

Wisdom Traditions, Science and Care for the Earth: Pathways to Responsible Action

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Introduction

This is a special issue of the journal *Ecopsychology*. Its purpose is to help awaken, re-awaken, and reinforce the recognition of many people throughout the world about the relevance and power of wisdom traditions, including those of Indigenous peoples. Those traditions are congruent with the best of current science and can help guide humans throughout the world to care for and with the Earth in healing ways. This combination of Indigenous and other ancient ways of knowing with insights from the sciences offers an urgently needed way of seeing, being, and doing that forms pathways to responsible action to help heal us—all individuals, communities, living systems, and the Earth that supports all of life.

The Context

Life conditions and systems on Earth are changing more rapidly than ever before in recorded history. Our planet is experiencing mass extinctions that are having cascading consequences for wildlife, ecosystems, and human civilization. Species and habitats are being transformed. They are disappearing at a rate never before seen as the result of increasing pressure from resource consumption, overpopulation, over-exploitation, habitat loss, spread of invasive species, pollution, and climate change (Charles et al., 2018). Even the number of the most common bird species is reducing dramatically, with a reported 29% decrease in the past 50 years in North America

(Rosenberg et al., 2019). The losses are accumulating at astonishing rates. As just a few recent examples, wildfires in Australia, the Amazon, Korea, and California are resulting in the loss of billions of animals, severe habitat loss, and interconnected impacts on the resilience of the planet's living systems to support continuing life as humans today know it. We humans need to act rapidly, and with urgency, to reverse our present course (Charles et al., 2018).

Ancient, Traditional, and Indigenous Wisdom

In the face of these losses, the rapid transformation of the Earth, and the deep ecological crisis that has begun to unfold as the result of global climate change, people throughout the world are exploring alternative ethical foundations, cosmologies, paradigms, and philosophies in search of models which may sustain Nature rather than destroy it. Many of these thinkers have found that Indigenous epistemologies offer some of the most profound insights for cultivating the kind of sustainable relationship to place and spiritually integrated perception of nature needed to address what has now become a global crisis of ecological relationship. Indigeneity means being of and within a place. Evidence is growing within non-Indigenous communities of the scientific validity of these ancient as well as contemporary practices, and their adaptive value today and for the future.

The Power of Place

Indigenous peoples' inherent identification with their place presents some of the most elegant alternative paradigms for practicing the "art" of relationship to the natural world. Indigenous peoples have consistently attempted to maintain a harmonious relationship with their lands in the face of tremendous pressures to assimilate (Cajete, 1994). While individual tribal efforts are not always successful in practice, the Indigenous worldview is resilient, informed, effective, and enduring.

Traditionally, Indigenous peoples have expressed in multiple ways that their land and the maintenance of its ecological integrity are key to their physical and cultural survival. The importance they traditionally place on connecting and being in resonance with their place is not a romantic notion which is out of step with the times. It is rather the quintessential ecological mandate of our time.

Traditional and Indigenous wisdom is based on natural law, the workings of the land and relationships. In the South Pacific, for example, New Zealand's Maori people have traditionally held a deep connection to the environment, focused on their tribal lands and waters in particular. The Maori worldview positions Maori as both part of the natural system and guardians for that system (Cowie, Greaves, Milfont, Houkamau, & Sibley, 2016; Panelli & Tipa, 2007). In Australia, Aboriginal culture was founded on the belief that people and nature are created as one, and humans do not have dominion over the natural world. Tribes had their own wisdom to connect them to the land or "country" (Gammage, 2011; Hall & Hendriks, 2012). For Aboriginal peoples, the concept of "country" embodies resilience. It is the holistic engagement of a person with a specific physical location that is both symbolic and real.

In North and South America, Indigenous peoples have many ways of remembering and practicing Earth-based wisdom. For example, for the Makunas, Eastern Tukanoan groups from the Northwest Amazon, humans and nonhuman beings share many of the same places. There is no separation between beings. There is no separation between the visible and invisible or between culture and nature, making evident the complete interdependence of all living beings (Cayón, 2008).

Other traditions, similarly spanning millennia, also offer the perspective of humanity's oneness with all that is. Among those are contemplative and meditative practices, including those from Buddhist and Taoist traditions.

