

## A REFLECTION ON ANIMALS, NATURE AND THE HUMAN CONDITION:

### A ONE HEALTH FOR ONE EARTH MANIFESTO

By Dr. Michael W. Fox\*

“The only thing worse than being blind is having sight but no vision.” –Helen Keller.

#### SYNOPSIS

**We are part of Nature, our ultimate provider. If we respect and work together to protect the environment, ---the land, the waters and the air we share--- as well as all our relations, plant and animal, Nature will not become our ultimate nemesis. “In wildness is the preservation of the world.”---Henry David-Thoreau. “As long as people will shed the blood of innocent creatures there can be no peace, no liberty, no harmony between people. Slaughter and justice cannot dwell together.”— Isaac Bashevis Singer. “Until he extends the circle of his compassion to all living things, man will not himself find peace.”---Albert Schweitzer.**

**Nature, the natural world as we know it today that has been variously affected by humans in the recent and distant past, is as much our apotheosis and nemesis as our provider, teacher, healer and inspirer. This all depends upon our state of mind; how we perceive, value, relate and treat other sentient beings, plant and animal and their habitats that comprise our life-sustaining environment we share and continue to pollute and defile. American social critic Marya Mannes wrote “The earth we abuse and the living things we kill will, in the end, take their revenge; for in exploiting their presence we are diminishing our future”.**

Once all rivers ran clear, free and clean and the pure, sweet air sang through forests and grasslands: Food for the human spirit, body and soul as was all else the good Earth provided, engendering in our ancestors an abiding sense of thanksgiving, kinship, and reverence for all beings, animal and plant. That was long before the enslavement of man and beast; of genocide, ecocide, the fur trade, the timber, oil and cattle barons, moguls of mining and industry and the relentless drive of conquest, colonialism and empire building under political, economic, religious and military hegemony.

Once the springs from mountain valleys were pure but now the water is contaminated from the chemicals in the rain, air and snow the forested slopes and peaks collect and are no longer neutralized by the microorganisms and mineral filters in the valley floor because most have been destroyed and disrupted by human agricultural, mining and other activities ignorant of how Nature can help us. Our lack of respect for the basic elements of life--water, soil and air---has adverse consequences world-wide. Declining soil productivity, air and water quality affect human health and the global economy. U.S. Government’s National Oceanic and Atmospheric Authority -supported scientists announced that the Gulf of Mexico “[dead zone](#)”— an area of low to no oxygen that can kill fish and marine life — reached approximately 6,334 square miles in 2021, equivalent to more than four million acres of habitat potentially unavailable to fish and bottom species. This is due to the high load of “nutrients” including agrichemical runoff and sewage in river water from the U.S. discharging into the Gulf of Mexico which has become

America's cesspool/septic tank. (<https://www.noaa.gov/news-release/larger-than-average-gulf-of-mexico-dead-zone-measured>).

Over-fishing and depletion of marine resources and biodiversity have been too long ignored. The biomass and biogeochemical roles of fish in the ocean are ecologically important but poorly known. A data-constrained marine ecosystem model was developed by scientists to provide a first-order estimate of the historical reduction of fish biomass due to fishing and the associated change in biogeochemical cycling rates. The pre-exploitation global biomass of exploited fish (10 g to 100 kg) was  $3.3 \pm 0.5$  Gt, cycling roughly 2% of global primary production ( $9.4 \pm 1.6$  Gt year<sup>-1</sup>) and producing 10% of surface biological export. Particulate organic matter produced by exploited fish drove roughly 10% of the oxygen consumption and biological carbon storage at depth. By the 1990s, biomass and cycling rates had been reduced by nearly half, suggesting that the biogeochemical impact of fisheries has been comparable to that of anthropogenic climate change. These findings highlight the importance of developing a better mechanistic understanding of how fish alter ocean biogeochemistry. ( See Daniele Bianchi et al Estimating global biomass and biogeochemical cycling of marine fish with and without fishing. *Science Advances* 8 Oct 2021 Vol 7, Issue 41 DOI: 10.1126/sciadv.abd7554).

