

## Ecosophy: Nature's Guide to a Better World by Elisabet Sahtouris

Ta Prohm Temple, Angkor, Cambodia

### Storytelling

The most exciting and beneficial things I believe happened to humanity in the past century were physicists' recognition that "the universe is more like a great thought than like a great machine" and astronauts lifting far enough from Earth to see, feel and show us how very much alive our planet is. Those events led to a wonderful sea change from the older - and rather depressing - scientific story of a non-living material universe accidentally giving rise to all within it, devoid of meaning or purpose.

The new view, revealing a conscious universe and a living Earth in which we are co-creators, takes us out of fatalistic victimhood to becoming consciously active agents of our destiny! It lifts the fog of our self-image as consumers of stuff, giving us awesome rights and responsibilities to live out our full co-creative humanity.

We humans always have been and probably always will be storytellers. Whether we create our stories from the revelations of religions or the researches of science, or the inspirations of great artists and writers or the experiences of our own lives, we live by the stories we believe and tell to ourselves and others.

Story, in the modern world, lost its importance as we assumed that science could tell us the truth, while story never did. But science was long based on the assumption of a reality independent of humans - a material universe that could be studied without interfering in it in any way. When physicists discovered that all the universe was composed of energy

waves and that every instance of our human reality was a wave function collapsed from sheer probability by a conscious observer, everything changed.

It meant that our world is produced in our consciousness - that realities are not fixed scenarios in which we grope our way about, but the ever-changing creations we ourselves 'bring forth' both individually and collectively through our beliefs and actions. In other words, a universe "more like a great thought than like a great machine" is more like a storytelling universe we make up as we go than like a stable physical reality in which we grope our way about.

"Every living being is connected intimately, and from this intimacy follows the capacity of identification and as its natural consequences, practice of non-violence... Now is the time to share with all life on our maltreated Earth through the deepening identification with life forms and the greater units, the ecosystems, and Gaia, the fabulous, old planet of ours."

~Arne Naess

Much more than a simple ecology, ecosophy is a wisdom-spirituality of the earth. 'The new balance' is not so much between man and Earth, but between matter and spirit, between spatio-temporality and consciousness. Ecosophy is not simply a 'science of the earth' (ecology) and even 'wisdom on earth,' but the 'wisdom of the earth itself' that occurs when a man knows how to listen with love.

~Raimon Pannikar

As conscious observers, we tell each other our realities as stories; as conscious actors, we create our realities. It takes time for the new scientific stories of a conscious living universe and Earth to percolate through society. But the time is ripe now for evolving our stories from that meaningless purposeless decaying old universe to a conscious, living universe and planet Earth. We must become active co-creators of our own reality once we realize we have the power - and the responsibility - to change it intentionally, day by day, even minute by minute.

Philosophers of science have long made it clear that science can only give us useful hypotheses, not truths. Even the ever-more-obsolete scientific beliefs and findings told us a story, and a very powerful story at that. It told us we lived in a one-way universe beginning with a Big Bang and running down ever since like a battery depleted in the process of powering all the random collisions that gave us galaxies and our world. Some of those collisions, we were told, brought about certain molecules that sprung rather magically to life, but life - so the (largely Darwinian) story goes - became a struggle for survival in fierce competition before the running-down tide called 'entropy' eventually

sweeps all life away.

It was a tragically misleading story. We abandoned community to individualism and turned our human civilization into a competitive 'Get what you can, while you can' globalized shopping mall of stuff. We have been frantically chopping down, drilling, digging and scraping up Earth's 'resources' as if - or rather, because - we expected no tomorrow. We have literally put ourselves into the Sixth Great Extinction and are the first of Earth's species to create such disaster. Only Earth's very first creatures, her most ancient bacteria, came close to our destructiveness, causing both global hunger and global pollution in turn. They, however, solved both those problems, as we would do well to note!