Native Science and the Metaphoric Mind

That sense of oneness, or harmonizing, involves the integration of mind, body, and spirit through a dynamic and complex set of activities. For Indigenous peoples, living in harmonious and sustainable relationship with the land is a sacred responsibility. It is a responsibility tempered with the realization that neglect of this responsibility will bring dire results and retribution from the Earth. The perpetuation of this sacred and survival-oriented responsibility from one generation to the next is accomplished through myth, ritual, art, and traditional education. For example, Native science as a knowledge system and practice emerges from and is itself an honoring of the psychology of place. There is no word for science in most

Indigenous languages, yet the essence of Native science is predicated on seeking and supporting life. Native science is a metaphor for perceiving, thinking, acting, and coming to know the meaning and practice of supporting life. It emerges from a lived and storied participation with the landscape that includes sensation, perception, imagination, logic, reason, emotion, symbols, spirit, and soul (Cajete, 2000).

In Native science, the metaphoric mind is the facilitator of the creative process; it invents, integrates, and applies the deep levels of human perception and intuition to the task of living. Connected to the creative center of nature, the metaphoric mind has none of the limiting conditioning of the cultural order. Its processing is natural and instinctive. It is inclusive and expansive in its processing of experience and knowledge. It invented the rational mind, and the rational mind in turn invented language, the written word, abstraction, and eventually the disposition to control nature rather than to be of nature. Unfortunately, this propensity of the rational mind also leads to the development of anthropocentric philosophy and of a science that would legitimize the oppression of nature and, consequently, the metaphoric mind (Cajete, 2000).

Because its processes are tied to creativity, perception, image, physical senses, and intuition, the metaphoric mind reveals itself through abstract symbols, visual/spatial reasoning, sound, kinesthetic expression, and various forms of ecological and integrative thinking (Samples, 1976/1993). These metaphoric modes of expression are also the foundations for various components of Native science, as well as art, music, and dance. The metaphoric mind underpins the numerous ecological foundations of Native knowledge and has been specifically applied in creating the stories that form the foundation of the complex and elaborate forms of Native oral traditions. Realizing that the greatest source of metaphor comes from nature, these stories are filled with analogies, characters, and representations drawn from nature, metaphors that more often than not refer back to the processes of nature from which they are drawn, or to human nature, which they attempt to reflect (Cajete, 2000).

Because Native science is thoroughly wrapped in a blanket of metaphor, expressed in story, art, community, dance, song, ritual, music, astronomical knowledge, and technologies such as hunting, fishing, farming, or healing, rationalistic scientists have difficulty understanding its essence of creative participation with nature (Cajete, 1994).

Ensoulment

Indigenous peoples express a relationship to the natural world that can be called "ensoulment." The ensoulment of nature is one of the

most ancient foundations of human psychology. For Indigenous peoples, such ensoulment represents the deepest level of psychological involvement with their land and in a sense also reflects a kind of map of their soul. The psychology and spiritual quality of Indigenous behavior with its reflections in symbolism is thoroughly “in-formed” by the depth and power of their participation and their perception of the Earth as a living soul. It is from this orientation that Indigenous people have historically believed that they have “responsibilities” to the land and all living things similar to those which they have to each other. In the Indigenous mind, spirit and matter are not separate; they are one and the same (Cajete, 1994).

Indigenous peoples historically projected the archetypes which they perceived in themselves into the entities, phenomena, and places that were a part of the natural environment which they encountered. They traditionally understood the human psyche and the roots of human meaning as grounded in the same order which they perceived in nature. They experienced nature as a part of themselves and they as a part of it. They understood themselves literally as born of the Earth of their place. That children are bestowed to a mother and her community through direct participation of “earth spirits” and that children come from springs, lakes, mountains, or caves embedded in the Earth where they existed as spirits before birth was a widespread perception. This is the ultimate definition of indigeneity, the identification of being “Indigenous” to a place, and forms the basis for a fully internalized bonding with that place. It is a perception that is found in one variation or another among the traditions of Indigenous people throughout the world, including the archaic rural folk traditions of Europe and other land-based traditions (Cajete, 1994).

