

## **Ecopoiesis:**

**Eco-Human Theory and Practice**

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**ECOPOIESIS: A MANIFESTO FOR ECOLOGICAL CIVILIZATION**



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## Summary

'Ecopoiesis: A Manifesto for Ecological Civilization' contains the main provisions related to a new type of civilization, which should replace the industrial civilization, which has actually exhausted the potential of its development and has become the leading force for the destruction of humans and the living environment. A Manifesto for Ecological Civilization is the basis of the scenario for the development of culture and various public institutions, recognizing the potential of people to control their own destiny, to take effective steps to preserve life on earth.

**Keywords:** ecological civilization, ecopoiesis, globalization, eco-humanism, humanities, aesthetic responsibility

## PREAMBLE

We are living in an era of mass extinctions, and the main driving force for this is the globalized market, now deregulated and freed from the constraints put in place after WWII to make markets serve national communities. This globalized market is now driven by the quest of a transnational class of financiers, entrepreneurs and corporate managers, who have gained control of the institutions of nation-states, to maximize corporate profits. And it is this that has brought to a climax a global ecological crisis and paralyzed efforts to deal with it. Destabilizing climate through greenhouse gas emissions, reaching the limits of readily accessible natural resources of the planet, exemplified by peak-oil, and local environmental problems and political conflicts, are manifestations of this crisis. More fundamentally, human activity is destroying the resilience of the global ecosystem and its capacity to respond to such perturbations. The outcome could be the destruction of the current regime of the ecosphere, which has been ideal for humans over the last twelve thousand years and largely accounts for their flourishing. Any new global ecological regime is unlikely to favour humans. There will be a collapse of civilization, and possibly, the elimination of humanity. At best, billions of people are likely to die along with the extinction of most of the world's species and the destruction of their associated ecosystems.

As the theoretical biologist Mae-Wan Ho and the theoretical ecologist Robert Ulanowicz pointed out in 'Sustainable systems as organisms?' (2005): "The economic globalization promoted by the rich countries in the World Trade Organization is aimed at removing all barriers to trade, finance and procurement, which is tantamount to destroying the system's intricate space-time structure. This inevitably results in the over-exploitation of the poor, especially in third world countries, that will impoverish the whole economic system. But that is not all. As the global economic system is embedded in the global ecosystem, over-exploitation in the global economy will drive people to use natural resources at unsustainable rates, so that the global ecosystem increasingly fails to renew itself. This leads to diminished input into the economic system so that even more natural resources will have to be harvested, resulting in a vicious cycle that will ultimately destroy both the global economy and the earth's ecosystem." <sup>[1]</sup>

While there is growing awareness of the ecological crisis, responses are clearly inadequate. Among ruling elites, it is claimed that markets, based on the rights of people to pursue their own interests, will provide the appropriate feedback. However, their claims to be addressing environmental

problems are tokenistic. On almost all measures, things have got worse since the threat we face was fully recognized in the 1970s. This includes efforts to reduce greenhouse emissions, which continue to increase, making it increasingly likely that humanity will fail to prevent a runaway greenhouse effect. Rainforests and ocean ecosystems continue to be destroyed.

Environmentalists around the world are calling for more action, but they now function as little more than pressure groups. They are ineffective because they have not faced up to what is driving ecological destruction. What has to be challenged is the globalized market, imposed and sustained by what Ray McGovern, who worked for the CIA for twenty-seven years, called the Military-Industrial-Counter-Intelligence-Media-Academia-Think Tank complex (or MICIMATT).

The profound tragedy of the globalization of the market is that the obsession with economic gain in the absence of a weakened regulatory power is a global abdication of concern for egalitarian and democratic priorities such as employment, food, shelter, education, and health care for all. The unleashing of the forces of the capitalist market economy comes with the destruction of all social, cultural, economic and ecological forms that stand in the way of the accumulative logic the market. This is the real agenda of neoliberalism with its goal of creating one global market dominated by the corporatocracy, most importantly, the financial sector of this, defining the rest of the population as consumers rather than citizens of democratically organized communities.

Even those who recognize the need for challenging this globalized market have not come to terms with the failure of alternatives to it. There has been a collapse of intellectual visions of alternatives.

This manifests a crisis of human knowledge and 'humanistic exhaustion', the loss of belief in humanity and its ability and will to serve as the conscious and intentional source of agency. The humanities are dramatically losing their historical *raison d'être* of cultivating the humanity in human beings and are increasingly turning into an instrument for pacifying people. Postmodernism, with its characteristic relativism and skeptical attitude towards the human foundations of culture, has contributed to this crisis of humanism.

The crisis of the humanities and advent of posthumanism appear to be one of the consequences of the introduction of NBICS technologies (nano-, bio-, info-, cogno-, socio-technologies) together with systemic cultural causes. Posthumanism appeared at a time when more humanity in people is needed than ever before to challenge the power of the global corporatocracy, the massive concentrations of wealth and the subversion of democracy, and to avoid the catastrophe of a war of all against all as global ecological destruction destroys people's livelihoods and the conditions for civilization.