## Awakening and Maturation

The awakening of humanity from this depressingly hopeless creation story - surely the bleakest in the history of human cultures - comes in the nick of time, just when our rapacious activity has created the 'Perfect Storm' of crises in energy economy and ecology all at once. It is as though we are taking a collective Big Breath and releasing the burden of this story with a huge sigh. Just as everything seems hopeless, we suddenly have cause to Hope. "We are the Ones we've been waiting for!" has become the mantra empowering us not to wait for saviors but to be them.

Conscious creation through changing our stories, our beliefs, becomes the means by which we change ourselves - even our own genes - as well as the world we experience. Technology developed in the fiercely competitive mode has turned to seemingly endless Internet capacity for cooperation and collaboration. We talk to each other, empower each other, build community, become human again after an interlude of trying to turn ourselves into cogs within the wheels of industry, of mechanized society, even of a clockwork universe.

We know there is something obsolete, something hopelessly immature, about the competing and fighting and grabbing going on at the highest levels of human society. After all, those are the very things we teach our children not to do to each other. The Occupy Movement that began in North Africa, moved to the Middle East, came 'round the Mediterranean to Spain and swept across to America was a natural outburst against such destructive and immature behavior. In many places, Occupy has been a peaceful and overtly loving process. It is most surely part of the wake-up call to humanity.

Love and other values lost to consumerism are pouring back into our lives like fresh water. Community as a concept, finally having lost the taint of its association with communism, is in wonderful revival as local self-sufficiency and sustainability become very human and very practical goals in an uncertain world. Caring and sharing are replacing competing and grabbing, in no small measure due to the increasing empowerment of women, who have always held these values. Indeed, many of us see this as a growing-up, as the maturation of humanity. As an evolution biologist and futurist, I find this view entirely compatible with my own theory of a repeating evolutionary cycle of maturation.

Values such as caring and sharing made little sense in a meaningless, purposeless material universe operating by mathematically describable scientific laws, including the law of entropy. But western science is not the only source of universal law and there is a considerable revival of the Perennial Philosophy - the universal truths found common to all religions and popularized in the West by Aldous Huxley, as well as other compilations of

universal laws honored in various ancient cultures (e.g., Vedic Indian and ancient Egyptian as attributed to Hermes Trismegistos, elaborated in contemporary scientific terms by Marja de Vries). These ancient laws, based on human inquiries into cosmology, have to do with Oneness, Correspondence (as in 'As above, so below'), Vibrations (cosmic energy waves), Polarity, Rhythm, Cause and Effect and Dynamic Balance. Further, such laws are in complete harmony with contemporary findings in physics.

Getting back to story, mythologer Joseph Campbell showed us over a quarter century ago that certain themes of mythology were also common to many ancient cultures, notably the Hero's Journey. Campbell called for a new myth for all current cultures, for all Earth - a call I believe we are now answering as we co-create a new future.

The story most often cited as the quintessential Hero's Journey is that of Odysseus' wild and thrilling adventures. But the end of the story seems almost a let-down. We are relieved that Penelope's faithfulness is rewarded, but Odysseus, with his son's help, must continue to battle with his wife's erstwhile suitors to restore order where disorder had reigned in his absence. Thus, the story ends on a note of relief and exhaustion. We are left without a clue to how Ithaca might become a stable, sustainable society. Penelope does not seem very important; we only know that Ithaca's strong leader is back and all challengers dead for the time being.

In short, the Hero's Journey, like the Darwinian evolution story, is one of competitive youthful adventure and ends with no guide for building a mature society that thrives in peaceful prosperity. We must now write the second phase of the Hero's Journey story.

There is a lovely story attributed to Mark Twain, though never verified, of a youth who leaves home for his own adventures and returns, finding to his surprise that his father has gained considerable wisdom in his absence. We smile. It is the son who has changed. Whatever the actual source, the story conveys a kind of folk wisdom about youth and maturity - that a youth cannot perceive the wisdom gained by experience until he becomes experienced himself. We humans now stand on the brink of maturity, still in adolescent crisis, but just mature enough to seek ancient wisdoms for guidance.