The archetypes of being born from the Earth of a place and the participation of “earth spirits” in human conception is universal among Indigenous people. Indeed, this perception is reflected throughout the myth, ritual, art, and spiritual traditions of Indigenous people because in it is a biological reality that our whole human development is predicated on our interaction with the soil, the air, the climate, the plants, and the animals of the “places” in which we live. It is this perception and projection of inner archetypes into a place that forms the spiritually based ecological mindset focused upon establishing and maintaining a correct and sustainable relationship with place. This orientation is, in turn, reinforced by a kind of physical “mimicry” and a reflection of a kind of “geopsyché” that often takes place when a group of people live in a particular place for a long period of time. There is an interaction between the inner and outer realities of people that comes into play as they live in a place for an extended period of time. Our physical makeup and the nature of our psyches are formed to some extent by the distinct

climate, soil, geography, and living things of a place. Over a few generations of this sort of human adaptation to place, certain physical and psychological traits begin to self-select. For example, the development of mountain people as distinct from desert people as distinct from plains people begins to unfold (Cajete, 1994).

Even so, people make a place as much as a place makes them. In North America, Indigenous people did indeed interact with the places in which they lived for such a long time that “their landscape became a reflection of their very soul.” So, phrases such as, “Land of the Hopi” or “Land of the Sioux” or “Land of the Iroquois” and so on have a literal dimension of meaning because there was a co-creative relationship between the people and their lands. We know that Indigenous groups literally managed their territories in what today can only be termed ecologically viable ways. Through long-term experience with the ecology of their lands and the practical knowledge that such experience brings, they interceded in the creation of habitat and the perpetuation of plant and animal life toward optimum levels of biodiversity and biological vitality.

Reconnecting with Nature

The relationship between Indigenous peoples and their environment became so deep that separation from their home territory by forced relocation in the last century in North America constituted, literally, a loss of part of the soul of that whole generation. Native people were “joined” with their land with such intensity that many of those who were forced to live on reservations suffered a form of “soul death.” The major consequence was the loss of a sense of home and the expression of profound “homesickness” with all its accompanying psychological and physical maladies. As one elder put it, “they withered like mountain flowers pulled from their mother soil.”

Traditionally, the connection of Indigenous people to their land was a symbol of their connection to the spirit of life itself. In parts of North America, the loss of such a foundational symbol for Indigenous tribes led to a tremendous loss of meaning and identity which only with the most recent generations has begun to be revitalized. Native loss of their homelands took such a toll because inner kinship with the world is an ancient and natural extension of the human psyche. The disconnection of that kinship can lead to a deep split in the inner and outer consciousness of the individual and the group. It also brings with it a whole set of social and psychological problems which can ultimately only be healed through re-establishing the meaningful ties to the land that have been lost. Reconnecting with nature and its inherent meaning is an essential healing and transformational process not only for Indigenous people

but for all people, especially in these times of dramatic disconnection from the living Earth and all its life.

A Sacred Covenant Revisited

The Indigenous sense of place, and the importance of being in harmony, is embodied in cultural traditions and educational practices. The collective experience with the land, integrated by myth and ritual, expressed through social structures and arts, and combined with a practiced system of environmental ethics and spiritual ecology, gives rise to a true connection with our places and a full expression of ecological consciousness. Indigenous and other traditional peoples have an important legacy of environmental education which we believe must be revitalized for current generations and for the generations that are yet to come. Those who may be called wisdom keepers have been entrusted with an important package of memory, feeling, and relationship to the land that forms a kind of “sacred covenant.” A sacred covenant with the land bids each of us to strive to educate ourselves about traditional forms of environmentally based education. Our shared covenant bids each of us and our communities to reclaim our heritage of living in harmonious and sustainable relationship with the land and, thereby, fulfill a sacred trust to the land that is an ancient part of this covenant.

Today, because of immersion in modern education and society, fewer and fewer people have the opportunity to engage the land, its plants and animals, in the way that our ancestors once did. Yet experience with the land was the cornerstone of traditional education. It truly was both the medium and the message of education. Environmental education from the perspective of a variety of Indigenous peoples must once again become one of the collective priorities of modern education. Indigenous peoples must take a leading role in environmental education, as Western and industrialized society begins to finally realize that it must forge a new ecologically based cosmology, complete with new myths and new expressions and applications of science and technology. Western society must once again become Nature and Life-Centered if it is to make the kind of life-serving, ecologically sustainable transformations required in the next decades. Indigenous peoples have historically expressed the kind of ecologically sustainable models which could form the basis for evolving the kind of educational models needed.

