception is understood in a fairly restrictive way. The “richness and diversity of life forms are values in themselves” vital to the flourishing of all life on our planet (Naess & Rothenberg, 1989, p. 29).

4. **Harmony:** Humans, to the greatest extent possible, should endeavor to live in harmony with the Earth’s ecosystems, respecting the natural cycles of energy, water, soil, and air flowing through these systems as well as ecological limits. In particular, humans should seek to minimize negative impacts on the Earth’s ecosystems, using no more than the Earth can naturally regenerate and contaminating no more that the Earth can reasonably absorb and recycle. Human technology should therefore seek to mimic the cyclical flow of energy and materials characteristic of natural ecosystems.

5. **Justice and equity:** The same principle of harmony, applied to the human community, implies that the authentic needs of all persons must be met as fairly as possible. Given the limitation of a finite Earth, this means ensuring that all humans should enjoy a modest but dignified lifestyle. Equity does not mean that all must have the same level of wealth, but it does mean that differences of wealth should not be so great that they manifest a fundamental lack of fairness that can lead to resentment, outrage, or violence.

6. **Sustainability and future generations:** The principle of justice combined with the principle of harmony means that meeting the needs of human beings in the present must not compromise the well-being of other species or the needs of future generations (both human and non-human).
7. **Fulfillment and Purpose:** A concrete implication of the above is that, to move towards both justice and sustainability on a planet with a limited carrying capacity, humans will need to find a source of fulfillment that does not depend on ever-increasing consumption. Indeed, while increasing the availability of essentials (healthy food, clean water, adequate shelter, healthcare, etc.) for the world’s poorest inhabitants is necessary for well-being, the consumption of the wealthiest 20% or so of humanity (who consume roughly 80% of its wealth) will necessarily need to be curtailed since our current global levels of consumption already exceed the carrying capacity of the planet by 30%. Albeit some of this reduction might be accomplished by improved technology and efficiency, a good proportion will need to come through a reduction in consumption. Given that ever-increasing consumption is currently the goal of most societies in the global North and that this activity is promoted as essential to human happiness, societies will need to find alternative goals aimed at genuine human fulfillment to replace their current materialistic orientation. In particular, this underlines the importance of a “functional cosmology” that provides a sense of meaning and purpose to life.

While not everyone need agree with each point in the above characteristics, they do provide a rough sketch of some of the key aspects that generally might be included when describing the values and assumptions typical of an ecological worldview. Of course, such a description does not directly describe the experience of reality, the types of perception, nor the modes of consciousness that might accompany such a worldview. The characteristics do, however, provide a starting point to move on to the question of ecological wisdom.

Arne Naess describes his deep ecology as an *ecosophia*, or ecological wisdom. Naess likens ecological wisdom to a worldview, but one that is embodied in behaviours and action:
“All ‘sophical’ insight should be directly relevant for action. Through their actions, a person or organisation exemplifies sophia, sagacity, and wisdom – or lack thereof. ‘Sophia’ intimates acquaintance and understanding rather than impersonal or abstract results.” (Naess & Rothenberg, 1989, p. 37). Such an embodied worldview also implies a “conscious change of attitude towards the conditions of life in the ecosphere” (p. 38). Indeed, this could be extended further still to encompass a form of consciousness, informed by a deep, experiential knowledge, that enables one to perceive reality relationally (as interconnected – with humans as members of, not separate from, the greater Earth community and the wider cosmos) and act in accordance with the ecological principles that enable life – including human societies – to consciously participate in evolution toward ever-greater differentiation, communion, and creative self-organization and interiority.

Provisionally, then, the following “working definition” could serve as a way of understanding ecological wisdom: Ecological wisdom is rooted in a conscious experience of the interconnection and intrinsic value of all life. It consists of the diverse modalities of cognition and consciousness – together with the knowledge, skills, and emotional intelligence – that enable humans to discern and embody actions that respect and protect the diversity of life, live in harmony with each other and other species, move toward ever greater justice and equity, protect the well-being of future generations, participate consciously in evolutionary processes, and find fulfillment and meaning in a functional cosmology.