## A History of Maturation

For me, that wisdom is inherent in the nearly four billion years of Earth's evolution. Species after species, from the most ancient bacteria to us, have gone through a maturation cycle from individuation and fierce competition to mature collaboration and peaceful interdependence. The maturation tipping point in this cycle occurs when species reach the point where it is more energy efficient - thus, less costly and more truly economic - to feed and otherwise collaborate with their enemies than to kill them off.

In the case of primeval bacteria that had Earth to themselves for almost two billion years - fully half of all biological evolution - the tipping point crossing led to evolving the nucleated cell as a giant bacterial cooperative. These cells, being new on Earth, then went through their own competitive youth for a billion years until they crossed the tipping point into maturity by evolving multi-celled creatures. Humanity crossed this tipping point when tribes built the first cities collectively as centers of worship and trade that we are only now discovering in South America, Africa, Asia and Europe.

These city cooperatives too have been experiencing their own youth as cities became the centers for competitive empire-building over thousands of years up to national and now corporate empires. We have at last reached a new tipping point where enmities are more

expensive in all respects than friendly collaboration, where planetary limits of exploiting nature have been reached. It is high time for us to cross this tipping point into our global communal maturity of ecosophy.

## Exploring Ecosophy

'Economy' once meant the careful, efficient management of households and larger human communities to provide for people as well as possible with the least expenditure, but industrial competition led to excesses that resulted in a complete perversion of the word. Most economists adopted the Darwinian story of fierce competition in scarcity that Darwin admittedly got from his friend Thomas Malthus. As Darwin described his own theory in *The Origin of Species*: "This is the doctrine of Malthus applied with manifold force to the whole animal and vegetable kingdoms."

Malthus was the first professor of history and political economy at the East India Company's Haileybury College in England. The East India Company was the first true multinational corporation in the world, with British, French, Dutch, Portuguese, Swedish and Danish national charters. Malthus' mission was to assay the world's resources, which led him to the famous conclusion that human populations always outstrip their food supplies and are thus necessarily competitive in the struggle for survival - an observation that justified the exploitation of other countries' resources in such inevitable competition for 'survival of the fittest.' Thus, we really should talk about economists adopting the Darwinian/Malthusian hypothesis of fierce competition in scarcity and of human nature as inherently competitive.

To explain my intention for 'ecosophy,' let me go back a few decades to tell a personal story. During the first Clinton administration in the early '90s, I lived in Washington DC and attended the meetings of the President's Commission on Sustainability with great interest and hope. At the end of one lengthy debate on whether the commission needed to include economics, when its mandate was only concern with environmental issues, I was fortunate to be given three minutes to address the commission.

As the debate had been heavily weighted against including economics and I had so very little time, I pointed out the etymology of the two words, economy and ecology. Both words come from the ancient Greek word for household: *oikos* (pronounced ee' kos, at least in modern Greek). The word 'economy' (*oikos* + *nomos* = *oikonomia*) means the rule or governance of the household. The word 'ecology' (*oikos* + *logos* = *oikologia*) means the creative organization of the household.

I asked, "How can we talk about only one of the most important aspects of running our human household without the other? The problem is not whether to integrate economy with ecology, but that we have separated them." I added my hope that they invite a child and a Native American grandmother to their future deliberations - the child to remind them for whom they were working; the grandmother to remind them of the need for wisdom, as well as consideration of future generations, preferably seven of them. That completed my three minutes.

It is in concert with these root meanings of ecology and economy that I give the word 'ecosophy' (*oikos* + *sophia* = *oikosophia*) the meaning it would have had in ancient Greece, had it come into use there:

Ecosophy: wisely run household of human affairs  
or, even more simply:

This is somewhat different from the meaning of ecosophy as introduced by Arne Naess, father of Deep Ecology, who used it as a contraction for 'ecological philosophy' and stressed its connection with respect for Nature and the inherent worth of beings other than human.

