

It is important to understand ... the magnitude of the change required in shaping a viable mode of human presence on planet Earth for the future. All our professions and institutions need to be reinvented in this new context. Eventually this implies rethinking ... our role within the planetary process.

Thomas Berry, *The Great Work*, 1999



Being present to the Earth

The domain of Earth awareness, deep remembering, and heart connection

As we ponder how to deal with the existential crises we have brought upon ourselves, a radical shift in our collective ways of being may be our best and last chance. Radical, that is, in the literal sense: a return to our roots in Earth's matrix of life — a reframing of our culture around the participatory values of eco-mutuality.

A renewed awareness of the Earth

Creative expressions of Earth awareness are limitless, as can be seen in a great diversity of settings around the world involving the full spectrum of artistic forms — music, performance, dance, visual arts, ritual.

There are many ways in which communities come together to explore and celebrate their relationship with the Earth in all its modes of being. In some places seasonal festivals and ceremonies have continued down the ages, though sometimes faded to mere echoes of their original inspiration. Even so, they retain the seed of something ancient and valuable and may be capable of reinterpretation in a contemporary context.

In some communities more overtly spiritual manifestations may emerge. For others the emphasis remains on artistic expression and celebration.

Sharing experiences of connection to the Earth in places of ecological and cultural significance can deepen our sense of belonging to a larger community of life. All have a part to play in weaving the fabric of a cultural renaissance.

Earth Dialogues

The convening of Earth Dialogues are one way of deepening Earth consciousness. These can take the form of gatherings at places of cultural and ecological significance designed to encourage the sharing of different ways of knowing and being present to the Earth. Participants might include indigenous elders, land stewards working to protect or restore farmlands and habitats, holistic scientists, environmental educators, green entrepreneurs, and artists from diverse modalities.

Earth Dialogues can open a space for creative expression and performance and can incorporate both newly devised and more

traditional forms of ceremony that bring in the voices of indigenous elders, our non-human neighbours and of future generations. By encouraging a plurality of expression and inquiry, Earth Dialogues foster our identification as part of a rich and diverse community of place.

Deep remembering and heartfelt connection

We have reached the point where the survival of our species requires that we abandon the underpinning conceit of industrial growth societies — that humans stand outside of nature with first claim on environmental resource. We need to discover, or rediscover, more intimate and empathetic ways of being with the Earth.

This transformation of our core cultural values will require deep remembering, and many diverse opportunities to share, reflect on, and creatively reinterpret experiences of heartfelt connection with the natural world and its precious gifts of life.

"If we allow a sense of presence to steal up the bones and swirl through the rooms of a many-chambered heart the planet becomes far too enchanting to ignore ... and the imaginary line between us and the rest of nature simply dissolves." Diane Ackerman

Making shared meanings

The domain of story, creativity, new cultural syntheses, and co-creation

At the very core of every civilisation lies a theory of human nature and a cosmology — the foundation stories of who we are and where we came from. These stories are the ultimate source of the unifying narratives of our societies. They are explicitly or implicitly manifest in the cultural practices of society; its public ceremonies, its performing and visual arts, its literature, its music, its popular culture.

In today's globalised world these stories typically reflect the values of a colonising, commercial monoculture — unending growth, competition, heroic individualism, and limitless consumption — that has swept away so many alternative ways of being.

A story of eco-mutuality

Upending centuries of cultural orthodoxy in the industrial world will involve a shift from the crippling conceit that we are the exception, standing outside and above nature, to a story of eco-mutuality — a mutually enhancing human-Earth relationship that restores our place as a co-creative partner within the planet's community of life.

Contemporary science has unfolded for us an origin story of breath-taking magnificence. This story shows us that our human journey on planet Earth has seen the emergence of a uniquely reflexive consciousness, embedded in our many cultures, and complementing the great diversity of non-human adaptive intelligences with which it has co-evolved.

The virtual habitat of human culture has become the primary vehicle of our continuing

evolution. We are now both the subject and author of our part in a bigger evolutionary story.

Now, the Earth calls us to mobilise this consciousness to creatively refashion this medium of our own evolution by restoring values of eco-mutuality at the core of our shared human culture.

But there can be no guarantees. The fossil and genetic record tells us that species are transient and evolution's unfolding uncertain. There have been many failed experiments in life's story on Earth.

Only by a conscious act of cultural transformation can we avoid evolution's verdict on the human experiment. We will consciously rejoin the mainstream of life's co-creative unfolding on Earth, or become an evolutionary dead-end.

This is the great story for our times. And, as North American performance poet Drew Dellinger reminds us, “the future belongs to the most compelling story”.