**Integral Ecologies and Wisdom**

While the previous discussion begins to illuminate the nature of ecological wisdom, wisdom is, in a sense, a rather elusive term that ultimately defies a neat articulation in the form of a definition. Like the old Zen story, we are cautioned not to mistake the finger gesturing
towards the moon with the moon itself; words can only point to the reality being described, but
ultimately this reality must be touched, tasted, and experienced to be fully understood. One way
to begin to move beyond this limitation, however, may be to view and enrich the meanings of
wisdom from a variety of integral and ecological perspectives.

One ancient way of understanding an embodied wisdom is captured in the Chinese word
Tao (or Dao in modern transliterations). The ideogram for Tao combines the radical for foot
(walking, movement) and that of the head (leadership, guidance), indicating “step by step”
movement with “walking feet, possibly in rhythmic movement. The use of the character for the
head combined with a foot suggests a ‘way’, ‘path’, ‘road’, or even ‘method’, with the head
suggesting, perhaps, that it should be a thoughtful way forward” (Fowler, 2005, p. 106). More
metaphorically, the Tao could therefore be understood as a walking wisdom which concretely
guides action (Dreher, 1991). At the same time, the Tao can be understood as a “way” leading to
peace, harmony, and right-relationship, a way that is also manifest in the unfolding process of the
cosmos itself (Needleman, 1989). In this manner, the Tao captures the insight that interiority and
subjectivity pervade all entities in the cosmos which, to borrow the famous words of Thomas
Berry (1999), is a “communion of subjects, not a collection of objects” (p. 82). Indeed, the
wisdom of the Tao is understood to permeate, inform, and sustain all beings. In the words of the
Tao Te Ching, “it flows through all things, inside and outside” (§25) while “it nourishes all
things and brings them to fulfillment” (§41). At the same time, the dynamic nature of a “way”
suggests the transformative nature of wisdom, as well as its presence in the evolutionary
processes of the cosmos.

A second, complementary perspective for understanding wisdom may be found in the
Shambhala prophecy from Tibetan Buddhism as recounted by Joanna Macy, based on the
teachings of Choegyal Rinpoche. This twelve-century old prophecy speaks of a time when “all life on Earth is in danger” and “great barbarian powers have arisen” that spend untold wealth to prepare for the annihilation of one another and whose technologies “lay waste to the world.” In this time, “when the future of sentient life hangs by the frailest of threads, the kingdom of Shambhala emerges.” Yet, this kingdom is not a place, and its “warriors” carry no weapons in a physical sense. Indeed, the “Shambhala warriors” must always do their work in “the very heart of the barbarian power,” going to where the barbarian weapons are fabricated – “the corridors of power where decisions are made” – to dismantle them. “The Shambhala warriors have the courage to do this because they know these weapons are manomaya. They are ‘mind-made.’” As such, they can also be unmade using two key “weapons”: insight and compassion. Both are necessary. Compassion “gives you the juice, the power, the passion to move” without fearing the pain and suffering of the world. Yet, without “insight into the radical interdependence of all phenomena,” compassion is not enough. Insight enables us to understand that “the line between good and evil runs through the landscape of every human heart.” At the same time, insight enables us to act “with pure intent” knowing that actions may have “repercussions throughout the web of life, beyond what you can measure or discern.” Yet, insight alone can be too cool and conceptual; “you need the heat of compassion.” Only together can these gifts sustain transformative action for the healing of the world (Macy & Brown, 1998, pp. 60-61).

While this prophecy does not use the word “wisdom” explicitly, it nonetheless provides deep intuitions about its nature. Normally, perhaps the idea of “insight” itself might be identified with wisdom, yet it may be helpful to think of wisdom as encompassing both compassion – the ability to share the pain and joys of others – and insight into the “radical interdependence of all phenomena.” In this way, wisdom is conceived as having both a mental-perceptual and an
emotional component. While the prophecy conceives of this insight and compassion as “weapons,” this wisdom could also be understood as a transformative “way” that aims to heal the world, restore balance, and re-establish right relationships.

A third source of traditional knowledge on wisdom can be found in the medicine wheel teachings of many indigenous cultures in North America (Bopp, Bopp, Brown, & Lane, 1985). In the medicine wheel, four aspects of being and learning are represented by the four cardinal directions (albeit the correspondence varies from culture to culture). Learning – and wisdom – must strive to balance these four aspects, which can be described as mental, physical, emotional, and spiritual.

