

EDITORIAL

Ethics and eco-ethics

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'Why is there so little reference in *Marine Ecology Progress Series* to the staggering problems that modern humanity encounters? Have ecologists nothing to say about ethics?' These questions have been asked by people at the steering wheels into the future.

Of course, ecologists have, time and again, warned decision makers, journalists and the general public that there is something awfully wrong with the way modern industrial societies behave. Apparently, this has not been enough.

What we must do is this: document and explain the significance of ecological research with regard to ethics wherever the results bear directly on policymaking and public interests, and involve appropriate sectors of society accordingly. It is time to enlarge the classic anthropocentric concepts of ethics to include eco-ethics, i.e. to ask not only what is good or bad in human societies but also what is good or bad for the total system 'humanity plus nature'. Such a modern ethical concept weighs human behavior against its value for reconciling human needs with the needs of natural ecosystems—the cradle and basis of life on earth.

Prompted by the questions quoted above, this Editorial addresses some theological and philosophical views of ethics and then turns to ecological views, outlining the principal theses of eco-ethics.

Ethics in religion and philosophy

Ethics has been a major concern of religious people and philosophers for many centuries. Both have invested immense efforts in the examination and interpretation of human behavior, and they must be accorded great merit for developing the concepts and ideals of ethics that we have today. Theologians and philosophers have used the term 'ethics' practically synonymously with the term 'morals'¹ Both terms refer to human behavior held to be standard for the majority

of a given people. The standard reflects what is morally right or wrong, good or bad in inter-human relationships.

Theological considerations are based on the authority of revelation, philosophical considerations on the authority of reason. One leading school of philosophers has analyzed and formulated normative criteria for developing ethical concepts and rules; another, ethical principles and methods of formulating moral judgment of what is good or bad. Most theologians and philosophers assume that standards of global dimensions can be developed. However, certain traits of ethics have strong local roots (situation ethics), as do the people who created them.

Global standards should formulate basic principles, but leave space for religious and cultural variation. Some people insist that what they have regularly practiced successfully over long stretches of time is right and good, and hence moral. Can we accept different ethical standards? Why not, as long as they respect human dignity, rights and freedoms as defined by the United Nations. Ethics will always contain subjective components; it should remain open to debate and be subject to change with time—as everything else.

Being believers, religious people side with supernatural phenomena. Their God makes the decisions and formulates the rules. Believers are allowed to interpret the decisions and to discuss the rules, but not to disobey them. Philosophers have developed complicated, partially contradictory, systems and terms. They concentrate on theory and side with rational argumentation. The world of theologians consists mainly of extrapolations of their beliefs; the world of philosophers, of extrapolations of their thinkings.

Both theologians and philosophers have created anthropocentric and geocentric models of the world—models with insufficient relevance to the realities around us. *Homo sapiens* is not the center of the earth, and the earth is not the center of the universe. *H. sapiens* is one species among millions and part of the life process—just as a dolphin, a mouse or a virus. Earth is a planet among billions in our galaxy, and there are billions of such galaxies.

¹Historically, the term 'ethics' derives from the Greek 'ēthos', the term 'morals' from the Latin 'mores'

Ethics in ecology: eco-ethics

Life on earth evolved over billions of years, firmly integrated into the dynamics of ecosystems. No species, not even *Homo sapiens*, can live for itself. Ecosystems consist of non-living and living components. These connect in diverse, mostly complex ways. The living components react with and against each other, they utilize each other as sources of energy and matter, and they interact with, and modify, their non-living environments. Such are the basic realities of life on earth as we ecologists can grasp them. Principal elements of evolution, these realities provide the life process with drive and direction. What is good here, what bad? There are no such things in nature's original plan.

Life unfolds under the harsh grip of ecosystem laws: (1) Ruthless competition, exploitation and maximization of selfish advantages, transformation of foreign materials into own materials. (2) Integration into the flow patterns of energy and recirculating matter. (3) Maturation with time, diversification, self-regulation and building up of interspecific ties. (4) Merciless punishment of law breakers. This is the ancient world in which *Homo sapiens* was born, in which our species lived 99% of its time, and in which all its essential structures and functions formed. In each of our billions of cells we still carry the genetic programs devised for ecosystem members, for our ecosystem past.