In my warning testimony of 1990, echoing the voiced of other scientists and organizations, along with then Vice President Al Gore, calling for immediate steps to prevent the Climate Crisis we face today, I wrote "We are committing matricide, killing the Earth, Mother of us all." ( quote from *Inhumane Society: The American way of Animal Exploitation*. St Martin's Press NY.). These voices were ignored by the U.S. and other industry and commerce driven governments striving, as the global metabolism accelerated, to maintain and expand business as usual. Similarly, the U.S. and other countries ignored the Club of Rome 1972 *Limits to Growth* report, advising that current extraction rates of natural resources by an exponentially doubling human population is non-sustainable, the Washington DC Chapter of which I was an elected member and addressed the contribution of industrial agriculture and animal factory farming to this global problem. So now we must adapt to self-created extreme weather events and pandemics and implement correctives long ignored.

#### DYSTOPIAS, DYSBIOSIS AND EXTINCTIONS

We have lost our minds and ways, breaking our spiritual connectedness to all that was once held sacred as witness the rising singular and collective violence, greed, prejudice (from racism to speciesism), hatred, delusion and psychosis in modern times. Many of the accepted norms of today, especially in our treatment of animals and Nature, would be unthinkable to any civilized society. I do not link our early gatherer-hunter ancestors with the mythical "noble savage" but many were more civilized in their relationships with Nature and other species than we are, collectively, today. Their adaptability, social cooperation, empathy, indigenous ecological knowledge and transgenerational wisdom were essential elements of survival. Yet this is not to deny that some peoples, genetically and culturally/epigenetically, were less compassionate or cruel than others.

If industrial civilization had embraced the Great Law of the Iroquois – which holds appropriate to think seven generations ahead (about 140 years into the future) and decide whether the decisions they make today would benefit their children seven generations into the future---it

would probably not be facing its own extinction today. Dystopia, dysbiosis and dysphoria go hand in hand and we are challenged to face political corruption, coercion, loss of vision (beyond “conquering” outer Space) and the documented decline in cognitive ability, critical thinking and related IQ

[\(Technology Is On The Rise, While IQ Is On The Decline – Forbes <https://www.forbes.com/sites/2020/04/29/>\)](https://www.forbes.com/sites/2020/04/29/).---and ultimately, our collective lack of reason and self-restraint.

The Earth has undergone five major extinctions in the last 500 million years. With the possible exception of the Cretaceous extinction event, these were primarily caused by dramatic changes in the concentration of atmospheric greenhouse gases (CO<sub>2</sub> in the case of past extinctions). Too little and the Earth freezes; too much and it overheats, acidifying the oceans in the process. A dramatic reduction in species accompanied all five, the Permian event being the worse, with 90% of life lost and the Earth perilously close to sterilization. We are currently experiencing a sixth major extinction. Like the others, the cause is an imbalance of CO<sub>2</sub> and other greenhouse gases. Unlike the others, the trigger is a single species, humans. It is why many scientists have unofficially dubbed the current Epoch the Anthropocene. Past extinctions occurred over tens of thousands to millions of years, an eternity by human standards. The current extinction is happening over the time scale of decades to hundreds of years. Estimates suggest that mankind is injecting greenhouse gases into the atmosphere at ten times the rate it was being added naturally during the Permian extinction. Any curtailing of this rate at this point, although admirable, is likely to be insufficient to prevent catastrophic and lasting climate events. The damage that is already done (e.g., to the coral reefs) will certainly not be repaired naturally for many human generations.

The Anthropocene epoch began with our ability to make fire, then pyrotechnology followed by other technologies including geoengineering, chemical, atomic/thermonuclear and genetic engineering. Some of these technologies were weaponized to fight adversaries, human and non-human, with little regard for their adverse consequences to the biosphere and life community. The increasing burden of these adverse consequences may disable future generations from ever evolving out of the collective egocentrism to the ecocentrism needed for effective planetary CPR-conservation, restoration and protection. Fr. Thomas Berry called this the “ecozoic” era of human evolution: A consummation devoutly to be wished!

### ONE HEALTH AND THE RECOVERY OF OUR SANITY AND EARTH

The recovery of our sanity and humanity to make informed, science and ethics-based decisions for the greater good and the good of the Commons will help heal us, the planet and all our relations. This One Health initiative must be the primary agenda of civil society which I pray every nation state and community will embrace and include under the rule of law.( For details visit <https://www.onehealthinitiative.com>) . Nature is not something that is separate from us: We are part of Nature. When we poison the environment is it no surprise to find poisons in mothers’ wombs and milk?