The mental realm – sometimes corresponding to the North – is the terrain of thinking, analyzing, synthesizing, organizing, memorizing, imagining, discriminating, and criticizing. This is the way of learning and being that science and the culture of modernity has tended to value most highly. It is part of wisdom, but only one dimension of it. As Wilber’s observations about the Big Three and the dignity of modernity suggest, this aspect of wisdom enables us to differentiate; but left on its own – or when out of balance with the other dimensions – it can also cause us to dissociate, leading to a sense of separation and alienation.

The role of compassion in the Shambhala prophecy can enable us to recognize the importance of the emotional dimensions of wisdom, often corresponding in the medicine wheel with the South. Many ideas that we might associate with ethical and moral values or qualities such as love, courage, loyalty, generosity, and kindness are aspects of this dimension of wisdom, but also anger and the passion it may unleash to struggle against injustice. Emotional wisdom

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4 While recognizing that each First Nation has its own unique understanding of the medicine wheel, the discussion here is based work done by a gathering of elders from a wide variety of native traditions held in Lethbridge, Alberta nearly thirty years. As such, it describes many common – albeit by no means universal – elements of traditions held by different indigenous cultures.
also recognizes the role that fear and grief plays in our lives and, rather than seeking to avoid or hide from them, endeavors to understand and move through them to greater compassion.

The physical and spiritual aspects of wisdom may have received even less emphasis in modern industrial western societies, yet both are of great importance. Most frequently, these aspects correspond to the East and West, or vice versa, depending on the tradition. The physical dimension reminds us that, to be fully integral, wisdom must be *embodied*; it must be put into practice in behaviours and actions. At the same time, the body in itself can be a source of wisdom, enabling one to open to new sources of perception and connection with the phenomenal world. Practices such as meditation on the breath, yoga, sacred dance and movement, Tai Chi, and Qigong can also serve to overcome the tendency to split mind, spirit, body, and emotions.

The words of Piero Ferrucci on dance capture this insight when he notes that each movement “has a meaning that not only is understood with the mind but is realized with one’s whole being – body and soul.” Embodiment moves beyond words, speaking to ineffable dimensions of being and “reawakening intuition and of opening one’s organism to a vaster world, at the moment of heightened receptivity” (1990, p. 177).

Indeed, while in the West body and spirit have often been separated (or “dissociated”), many spiritual traditions see them as closely linked – with the life-sustaining air we breathe in being understood as a link between the physical and spiritual. For example, in Hebrew, Aramaic, and Arabic, the word for “spirit” (*ruach*, *ruha*, and *ruh*) also means wind, air, and breath – and this was originally the case in Greek (*pneuma*) and Latin (*spiritus*) as well. As David Abram notes, this is also the case for the Dine (Navajo) people who identify air – and the *awareness* of air – with the spiritual, conceiving the psyche “not an immaterial power that resides inside as,” but rather as “the invisible yet thoroughly palpable medium in which we (along with the trees,
the squirrels, and the clouds) are immersed” (1997, p. 237). At the same time, this invisible realm is also associated with other, less tangible, phenomena such as dreams, visions, stories, and teachings. Because of this, the capacities associated with spiritual aspects of wisdom include the ability to respond to and accept these realities as an “unknown or unrealized potential to do or be something more or different than we are now.” At the same time, spiritual wisdom entails finding ways to communicate these realities through speech or art and uses them as a guide to “action directed toward making what was only seen as a possibility into a living reality” (Bopp, et al., 1985, p. 8). This final point re-roots the spiritual in the physical, the embodiment of vision in concrete action.

While the medicine wheel emphasizes the need for balance in cultivating wisdom, the aspects of wisdom that are non-rational, intuitive, or trans-rational may be the most challenging for those influenced by the worldview of industrial modernity. Perhaps for this reason, Thomas Berry often emphasizes this spiritual-intuitive aspect when speaking of the need to create a sustainable society based on a reinvention of “the human at the species level.” Bill Plotkin observes that Berry believed that “we must root our efforts not in our rational minds but in revelatory visions that sprout from the depths of the human psyche and from our encounters with the mysteries of the natural world” (2011, pp. 43, 42). To do so, humanity needs to return to both the psycho-spiritual and ritual processes that have sustained healthy cultures throughout millennia and recover a shamanic dimension of existence. The word Berry uses to describe this process of descent into both the depths of the soul and the heart of the phenomenal world that simultaneously enkindles vision and guides action for transformation is “inscendence.” As mentioned in my earlier discussion of the dream that drives the action, we must be motivated out of the unconscious depths from whence dreams arise so that we may tap into instinctive, pre-
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rational resources for transformation. Another way Berry (1990) speaks of this is in terms of a new “cultural coding” or a “revelatory vision” – something that could be understood as a transformed worldview.

