

Exponents, Extinction, and Invasive Species

Reconnecting 'oikos logos' and 'oikos nomos'

Book Review by Craig Straub

In his 84th year, the “Father of Human Ecology” has lofted another missile at well intentioned Utopian efforts. This hand-crafted device contains a cognitive cure for a culture suffering from population myopia and is designed to stimulate the uninitiated about the implications of ignoring societal taboos. To the educators in the lecture halls, formulators of public policy, proponents of perpetual growth, mercenaries of the masses, and spineless up-and-comings, this is assigned reading. Organizations and individuals preaching from the gospel of posterity are provided the ability to dismantle the hysteria and misperceptions which emanate from issues related to population, economics, ecology, ethics, and culture.

This book is predicated on the analogy of the proverbial ostrich burying its head in the sand and society’s denial of problems associated with human population growth. An infant burying its head in a blanket exhibits behavior called ostrichism. An adult indulges in the same behavior by burying his head in denial as a mechanism to escape further inquiry into the naked truth of an uncovered taboo. Advocates of continued population growth indicate that civilization will rapidly advance because more Shakespeares will be produced to solve humanity’s problems. Hardin reveals that England today has 13 times more people than in Shakespeares’ time and asks “And where are the thirteen Shakespeares?”

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As an ecologist and philosopher, the author revisits the thoughts of 3rd century Christian apologist Tertullian, who regarded pestilence, famines, and wars as blessings to overcrowded nations. Tertullian viewed the value of human and natural catastrophes as nature’s responses to curb the rate of population increase to alleviate more suffering. From *De Anima* Tertullian writes:

As our demands grow greater, our complaints against nature’s inadequacy are heard by all. The scourges of pestilence, famine, wars, and earthquakes have come to be regarded as a blessing to overcrowded nations, since they serve to prune away the luxuriant growth of the human race.

**The Ostrich
Factor: Our
Population
Myopia**

by Garrett Hardin
New York: Oxford University Press
153 pages, \$22.00



The expression “to prune away” refers to the agricultural practice of getting rid of superfluous living material for the sake of a better harvest. Hardin suggests that the practice of pruning must be incorporated into every population program to produce a policy of sustainability.

Liebig’s Law of the Minimum (Justus von Liebig) opens the discussion of limiting factors to growth. Liebig’s Law states that “growth of a species is limited by whatever required nutrient is least available.” For example, agriculture relies on nitrogen and oceans are experiencing a phosphorus shortage. To answer the question *How many people can the earth support?* is difficult unless the limiting factor is specified. A population which is only herbivorous can support 5 to 10 times more people with the assistance of photosynthesis. Regarding energy capture, solar energy will support a larger population if space heating and cooling are eliminated. Posing the question “How many people?” implies the desire to

maximize the number of people in the world. Many religious fundamentalists contend that Genesis 1:28 ("be fruitful and multiply") is a commandment to maximize the size of the human population. Hardin indicates that the words of Genesis were addressed to a small human population who could not fathom the consequences of a multi-billion population infested with the habitual practice of seeking the maximum.

The terms shortage and longage provide an understanding of the traditional differences between ecologists and economists. Shortage provides justification to expand infrastructure and profit; Longage implies the need to trim growth. The default position of ecology is based on the conservation principle that "we can never merely do one thing." By contrast, economics maintains that we have a limitless world. Officially a conservative discipline, economics has been contaminated with obstructive empiricism (ignoring conflicting data). The obstructive empiricist promotes perpetual growth which is accepted as a form of optimism. Ecologists are viewed as pessimists and are often detested by economists for revealing the unanticipated consequences of ignoring the complexities of the world. In response to the imbalance between supply and demand, economics offers higher prices by increasing the supply. Ecologists recognize that when dealing with problems of human need, a shortage cannot be cured by increasing the supply. Such an approach encourages production of more people and greater demand. In response to the bifurcation of ecology and economics the newly emerging discipline of ecological economics has been formed to discriminate among limitless demands in a world of limited resources.

Economics has recognized the importance of economies of scale, the notion of gaining economies by producing more of some product. For example, the production of more automobiles per year reduces the cost of each car because the cost of the machinery is divided among more units produced. However, the increase of transportation results in diseconomies of scale by increasing commute time, higher cost for higher capacity roads, and smaller residential lots resulting in displacement of home gardening and more trips to the store. Ecology has acknowledged the economies and diseconomies of scale of generation

and extinction. The growth of organisms are subject to limitations and stop when their genetically programmed maximum is reached. Every growth phenomenon exhibits economies of scale in the early stages and will meet barriers of diseconomies of scale, which will halt growth or extinguish the structure. Hardin concludes that the acceptance of a limited world will be one of the most difficult tasks for our species. The intermediate costs will be high and the

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reward will be survival.

The humanist champion reveals the ethics involved in distinguishing the controversial ideas of evolution and natural selection. Evolution is an historical idea referring to the past and natural selection is a scientific idea referring to the future. Motivational ethics is concerned with interpretation of the past and implies that an assertion about the past dictates a choice of action in the future. Consequentialist ethics is concerned with future consequences of present acts. Dispute over creation in a few days or over millions of years is to engage in historically accurate motivational ethics. Consequentialist ethics is interested in altering the future and supporting the idea of natural selection: a consequence following the consistent ability of various species to reproduce in a competitive world of limited capacity.

Two examples from the animal kingdom illustrate the principles of consequentialist ethics. The European Swift's inherited behavior equips the mother bird to raise a clutch or dispose of them in response to inadequate food supply (lack of insects during cool weather). More offspring can be produced if the eggs subjected to cool climate conditions are liquidated. Self-sacrifice is displayed by a species of cricket. The mother cricket lays many eggs and offers herself as the first meal to increase the probability of her babies'