The marginalization of the humanities, including philosophy and the arts, has been associated with the almost complete triumph in status accorded to algorithmic thinking (which can be performed by computers) along with claims to specialist expertise, particularly in economics, over imagination, understanding, insight, comprehension, wisdom and good judgment and the education required to foster human and non-human life.

What we now have is 'techno-science', science as portrayed and defended by analytic philosophers and directed by markets and human resource managers. It is the form of science that Norbert Wiener <sup>[2]</sup> warned would be the outcome of 'Megabuck Science' dominated by people with well-defined missions, ultra-specialization, short-term perspectives and indifference to science for its own sake. The only science to be funded is that which treats nature and people as of significance only insofar as they can be transformed to serve the quest by companies to maximize profitability and governments to maximize GNP.

This techno-science has created a media centred world with its decentred subjects, fragmented culture, the transformation of everything possible into commodified spectacles, an increasingly fragmented public life, depoliticization of the population and paralysis of transformative politics, all associated with the hollowing out of democracy.

Such science has not produced any deeper understanding of the world but the mass production of fragmented knowledge and pseudo-knowledge, although it does provide corporations with the means to make profits, governments with the means to make weapons, and power elites generally with the means to control or confuse people. It has been complemented by the almost complete domination of public policy by the revived pre-Keynesian form of neo-classical economics, used to justify imposing markets on every facet of life. Science that implies limits to the quest for domination and profits, such as ecology, including human ecology, climate science, institutional and ecological economics, has been undermined and marginalized.

The previously established system of the globalized market economy, in its connection with corrupted notions of liberal democracy (in the form of modern neoliberalism) hostile to genuine democracy, and techno-science, has demonstrated its inability to cope with the key problems of our time - preserving the global ecosystem, building fair interstate relations, taking into account the interests of different states and global centers of power, human preservation.

The planetary community now is, in fact, on the verge of a civilizational crisis: the development potential generated by the previous bifurcation, which resulted in the emergence of all modern civilizations, and consequently, the consumer society, is exhausted! Or nearly exhausted. In any case, within the framework of the existing industrial civilization and the currently accepted system of values, the ecological crisis is insurmountable. No purely technical means will help us out of trouble. Either humanity will continue on a path of degradation, or it will have to qualitatively change the very nature of civilization, and hence the structure of universal human values and the social nature of society.

The way out of this impasse is to strengthen the international identity of eco-human forces and their coordination that supports the internal resistance to the global corporatocracy. An articulated vision or program, which can support organizational strategy and perspective on environmental and human issues is needed.

A vision of a new ecological civilization can provide a scenario for the development of culture and institutions that recognize the potential of people to govern themselves, to take effective steps for the future of life on earth, to save humanity and earthly life from destruction.

## **WHAT IS MEANT BY “CIVILIZATION”?**

“Civilization” originally was defined in opposition to barbarity and decadence as both a process and an achieved condition of social order and refinement, having behind it the spirit of Enlightenment with its emphasis on progressive human development. This was the sense in which civilization was understood by environmentalists in the Soviet Union who originated the notion of ecological culture. They meant by this a further development of humanity to take into account the ecological conditions of our existence. This was translated by the Chinese as ‘ecological civilization’. However, the notion of “civilization” also developed a further meaning.

In referring to agricultural civilization, industrial civilization, and ecological civilization as their successor it is suggested that the dramatic transformation is required to come to a new form of civilization, but at the same time this transformation should be seen as incorporating what was best in previous forms of civilization. The problem then is to work out what identifies a civilization and,

more importantly, the transformation of one civilization into another; and what is the relation between the old and the new civilizations.

For instance, industrial civilization, associated with a drive to reduce the whole of nature to an instrument serving human purposes and the forced imposition of a global market, has united the world into one civilization, although there are major differences within it reflecting the influence of preceding civilizations, and there are still relics of earlier ways of life which have not yet been entirely dissolved by industrial civilization.

“Civilizations” are characterized by deep assumptions about the nature of the world and the place of humanity within it, and thereby the ultimate ends worth striving for. These assumptions permeate all domains of culture, including practices and institutions, and are reproduced over long durations by the practices and forms of life embodying and expressing these deep assumptions. Civilized societies differ from uncivilized societies in the complexity and coherence of their cultures and ideals and thereby in the degree of complexity of their organization, and, most importantly, the degree of cultivation of its members required to uphold these ideals and to participate in these complex societies.

## **WHAT IDENTIFIES “ECOLOGICAL CIVILIZATION”**

The notion of ecological civilization has become central for some countries, such as China and Russia, in their efforts to confront and deal with environmental problems. However, ecological civilization is characterized by its proponents in different ways. Some see it as simply an adjunct to the existing system designed to deal with current ecological crises. Its more radical proponents argue for a socialist ecological civilization that should be developed globally and transform every part of society, changing the way people perceive, live and relate to each other and to nature, and the goals they aspire to.