Plotkin notes that inscendence – this source of new cultural codings – is rooted in a conscious connection with those realms of experience most often ignored and marginalized by the mainstream of modern industrialized Western cultures such as vision, instincts, the numinous powers of the phenomenal world, dreams, and the mysteries of the cosmos. From the perspective of ecological wisdom, inscendence is the process through which we develop (or recover) a variety of forms of perception rooted in a transformed consciousness. Such modes of cognition transcend the control of the conscious mind, yet some are what we would normally think of as “inner” (dreams, visions) and others as “outer” (natural world, cosmos) phenomenon. Berry, however, overcomes the dualistic tendency to divide human experience, considering all these perceptual modes as being focused and rooted “in the world” (Plotkin, 2011).

For Berry, humans are both distinctive beings in the cosmos and a mode of being of the cosmos itself. Humans are a “reality in whom the entire Earth comes to a special mode of reflexive consciousness” and in which the “various polarities of the material and the spiritual, the physical and the psychic, the natural and the artistic, the intuitive and the scientific” (T. Berry, 1999, pp. 174-175) come together as an integral unity. Through inscendence, humans can apprehend the wisdom of the Earth itself, seeking out its guidance through forms of consciousness rooted in an intimate relationship with the cosmos that transcend rationality alone. Indeed, if humans are to survive and thrive in the future, “it will be because the guidance and the powers of the Earth have been communicated to us, not because we have determined the future of the Earth simply with some rational faculty” (T. Berry, 1999, pp. 173-174).
A complementary way of understanding this process of apprehending the wisdom of the Earth and allowing it to guide us comes from deep ecology and ecopsychology which speak in terms of widening our sense of self and – in the case of ecopsychology – reconnecting with the “ecological unconscious.” From an early age, people in modern societies are taught to repress any kind of “cosmic empathy” or “oceanic consciousness” that enables them to access a wider sense of self extending beyond the boundaries of the skin. Once again, if this were only a matter of differentiation, it could be seen as a normal part of psychic development; yet, for many, this differentiation becomes dissociation, a loss of the ability to identify with a wider sense of self. Freud once observed that “our present ego-feeling is only a shrunken residue of a much more inclusive, indeed, all-embracing, feeling which corresponded to a more intimate bond between the ego and the world about it” (as cited in Roszak, 1995, p. 12). Theodore Roszak sees this observation as a distant precursor to the perspective of ecopsychology, which could “be defined as the refusal to settle for that ‘shrunken residue’” (1995, p. 12).

A healthy sense of differentiation – as opposed to dissociation – enables a person to understand their own uniqueness in relationship to others (both human and more-than-human), not in defensive opposition to or separation from others. Instead of seeing the separative self that equates “healthy development with increasing autonomy” as normative, we could seek instead to value and nurture what some feminist psychologist call the relational self that “suggests that as we mature, we move toward greater complexity in relationships” (Gomes & Kanner, 1995, p. 117). Similarly, ecophilosopher Arne Naess maintains that the process of psychological maturation involves an ongoing broadening of one’s identification with others, to allow the self to encompass wider and wider circles of being until it comes to include the greater Earth.
community itself – a process he conceives as Self-realization (or literally, “Self-realizing”) – where “Self” is conceived as a wider, more inclusive self (Naess & Rothenberg, 1989).5

This widening of our selves is simultaneously a deepening. Ecopsychologists describe the core of the psyche as the “ecological unconscious.” In some mysterious way, this form of collective unconscious includes a living record of the entire process of cosmic evolution. At the same time, it is characterized by a deep sense of our abiding connection with the Earth. This inner wisdom has guided our evolution and permitted our survival. Roszak calls it the “compacted ecological intelligence of our species, the source from which culture unfolds as the self-conscious reflection of nature’s own steadily emerging mindlikeness” (1992, p. 304). The repression of this “ecological unconscious is the deepest root of collusive madness in industrial society.” In contrast, “open access to the ecological unconscious is the path to sanity” (1992, p. 320). To the extent that each us awakens to our connection to the Earth, all its living beings, and indeed the wider cosmos, we also awaken to our own Self.