Taking a “moral inventory” in an amoral technocracy that has no bioethical foundation or vision of One Health is as meaningless as it is in any immoral autocracy. The hubris of science that promotes eugenics, exploiting and “improving” on Nature and taking the law into its own hands

must be tempered by the precautionary principle, respect for the laws of Nature and the wisdom of humility.

Over-population, consumption and waste and pollution of natural resources would be better controlled voluntarily than by Nature's various correctives such as plagues, pestilence, famine and our endless wars against each other as well as pests and diseases which we bring upon ourselves. The COVID-19 pandemic and Climate Change are wakeup calls to change our egocentric and human-centered (anthropocentric) world views and associated economy, ways of living and expectations, to one that is eco-centric: A consciousness that is more emotionally aware in a co-evolving communion with the life community of planet Earth. We may then be worthy of bearing the self-anointed title of *Homo sapiens*, Man the wise.

Regardless of our prowess in the arts, science and technology, human history is a record of greater harm than good to our own species and to others and Nature. In every country and community today there are evident, from their behavior, a variety of human sub-species or variants, notably *Homo sapiens tyrranicus*, *Homo sapiens empathicus* and *Homo sapiens technocraticus*. Such diversity of phenotypes/sub-speciation determines the quality of life and degrees of conflict in every culture and, ultimately, the evolution of our species. The current global extinction of species and loss of natural biodiversity are primarily anthropogenic, our existential ignorance, indifference and inhumanity being contributing factors for many centuries. Therefore, we also need to take immediate steps to prevent the extinction of our humanity. Otherwise, the surviving species in human form may not be recognizable as being human in any spiritual, empathic and ethical sense but rather, biologically, as a planetary parasitic infestation.

The reality of Nature, where one species kills and consumes, parasitizes or otherwise exploits others is seen by some as the tragedy of reality and evidence that there is no God. Others justify such behavior themselves, exploiting animals variously for food, labor, fur, and for developing vaccines and profitable drugs for an at-risk and sickening human populace. According to a July 15, 2021 report in the science journal *Nature*, the US government is investing heavily to breed more monkeys at the national facilities that house primates for biomedical research. The goal is to [offset an ongoing shortage of these animals](#), which grew worse in 2020 as scientists tested scores of COVID-19 vaccines and treatments on primates before trials began in people. National Institutes of Health's Dr. James Anderson says. "What happens if [a pandemic] happens again, with another virus in three years? We want to be ready for that." But with a human population soon to reach 8 billion this demand on the animal kingdom is non-sustainable and bioethically questionable especially considering that laboratory animals are made to suffer and be "sacrificed" to find cures for diseases we bring upon ourselves.

Three-quarters of novel or emerging infectious diseases in humans are zoonotic, and the international wildlife trade -- estimated to be a \$10 billion market each year -- is a major source of risk. A series of public health crises have put the issue in the spotlight, shifting attention from diseases of economically important livestock species to those that are most likely to cause problems in humans, but experts say a One Health approach that accounts for the entire human-animal-ecosystem interface is the solution to mitigating risk [JAVMA News](#) (6/23).

The consumption of exotic wild animals, wildlife farming and trade, livestock management practices, keeping exotic animals as pets and human encroachment on wildlife habitats all put humans at risk for zoonotic diseases, researchers reported in *Biological Reviews*. ([Silviu O. Petrovan](#), et al Post COVID-19: a solution scan of options for preventing future zoonotic epidemics. *Biological Reviews*, 07 July 2021 <https://doi.org/10.1111/brv.12774>).

#### THE DEATH OF NATURE & NATURE'S RIGHTS: NEW WORLD WAR & ORDER

In the anarchic complexity of Nature there is no ruler or authoritarianism but competition and cooperation within and between species that maintains and sustains a whole greater than its parts, an ecosystem. Ecosystems are complex, dynamic, unstable equilibria interconnecting to form a global biosphere. Such organization, in human political terms, is democratic. One life gives life to another taking life and death renews as exemplified by a cyclical pattern of prey and predator numbers. Ecosystems become dysfunctional and can collapse or succumb to invasive species when there are too many prey species (herbivores) or too few or too many predators (carnivores). The human species has not yet learned to live in accord with Natural law, being too many to live as predators and displacing wildlife and reducing self-regulating natural biodiversity by raising billions of livestock and poultry for consumption. Such an economy and culture is neither sustainable nor ecologically just and amounts to ecocide. Nature,---Earth's non-human creation and co-evolved life community of animals and plants-- is our ultimate provider, but becomes our nemesis when we harm Nature.

