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Book Review: The Way: an Ecological World View

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The Way: an Ecological World View. Revised and enlarged (second) edition.

Edward Goldsmith, 1996. 553 pages, paperback.

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This is an important scholarly book about purpose; about aims, missions and intentions for you and me and all humanity here on Earth. It is the summing up of Edward Goldsmith's ecological world-view, the mature fruit of many years of study and thought catalyzed by his intimate association for 25 years with the journal, *The Ecologist*. The magnum opus consists of 66 short chapters (plus four Appendices, a Glossary, Bibliography and Indexes) whose titles convey the gist of the arguments advanced. A sample: Ecology is holistic, Ecology is emotional, The ecosphere is one, Gaia is alive, Life processes are dynamic, Living systems are intelligent, Cooperation is the primary Gaian interrelationship, In a vernacular society technology is homeotelic to Gaia.

"Homeotelic" is a neologism coined by the author, meaning "normal behaviour that serves to maintain the critical order of the whole." Other new terms make their necessary appearance in the text, because the intelligence of the English language is limited when it comes to conveying ecological thoughts. Goldsmith has set himself the task of providing a vocabulary capable of expressing activities harmonious and disharmonious with the Way of the World.

The book differs from most treatises classed as "environmental philosophy" or "ecosophy" in drawing little upon classical philosophy. Not that Goldsmith is unaware of the thoughts of the ancients, for he knowingly comments on ideas of the "name" philosophers where appropriate. But the fact is that with the possible exception of forgotten Romantics such as Goethe and Wordsworth, few have entertained a vivid Earth-centred philosophy. The chief concerns of Great Men of the past have been the ever-popular homocentric Man-to-Man and Man-to-God themes. In this book the authors who get the greatest play are moderns: the likes of Darwin, Lovelock, Odum (ecologist), Waddington (developmental biologist), Worster (historian of ecological thought), von Bertalanffy and Woodger (philosophers of science) - people whose ideas relate directly or indirectly to an ecological faith.

Do not conclude that Goldsmith's frequent citing of scientists and philosophers of science is an endorsement of *The Way of Science*. His philosophy, though

material, is organic, holistic and teleological, running counter to modernism's "science paradigm" whose chief article of faith is a dead universe brought into being (caused) by random prior happenings. For traditional scientists, teleology is a bad word because it denies an exclusive dependence of present events on the past. For them, nothing in the world is purposive, except perhaps some aspects of human behaviour. Against this, Goldsmith argues that a goal-seeking life-process comprises the entire Earth-system - of which we are but one constituent part. All parts find their roles, niches or purposes in maintenance of the integrity or "critical order" of the whole Gaian hierarchy.

As to that last term, "hierarchy," forget the pejorative-tinged "archy" that smacks of priestly rank. Concentrate on the "hier" or holy-wholly part. The world as we know it is organized in wholes at different levels from large to small, each understood as an integrated system that depends both on the smaller systems of which it is composed and on the larger surrounding systems of which it is a part. Reality is conceived as a hierarchy of systems, a holy order, each part contributing to the well-being of all. Each cooperating, contributing system thereby ensures its own fitting survival. Maladaptive systems, ungenerous and discordant vis-a-vis their contexts, court elimination from the Gaian hierarchy.

Important implications for humanity flow from this logic. As individuals and as communities of people we form human "systems" that depend on smaller ("lower") and larger ("higher") orders. For example, each of us owes that magical essence "life" to the organ-systems of which our bodies are composed *and* to the air-land-water-organism systems (ecosystems) in which we are enveloped. Individually and socially we can contribute to our ruination by harming either our constituent parts or our supportive context. *Health* in the person, as in the body politic, hinges on health in the intact and undamaged Gaian hierarchy.

In general, people are aware of their dependence on the smaller systems they comprise. The contemporary, socially amnesiac obsession with self-improvement hinges largely on mind-body health, on reducing mental stress that leads to bodily disfunctions, on maintaining the correct youthful weight, on a non-carcinogenic diet, on various supplements to prevent afflictions of the circulatory, respiratory and uro-genital systems. Health clearly requires that no obstacles be put in the way of organ-systems, organs, tissues and cells as they harmoniously carry on the natural, vital functions prescribed by the innate "intelligence" of the body.

Oddly, that same "intelligence" is denied to the human context. The larger systems that encapsulate life-forms such as ours tend to be invisible because we are inside them. Hence the ecosystems of which the Gaian ecosphere is composed are not conceived as wholes in states of health that impose well-being or ailments upon their constituents. People don't see themselves embedded in a living system but instead see resources and raw-material assets to be used and thrown away. Ignorant of ecological relationships, few perceive themselves as totally dependent on the larger whole that is Earth's body. Most carry the false

image of themselves and their society as free, autonomous and self-sufficient. Their manifest destiny is the playing of entrepreneurial roles, contributing to "progress" by the economic development of a senseless, inanimate environment. Ecological rules and restraints? There are none except those agreed to and voted into existence.