In November 2007 “ecological civilization” was incorporated into the Central Commission Report to the Chinese Communist Party’s 17th National Congress and embraced as a central policy objective by the government, and in 2012, the Party included the goal of achieving ecological civilization in its constitution, and included this goal in its five-year plan. Then, in 2017, the 19th Congress of the Party called for an acceleration of ecological civilization construction. Ecological civilization in this country is associated with the quest for a circular economy in which outputs from one branch of economic activity can be used as inputs in other branches, while expenditure on technology to ameliorate environmental damage, reduce pollution and greenhouse gas emissions has been massively increased. Hardly surprisingly, given the centrality accorded to ecological civilization in Chinese political culture, what is meant by ecological civilization is highly contested.

Ecological civilization is often characterized in China as what comes after industrial civilization, and this can be interpreted to mean that a country has to fully industrialize before it can afford to fully deal with ecological problems. It can also be interpreted as dealing with ecological problems generated by industrialization by utilizing technological solutions, much as in Western capitalist countries. A more radical view is that the centralization of power engendered by capitalism and industrialization needs to be challenged, and that ecological civilization requires institutions to subordinate markets.

Ecological civilization can be also interpreted as a translation of the Russian notion of ecological culture, and tracing the history of ecology and the concept of culture in the Soviet Union (developed by A. Bogdanov and A. Lunacharsky) particularly in the 1920s and later, in the 1990s in post-Soviet

Russia, establishes a tradition of socialist thought in its liaison with the concept of “universal evolutionism” and “the theory of self-organization of the universe” developed by N.N. Moiseyev, with new moral imperatives that act as the main condition for the preservation of human and non-human life.

Both according to Chinese and Russian traditions of socialist thought, ecological civilization and its practice will negate and transcend modern civilization, being connected to new kinds of economic, social and cultural institutional frameworks through which people will have the liberty to live more meaningful and sustainable lives.

Various thinkers and social movements in Western nations have since embraced this quest for ecological civilization. There is no final agreement on what ecological civilization means; however, debates on this issue along with efforts to develop the notion are indications of the healthy state of efforts to promote this vision of the future.

The fruitfulness derives for the most part from the fecundity of work in ecology. At its core, ‘ecology’ is developed as root metaphor for reinterpreting humanity in all its dimensions, including its place in nature, and for revealing new possibilities capable of being realized. In its more radical formulations, ecological civilization upholds a vision of the future as a world-order of communities of communities upholding democratic federalism, freeing individuals and communities to live in a way that augments the life of the ecosystems of which they are part, including human ecosystems. It supports many of the ideas of eco-socialists and eco-Marxists; however, because socialism and Marxism mean such different things to different people, it is easier to embrace the term ‘ecological civilization’ and use it to assimilate all that is best in socialism and Marxism, include opposition to commodity fetishism and the alienation of people from their humanity (species-being), from each other, from their creative potential (labour power) and from nature generated by this fetishism.

Ecological science is a fundamental challenge not only to the core assumptions of modern science, but of industrial civilization as a whole. Acceptance of ecology will involve not merely a transformation of science, but a transformation of the relationship between science and other domains of culture, impacting on people’s lives, their institutions, and their organizations, and more fundamentally, on their image of the future and of the ultimate ideals and goals worth struggling for.

Recent developments in ecology, while advancing science and thereby building on the most advanced achievements of modernity, provide the basis for overcoming not only the limitations of this way of thinking, but the failures of industrial civilization. These advances provide the basis for making teleology intelligible, making sentience comprehensible, overcoming the dualism between body and mind, and between science and the arts and humanities, and, through situating humanity as an emergent complex of processes and structures within nature, provide the basis for comprehending the achievements and limitations of both industrial and pre-industrial civilizations. In doing so, ecology is developing the forms of thinking required to reassess the relationship between humanity and nature and between individuals and their communities, the nature of culture and civilization, and thereby to transform the way people live and organize themselves. It provides the basis for a different vision of the future, with a different kind of ethics and political philosophy than those which have dominated modernity.

It is now possible to see the importance and viability of seeing ‘ecological civilization’ as the utopian vision that is required to unite people and mobilize the whole of humanity against the forces for global ecological destruction. It upholds a vision of a global civilization oriented to augmenting the conditions for life, including augmenting the life of the multiplicity of communities of which people are part,

including nations and subordinate civilizations. This vision of ecological civilization has the potential to overcome the difficulties standing in the way of reviving the genuine utopian components of the social imaginary by unifying world politics.

This Manifesto presents the key values and axioms of ecological civilization and maps what we believe is an essential step toward a sustainable future.

## **STATEMENT OF CONVICTION**

We need a form of civilization, which is more resilient and sustainable than preceding and existing civilizations, a civilization that can co-exist with the millions of other species, is socially just and does not equate human well-being with the endless consumption of material resources. We need to create new ways of living that are more sensitive to the global web of life. We need a form of civilization, which respects and supports the intrinsic value for all life and for the significance of humans as its part, having value and meaning beyond their being instruments or objects of commodification.