This process of broadening and deepening the sense of Self taps not only into the spiritual-intuitive dimensions of wisdom, but also the emotional aspects – in particular, the cultivation of empathy and compassion. Albert Einstein refers to this process when he notes that:

[Human beings are] part of a whole, called by us the “Universe,” a part limited in time and space. [We] experience [ourselves], [our] thoughts and feelings, as something separated from the rest – a kind of optical delusion of [our] consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few

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5 Esbjörn-Hargens (2005, p. 6) notes that this widened sense of Self must include, not only the Earth and other forms of life, but also different people and cultures: “Integral Ecology recognizes that for an ecocentric approach to manifest in ourselves, and our communities, individuals have to work together to stabilize worldcentric patterns of being in relationship. Otherwise, ecologically concerned individuals who are ostensibly one with the earth might propagate dynamics of ‘othering’ against their neighbors as well as various members of the global village.” While this point is well-taken, an ecocentric perspective – at least as understood by Arne Naess – actually includes both other species and other people (Naess & Rothenberg, 1989).
persons nearest us. Our task must be to free ourselves from this prison by widening our circles of compassion to embrace all living creatures and the whole of nature in its beauty. (as cited in Chang, 2006, p. 525)

This broadening of Self to embrace widening circles of compassion also entails the ability to enter into a mode of participatory consciousness, “a heightened, world-reshaping awareness of participation with the visible and invisible; embodied and numinous; past, present, and future beings, relationships, and energies among whom we dwell.” This form of consciousness is “more porous,” involving “a felt-sense of interpenetration and reciprocity; a psychic and somatic openness to the Others and to the mysterious terrain of imagination and dream.” At the same time, it may involve “what Joanna Macy calls ‘deep time’ – or awareness of connection with both ancient and future beings and events” (Haugen, 2011, p. 33).

Morris Berman observes that this participatory consciousness was typical of Medieval alchemy, which instead of analyzing or confronting the phenomenal world, endeavored to permeate it (1981). In a similar vein, Jamake Highwater speaks of the ability of many indigenous peoples to “know something by temporarily turning into it” (as cited in Heyneman, 1993, p. 27). Ecological wisdom, then, calls for a reintegration of participatory modes of consciousness into the human psyche. This, of course, should by no means be understood to imply that we should simply abandon the ability to employ more discursive, analytic modes. The challenge is to find ways of integrating both discursive and participatory modes of consciousness in new ways, enabling us to tap into varied modes of cognition and reasoning.

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In an evolutionary context, ecological wisdom also entails seeking to consciously participate in the ongoing process of planetary and cosmic evolution in ways that combine
insight and compassion. As noted earlier, Thomas Berry understood humans as members of the Earth community who have awoken to self-reflexive consciousness. As such, humans can participate in evolution in a mindful, intentional manner. To do so, however, requires that we transcend the separative self and instead understand ourselves relationally – as ecological beings. While self-aware and self-reflexive, we must also integrate incendence, compassion, and participatory modes of consciousness so that we are able to seek out guidance from “the powers of the Earth” and the wider cosmos that embraces it.

Drawing on insights from ecology, Arne Naess speaks of this process in terms of Self-realization. From a relational perspective, the potential for Self-realization is increased to the extent that others – both human and more-than-human – are also able to increase their own Self-realization, and this in turn can be furthered by increasing diversity, complexity, and symbiosis (Naess & Rothenberg, 1989). Similarly, Brian Swimme and Thomas Berry – looking at the process of cosmic evolution – identify what they name the “cosmogenic principle” that states that the universe’s evolution “will be characterized by differentiation, autopoiesis, and communion throughout time and space and at every level of reality. These three terms – differentiation, autopoiesis, and communion – refer to the governing themes and basal intentionality of all existence” (1992, p. 71).