My friend and former EPA employee Evaggelos Vallianatos published a relevant essay addressing the real global crisis humanity faces today. Entitled **Annihilating the Natural World** [https://www.huffpost.com/entry/annihilating-the-natural-world\\_b\\_596a9443e4b022bb9372b23a](https://www.huffpost.com/entry/annihilating-the-natural-world_b_596a9443e4b022bb9372b23a) He asserts "As I see it, all the attention on Russia (like the superficial attention on war and terrorism) hides the crimes of global corporations against the natural world and public health: air, water, and land are being poisoned while we fight over this gossip or "fake" story. In other words, our future is being often defaced, nay deleted, daily and we, like prisoners in Plato's cave pay attention to the well-funded shadow theater in front of us. This official theater is a gilded operation of the ruling business class to disempower and harm everybody else, especially the environmentalists. This is no exaggeration. At home, factory farming and its sprays and genetic engineering of crops are altering the very nature of our food and agriculture. Giant companies are converting rural America to their private fiefdom. Where is a bird, monarch butterfly or honeybee supposed to find food when thousands upon thousands of acres of land are growing bioengineered corn or soybeans and poisons flood the land? Walk in rural America and see if you can find and distinguish a family farmer from a plantation.

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I would clarify the disempowering and harming of environmentalists. There are death threats and assassinations along with disenfranchisement of indigenous peoples and land owners in many countries, (which Vallianatos has investigated). A record 227 environmental and land defenders were killed in 2020 for protecting their homes and our planet, according to the annual Global Witness. That's an average of more than four people a week, and more than double the number reported in 2013, the report authors wrote. Further, they connected that rise in violence with the worsening of the [climate crisis](#) itself.

All of this is clouded by disinformation, defamation and misinformation in a concerted anti-science socio-political arena along with the firing of government and corporate whistle blowers and denial of tenure in some academic circles in the U.S. and other countries. Academic freedom is conditional. There is also monopolistic control of the media and the new version of “balanced” journalism to give fair and equal airing of both ‘sides’ of issues which in reality have no sides but need immediate rectification rather than circular discussions and investigatory committees. This so-called balanced journalism gives credibility to views and values which legitimize bioterrorism---the annihilation of the natural world---and bio-fascism. Some public- pandering politicians have even promoted the lie of personal freedom as an absolute to a disinformed and intellectually challenged public who equated any mask-wearing mandate to prevent the spread of the COVID-19 disease-causing, airborne coronavirus as violation of their personal freedom. This echoes the newspeak and doublethink of George Orwell’s book published in 1949, *Nineteen Eighty-four*.

The wheels of justice, like the cogs of social change in consciousness and conscience, can move with barely perceptible motion. Not until 2021, 49 years after the publication of the seminal treatise *Should Trees Have Standing? Law, Morality, and the Environment*.by Christopher D. Stone (who died this past May from Parkinson’s disease) were any Rights of Nature lawsuits filed in the U.S. Their outcome is yet to be determined, but at least these initiatives signal the potential power of civil society to broaden the scope of legal protection for various species and natural habitats, the well-being of which ultimately benefits us all.

Apr 27, 2021 — **Filed** in the 9th Judicial Circuit Court of Florida, the **lawsuit** asserts that *Florida Waterways Seek to Enforce Their Legal Right to “Exist” - Proposed Housing and Commercial Development Would Destroy Wetlands and Streams*

[First US “Rights of Nature” Enforcement Case Filed-4/27/2021  
https://www.centerforenvironmentalrights.org › news](https://www.centerforenvironmentalrights.org › news)

Aug 15, 2021 — This is only the second “rights of nature” case to be filed in the U.S. and the first to be filed in tribal court. Mary Annette Pember writes in [Indian Country Today](#) “For Ojibwe, wild rice or *manoomin*, “good berry” in the Ojibwe language, is like a member of the family, a relative. *Manoomin* is more than food, it is a conveyor of culture, spirituality and tradition. Therefore, legally designating *manoomin* as a person in the White Earth Nation’s lawsuit against the Minnesota Department of Natural Resources aligns with the Ojibwe world view... According to the Global Alliance for the Rights of Nature, Indigenous cultures recognize the rights of nature as part of their traditions of living in harmony and recognition that all life is connected.”