How shall we learn to see truly who and where we are? Goldsmith concludes that finding "The Way" requires conversion of all peoples to the world-view of ecology, the discipline of context. Is this too simple, too easy? I don't think it is. The implications of a paradigm that positions humanity within the Gaian hierarchy, as a contributing or disruptive part, are profound and complex. The greater part of the book is concerned with the ramifications and implications of this conceptual framework. Though apparently novel now, it formerly ordered all human lives and still does in the few remaining "chthonic" (Earth-centred), "vernacular" (indigenous), "primitive" (primal) societies thus far shielded from economic development and industrial progress.

Persistent vernacular societies provide the paradigm for stability, for adaptation to the ecosystems in which they exist and on which they depend. They are necessarily oriented to an ecologically aware Way which, once discovered, is their culture. If longevity is the measure of success, the Australian aborigines must have got it right long ago, for their culture is said to have persisted unchanged for more than 30,000 years. To such successful foragers, history as "human progress" is meaningless because the present, like the past, is expected to be the future. Year after year, life follows the same seasonal pattern. How different from the expectations of today's industrial culture!

A word here about the relevance of invoking the "primitives" (the first peoples) and their wisdom. It seems to me that we can read vernacular cultures in two ways, as templates for the more or less exact redesign of our ailing culture, or as the embodiment of ecological truths with transforming power if transplanted and nurtured within the Western milieu. The first idea can lead to despair; "We can never live that way! Do you want us to go back to the stone age?" The second idea is more hopeful; "Aha! Here are worthwhile implications for cultural survival." Goldsmith catches both ideas, but his uses of anthropological quotations and his interpretations of their significance favor the former - especially when the chapters are read sequentially. A warning then: Readers who quit at chapter 65 and miss chapter 66 may find themselves stranded on Mount Improbable. Early on, the author advises jumping into the book at any chapter because, like an organism, the whole can be grasped when read from its parts *in any order*.

Begin, then, at chapter 66 where hope is expressed. People *can* be converted to a new conceptual framework, a new ecological world view, but only under specific conditions comparable to those that lead stressfully to a nervous breakdown. Thus religious conversions are often preceded by physically and mentally exhausting ceremonies. Today's economic development, aka "progress," is pro-

ducing the requisite stresses of which one fruit is a Noachian flood of Creationist and New Age flotsam. Just as the breakdown of paganism in late Roman society brought on a frantic search for a new world-view to satisfy the psychic requirements of the increasingly atomized and alienated masses, so the accelerating failure of industrial culture to solve planetary problems and satisfy fundamental psychic needs is propitious for the emergence of an ecology-based faith. There is reason to hope, Goldsmith says, "that the ecology-based revivalist movements of the future will seek to achieve their ends in the true Gandhian tradition. It could be that Deep Ecology, with its ethical and metaphysical preoccupations, might well develop as such a movement."

The task of the moment is to prepare the ground, or in Ursula Franklin's words, to do some serious earthworming. Help recreate the family and the community and, above all, a localized and diversified economy in order to reduce the increasingly universal dependence on a destructive economic system. Here Goldsmith adduces many references to small-is-beautiful vernacular societies as working models of long-term stability. To undermine the modern world-view he suggests combatting the ideology of never-ending progress (industrial development) which leads directly away from adapting ourselves to the ecosphere as responsible home-dwellers. A companion tack is to systematically weaken the main institutions of the industrial system: the state, the corporations, and the science-technology used to transform society and the natural world. Ancillary activities, such as religion and education, also invite critical demolition and affirmative ecological reconstruction.

Goldsmith targets those ideas and institutions that interrupt, damage or destroy the critical order of the ecosphere, which is to say the natural *goals* of the Gaian hierarchy (systems within systems). Again, note the denial that Earth and its constituents are purposeless. Systems in the Gaian hierarchy are goal-seeking. *Each one, from cell to organ to human being to society to ecosystem and ecosphere, seeks maturity marked by relative complexity and stability.* The argument rests on analogy: that of organic development in which the inner anatomy and structure of a developing cell, embryo or child is insufficient to explain its drive, often against considerable obstacles, to attain a specific mature form and function. The vital "cause" of such morphogenesis is evoked as much by the surrounding system (its ecology) as it is induced by genetic make-up (its physiology). In a sense, development is both pulled from in front (purposefully) and pushed from behind (classical causation). In macro form, a comparable phenomenon is exhibited by the known development of Earth whose geological history is marked by an astonishing transition from steam and hot rock to tropical rain forests full of marvellous plants and animals. Nothing in Earth's early chemistry could presage such an end, and were it not for the solar-system context these marvellous potentialities would not have been elicited.