Ecology is a key concept for ecological civilization. Ecology provides the foundation by which humans can redefine their relations to each other and to the rest of nature and can replace those deriving from economics. At a broader level, ecology provides the basis for working towards decolonization of the planet and humanity and establishing a multi-polar world order with communities at all levels organized to augment the conditions for each other, with the appropriate institutions to control their economies, rather than a world order dominated by one hegemonic power imposing markets to maximize the conditions for profitability of transnational corporations. The vision of ecological civilization focuses on developing the conditions for living beings, including humans, to flourish, developing their full potential to augment life, rather than maximizing profits or simply developing the forces of production.

Ecology also provides the basis for rethinking ethics and politics as ‘ecopoiesis’, that is, as ‘home making’ at multiple levels. Ultimately, this involves functioning in a way that augments the life of all broader communities, including humanity as a whole and the global ecosystem, of which each community or complex of communities is part.

The notion of ecopoiesis provides support for the idealist tradition of political philosophy according to which society should be designed to remove all obstacles to the development of people’s potentialities to contribute to the common good, and to this end, to institutionalize rights to pursue and uphold truth and justice without fear of retribution.

Ecological civilization is based on a vision all life as interdependent communities of communities. According to such thinking, the new understanding of the nature of life is seen to provide the basis for new developments in human and natural ecology, characterizing humanity as a complex of processes and structures within the global ecosystem. According to this understanding, the Earth itself is alive and has produced the conditions for life.

Ecological civilization implies redefining humanity’s place in nature, in the processes of self-development of the universe and participating in communities, both human and non-human, including the global ecosystem. From this perspective, the end of life in both ethics and politics is to augment life through augmenting the conditions for life, that is, through ‘ecopoiesis’ or ‘home-making, co-evolution and co-creation of humans and non-human world.

It is only possible to build an ecological civilization when proper technological and economic reorganizations go together with the radical changes in the humanities, in our understanding of

ourselves and our relations with the ecosphere. Rethinking civilization requires rethinking what it is to be human, establishing the notion of eco-humanity based on the revival of our natural essence which needs to be recognized and justified.

An ecological civilization requires reconsidering the traditional concepts of subjectivity in relation to the natural world and to inter-subjectivity, with reference to the interaction of the human being and nature, most importantly, the ecosphere. Humanity's care for Earth cannot be carried out only on the basis of understanding the disastrous path of the uncontrolled exploitation of natural resources, or a sober calculation of economic and environmental realities. All this must be supplemented by the growth of ecological awareness, changing the ways of thinking and attitude of humankind to the planetary life, itself and its own environmental essence.

An ecological civilization is aligned with eco-humanism – a worldview and a way of life that affirms the value of human beings in their relation to themselves, on the one hand, equality, freedom and value in relation to other people, society and nature, non-human beings, on the other hand. Eco-humanism frees the humanistic worldview from the ideas of superiority of an individual, or certain categories of human beings over other peoples and the claim to dominance over non-human beings, even life forms not yet known to us, including artificial life forms created by humans. Eco-humanism rejects human exclusivity and the superiority of some cultures over others, the claims to world domination by certain groups of people, whoever they are - races, gender categories, carriers of particular ideologies or religious worldviews, or the human species as a whole. Eco-humanism advocates a view of humans, which recognizes their ability to implement a constructive plan for the development of civilization. Such human ecology, implied in eco-humanism serves as a system for regulating fair social and political relations, can be seen as an alternative to traditional forms of the free market and liberal democracy, since it affirms the value not only of human communities, but also of the wider biotic communities of which we are a part.

Such a point of view leads to an extended or inclusive humanism, affirming the ethical position in human relationship to the living matter of the planet. It raises the question of revising human relations with the environment, affirming the principles of equal communication, partnership and co-creation.

Ecological civilization is based on the ecology of human and natural life, and needs more than political economy. It shows why it is necessary to counteract the globalization of the economy, increasing the processes of regionalization and the formation of a multipolar world order, to reject free trade and to develop local economies with local currencies insulated from broader markets, while still giving a place to some broader markets. It enables us to revision progress of humanity as movement towards a 'patchwork quilt' of co-evolving cultures, communities and economies and provides the perspective needed not only to uphold the value of communities, but to reinforce the feeling of belonging to these communities and to foster the virtues required for their defense and survival, while at the same time, revealing why it has been so difficult with the civilization of modernity to internalize the quest for justice for animals and ecosystems in the quest for social sustainability in social policy.

Ecological civilization implies a dialogic grand narrative, able to grant a place to all human and non-human communities and relations between them and inspire people to embrace a 'patchwork quilt' of co-evolving cultures and forms of life, promoting concern for justice at all levels of human and non-human community, promoting life as the ultimate value. This is closely related to the overcoming the monologic grand narrative of the world hegemon, debunking of the idol of possessive individualism portrayed misleadingly as liberal democracy.