[‘Rights of nature’ lawsuits hit a sweet spot - Indian Country ...  
https://indiancountrytoday.com › news › rights-of-natur...](https://indiancountrytoday.com › news › rights-of-natur...)

## THE CLIMATE CRISIS

In my opinion there is no either/or, natural v human factors responsible for the current Climate Crisis but both. The sun's rays feel different, the Earth's magnetic field is weakening; burning forests are shading the land, less ultraviolet light and a major "carbon sink"---our forests and

grasslands (plowed and over-grazed)--- is being lost a swell as our terrestrial source of life-sustaining oxygen; plastics in the oceans and acidification are destroying another oxygen source and carbon sink-the phytoplankton. These, as well as zooplankton are the foundation for the marine food chain so those higher up are starving; ice-cap melting increases atmospheric moisture which is disrupting the Jet Stream which means more extreme regional weather events, compounded by ocean warming and slowing of ocean currents or gyres such as the Gulf Stream. Freak cold snaps in the United States and other parts of the Northern Hemisphere could be a paradoxical consequence of climate warming in the Arctic. A study based on decades of atmospheric observations shows how [rapid Arctic warming can trigger anomalies in the polar vortex](#), a fast-flowing band of high-altitude winds around the North Pole — with consequences for weather thousands of kilometers farther south.

“Now science is shouting from the rooftops that it’s time to level up actions in an order of magnitude sufficient to the challenge,” Christiana Figueres, a former head of the United Nations climate agency, said in a statement. “All other geopolitical issues will fade into irrelevance if we fail to rise to the existential challenge that climate change presents.” (From United Nations Warns of ‘Catastrophic Pathway’ With Current Climate Pledges <https://www.nytimes.com/2021/09/17/> See also William J Ripple et al, World Scientists’ Warning of a Climate Emergency 2021, *BioScience*, 2021;, biab079, <https://doi.org/10.1093/biosci/biab079> ).

Climate change hasn’t yet had a noticeable influence on atmospheric rivers, narrow air streams that carry huge amounts of moisture towards the poles. But these ‘rivers in the sky’, which bring downpours to mid-latitude coastal regions, could become markedly more extreme if atmospheric greenhouse-gas concentrations continue to rise.

To this mix of global consequences of undetermined harms of multiple origin we should add electropollution. This comes from the escalating, energy-demanding telecommunications and cybertechnology potentially more harmful to organisms than pesticides as detailed on my website [www.drfoxonehealth.com](http://www.drfoxonehealth.com)

We do not know the long-term consequences of all these interacting changes. Since the advent of the industrial revolution, (with the "Satanic mills" of William Blake) we have increased the metabolism of the planet to non-sustainable levels of extraction and consumption which calls for sound, science-based public policy correctives and international cooperation. The expanding human population along with food crops and livestock have decimated natural ecosystems and healthy plant and wildlife biodiversity contributing, in large measure to epizootic and pandemic diseases, the blights, plagues and pestilence of biblical record. When we forget our history we re-live it! According to the United Nations report, *Groundswell*, 200 million people may be climate-change migrants seeking refuge from uninhabitable homelands by 2050.

Even if we did not have this existential crisis of climate change we would still face the issues of overpopulation, over-consumption, economic and political refugees and the violence and inhumanity toward each other and other species. Evolutionary biologists are adamant in the opinion that *Homo sapiens* is the most recent mammal to evolve and as such, is the youngest. Our collective lack of respect for our “elders” many of whom have been on Earth millions of

years before us, from mice and elephants to whales and wolves, is despicable. But there is more public outcry, as over the Faroe Island mass slaughter of some 600 Pilot whales annually and the horrendous massacre of 1,428 White-sided dolphins in a one- weekend traditional killing for community sharing of meat and blubber.

Our inhumanity has surely contributed directly and indirectly to the Climate Crisis all of which is not helped by political and public paralysis of will and action---and denial. Denial was especially evident in the U.S. at the onset of the COVID-19 pandemic and even in the face of this latest of Nature's "bioweapons" many people fought mandates to wear masks to help prevent coronavirus spread as a violation of their personal freedom. Clearly the educational system has been deficient in teaching civics, ethics and critical thinking.