Creative renewal

Creative expressions of Earth consciousness are limitless, as can be seen in the great diversity of its manifestations around the world involving the full spectrum of artistic forms — music, performance, dance, visual arts, ritual, digital and screen-based media.

In some cultures the emphasis is on artistic expression and celebration. In others more overtly spiritual forms are seen. All have a part to play in weaving the fabric of a renewed culture.

The border zones where cultures, ideologies, and religions clash, where communities and nations compete for advantage or survival, so often become the killing fields. But they can also be spaces of creative engagement, of

renewal, where surprising new cultural syntheses emerge and evolutionary breakthroughs occur.

Finding new forms of co-creation

Creation is not a singular event, but an on-going universal process within which each one of us has a part to play. As the ancient stories tell us, we issued from a creative universe and can continue only as participants in its inexorable creativity.

There is no blueprint to guide us in this task of co-creation. It will be a learning journey along a path we must invent as we go. By its very nature, it is a collaborative undertaking. Finding ways to more fully manifest this collective creativity in the service of the continuing viability of our species within planetary boundaries is the key challenge before us.

Learning and knowing

The domain of holistic science, complex systems, catagenesis, and adaptive social learning

When we speak of a transition driven by our species' disruption of the life support systems of the planet, we must be very clear this is not a process to which we can understand or frame effective responses to within the categories of conventional politics, economics, or scientific reductionism.

Einstein's oft cited warning about the futility of attempting to solve complex problems using the same mode of thinking that created them has become a cliché. Yet that is precisely what we are doing on virtually every front in our responses to the big systemic issues of our age.

From reductionism to holism

Since the 18th century Western science has given humanity extraordinary abilities to manipulate the natural world by delving into the fundamental building blocks of matter and energy. With this power came the conceit that there was nothing we could not ultimately know and manage to our own advantage. But the success of this mode of knowing has created an awful blind-spot in our collective way of seeing the world.

Preoccupation with the minutiae of matter and the instrumental power it gave us left our culture with a diminished respect for the complex and interdependent systems — both biophysical and social — within which we exist. Such systems exhibit qualities and behaviours as a whole that a knowledge of their constituent parts can neither predict nor explain. The seemingly miraculous emergence

of reflexive consciousness from the human brain, for example. These complex systems, with the higher order patterns to which they give rise, constitute much of the world we seek to know.

Understanding complexity

Our difficulty understanding the complexity of life on Earth became increasingly obvious as the effects of our micro level know-how, scaled up to macro interventions, started to rebound on the environment, and thus ultimately on ourselves, in alarming ways. Problems managing both the immediate and long-term consequences of unleashing the ancient energy of fossil fuels and the atom are cases in point.

Then, early in the second half of the 20th century, several new fields of scientific inquiry started to emerge — like cybernetics, systems theory, ecology, and artificial intelligence. Their focus was on emergent order and evolutionary change in whole systems.

By the final years of the century separate developments across numerous disciplines had begun to flow into the new holistic field of complexity science. Concepts such as self-organisation, adaptation, resilience, and emergence offer new ways of thinking about the dynamics of change in whole systems that transcend the simple linear causality underpinning much of our conventional social, political, and economic thinking.

Catagenesis

Science and history teach us that complex dynamic systems like ecosystems and civilisations tend to cycle from rapid growth, to increasingly rigid maturity, systemic breakdown, and then renewal. Indeed, there are circumstances in which breakdown can be seen as a condition for renewal.

All complex systems exist on multiple scales, so shorter adaptive cycles are usually nested within longer ones. Understanding the dependencies between different scales is important to understanding the dynamics of the whole system.

These concepts are informing much new thinking across diverse fields including the social sciences. Canadian political scientist Thomas Homer-Dixon (2006) has applied them to the complex dynamics of our increasingly unstable world system. He coined the term 'catagenesis' to describe "the creative renewal of our technologies, institutions, and societies in the aftermath of breakdown."

This invites us to think in new ways about what a transition from gross overdevelopment to environmentally sustainable societies might entail. It challenges us to consider how we might engage creatively with change processes that are beyond our control.

Adaptive social learning

Ultimately our ability to survive and thrive in a period of radical uncertainty and profound change will depend on our capacity for wise collective action reflecting a new consciousness of our place in the Earth system.

This in turn requires a greatly enhanced capacity for adaptive social learning — groups of people sharing their experiences in action, experimenting with different ways of dealing with common challenges, reflecting together on the meaning of their experiences, and deciding on new forms of co-operative action.

Guiding principles for new modes of knowing the world in all its glorious diversity can be found in the dynamic co-evolution of Earth's community of life, our deepening understanding of change in complex systems, and a profound respect for emergent adaptive intelligence in its manifold forms.