French psychotherapist and philosopher Felix Guattari is also credited with coining the word 'ecosophy.' Much influenced by Gregory Bateson (author of *Steps to an Ecology of Mind*), Guattari's ecosophical model follows Bateson's model of nature as a cybernetic system of interconnected feedback loops and nonlinear causality.

The aspect of Guattari's model I agree with is that it includes three different levels of ecosophy that must be integrated - the human psyche, culture and nature - which clearly reflects the ancient Greek conception of Nature described in the section to follow on The Concept of Cosmos, where I will elaborate on this matter of levels.

The aspect of his model I cannot accept is that each of these levels is cybernetic - in his own words, an 'abstract machine.' Cybernetics is an advanced form of mechanism, but it is still mechanism, which I consider a poor metaphor for any living system - a metaphor missing the system's very essence. Guattari argues that cybernetic machinery, which introduced the capacity to collect all manner of feedback to increase control, has indeed, with the advent of the Internet, made elite control more insidious and effective than ever.

He is right that elites have learned to control society by deliberately working to construct society itself as machinery, and teach people that it is machinery, because machinery can be controlled. That does not mean that psyche, society and nature are machinery!

### Mechanism and Organism

The confusion of mechanism and organism is extremely widespread in today's world, even among scientists, especially those in Artificial Intelligence (AI). This accounts for such beliefs as that computers and/or robots will eventually come to life, that living cells can be assembled from molecular components, etc. Fritjof Capra has done an excellent job of debunking these notions in his book, *The Web of Life*.

I believe the same mechanistic reasoning, conscious or not, was behind the founding fathers of science modeling the universe as a clockworks and Descartes believing that even animals were mechanisms devoid of feeling. As inventors of machinery themselves, these founders of science completely understood and controlled it; therefore, a mechanical universe would also be understandable and its forces subject to control at least locally on Earth. No wonder they projected their engineering abilities onto God as 'Grand Engineer.' Unfortunately, there were no 'founding mothers of science' to temper their hubris and work for a better understanding of life.

So, while I honor and incorporate Naess' deep ecology and Pannikar's emphasis on spirit in my version of ecosophy, as well as honoring Guattari for seeing psyche, culture and nature as levels of ecosophy, it is not possible from my perspective to promote an ecosophy in terms of cybernetic mechanics.

Mechanism and organism are created and function by completely different kinds of

logic. So while I honor Naess and Pannikar as ecosophy pioneers with a deep understanding of and manifested respect for all nature as alive and Naess', Pannikar's and Guattari's respective pleas for a human society fully integrated into the rest of nature, ecosophy for my purposes is very simply, as I said above, what I believe it would have been in ancient Greece given the meanings of the words ecology and economy.

Ecosophy would have been oikosophia, the 'wise household' - the human household in which economy (including finance) and ecology are not separated because they are understood as aspects of a single living system, or living economy, that is both organized and governed wisely. Thus, in an ecosophy, ecology cannot be made subservient to economics by treating nature simply as resources for human use.

## Ecosophy in Context

In my 2013 presentation to global corporate leaders at the Xynteo Foundation's annual Performance Theatre event held in Istanbul, I thanked these high-ranking corporate executives and board members for having globalized the economy through competition and creative initiative, as that was a necessary evolutionary step for humanity, inviting them to lead the way now to a sustainable future based on peaceful cooperation. I then apologized for my field of science, for providing economists and business leaders only the Darwinian story that has guided them throughout this expansive industrial and globalizing phase, while giving no guidance for the necessary next phase that must now be created with extreme speed.

As I had only five minutes to speak, I followed this with my elevator pitch on how this mature cooperative phase in Nature comes about and why it is sustainable, as well as repeatable for developing mature living economies. (This and the Washington DC talk described above were the shortest I have ever given, and thus the most challenging!)

In separating economy and ecology, both are failing us now. Economy because it cannot get beyond its youthful competition now in runaway mode; ecology - unfortunately made subservient to economy - because ecosystems are taken to be no more than resources for human use. This misunderstanding is what has brought the current 'Perfect Storm' of crises to our world, and we must understand now that it should be the other way around - that our human economy must be fitted harmoniously into nature's ecology.