## **CORE AXIOMS AND VALUES**

### **Life is ecosystems providing the conditions for their flourishing, exploration, and creative advance into the future**

Life can be understood as ecosystems, that is, as communities of dynamical processes in symbiotic relation, constraining themselves and able to constrain each other directly or through the mediation of signs, thereby coordinating their activities to contribute to their common good, reproducing and developing the environmental conditions for their reproduction and flourishing, and thereby maintaining themselves in existence as living communities.

Ecosystems differ from machines in that their components are not mere instruments, but have autonomy and significance of their own. They contribute creatively to and modify the whole according to their own dynamics, and they differ from random arrangements of entities in that this creativity of components is nevertheless constrained, exogenously or endogenously, to augment the conditions of life for the members of the community, thereby augmenting the life of the community.

Life is “eco-poietic,” that is, making homes (or niches), where ecosystems and their constituents can emerge, flourish, explore new possibilities and contribute to life through this home-making. All life consists of communities of communities that create, provide, and augment homes for themselves and their component communities, while augmenting the homes of each other and thereby the life of the communities, of which they are part, providing the conditions for their flourishing, exploration, and creative advance into the future.

Ecosystems can be healthy or unhealthy (or, more broadly, can have or lack integrity). “Health” is characterized by mutual augmenting of the whole community and the component communities of each other at multiple levels, facilitating their continued successful functioning, their resilience in response to new situations and stress, and for ongoing change and development to maximize developmental options.

### **All life is intrinsically valuable and has meaning and purpose. Preserving and supporting life is the highest value and priority goal of ecological civilization**

Viewed from this perspective, global warming and other environmental challenges are not simply a scientific fact but a moral and aesthetic problem that needs immediate action. Concern for economic justice and thriving local human and ‘green’ communities has ethical and aesthetic roots as well as economic and ecological roots.

If we interpret ethics through ecology, it challenges the fundamental assumption of current public policy that a thing is right when it tends to increase the profitability of transnational corporations, and is wrong when it tends otherwise, and replace it with Aldo Leopold’s dictum that: ‘A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.’<sup>[3]</sup>

As such, ethics of ecological civilization presupposes aesthetics through which we study what is admirable in and of itself. Such a view of ethics is more in accordance with the Chinese conception of philosophy as finding and walking on the right path or Dao, free of the assumption that this involves sacrificing one’s personal interests for the good of others or the collective good. Or following Aristotle, we can take the right path to be a fulfilling and fulfilled life, achieved through augmenting the life of

one's community or communities. What are required are constraints that provide people with the freedom to augment life.

## Human beings are ecological beings

Humanity can be regarded as a very complex experiment by the global ecosystem (ecosphere, Gaia). It is complex because it involves a multiplicity of new kinds of organization, cooperation, and creativity, from local communities to global civilization.

All this complexity is made possible by the unique kind of human language (semiosis) which enables humans to constitute their worlds as shared worlds in which individuals see themselves as components of the worlds of others, making them more essentially cultural beings and thereby more creative than any other animal.

Human language drives the quest to represent the world more adequately. However, while language is extremely important, there are two other dimensions of human complexity or "dialectics" of culture which are irreducible to language and the dialectic of representation. The second dialectic, the dialectic of labor, derives from the capacity of humans to identify functions and thereby identify forms and then produce forms to serve these functions, that is to identify "tools," shared instruments to augment control of the world, including weapons, machines, houses, roads, electronic media, and so on. It is by virtue of this dimension that humans are major contributors to the morphogenesis of nature, i.e. human eco-poiesis. The third dialectic, the dialectic of recognition, is the capacity of people to recognize and appreciate other human and non-human life forms as other subjects sharing with them a common world.

It is by virtue of this dialectic that humans form identities, develop a sense of justice and a sense of themselves as individuals with potential to be realized. As living systems, each of these dialectics of culture is a component of the others, yet irreducible to them. This human dialectic involves new constraints of thought and action in taking into account the freedom and significance of others based on recognition of others, the condition for establishing a proper sense of one's own self as a free agent.

According to this human ecology or *eco-human perspective*, through humans the ecosphere has become conscious of itself and its significance, and the problems confronting it, the most important of which is the current trajectory of human civilization. At the same time this recognition reveals the quest for justice, the proper understanding by the human component of the ecosphere, of the dynamics and significance of the ecosystems of which humans are part, as integral to healthy ecosystems. The advance of the dialectic of recognition whereby people constrain themselves according to their growing appreciation of the significance of "others," both people and other organisms, or more generally, ecosystems, are the constraints required to return local ecosystems and the global ecosystem to health.

According to the eco-human perspective, poietic ecology, an individual and humanity as a whole are considered as rational and self-conscious parts of nature, able to recognize their eco-identity, an earth-based sense of Self, based on human identification with the world of nature and its different components, their emotional bonds with nature and attachments to nature, together with their bonds with other people.