What went wrong? Never before has a form of life disregarded ecosystem laws as much as modern humankind. Never before has a single species changed Planet Earth so ruthlessly and relentlessly and attained an ecological dominance of such outrageous dimensions. And never before has the discrepancy been so large between what we are doing and what we ought to be doing. In order to meet the extraordinary challenges modern humanity faces, we must enlarge the traditional concept of ethics to embrace not only *Homo sapiens*, but also environments and coexisting forms of life. The word proposed for this enlarged concept is 'eco-ethics', i.e. human thought and conduct oriented to what is right or wrong, beneficial or destructive for the total system '*Homo sapiens* and nature'.

Our dilemma is this: we were born in, and built for, a world from which we have, to a considerable extent, escaped. In this sense, we are runaways and law breakers who have become experts in bending or evading nature's rules for our own ends, and masters at replacing patterns of coexistence with patterns of dominance. We will be punished severely unless we establish a new balance between our modern ways and those of our ecosystem past—unless we re-establish compatibility between nature's metabolic patterns and those of the human population. This is the first thesis of eco-ethics.

'Environmental protection', as presently practiced, is a misleading and dangerous concept. Why? Because it protects the environment of nature's worst enemy. The result? Additional support for the already towering human dominance. We need a *new* concept of environmental protection. It must also seek to protect the environments of our fellow creatures. They cannot speak out for themselves. We must act on their behalf according to the best of our knowledge. Our societies and educational systems have to take this into account. They must obtain and teach ecological knowledge and ecological thinking. And they must insist on accepting human responsibility for other ecosystem components. This is the second thesis of eco-ethics.

Survival in our new world requires control of the animal in us. We cannot break ecosystem laws without devising new rules, designed to tame our ancient urges, desires and instincts. Based on nature's grand designs, we need to develop and to enforce new values, such as self-restriction, modesty, responsibility, honesty; to formulate aims, such as peace, freedom, dignity, justice, human rights; to further ideals, such as virtue, altruism, help, love. Here extends ground common with moral theology and moral philosophy. This is the third thesis of eco-ethics.

Nature evolves through harsh conflicts. Human societies must avoid harsh conflicts. To keep our complex societies intact requires the wisdom of conflict reduction and the will to reconcile economy and ecology. Both are different sides of one coin, and both must be measured against moral principles. In order to achieve that, we have to define what is beneficial, good, and what is detrimental, bad, for the development of our economic systems and for their ecological fundamentals. And we have to decide how we can best enhance such good and reduce such bad. This is the fourth thesis of eco-ethics.

In a human world of wars, hunger, poverty, disease and misery for millions of people, is there enough will-power, time and energy for responding to the challenges outlined above? If the answer is 'no', *Homo sapiens* will disappear from the stage of life in the not-too-distant future. This is the fifth thesis of eco-ethics.

Originally foreign to life on earth, ethics—and especially eco-ethics—has become the most important single prerequisite for protecting life on earth from the ecosystem runaway *Homo sapiens*, for maximizing the life span of our species, and for avoiding a catastrophe of gigantic dimensions.

Consequences

The problems and facts outlined above are of global dimensions. Each one of us can contribute only a very

small fraction of what must be done. The contribution of *Marine Ecology Progress Series* is to open its pages to papers concerned with marine ecological research immediately relevant to eco-ethics. Other contributions are the Book Series 'Excellence in Ecology', published by our international Ecology Institute, a new series of special novels, published by our 'Top Books', and the 'Eco-Ethics Task Force'², founded 1996 by myself (Chairman) and Academician Gennady Polikarpov (Vice-Chairman).

I realize that the inclusion of eco-ethics in the topics covered by MEPS may create conflicts. MEPS is and will continue to be a journal devoted to publishing ecological research results; we do not want excessive philosophizing. Let us experiment. And let us be patient. It will take time to develop a pattern that fits into the con-

cept of our journal, and authors need time to consider how to respond to the new possibility of disseminating ethical views related to their research.

²Aims: (1) Assessment, classification and generalization of eco-ethical principles and their ecological substantiation. (2) Implementing these principles by addressing (a) influential decision-makers, (b) the young generation, especially students, (c) the general public. At present, the Eco-Ethics Task Force consists of a small number of highly competent ecologists from Europe and Australia. We invite additional members. Please address correspondence to Academician Prof. Gennady Polikarpov, Institute of Biology of the South Seas, National Academy of Sciences, 2, Nahimov Prospect, Sebastopol, 335011 Ukraine (tel: +380 692 526629/524827; fax: +380 692 453578/592813; e-mail: ggp@iur.sebastopol.ua)