We are in desperate need of this wisdom as the governing principle of our human household. We must review, re-conceive and reinvent our human way of life beyond the separations and misconceptions preventing us from creating a wise way of life. Thomas Berry, walking in the footsteps of Teilhard de Chardin, one of the authors of the word 'ecology,' said cogently: "We cannot tell the human story without telling the Earth's story."

Berry, like Naess, well understood that we humans are, for better or worse, solidly embedded in and dependent on Earth as one of its myriad species of living creatures, however much our unique brand of consciousness permits us to pretend otherwise - that we are somehow apart from and superior in intelligence to our Earth, that our technologies are superior to her living designs.

John Cairns, Jr. asked: Since the human economy is totally dependent upon the biosphere and humans are dependent on the biospheric life support system, why are [we] tolerant of the type of economic growth that damages the biosphere? He then suggested that Humankind should only engage in activities that nurture the biosphere.

Such overarching holistic frameworks are needed to develop a coherent ecosophic strategy for living economies, which can fruitfully be based on Nature's lessons for growing sustainable abundance through cooperative creativity without further physical growth. Nature has role-modeled the way and reveals it to us if only we look. If we follow her way, I believe we will find it to be the way to a genuine leap in humanity's maturation from economy to ecosophy - even a leap in Earth's evolution by way of her humans as we truly become cooperative, wise Homo sapiens sapiens!â€œ

Photography by robert gendler. Cosmos is the organizational pattern of the universe as our greatest context and cosmos is also the organizational pattern inherent in a human society, as well as its collective of people per se.

## Cosmos, Philosophy and Science

In modern Greece, as in ancient times, the word cosmos is used for nature's grand universe as well as for a smaller 'universe' of people - a populace or 'the public' (in Greek, a polis, from which we get our word 'politics'). Cosmos is the organizational pattern of the universe as our greatest context and cosmos is also the organizational pattern inherent in a human society, as well as its collective of people per se.

In ancient Greece, this relatedness of nature and society also held for the human mind or psyche that is preoccupied with them, so all three - universal nature, human society and individual psyche/mind - were seen as embedded levels of our complete world, and all three were based on the same organizational principles and laws of operation or conduct.

In this truly cosmic model, the Greeks believed that if we knew how the greater cosmos was organized, we would know how to organize our human cosmos. The greater cosmos came out of chaos, which was not seen as the disorder for which we use the word chaos, but as the unpatterned no-thing-ness of the universal source, the infinite potential (chaos, more as in today's chaos theory) within which all arises. Thus, the matter of how cosmos-as-order arose and functions is of supreme importance for human life.

To create a harmonious human cosmos within nature's greater cosmos, the Greeks believed that the human mind and emotions would have to be trained to function by the principles of harmonious cosmic organization. Epic poems, ancient Greek drama, and eventually logic were all teaching tools. A contemporary BBC television series on the ancient Greeks begins with the intentional relationship between Greek drama and democracy. Dramas about terrible tragedies wove together the levels of cosmos in order to teach people democracy - what most difficult or horrific situations could befall people, what decisions had to be made, what consequences must be dealt with when bad decisions were made, how cosmic influences moved between levels. Comedy taught similar lessons by spoofing how people actually behaved in order to promote better behavior, as in Aristophanes' plays *Lysistrata* and *Women in Parliament*, in both of which women scheme to make peace when men fail to do so.



Another familiar ancient Greek word, philosophy (philosophia from philos sophias), meant love of wisdom and was used to designate the pursuit of wisdom by studying the natural world for guidance in human affairs. The Greeks assumed that the study of nature would reveal patterns of relationships applicable to human society - patterns that would help people organize and conduct their own lives, the lives of their families and their society wisely. Thus, philosophy included all the studies later given the designation of natural science, the term 'science' coming into use only in the Middle Ages.