These three aspects are revealed in the very structure of the cosmos: “Were there no differentiation, the universe we see would collapse into a homogeneous smudge; were there no subjectivity [or autopoiesis], the universe would collapse into inert, dead, extension; were there no communion, the universe would collapse into isolated singularities of being” (Swimme & Berry, 1992, p. 73). Ecologically, the interrelationship of the three principles may be seen in the evolution from a pioneer ecosystem – like weeds growing on recently cleared land – to a mature
community like a rainforest. Over time, as the system evolves, it simultaneously becomes more differentiated and more integrated as communion and symbiosis among different species grows and biodiversity increases. At the same time, these same processes lead to a greater capacity for creative self-organization, or autopoiesis, which can also be understood at the dimension of interiority. In a similar fashion, an ecological wisdom that seeks to consciously and harmoniously participate in the process of evolution will be characterized by these same three aspects. In this way, we could say that a wise action, or wise behavior, seeks to broaden diversity, deepen communion, and increase interiority, mindfulness, and dynamics of creativity.

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While no single description can fully encapsulate its meaning and nature, the previous discussion enables us to more clearly understand the characteristics of ecological wisdom and serves as a foundation for more practical questions: How – both as individuals and collectively as a species – can we concretely begin to embody the kinds of cultural codings or worldviews that will enable us to transition from being an ecologically destructive presence on the planet to one that is benign? How can we broaden our sense of self, become more compassionate beings, gain insight into the radical interdependence of all phenomena, and recover more intuitive forms of cognition that enable us to seek guidance from the greater Earth community and the wider cosmos? Can we learn, in time, to participate consciously, harmoniously, and fruitfully in the Earth’s evolutionary processes as they move toward greater differentiation, communion, and creative self-organization? While there can be no simple “recipe” for cultivating ecological

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6 In *The Tao of Liberation*, Boff and I also demonstrate how the same principles flow out of systems theory (Hathaway & Boff, 2009, pp. 202-204)
One such framework is that of transformative learning, first proposed by Jack Mezirow in the late 1970’s as a theory of perspective transformation. For Mezirow, transformative learning requires a shift in one’s “frames of reference” which are “coherent bod[ies] of experience” including “associations, concepts, values, feelings” and “conditioned responses” that define a “life world.” The assumptions these embody “selectively shape and delimit expectations, perceptions, cognition, and feelings” (Mezirow, 1997, p. 5). These “habits of mind” are in many respects analogous to worldviews. In practice, however, Mezirow uses perspective transformation to describe phenomena that do not necessarily imply a fundamental change in one’s orientation to the world, except when he refers to “epochal” transformations – changes which he considers far less common and far more difficult to effect.

For Mezirow (1978, 2000), the process of transformation begins with a disorienting dilemma which stimulates self-examination – often accompanied by feelings of anger, shame, fear, or guilt. This leads the learner to critically reassess their assumptions which begins the transformative process in earnest. Subsequent research (Taylor, 1997), however, has raised the question: Why does perspective transformation result from some disorienting dilemmas, but not from others? Taylor’s research suggests that a key factor may lie in moving beyond Mezirow’s initial reliance on rational, critical thinking to include the role of emotions, intuition, empathy, and other forms of knowing. This latter point links to our earlier discussion on wisdom as an integral reality that includes the emotional, physical, and spiritual-intuitive realms of experience as well as the mental dimension. At the same time, Thomas Berry’s insistence that we need to
reconnect to the wider Earth community through visions, dreams, and the phenomenal world reinforces the need to go beyond discursive-analytic modes of cognition.

With regards to the current ecological crisis, unique considerations arise when considering the idea of a “disorienting dilemma.” Initially, it may seem that the threat posed by global climate change, for example, should serve to spark perspective transformation – presumably, to a more deeply ecological consciousness and wisdom – that in turn would inspire us to take effective action to address the crisis. Yet, while this arguably has occurred in many individuals, such a shift is not clearly discernable in the population at large.

Why do we largely seem to suffer a collective paralysis in addressing the ecological crisis? Until the mid-twentieth century, every generation of humans lived with the tacit assurance that other generations would follow them. Since the advent of nuclear weapons and the growing power of humans to affect global atmospheric and oceanic systems, however, this is no longer the case. Humans are now destroying entire ecosystems, and even destabilizing the systems essential to the sustenance of life. This realization is so painful that we seek to avoid it; we may retreat into denial, escape into addictions (understood here broadly to include, for example, consumerism), or fall into despair (Walsh, 1984). Moreover, at a systemic level, a whole series of factors reinforce our paralysis in order to maintain the status quo. For example, a half-trillion-dollar-a-year advertising industry actively fuels consumerist addictions – distracting us from the urgency of the crisis. Mass-media and educational systems may also fragment our view of reality or accentuate the voices of denial.