New ways of doing

The domain of closed-loop economics, holistic technologies, eco-social resilience, and deep democracy

Culture is a society's shared way of making sense of the world: of what is real, what is knowable, and what has value. It conditions our ways of being, seeing and doing. It determines what we consider appropriate action in and on the world. It defines the taken-for-granted limits of the possible and the acceptable.

Changing our shared culture — “the way we do things around here” — involves more than “sustainable” business models, low carbon economics, and appropriate technologies. All these are vitally important areas of innovation in this age of transition, but in themselves they are not sufficient. Our challenge is ultimately to reshape our core cultural values and how they translate into action in the world.

Breaking the growth nexus

Living in the Anthropocene requires us to find a new symbiosis between human societies and the matrix of life on the planet. To do this we must make a shift from the mindset of industrial consumer capitalism to a holistic approach to technology and economics that focuses on the complex relationship between humans and the rest of nature.

Our goal must be to devise technologies and economies that are conducive to life. Our commitment must be to the integrity and resilience of the whole and to wholeness.

Decoupling economic activity from the conveyor belt of unending growth is fundamental to a viable future. The design

criteria for truly sustainable economies must include closed-loop industrial ecologies that reuse waste, are based on renewable energy, build resilience through diversity, prioritise social rather than individual consumption, maintain a balance between scale and community, and are open to stakeholder participation.

Replacing environmentally destructive technologies with “greener” alternatives — like heavily polluting coal-fired power stations with low carbon wind farms — may deliver valuable incremental gains, but will prove incapable of achieving the longer-term goal of sustainable and healthy eco-social systems.

Nature's brilliant solutions

Many of the technologies and processes born of the scientific and industrial revolutions are a perfect manifestation of human hubris, designed to enhance our ability to dominate, manipulate and exploit the natural environment. Their logic is that of mass production: standardisation, centralisation, and economies of scale.

Thus, when so-called alternative technologies are applied on the scale required to conform to existing infrastructure and business models, they too dominate and alienate both humans and nature.

Our only way through this conundrum is to turn to nature for inspiration and instruction. As the Biomimicry Institute observes, nature provides us with an inventory of “brilliant solutions” drawn from 3.8 billion years of trial and error.

While the concept of biomimicry has inspired some important breakthroughs and encouraged a fundamentally new approach to systems design, many biomimicry designers have themselves pursued a substitutionist approach, using models from nature to deliver enhanced products and materials into the mass consumption marketplace. Biomimicry

pioneer, Janine Benyus (2008), reminds us that “a full emulation of nature engages at least three levels of mimicry: form, process and ecosystem”.

Building resilience

Resilience is the capacity of a system to absorb and utilise disturbances. A resilient ecosystem, community, economy or governance system can withstand unexpected upheavals by reorganising itself to preserve its basic structure and functions.

In times of environmental, social and economic disruption and uncertainty, the resilience of local communities and the critical bio-regional systems on which they depend will be of paramount importance — particularly the reliability of local energy, water and food sources, communications and trading systems.

Resilience is a key to eco-social sustainability. It is significantly a product of a community's deep relationship to a unique place. Sharing ecological, cultural, and historical knowledge of the local environment and valuing this as the basis for social partnerships and stakeholder alliances can build strong bonds of respect and mutual responsibility.

This is an area in which settler societies have much to learn from the responsible custodianship traditions of indigenous cultures — what the first Australians call “caring for country”. When a community shares a strong sense of responsibility for its environment, respects the limits it mandates, and develops inclusive cultural expressions of this consciousness, it will exhibit a corresponding depth of sustainability.

Inventing deep democracy

Just as important is building robust social capital and more responsive and adaptable systems of local governance. Thus local resilience is closely related to social innovation

and adaptive social learning. We need a better understanding of the conditions for such resilience at every scale of human activity from local to global.

Transition times require innovation in the way we govern ourselves at all levels. The outmoded institutions of industrial consumer society and their moribund ways of encountering the world must give way to more dynamic social forms with permeable boundaries that can readily experiment with new approaches and speedily adapt to emerging needs and opportunities.

The plasticity of the human brain is a model for the organisational forms we need to invent. As neurologist Elkhonon Goldberg (2009) has observed: “The evolution of the brain teaches us the lesson that a high degree of complexity cannot be handled by rigidly organised systems. It requires distributed responsibilities and local autonomy.”

This involves moving away from the rigidities of centralised bureaucratic power and the hollowed out political theatre of representative democracy to invent new forms of deep democracy.

There are good reasons to believe that such social innovation is most likely to flourish in local communities, small workplaces, and networks of practice. In these settings institutional inertia is weakest, resistance by vested interests less, the risks of failure manageable, and the bonds of human solidarity strongest.

Surviving the Anthropocene will require the basic redesign of core societal systems, grounded in principles of eco-mutuality.