When I discovered this ancient Greek goal of science, well after becoming a scientist, it resonated deeply within me as the very mission that had driven me to the study and practice of science. I believed that scientific understanding of nature, including our own human nature, would help us live on Earth more intelligently and peacefully. Sadly, science had abandoned that mission long ago when philosophy became an independent field while the systematic study of nature became 'science,' from the Latin scientia, a word implying knowledge and the analytical separation or division of things into parts to understand them.

Wisdom went with the name - out of science and (presumably) into philosophy. Philosophy became a very broad pursuit in its own right, based on thinking instead of experimentation or other formal research. Its foundation is widely accepted as reason and logic, but it also includes values, beliefs and principles in its domain. In everyday use, it is the way we think about and reflect on life and how we steer our lives in terms of our values. In that sense, we all are - or should all be - philosophers.

The ancient Greeks were like many indigenous cultures have been, and like some still are, in their recognition of levels - individual, family/household, society, cosmos - as repeating the same patterns and principles as embedded living systems at different scales. As the perennial philosophy mentioned earlier has it, 'As above, so below' - now even becoming part of western science via the fractals and holograms increasingly used by physicists and biologists in describing nature.

Ecosophy can not only unite our separate categories of economics, ecology, finance, politics and governance, but can also unite science and spirituality, and bring human values into the entire human enterprise. In its core focus on wisdom, it must especially draw upon the feminine concerns with well-being, with caring and sharing as long promoted by, for example, Hazel Henderson and Riane Eisler.

## Wisdom

Studying physiology in a PhD program in the 1950's, J.B. Cannon's book *The Wisdom of the Body* (1932) was still a text, though a term such as 'wisdom' was soon after dropped as anthropomorphic - a human-centered view to be eschewed by 'objective' scientists. I pointed out that we were expected to take a mechanomorphic view of things- to see nature as machinery, which was actually illogical as machinery was the invention of humans (anthropos), making mechanomorphism secondary to anthropomorphism. Such commentary was not very welcome in graduate school.

Nevertheless, the wisdom and even ethics of the body - of all our bodies - are remarkable in endless ways. Some 50 to 100 trillion cells, each as complex as a large human city, get along amazingly well. All are agreed to send aid to any ailing part of the body immediately. No organ dominates - not even the brain - or expects other organs to become like itself. While blood is made from raw material cells in bone marrow 'mines' all

over the body and becomes a 'finished product' when purified and oxygenated in the lungs, the heart distributes it equally to all those trillions of cells with no hoarding or profit.

Further, the ATP (adenosine triphosphate) 'currency' in our cells is given out freely by the mitochondria as banks - thus never as debt money - but carefully regulated to prevent both inflation and deflation. One can go on and on through all the interdependent systems of the body to show it is a genuine ecosophy and a clear corroboration of the Greeks' belief that studying nature can bring wisdom to how we run our human affairs.

The wisest, most ethical human ecosophy I know is Dr. A.T. Ariyaratne's Sarvodaya movement in Sri Lanka. Founded over half a century ago on the Buddhist principles of inner peace and generosity, this equitable rural development project now involves 15,000 villages, with 5,000 of them running their own banking system and helping the others develop. Businesses, schools, orphanages, community centers and agriculture are all developed to care for everyone's need and no one's greed.

In high technology societies, many people are now promoting the observation of nature to learn clean, non-toxic production, full recycling, 'Natural Capitalism,' ethical markets and fair finance. Integrating all of these with a myriad peacekeeping and human potential efforts we can see it is possible for us to develop ecosophies.

The perfect storm of crises we now face may well prove to be the challenge that drives us into our greatest evolutionary leap. Economy must be made subservient to ecology if we want to continue our life on Earth as a healthy, embedded global human society. Economy based on principles of a conscious universe's mature ecosystems, including that of our bodies, becomes Ecosophy. We know deep in our hearts and souls that this must be done; all we need is the courage to lead the way for all!