If scientific causation (the push from behind) is inadequate to explain development, then goal-seeking or teleological explanations (the pull from in front) gain

legitimacy. This is no blind leap of faith. Goldsmith devotes several chapters to the teleological precepts and language used by practitioners of science, even though in theory they eschew purposive explanations. Yet none can quarrel with the fact that sub-systems are purposive in the sense that their niches or roles are clearly targeted on service to the larger systems they compose. The functional meaning of parts - answering the question "why do they behave in this particular way?" - is found in their relationships to the wholes that comprise them. Obviously the heart has a purpose in the body, the contractile muscle tissue a purpose in the heart, the cells a purpose in the muscle tissue, etc. In each instance the purpose or goal is revealed by reference to the larger surrounding system. So Gaia, the largest Earth ecosystem, defines the purpose of all its sub-systems which is, in Goldsmith's phrase, *to maintain the critical order of the hierarchy of systems it comprises*.

At this point, if not earlier, sceptics may suspect that the author is a closet Neo-Deist or Young-Earth Creationist intent on smuggling God back into the universe disguised as the Intelligent Designer. Not so. Flights of theological fancy on the wings of "eternal spirit" and "immortal soul" are refreshingly absent. Goldsmith espouses *purpose* not as a supernatural dogma but as the given ordering of parts to the wholes they must serve for mutual survival. Living things are alive because they are parts of a whole: the Gaian hierarchy. In the words of Joseph Needham, "Life is the whole in which the parts, instead of going their separate ways, work together." Humanity's purpose in the context of Earth's enfolding and sustaining air-land-water-organism ecosystems is to function as a healthy, cooperative, non-destructive and balanced part. To find and define that balance, here and now, is *The Way*.

The idea of balance, the "balance of nature," has recently come under attack by many academic ecologists. A word of explanation may help explain why this is so. Traditional ecology grew out of biology, focussed on organisms. At first, three branches appeared: one the study of individual organisms in relation to their factored environments (light, heat, moisture, nutrients, etc.), another the study of populations and particularly their cycles (the ups and downs over time of lemmings, hares, cod, salmon, etc.), and a third concerned with communities of organisms of various kinds sharing the same geographic space (flora and fauna of aspen groves, neotropical bird aggregations in their wintering grounds, etc.). The second and third kinds of ecology dominate the field. A fourth branch, the study of air-land-water-organism *ecosystems* as geographic three-dimensional sectors of the ecosphere, has largely been by-passed because it demands much more than a biological background. Briefly, the "balance of nature" or in the modern phraseology, "equilibrium theory," has come into question by those focussed on the organic parts of ecosystems - on populations and communities that tend to fluctuate in numbers over short time intervals. A different picture emerges when organisms or ecosystems are examined. Suffice it to say that what Nature yields as states of stability or instability, equilibrium or non-equilibrium, depends greatly on which surrogates are measured, what time-and-space scale

is adopted, and on the ideological preconceptions brought to the problem.

The author is wedded, perhaps a little too closely, to the idea of "succession to climax" in the many systems of the Gaian hierarchy, each goal-oriented to the state of *relative stability* (one definition of "climax") that best assures the integrity of the whole. This makes sense if, as Lovelock argues, Earth's life-supporting features have been relatively constant over hundreds of millions of years. Even though the last 500 million years were punctuated half a dozen times or more by asteroid collisions and extensive vulcanism, the parts of the whole cannot have gone wildly out of kilter. Thus the ecosphere long ago developed and has for eons maintained its improbable and interrelated seas, atmosphere, soils and diverse organic forms. The argument also draws strength from analogy at the small size-scale of the organism which exhibits a developmental "succession" from fertilized egg to mature (stable) adult.

If, then, between organism and ecosphere such sub-systems as human societies and ecosystems are interposed, must they not as participants in the Gaian hierarchy also tend toward the equilibrium climax state? Perhaps, but agreement is lacking as to what the words mean and how the concepts can be validated. Succession as a concept applied to the woolly taxonomic aggregate called "community" is particularly tricky. Perhaps the better phrasing with which none can quarrel is: Woe to those cultures whose development (succession) destroys their ecosystems and consumes the Earth!

The comparison of chthonic cultures with modern industrial society sparks a number of enlightening ideas about the ecological and adaptive roles of economics, education and religion. Taking the last as an example, religious rituals and ceremonies in vernacular societies seem to serve a *social* function, maintaining and reinforcing a daily Way-of-living coherent with a sustained environment. Animism keeps the focus on things of this Earth, and the gods sanctify those communal practices that are attuned to the welfare of the culture and of its worldly context. Such deities as Fate and Justice personify the vital cosmic force that supports the world's critical order in the here and now, not in a somewhere-else paradise.