The traditional distinction between the human being as a subject and nature as an object is no longer capable of accounting for the world in which we live. All forms of life, living species are capable of ecological awareness and synergy and acting as co-creators of the ecosphere contributing to its well-being and resilience.

According to the eco-human perspective, eco-identity is integral to the healthy psychological growth and well-being of each individual, each human community, and humanity as a whole. Healthy development of personality takes place within a wider matrix of being, “the web of life”. The notion of eco-identity challenges most “conventional” personality theories and can be defined as the interiorized dynamic structure of our relationship with nature that embraces both the human and non-human worlds and serves as one of the significant foundations for self-perception and self-conception. This is the kind of self-understanding that is linked to one’s mutually sustaining relationships with ecosystems and planetary life as a whole and implies one’s responsibility and care for nature. Ethical and aesthetic perception of the world of nature and practical action aimed at its preservation and the cultivation of the world of nature serve as important factors in one’s own health and well-being. Eco-identity explains the reciprocity between the planet Earth and each human being.

Human beings are shaping animals possessing a *poietic* function and capable of creative acts and behavior. They exist by shaping the world around themselves. In this process, their shaping is a response to what has come before them. At the same time, they exist in the mode of possibility and can choose to shape the world and themselves in a way that is not yet actual but that is contained potentially in what is already given. As far as humans’ ability to shape the world according to their mutually sustaining relationship and co-creation with ecosystems and planetary life is concerned, it becomes an eco-poietic function.

## **Human beings are aesthetic beings**

*Poiesis* is linked to *aesthesis*. Humans are capable of “making sense” of the world. There is a “pre-formation” of meaning in our sensible experience. If they are to live in a world that makes sense, then this world must be appropriate to their senses. It follows that they have a responsibility to shape the world “aesthetically,” to reveal its beauty as a core characteristic of life. Aesthetics refers to the way people sense the world as beautiful, healthy, and resilient; *poiesis* to the way they shape it according to their senses, i.e., aesthetically. They have an *aesthetic responsibility* to the world.

Ecology as a meta-science, uniting all spheres and methods of scientific knowledge dealing with Earth as our home, can be poietic, i.e. being in the forefront of not only scientific, but artistic and aesthetic exploration of humanity’s relationship with nature.

Beauty as a core quality of life, within the framework of a poietic ecology, is seen to emerge from the awe and Love (*Eros*) with which people regard the world, and all living beings, including human and non-human forms, within it. A poietic conception of beauty as an ecological category has some of the quality traditionally ascribed to the sublime, a source of life. Beauty could thus be said to be the apprehension of “Earth” and life in the world.

## **Human beings are artistic beings resonating with ‘artistic’ propensities of ecosystems**

The arts have a special role to play in the framework of ecological civilization. As modes of showing, they can reveal the ways in which people made the world ugly or beautiful; they can confront humans with their an-aesthetic and destructive acts. At the same time, they can point towards what is possible. In their imaginative explorations, the arts show humans what *can be*, not only what *has been*. The vision of beauty provided in the arts can serve as a guideline for all human shaping acts in their relationships with both culture and nature.

To speak of poietic human ecology is to imply that nature can be considered both as a work of art and also as 'an artist.' The arts themselves are not understood here to be the imposition of form upon matter, as it is in traditional ontology. If the work of art is itself a struggle between revealing and concealing, and if "Earth" is essential to the work as its ground, then to consider nature as a work of art is not to imply mastery over life. Rather, this perspective points to a different attitude toward the world around humans, one in which they accept their responsibility for shaping the ecosphere in a way that respects its otherness, as well as their own capacity for affecting it.

To consider nature as an artist together with humans means accepting earth's propensity for creating new forms of life and new ecosystems, supporting their well-being and resilience, providing the conditions for their flourishing, exploration, and advance into the future. This also means recognizing the human capacity to co-create together with the world of nature, to co-create Earth and the ecosphere, as our home together.

## **Ecopoiesis is our imminent capacity to shape and co-create the world, our home on Earth together with the world of nature, the ecosphere, as a subject, an artist**

Ecopoiesis is a term, a concept that denotes humans' and nature's propensity for creative acts and behavior, a generative process whereby human beings together with nature shape the world and themselves, bring new forms and meanings of life from the mode of possibility into the mode of existence. It is an eco-human propensity for biological and cultural creation and a factor in co-evolution of human beings and nature, the ecosphere.

From the perspective of the eco-human approach, ecopoiesis implies an intrinsic human ability to love and appreciate life in a myriad of its forms, as well as reveal and support its beauty, health and resilience. Ecopoiesis is a quality and a mechanism of co-evolution of humans and ecosphere, a conscious and responsible co-creation of humans with ecosystems, based on their vital physical, emotional and spiritual connection with them. Through ecopoiesis, human beings, together with nature, and as part of it, create, learn, and generate not only their meanings, but also various forms and meanings of planetary life.