We believe that it is time for *all* people to re-assert our indigeneity. We believe we must re-assert our sacred covenant with the land. The land is an extension of our collective tribal minds. It is place that holds our collective memory. It is place with its unique natural spirit that provides us with meaning and defines us as distinct peoples of place. It is place that supports all of life, spirit, reverence, and purpose.

The Contents

Within this special issue, you will find peer-reviewed research studies, inspirational pieces, and narratives. You will find specific examples of ways this blend of wisdom traditions and science is relevant today, and going forward, in this time of urgent need to care for the Earth, and all its life, with respect, humility, and reciprocity.

In the first article, Jonathan Long and colleagues offer a compelling report of effective integration of tribal traditional ecological knowledge (TEK) and contemporary scientific management practices of the U.S. Forest Service, using examples from the western United States. The authors state, “The agency’s current land management planning rule requires decision-makers to request information about tribal ecological knowledge and land ethics as part of participation and consultation with tribes.” This traditional knowledge is informing and contributing to improvements in on-the-ground ecological restoration and management practices. The authors say, “The concept that the natural world is imbued with life and our home, rather than merely a source of services, reinforces the idea that restoration is a way toward proper living rather than simply another tool to serve humans.” And in their conclusion, they state,

Traditional perspectives regard the natural world beyond plants and animals as rich with life force that requires moral considerations. A traditional perspective can help recognize dynamics that are often hidden to less experienced observers, such as how the architecture of a tree reveals a history of human engagement with the land. These histories and the capacity to perceive them are in danger as both social and landscape memories are washed away, bulldozed, burned up, or buried. Restoration informed by traditional perspectives can reveal these patterns and help present-day tribal and non-tribal communities understand the need and opportunities for holistic restoration in the face of novel threats.

Wise words, we think, at this time of “novel threats” and extraordinary damage to much of life and the living systems on the Earth. The need for restoration of the highest order, and healing, is now.

Dr. Greg Sarris has a remarkable personal story. At age 18, he learned that he was Indigenous, a child of a white teenaged woman from a financially wealthy family and a high school classmate of hers with mixed blood, including those of coastal Indigenous in California. She died soon after giving birth to him. Growing up with White adoptive parents, he gravitated to Hispanic and Indigenous youth and elders, feeling at home with their stories and ways of

being. He was a graduate student at Stanford University, now is an endowed chair as a professor at Sonoma State University, is an acclaimed author and screenplay writer, and has successfully helped the Indigenous tribal groups in his region of California achieve tribal sovereignty and a new life in which both cultural and ecological traditions are respected. He is the chairman of the Federated Indians of Graton Rancheria in the Sonoma County area of California. Cheryl had the opportunity to talk with Greg while preparing for this special issue. One small story is excerpted from that conversation, in which he talks about a dream of an elder. He has written about her in his book, *Mabel McKay: Weaving the Dream* (Sarris, 1994/2013). Mabel McKay was right.

Dr. Patrisia Gonzales offers an important set of insights and recommendations in her article, "Water-Womb-Land Cosmologic: Protocols for Traditional Ecological Knowledge." She is an Indigenous scholar who teaches courses on Indigenous medicine at the University of Arizona, a traditional birth attendant and an herbalist. She intentionally offers what she describes as an experimental narrative and says,

I seek to evoke a sense of ceremony with the natural elements discussed in this article ... I raise questions regarding cultural appropriation and the consequences that emerge when Indigenous knowledge becomes generalizable knowledge. I then offer some values that can guide allies and various peoples as they seek to respectfully interact with this knowledge. I call into question knowledge that is based on profit rather than on seeking a deep relationship with the environment that allows both to continue.