#### ECOCIDE AND CRIMES AGAINST HUMANITY

An international panel of 12 legal experts has drafted an official definition of ecocide after months of deliberation. The definition was released with a proposed law that would be the fifth crime prosecuted by the International Criminal Court if enacted.

The experts have defined ecocide as "unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and widespread or long-term damage to the environment being caused by those acts." If the law attached is enacted, those accused of ecocide would be tried alongside those who have been accused of crimes against humanity and genocide. (EcoWatch <contact@ecowatch.com> 2021).

The U.S. may soon face another dust bowl crisis if the USDA's Grasslands Conservation Reserve Program in Dust Bowl zone counties in Colorado, New Mexico, Texas, Kansas and Oklahoma. Reseeding with native grasses fails. This will call for water and the Ogallala aquifer is now near empty after a century of ploughing up the prairie and inefficiently irrigating commercial crops. This kind of "*Agricide*" as I document in my 1986 book of the same title (St Martin's Press NY) is a crime against Nature; ecocide indeed. It is notable that the term environmental justice is being applied to those communities, especially the poor, being exposed to pollutants, especially from chemical factories and waste-burning municipal incinerators. The unremitting destruction of the Amazon forest for cattle/beef and commodity crop production and mining is blatant ecocide and a crime against humanity, endangering the lives and future of indigenous forest peoples.

Another ecocidal and biocidal crime is evident in the rising incidence of human diseases associated with agrichemical pesticides which also play a major role in the demise of insects and ecosystem collapse. These chemicals, in microparticles of dust, be picked up by convection air currents, are spread widely and are found in the rains falling in remote areas. Many autoimmune and neurodegenerative diseases like Parkinson's and Alzheimer's are multifactor/pluri-causal. Several studies have shown farmers' exposure to insecticides, fungicides and herbicides as well as non-farming people living in communities close to agrichemical-treated fields is associated with higher prevalence of such diseases. For a general overview see *Pesticide-Induced Diseases: Brain and Nervous System ...* <https://www.beyondpesticides.org> and also, <https://www.americanscientist.org/article/the-rise-of-parkinsons-disease>.

In their extensive review of clinical and research studies of these concerns, authors Freya Kamel and Jane A. Hoppin conclude “there is mounting evidence that chronic moderate pesticide exposure is neurotoxic and increases risk of Parkinson disease.” (quote from Association of Pesticide Exposure with Neurologic Dysfunction and Disease published in *Environmental Health Perspectives* [Vol. 112, No. 9](https://doi.org/10.1289/ehp.7135) June 1st 2004<https://doi.org/10.1289/ehp.7135>). See also Angeline Andrew et al, Pesticides applied to crops and amyotrophic lateral sclerosis risk in the U.S, *NeuroToxicology*, 87,128-135, 2021).

Contaminated rains and irrigation waters notwithstanding, organically certified agricultural practices that avoid the use of herbicides and fungicides and insecticides on both farmed animals and food crops is enlightened self-interest. Such practices are vital to restoring soil microbiome health as well as those of our own guts and of our domesticated animals. These are probiotic/pro-bios antidotes to the dysbiosis caused in large part by our adversarial attitude toward life and dependence upon anti-biotics (anti-bios) and biocidal chemicals. Their use is justified by the addictive (and highly profitable) petrochemical-pharmaceutical treadmill, the harmful, iatrogenic consequences of which we face today.

Albert Einstein observed, “No problem can be solved from the same level of consciousness that created it.” Only from the perspective of our being part of Nature can an objective, rational and existential assessment be made of our life’s purpose and its consequences in terms of how our life-choices and values affect ourselves and others for better or for worse. Solutions for most existential problems come from cooperation rather than competition; acceptance rather than denial; education rather than indoctrination; renunciation rather than conformity; passion for justice rather than retribution and the courage to speak truth to power. William Ophuls in his essay *What Can Give Us Hope* writes” But the prophetic madness attending the death throes of industrial civilization will also contain a small but significant ray of hope: out of the welter of false prophets there may arise one whose message will effect the metanoia that is the only real way out of the impasse. For only by transcending our obsession with material power and progress and recovering a deep empathic connection to the planet and the life it bears can we hope to reconstruct civilization to be sane, humane, and ecological.” ([9 Essays by Author William Ophuls \['Immoderate Greatness Why Civilizations Fail'\] : collapse \(reddit.com\)](#))