In facilitating transformative learning seeking to cultivate wisdom and address the ecological crisis, educators therefore need to recognize and work with the fear of pain associated with our dread for the future. As Macy and Brown observe, “the very danger signals that should
rivet our attention, summon up the blood, and bond us in collective action, tend to have the opposite effect. They make us want to pull down the blinds and busy ourselves with other things” (1998, p. 26).

Recalling Mezirow’s theory, disorienting dilemmas are often accompanied by feelings of fear, guilt, and shame. Certainly, confronted with the current ecological crisis, such feelings – and even dread – are both natural and understandable. It would be an error, however, to attempt to use fear, guilt, or shame as a motivating force. While accurate information about the crisis is essential, Roszak notes that actively encouraging guilt – as some in environmental movements have done – will inevitably prove to be counterproductive: “Shame always [has] been among the most unpredictable motivations in politics; it too easily slides into resentment. Call someone’s entire way of life into question, and what you are apt to produce is defensive rigidity” (1995, pp. 15-16). Ultimately, shame undermines trust – including our trust in our own selves – as well as the solidarity needed for effective transformative action.

Instead of appealing to guilt and fear, would it not be possible to instead acknowledge our shared pain and use this as a starting point to recognize our fundamental connection with each other and the greater community of life? Macy & Brown’s (1998) “Work that Reconnects” provides a particularly insightful way of doing this, working through pain in a way analogous to grief work – with the key difference that here we are not trying to come to terms with a loss that has already occurred, but rather awaken ourselves to action aimed at preventing future harms.

The “Work that Reconnects” uses a four step process that begins – not with guilt, fear, or pain – but rather with gratitude. Gratitude enables learners to first root themselves in their experiences of the goodness and beauty of the world, including their relationships with other people and the greater Earth community. Only then does the process move on to that of honoring
our pain for the world; yet, even here, the point is not to motivate through guilt, but rather to work through the pain to recognize that we suffer because we are interconnected through bonds of compassion and love. From there, the process proceeds to “seeing with new eyes,” including perspectives that enable learners to connect emotionally to both our ancestors and to future beings to facilitate a shift in worldview. Finally, in “going forth,” learners are challenged and empowered to embody their shifts in perception and understanding through concrete actions and an ongoing commitment to the transformative process of cultivating ecological wisdom.

A complementary perspective comes from the transformative learning theories of Edmund O’Sullivan, an adult educator deeply influenced by the work of Thomas Berry. O’Sullivan (2002) affirms that “transformative learning involves experiencing a deep, structural shift in the basic premises of thought, feelings, and actions. It is a shift of consciousness that dramatically and irreversibly alters our way of being in the world” that affects both our relationship with other human beings and the greater Earth community, as well as “our understanding of relations of power in interlocking structures of class, race and gender; our body awarenesses, our visions of alternative approaches to living; and our sense of possibilities for social justice and peace and personal joy” (p. 1). O’Sullivan proposes a threefold process of transformative learning based on the steps of survive, critique, and create. Like Macy and Brown, O’Sullivan’s step of survive emphasizes the need to overcome despair and denial. Critique, like “seeing with new eyes,” focuses on shifting to a new worldview – but also on critiquing structures of power. The create step includes seeking out a functional cosmology and reframing the role of the human (O’Sullivan, 2002).

In The Tao of Liberation, Leonardo Boff and I (2009) also propose a process for cultivating wisdom – based in part on Matthew Fox’s four paths of creation spirituality (1983) –
that we understand as an “ecology of transformation.” These four paths are not understood as a linear progression, but rather as interrelated processes that constitute a kind of “ecology” of deep transformative learning. While rational, critical thought plays a role, each path is integral – involving intuitive, emotional, and somatic learning as well as more analytic-discursive processes.

The first path is that of invocation, of opening to the wisdom (or Tao) manifest in the cosmos, remembering our communion with other beings and the universe, and finding inspirational energy through beauty and awe. Cultivating mindfulness and gratitude are the key goals of this process: We begin by attending to that which we love and then extend our awareness into other aspects of our lives. At another level, art, myth, and story can be employed to cultivate our awareness of the emerging story of the universe and foster an apprehension of the interconnection of all beings. These processes serve to broaden our sense of self, re-root ourselves in both the mythic and the phenomenal world, foster participatory consciousness, and open ourselves to the guidance of the powers of the cosmos.