The next three articles are each based on research studies. Two of the three studies were designed to enhance internalization of Indigenous values related to the environment. The third examines generational differences in environmental views within one tribal group. The first study is focused on observations and analysis of Indigenous kindergarten-aged children in Alaska learning about a traditional medicinal practice through an immersive day-long outdoors experience in nature. The resulting article, "Harvesting *Good Medicine*: Internalizing and Crystalizing Core Cultural Values in Young Children" (Lunda and Green) is rich with quotes and narrative. The next study, "Indigenous Nature Connection: A 3-Week Intervention Increased Ecological Attachment" (Kurth, Narvaez, Kohn, Bae), is focused on developing Indigenous values of ecological empathy, ecological mindfulness, and conservation behaviors in college students. While all three articles describe changes in childhood and trends of increasing disconnection from nature in the lives of chil-

dren and youth, even among some Indigenous today, the third article adds a question about whether or not there are generational differences in environmental views. It is based on a study of the "Environmental Views of the Eastern Band of Cherokee Indians" (Hines, Daniel, Bobilya). It summarizes core values, then looks at generational differences, and finally offers recommendations for ways in which environmental education, including place-based and intergenerational approaches, could enhance education of Indigenous children and youth in the Eastern Band of Cherokee.

Pueblo tribal elder and storyteller whose traditional homeland is the southwest region of what is now the United States, Larry Littlebird, offers "In Our Seasons of Living," reinforcing the Indigenous value of life in all beings. He refers to Pinon and Juniper as People. Dr. Tina Fields follows with "Trees in Early Irish Law and Lore: Respect for Other-Than-Human Life in Europe's History." Her article takes us through centuries of Brehon Law, in which trees and their habitats were revered and respected. Punishments for harming trees and their parts were documented and implemented, with parallel punishments for harming humans.

Joseph Cornell draws on a variety of wisdom traditions in his "Experience Oneness with Creation: The Pathway to Universal Consciousness." David Mulholland brings forward a powerful perspective in his "I Am One-Drop, Not-Enough, Walking Through 'Not-My-Land'."

Finally, Dr. Jonathan Coope brings our focus directly to the field of ecopsychology. In his "Indigenous Knowledge and Techno-Scientific Modernity: 'Hierarchical Integration' Reconsidered," he says,

With growing awareness of the urgent need for action on environmental problems, increasing attention is being given to how wisdom traditions and Indigenous cultures might usefully inform and engage with Western scientific knowledge. However, a significant barrier to this for many Western scholars—including environmental scholars—remains the problem of *scientism*: the assumption that Western science offers the definitive account of nature and reality. This paper seeks to re-examine one approach to tackling the problem, developed by Abraham Maslow and Theodore Roszak in the 1960s and 1970s. To address the problem of scientism, these authors developed the idea of "hierarchical integration": a project that seeks to harmoniously and psychologically integrate modern scientific knowledge with other knowledge styles. In its mature form, it suggests that while Western scientific styles of knowledge undoubtedly provide invaluable information about the natural world, modern science requires integration within a much grander conception of

knowledge and reality that also encompasses a *magical* apprehension of nature: that experienced reciprocity and felt ethical relationship with the animate Earth to which Indigenous and wisdom traditions have long borne witness.

Home to Us All: The Roots of This Special Issue of *Ecopsychology*

Current conditions on the planet, and especially the accumulating consequences of exploitative human actions, disregard for life, disrespectful treatment of one another, and extractive lifestyles, certainly underlie the reasons for the co-editors agreeing to develop this special issue of *Ecopsychology*.

A specific project of the IUCN's #NatureForAll campaign resulted in *Home to Us All: How Connecting with Nature Helps Us Care for Ourselves and the Earth* (Charles et al., 2018). Embedded in that synthesis of research was a section that drew on ancient, traditional, and Indigenous wisdom, and looked at areas of congruence with contemporary science about what contributes to humans taking action to care for the Earth. The IUCN's Commission on Education and Communication, #NatureForAll, the Children & Nature Network, and the executive editor of *Ecopsychology*, Peter Kahn Jr., all supported the idea of expanding on these ideas that were documented and expressed in *Home to Us All* to bring "Wisdom Traditions, Science and Care for the Earth" to a broad audience and beyond.

We humbly and respectfully offer this special issue. May it result in increased empathy and actions of respect and care for this living Earth and all of its inhabitants.

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