## NATURAL PERSPECTIVES AND NATURE WISDOM

The best qualities of human nature, of character, empathy, compassion, respect for life, innate potentials and individual genius can be best awakened and nurtured in children by appropriate relationships with other species wild and domesticated that engender respect and understanding along with experiences in Nature that inspire awe and wonder. When we realize that we are related to each other and to all sentient beings we discover the true meaning of freedom for all and begin to live spontaneously in accord with the Golden Rule. We all need to consider Sioux Chief Medicine Man Black Elk’s statement “Nothing will be well unless we learn to live in harmony with the Power of the World as it lives and moves and does its work.” The redemption of our species and recovery of our humanity lies in restoring right relationships with Nature and other species, plant and animal, rather than treating Nature as our own exclusive resource and other sentient beings variously as commodities, objects, pests and disposable pets.

If there were no stones, we would have no minerals for our bones and never walk, or for our brains and never talk. If there were no trees and other green life on land and in the seas we would not exist without the oxygen they give. We would not be red in blood and living free without the oxygen-binding iron from Earth's magnetic core spread by primordial volcanic activity. Without the microorganisms in healthy soils we would have no nutritious plant foods nor our own related microbiome in our guts essential for our health, immune and digestive systems. Ecology, molecular biology and other natural sciences affirm these life-giving and sustaining relationships between the universal and the particular, humanity and Earth, self and other.

In the realm of sentience, the reality of Nature and nature of reality spans the polarities of sublime beauty and joy and horrendous suffering and fear. Between these antipodes we have our being and choice between compassion and loving kindness, predation and self-sacrifice, cruelty and indifference. The choices are ours regardless of whatever god we may believe in who created this world. We have the freedom to choose between good and evil and obedience to the rule of law to protect the greater good of all sentient beings great and small.

The violence in Nature, and in human nature driven by ignorance, ideologies, hatred and fear combine to invoke either fatalism, salvific fanaticism or nihilism or the core values and ethics that temper these innate proclivities with the basic virtues that define and refine our humanity with compassionate concern and respect for all life.

The law of Nature and nature of law is "blind" because it is impartial and therefore objective. Only then can justice be served. The law of nature punishes us when we harm natural systems to which we are connected and depend upon, and when we violate natural law by over-consumption, over-population, over-extraction and depletion of finite resources and polluting our shared environment. Also, when we harm other species as by extermination, habitat destruction and exploitation; all religiously and culturally sanctioned practices that open us up to zoonotic diseases, pandemics like COVID-19, and various cancers and brain and body birth defects from environmental contamination.

The physicians' Hippocratic oath: 'First do no harm', is derivative of Natural law. If economists were to make a similar pledge we would surely see less social, environmental and ecological injustice.

Our affinity for and love of Nature and the nature of such affinity and love are innate and intertwined. Love can link us to the sacred, to divine presence and inspire reverence and awe. The feeling of immortality in love from life to life may be awakened and its ineffable, illimitable joy and power.

The art (and music) of Nature and the nature of art (and music) are interwoven and celebrated by the human spirit but broken by the human ego. So it is with the science of Nature and the nature of science. When truths are converted and perverted into powers (chemical, atomic, genetic) science causes more harm than good when this essential unity is ignored and violated. The same is true for the art and science of human medical and veterinary praxis. The concept of One Health (and One Economy) recognizes this fundamental unity where human well-being is inseparable from the well-being of Nature, the natural environment, and other sentient beings.

The healing powers of Nature and nature of healing are interconnected. “Forest bathing” and spending time in nature promotes our own innate powers of psychophysical healing---what Albert Schweitzer called the “physician within.” Efforts to protect and heal Nature from human encroachment, desecration and pollution are, therefore, integral to our own well-being. The biological sciences can help us appreciate and respect all life including bacteria, viruses and other microorganisms with whom we have co-evolved and would not and could not exist without. Some of the earliest life forms like the cyanobacteria, generated the first oxygen on the planet by evolving photosynthesis.

## SCIENCE, MEDICINE, TRUTH AND PUBLIC POLICY

Regrettably, scientists, for various reasons, some vested and aligned with corporate interests, refuse to accept peer-reviewed scientific reports and the consensus of the scientific community when it comes to the current Climate and Extinction/Biodiversity Loss Crises. This was the case earlier with the documented risks of DDT and other pesticides and addictive and cancer-causing consequences of tobacco.