The second path is that of letting go, of embracing the void and clearing away the cobwebs of delusion that ensnare and disempower us. Macy’s techniques for honoring our pain for the world – moving from denial and despair, through pain, to connection and empowerment – comprise one aspect of this path. As well, meditation – be it a sitting practice, chanting, or forms of body movement – can facilitate the process of emptying ourselves of preconceptions and predispositions, allowing a radical openness to new perspectives.

The third path, that of creative empowerment, focuses on reconnecting with the intrinsic power that enables us to see clearly and act decisively in the right way, at the right place, and at the right time, combining both intuition and compassion. Artistic processes may be used to
liberate our imaginations. Processes may also be employed to become more conscious of “acausal” connections and synchronicities – for example contemplating dreams or using divination practices like the I Ching, either individually or collectively – to cultivate intuitive discernment and become more aware of the dynamics of non-linear, complex causality in our work for integral transformation.

The fourth path is that of incarnating the vision, where we move from vision to embodiment and action aimed at restoring balance, re-establishing right relationship, and healing the world. Creative visualization and body-based practices can play a role in this path, as can work around vocation and right livelihood. The key to this path is the idea of combining traditional praxis-oriented processes with more intuitive-spiritual approaches in ways that combine imagination, creativity, intuitive insights, analysis, and planning.

The phase of embodiment may take the form of what Physicist David Peat calls “gentle action.” Instead of isolating individual problems, analyzing a specific situation, and then proposing a solution, gentle action attempts to operate throughout a system in a gentle, nonlocal fashion that taps into holistic forms of cognition. Using sensitive observation and intuition, “it arises out of the whole nature and structure of a particular issue” and considers questions of perspective, values and ethics. “Like the ripples around the point, it moves inward to converge on a particular issue. Gentle action works not through force and raw energy but by modifying the very processes that generate and sustain an undesired or harmful effect” (Peat, 1991, p. 220). Like the Shambhala warrior, we are reminded to act “with pure intent” knowing that actions may have “repercussions throughout the web of life, beyond what” can measured or discerned (Macy & Brown, 1998, p. 61). While this does not mean that we are unconcerned about the effectiveness of our actions, we learn to act with a healthy detachment that enables us to
recognize that what at first may appear to be fruitless, in the longer term may actually prove to
be richly fertile; while what appears at first to be fruitful, may in fact wither over time.

**Conclusions**

Ultimately, cultivating ecological wisdom can never be reduced to a recipe or a neat theory. There are many possible approaches, processes, and practices that may be employed, some of which may be more appropriate for certain individuals and contexts than others. For example, a cross-cultural experience may cause a person to question their dominant worldview, beginning a process that leads to a more radical shift in perspective. A deep encounter with a place – perhaps an experience that inspires awe through overwhelming beauty or an encounter with ecological devastation that leaves one in shock – could serve as an impetus for transformation. For others, it may be a daily spiritual practice, the experience of working with others to address a specific issue of justice or sustainability, participation in a ritual, work in scientific research, or the creation of a work of art. Much of the transformative learning involved may happen outside of any structured event or process.

Because of this, my own research is shifting to look at the experiences of those who are actively seeking to cultivate ecological wisdom in their own lives. It is my hope that this research will enable me to elucidate a clear, phenomenological description that evokes the experience of an ecological worldview – or even of ecological consciousness. At the same time, I hope this inquiry will lead to a clearer understanding of the experiences and practices that frequently seem to effectively facilitate the process of cultivating ecological wisdom. It is my hope that this work will serve to guide and inform the work of both educators and learners who seek to foster ecological wisdom and inspire creative action for right relationship and sustainability.
While cultivating ecological wisdom may at times seem to be an immense challenge, particularly when viewed from the perspective of attempting to transform our collective worldview, hope lies in the fact that this wisdom is never far from any person. It does not need to be conjured out of nothing, nor sought on a distant planet; rather, the phenomenal world that surrounds us constantly evokes it and it may be educed by drawing on the ecological unconscious within us. For this reason, the transformative power of this wisdom is close at hand. Indeed, as Thomas Berry writes, “We are not lacking in the dynamic forces needed to create the future. We live immersed in a sea of energy beyond all comprehension. But this energy, in an ultimate sense, is ours not by domination but by invocation” (T. Berry, 1999, p. 175).

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