As an aside, the idea of Fate as unknown destiny makes much sense for the Gaian whole. Each contributing system within the Gaian hierarchy, though charged with its own purpose to maintain the larger enfolding system, cannot comprehend the purpose, role or goal of the latter. Humans can *under* stand their own purposes and the purposes of their parts; they cannot *over* stand the developmental role of ecosystems and the ecosphere. Therefore attempts to manage Earth strictly for human purposes, i.e. trying to force the whole to serve the part, tempts Fate and invites disaster.

Contrast the vital cosmic force, the chthonic mystery god who is *felt* to be the life of the whole of things, with the universal god who is *thought* to be the saviour of individual souls. The change in belief from the first to the second occurred in

the distant past, paralleling social and cultural disintegration. Goldsmith comments that two thousand years ago, not surprisingly, the universal god acquired a wife and a child rather than an extended household, a reflection on the newly atomized society. "As the role of religion ceases to be social, it serves instead to provide solace to the individual and his nuclear family." The revealed religions - Christianity, Islam and modern Judaism - developed to satisfy the psychological needs of atomized societies. Focussed inward and "upward" rather than outward, they carelessly desanctified the natural world and opened the way to its exploitation and destruction. Thus other-worldly religions are treacherous; they fulfill no constructive ecological or cosmic roles and are apt at leading humanity along the anti-Way.

As to secular themes, Goldsmith casts a critical eye on the theory of evolution. That Earth has evolved along with all its systematic parts is not in doubt. But how did it happen? Evolutionary biologists, fixated on organisms (which they wrongly equate with "life"), tend to be strict followers of Darwin whose views about the "how" of developmental change have been modified only slightly since his time. Thus orthodoxy dictates that organisms evolve guided by the invisible hand of "natural selection" which, in various ways, sieves out from large pools of randomly varying individuals those that are best "adapted," giving the survivors a reproductive edge in the struggle for existence. Darwinian evolution is therefore an exemplar of the "scientific paradigm." It is reductionist (individual organisms, sex cells and genes are the winners or losers), strictly causative (by prior events especially historical accidents), random in direction (both as to population variation and selection pressures), and runs its course in a mechanistic world consisting of living things (organisms) and dead things (the physical environment). Because organisms are conceived as having "environments" rather than being parts of organized "ecosystems," Darwinian evolution is presented by its advocates as "adaptive" to environmental changes but otherwise purposeless.

In contrast, the ecological world view that Goldsmith espouses identifies evolution as goal-directed, a process tending toward the increased stability of the Gaian hierarchy which is itself alive. All life processes are dynamically system-maintaining and self-maintaining, at all levels of organization of which organic forms are only one. Consequently evolution has to be viewed as a process proceeding simultaneously at the level of the ecosphere *and* at the levels of its constituent system-parts: ecosystems, organisms, cells, etc. This again implies the idea of "purpose" in the sense that the evolution of organisms in all their complexity and diversity must be fitted to (adapted to) the evolving functions of the larger bodies they inhabit, else they are both self-destructive and other-destructive. The argument, again by analogy, is that populations of cells do not evolve randomly but rather are constrained in their forms, functions and durabilities by the organ and body in which they live and reproduce. Human evolution today is unrestrained technological, equipping bodies with a variety of machines and techniques that tend to simplify and destabilize Earth and its ecosystems.

A penetrating thought, expressed many times by the author, is the remarkable fit of orthodox science's epistemology (a key part of Modernism's paradigm) to the demands of industrial society. If all nature is random, meaningless, purposeless, then humans are freed from any restraints on what they do to Earth, to its inhabitants and to each other. The idea of progress can then be translated as "more people with more material wealth." This is the anti-Way.

Readers of the foregoing will perceive that I like this book and not just because it is "down to Earth." It embodies a faith in the intelligence of Earth, where our bodies and minds are participants. Like all faiths, this one has its weak and fuzzy spots. It cannot be proved. It draws its argumentative strengths from analogies which those who are so disposed can accept or reject. It draws its emotional strength from a deep attachment to the beautiful world that surrounds us. It expresses an attractive and practical "religious" view, in the vernacular society sense.

I recommend the book to all who are searching for a thoughtful ecosphere-first philosophy. But it should also be read by scientists, particularly evolutionary biologists, to expand their horizons beyond the focus on organisms. It should be read by humanists, to expand their thoughts beyond people. It must be read by environmental philosophers who, as one book - jacket blurb says, from now on will have to take Goldsmith's work into account.

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