Ecopoiesis recognizes the need to supplement a rational, reasonable stance in a human relationship with the natural world with an emotional stance, an immediate vital, sensual, emotional, and even erotic experience of connection implying empathy, and identification with ecosystems and different forms of life. Ecopoiesis cannot be achieved without a love for the Earth and for the beings which inhabit it, including ourselves. Along with conscious awareness, this loving care must arrive with its capacity for creativity and creation.

Ecopoiesis begins when we recognize Earth, the ecosphere, not as a mere object (even if it is of supreme value), but a subject having the same status as human beings capable of 'love' in some sense, and creative acts. Building environments, or 'home-making', according to the eco-poietic stance in the word, can be understood as contributing to morphogenesis in nature, a major aspect of life and should be judged according to whether it contributes to augmenting life – biological, social and cultural.

Such morphogenesis is important not only for the health or otherwise of ecosystems but also for the life of human communities. It is in relation to the art of building, that the relationship between aesthetics and ethics is most clearly manifested. Built environments can and should be designed to augment community life, enabling people to live in a way that augments their own life the life of others, the life of the community and the life of their co-evolved species and ecological communities

## **ACTIONS: STEPS AND AVENUES TO CREATE ECOLOGICAL CIVILIZATION**

As far as ecological civilization is concerned, it is important to think about more than the “technological” aspects. Ultimately, to create a civilization that is sustainable, it will be necessary to dramatically change the way society is organized and the way people live. Creating ecological civilization focuses on solutions and learns how to put ecopoietic vision into practice. Some avenues and steps to create ecological civilization are as follows.

### **Social life and economy**

To avoid the kind of destructive exploitation that has characterized past civilizations it will be necessary to create a global civilization that empowers people to augment their ecological communities and inspires them to do so, but also to limit themselves, for instance, by limiting the number of children they have and limiting their consumption. In place of a social order which concentrates power, wealth, and income, subjugates farmers and workers, reduces people to instruments, fosters greed and promotes consumerism, it is necessary to create a social order globally and locally in which people gain a sense of identity, adventure, fulfillment, and meaning in their lives through participation in their communities, working creatively in cooperation with others and participating in the life and governance of these communities.

Most importantly, it is necessary to free people from enslavement to the laws of the market by subordinating markets to communities, reducing markets to instruments serving these communities. To overcome the seductions of consumerism it will be necessary to uphold a superior ideal of civilized life.

People need to constrain themselves by their commitment to truth and justice, their appreciation of beauty, and the need to harmonize these, and to be lured by the challenge posed by their communities’ problems to adventure on new paths into the future. The most promising path to achieve this transformation is the development of a hierarchy of communities characterized by organized decentralization, with a high level of civilization at all levels of society. Broader communities should provide the homes for more local communities, constraining the way they develop, preventing conflict and exploitation, enabling and inspiring them to develop their full potential to augment the life of their communities, while empowering these local communities to constrain the broader communities to ensure they work for the common good. The economy also should be organized in this way, protecting local economies from destructive competition.

As Ho and Ulanowicz argued: “We can deal with sustainable economic systems by embedding the global economic system in the global ecosystem... The global economic system will have an intricate structure encompassing many national economies. Ideally, the intricate structure of the global economy should look like the many nested subcycles that make up the organisms’ life cycle.” <sup>[4]</sup>

### **Decolonisation and regionalisation**

At present, the processes of decolonization and the ecological revolution are closely connected with each other. Decolonization affects not only the relations of the population of territories, many of which were previously colonies (India and other Asian states, countries of Africa and Latin America and other territories), with global hegemony that control a significant part of the material and information resources of the planet, but also the relationship of humanity to the earth. Along with globalization, regionalization is taking place, associated with the conquest by regional centers of

power, peoples and local communities of the right to responsibly build their relations with other countries and the global network of life based on a new ethical and nature-centered principles.

At the ecological, geopolitical and economic levels, the processes of decolonization and regional self-determination of the planet's territories with their characteristic ecosystems and cultures are intensifying, and a new reality of a multipolar world order is being formed. This is facilitated by the environmental movement and geopolitical transformations.

The ecology of human and natural life, more than political economy, shows why it is necessary to counteract the globalization of the economy, increasing the processes of regionalization and the formation of a multipolar world order, to reject free trade and to develop local economies with local currencies insulated from broader markets, while still giving a place to some broader markets. It enables us to revision progress as movement towards a 'patchwork quilt' of co-evolving cultures, communities and economies. It also provides the perspective needed not only to uphold the value of communities, but to reinforce the feeling of belonging to these communities and to foster the virtues required for their defense and survival, while at the same time, revealing why it has been so difficult with the civilization of modernity to internalize the quest for justice for animals and ecosystems in the quest for social sustainability in social policy.

## **Education**

An ecological civilization will have to develop and maintain a high level of education in all its members. Members, both individuals and communities, will need to embrace an ecological worldview to enable them to understand their place in the world, to appreciate the significance of life, to play their role in this complex of communities, to appreciate their unique situations and to see the significance and meaning of their own lives accordingly. Education in an ecological world-orientation is required to inspire people to face up to problems in the world and develop their full potential to augment their homes, including their own character, and thereby the communities of which they are a part.