Merriam -Webster’s Definition of *scientific method* : “principles and procedures for the systematic pursuit of knowledge involving the recognition and formulation of a problem, the collection of data through observation and experiment, and the formulation and testing of hypotheses.” The biological and physical sciences adhere primarily to this method, often linked with ethics, economics and mathematics, grounded in objectivity, and, like justice, is impartial. Otherwise, self-interest, ideological and other biases would distort the truth, interpretation and application of scientific discovery. Regrettably, vested material, industrial, military and other interests and aligned investors, politicians and regulatory agencies have too often ignored the precautionary principle, bioethics and consideration of consequences, the “hidden costs” or externalities, resulting in more harm than good. Otherwise, many of the problems we face today especially in industrial agriculture and in the medical industry and veterinary services would not exist.

Affirming some of the assertions of Ivan Illich in his 1975 book *Medical Nemesis: The Expropriation of Health*, former commissioner of the Minnesota department of health Edward P. Ehlinger writes:” Too much money (\$ 3.6 trillion per year) is spent on medical care (less than 3% going to prevention) with many treatments doing more harm than good. Approximately 25% of total health care costs are spent on wasteful activities and about 250,000 deaths per year are due to medical errors, making “iatrogenic” conditions the third leading cause of death.” (The State of U.S. Health. Defund the health care system. *Star Tribune*, Oct 20<sup>th</sup> 2021.

When science speaks truth to power and exposes the lies, deception and delusions of status quo and “progress” we witness the anti-science backlash of political and corporate opposition, as with the late Trump administration’s inaction concerning the Climate Crisis and bungled response to the COVID-19 pandemic.

The sciences can help us build a waste-free “circular” economy that is sustainable, healthful rather than extractive and polluting. Generating safer alternative sources of energy rather than burning fossil fuels (coal, oil and gas) and not relying on hydroelectricity from ecologically hazardous dams which droughts make non-productive are survival initiatives all nations must

pursue. The fossil fuel industry's production of plastics must cease> It may soon exceed in mass the weight of fish in the ocean, some 8 million tons of plastic being ocean-dumped every year; and the release of dioxins and other toxic petrochemicals into the air we breathe---now recognized by the WHO as the most serious environmental threat to human health--- come from the incineration of plastics and other municipal waste. Research has shown these pollutants to be linked to cancer, obesity, immune and endocrine system dysfunctions, sterility, birth defects and neurological problems such as Parkinson's and Alzheimer's diseases and lower IQs in children today. This entire industry must be terminated for the common good and the good of the Commons.

The science of Nature and nature of science is the existential reality of truth. Nature's economy is the wise human economy of regenerative sustainability. Nature's medicine is the nature of healing which embraces more than vaccines, drugs, genetic biomedical engineering and surgery. The ethics of Nature and nature of ethics lead us to the bioethics (as in my *book Bringing Life to Ethics*) of sustainability: Of life giving more to life than it takes for the common good and the good of the Commons as well as the integrity of Earth's life- community.

Our love of Nature and nature of love are connected empathically with our innate, ancestral and spiritual affinities and cherishing of other beings, human and non-human, plant and animal: Not just loving other humans, since love cannot be exclusive or possessive without causing harm. Selfish love breaks our sacred, life and spirit-sustaining connections as when love becomes conditional in our seeking to be loved rather than to love; and in the myriad other ways that limit our lives and so often harm others and Nature, Mother of us all.

We have ignored, exploited and violated many of these relationships for millennia and now face the nemesis of Nature's retribution. The worse is yet to come if we do not, as the Hopi Prophecy warns, collectively and singularly repair these relationships and respect all our relations, plant and animal, water, soil and stone. In this anthropocene age we are experiencing the existential crisis, environmentally, socio-economically and in terms of public health and food security that the Hopi Indians prophetically warned about as a consequence of *koyaanisquatsi*, life out of balance. Renunciation of our self-worship of gods created in our own image would be a good beginning toward living in harmony with all life, the spiritual root of One Health and the antidote to our pathogenic anthropocentrism. Indeed, Global Sustainability via a One Health approach as a moral compass is critical to our planet's survival and thereby ourselves.

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