## **Reorganizing science and putting ecology and human ecology in the center of knowledge**

### ***Ecology***

There are a number of elements being integrated in recent developments in theoretical ecology. The most important of these elements are non-linear thermodynamics, hierarchy theory and other developments in complexity theory, and biosemiotics, including eco-semiotics. Such developments involve a new way of understanding the nature of life, and justify Lovelock's Gaia hypothesis, the claim that the Earth itself is alive and has produced the conditions for life. These ideas have then provided the basis for new developments in human ecology, characterizing humanity as a complex of processes and structures within the global ecosystem and providing new insights into why civilizations collapse, and what is required to avoid such collapse.

### ***The humanities***

The values and significance of the humanities, including philosophy and the arts, are preeminent and cannot be underestimated as a constructive force to build ecological civilization and to enable resistance to techno-science, the disintegration of contemporary human knowledge, dehumanization of culture as a manifestly pathological deterioration of fundamental values, an unholy alliance of

neoliberals, who believe that consumer choice is the answer to all social questions, and purportedly radical intellectuals who promote rights without duties and ignore the quest for justice.

The humanities can situate humans as conscious, reflective social beings participating in the creative becoming of humanity and nature. We do need the humanities to cultivate people with *humanitas* willing to take responsibility for their communities, to develop their 'subjectivities,' to support their quest for understanding themselves and the world and redefining science as nothing but techno-science helping companies to maximize profitability and governments to maximize GNP.

The humanities are the set of disciplines focusing on understanding and evaluating the present, developing new ideas and forms of thinking and deciding what futures people should be striving to create, and mobilizing them to create such futures. As such, the humanities should give a central place to the philosophy of nature, which should include philosophical biology and philosophical anthropology.

While the practical outcome of the natural sciences is technology through which nature is transformed, and the practical outcome of the human sciences is the transformation of society through politics, the practical outcome of the humanities is the transformation of culture.

The crucial distinction between the humanities and the sciences is that in the humanities the subject and the object of study coincide; in the humanities, humans are studied by humans and for humans. Therefore, to study the human being also means to create humanness itself; every act of the description of the human is, by the same token, an event of one's self construction. In a wholly practical sense, the humanities create the human, as human beings are transformed by the study of literature, art, languages, history and philosophy: the humanities humanize.

As a constructive component of the eco-humanities, a new generation of eco-human technologies has to be used as a way of transforming human's attitude to the environment and themselves, and supporting sustainable lifestyles.

The eco-human approach is not only a general ideological, scientific doctrine, a paradigm, but also a field of constructive innovations, eco-human technologies that can be applied in education, medicine, and the social sphere, as well as the wider cultural context. Such technologies can serve not only the well-being, resilience, and health of human and 'green' communities, but can also change people's environmental consciousness and behavior, without which, a fundamental turn in our approach to solving the environmental crisis cannot occur.

Eco-human knowledge and technologies are currently inventions of the humanities, and comprise new human ideas, new means of their embodiment in the form of cultural practices, creative organizations and forms of cooperation.

One of the practical branches of the eco-humanities that can grow is the field of environmental education, developing environmental consciousness and self-awareness, and supporting sustainable lifestyles. Other practical branches can grow in the field of psychology (ecopsychology, environmental psychology, and psychology of environmental consciousness), penetrating from here to various empirical areas, such as counseling, psychotherapy, personal growth practice, coaching, work with families and communities, organizational psychology and work psychology, community psychology, peace psychology, developmental psychology, clinical psychology, psychiatry and neurosciences.

Constructive initiatives of the eco-humanities can be primarily applied to the problem of developing environmental consciousness. In the coming decades, these methods and technologies may become one of the key factors of the sustainable (co-evolutionary) development of humankind

and nature. Eco-human technologies can also be developed in medicine, contributing to the prevention and treatment of somatic, psychosomatic and mental pathologies, and developmental disorders.

Constructive initiatives of the eco-humanities can also promote social change as a major project that spans the humanities, social sciences, and sciences. In order to gain a richer, more complex and accurate understanding of life and how to support it, eco-human technologies need to cut across disciplines and consider issues like systems change, strategies for regeneration, and reinventing communities.

## Notes:

<sup>[1]</sup> Ho, Mae-Wan and Robert Ulanowicz (2005). Sustainable systems as organisms? *Biosystems*, 82: 39–51., p.47.

<sup>[2]</sup> Wiener, Norbert. (1993). *Invention: The care and feeding of ideas*. Cambridge: MIT Press.

<sup>[3]</sup> Leopold, Aldo. (1949). *A Sand County Almanac and sketches here and there*. London: Oxford University Press, p.224f.

<sup>[4]</sup> Ho, Mae-Wan and Robert Ulanowicz (2005). Sustainable systems as organisms? *Biosystems*, 82: 39–51., p.43.

## Reference for citations

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