SYSTEMIC HOLISM : A STUDY OF ROLSTON'S ENVIRONMENTAL ETHICS

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Abstract : As the title suggests, we have in this paper made a critical exposition of the holistic environmental ethics of Holmes Rolston-III, a biologist-turned-philosopher. Rolston raises his voice against traditional anthropocentric, speciesist theory of value, which finds no independent value in non-human nature. Against this nature-view Rolston contends that the world, that world that humans are able to value, is not value-free; to the contrary, it is *the genesis* of value. And human beings are sometimes morally required to put values discovered in nature above their own preferences or self-interests. Rolston argues for nature's *systemic value*, which focuses upon the creative capacities of the earth's ecosystems to generate intrinsic and instrumental values over evolutionary time. He draws our attention to the fact that non-sentient organisms are the *holders of value*, though *not beholders*. We have appreciated Rolston's account of values in animals, in organisms, in species, and in eco-systems. In the concluding part we have examined the so-called naturalistic fallacy in favour of Rolston's environmentalism of systemic holism.
Key-words: intrinsic value, instrumental value, systemic value, objective good, ecological conscience, value anthropocentrism, ecological holism and Land Ethic

Going beyond individualistic sentientism propounded by Jeremy Bentham, and advocated by Peter Singer, Tom Regan *et al*, biologist-turned-philosopher Holmes Rolston III strongly upholds an environmental ethics of "Systemic Holism", according to which ecological wholes, like species, ecosystems, etc. merit moral respect, in addition to that owed to the individual members of species. He introduces the notion of 'objective good', and says that all living things have objective 'good-of-their-own-kind'. Plants may not have a subjective life, he contends, like a higher animal or a human being, but they have objective lives, and when we utter 'Let flowers live!' we indirectly refer to an evaluative system that conserves good of its own kind and, in the absence of evidence to the contrary, is really good. In what follows we shall try to understand Rolston's environmental ethics of Systemic Holism.

To start with, Rolston was totally dissatisfied with the traditional concept of nature and with people's mistreatment of nature itself. He especially dislikes the common insistence that nature is value-free. In his "Challenges in Environmental Ethics" he remarks: "Ethicists had settled on at least one conclusion...: that the moral has nothing to do with the natural."[1] But ethics, he reminds us, is, in the end, just transcending our own sector of self-interests/class-interests! He comes to realize the need for an environmental philosophy that could undergird a richer appreciation

of life on the earth. He calls for an 'ecological conscience', and insists that philosophers have to reckon not just with the *polis,* culture, but also with the *anima,* inspirited matter, by which they become philosophers. He writes: "Culture is good thing for humans, often a bad thing for animals."[2] A significant part of our meaning of life lies in its naturalness. We need to apologize for forgetting this fact. No one can really become a philosopher, loving wisdom, without caring for these sources in which we live, move, and have our being, the community of life on the earth. Rolston reminds us:"The unexamined life is not worth-living; life in an unexamined world is not worthy living either. We miss too much of value."[3]

Rolston is dead against the hardcore naturalists and resolute subjectivists. According to the naturalists, non-human nature is value-free, nothing but a resource for the satisfaction of human desires, abetted by the skills of science and technology. Value is, as if, entirely in the eye of the beholder, assigned by a preference of the valuer. Non-sensed value is thus regarded as nonsense. The argument runs like this: there are no thoughts without a thinker, no percept without a perceiver, no deeds without a doer, no targets without an aimer, so there is no value without a valuer! Such resolute subjectivists can hardly be defeated by argument. That theirs is a retreat to definition is difficult to expose, because they seem to cling closely to inner experience. Actually, they report on how values always excite us. They are giving, at the same time, a stipulative definition, that is, how they choose to use the word "value."

Against this nature-view Rolston contends that the world, that world that humans are able to value, is not value-free; to the contrary, it is *the genesis* of value, about as near to ultimacy as we can come. We first here recall the dissenting voices with whom Rolston has to fight: Frederick E. Smith, for example, argues that the absence of 'goal' in the world systems is what makes the concept of Mother Nature 'dangerous'. As nothing is guiding the ship, we must take control of these aimless ecosystems; otherwise we shall perish. And this is more a matter of prudence than of morality! William James, too, called us to the 'moral equivalent of war' in our resistance to a 'moral nature': "We are free in our dealing with her several parts to obey or to destroy, and to follow no law but that of prudence in coming to terms with such of her particular features as will help us to our private ends."[4] J.S Mill also supports this distorted view, and reiterated: "Conformity to nature has no connection whatever with right and wrong."[5] Again, Windelband says, "Value is never found in the object itself as a property. It consists in a relation to an appreciating mind...Take away will and feeling and there is no such thing as value."[6] The same view is echoed by Norton who declares:"Only humans are valuing agents."[7]

Actually we find here two camps: one setting human conducts morally and valuationally

in essential discontinuity with our environment; the other finds continuity. Rolston clearly is on the continuity camp, who dares to declare that the world/nature/environment is just the extension of our body. He writes: "The world is my body.[8] According to him, the complex life of humans is rather a product of, and is underlain by, environmental maximum *noetic* development, the humans require an environmental exuberance. He avers that there is excitement in the beholder, but what is valued is what is beheld, what is there in the nature. According to Rolston, the ''classical" value theory is anthopocentric, or at least, anthropogenic. Rolston describes this as "value apartheid"—the unjustifiable *axiological* separation of humans from nature. This is inconsistent, when we affirm that humans are not metaphysically different from nature, but axiologically different.

If we look at his career as environmentalist, we will find that Rolston's article "Is There an Ecological Ethic?" published in1975 helped to jump-start interest in environmental ethics in academic philosophy. In 1979 he helped to found the first journal in this field, *Environmental Ethics,* and remained an associate editor upto 2008. During this time he was developing his own non-anthropocentric environmental ethics, first in articles later collected in *Philosophy Gone Wild* (1986) and then in a systematic presentation in the book *Environmental Ethics* (1988). Rolston is best known for his sustained, ingenious, and uncompromising advocacy of the thesis that values inhere objectively in nature. He holds that individual organisms, biological species, and ecosystems all possess intrinsic values—values based on what they themselves are—in addition to their instrumental values to human beings. These intrinsic values ground duties to treat nature with respect and use it with restraint. Rolston insists that human beings are sometimes morally required to put values discovered in nature above their own preferences or self-interest. In his article "Feeding People *versus* Saving Nature?" he comes out to assert that sometimes we ought to save nature even if this results in some people going hungry. Rolston argues for nature's "systemic value", which focuses upon the creative capacities of the earth's ecosystems to generate intrinsic and instrumental values over evolutionary time. His goal is to present a comprehensive and accurate account of the way in which nature ought to be valued. Rolston's value arguments are built upon detailed, scientifically informed descriptions and an appreciation of the natural entities in question. They have been so influential that casual observers often define environmental ethics as the position that nature has intrinsic value, or equate environmental ethics with non-anthropocentrism. Rolston, however, finds traditional ethical outlooks to be inadequate, either as guides to practice or as complements to a modern scientifically informed worldview. Rolston has also worked hard to specify what respect for nature might mean for policy issues, such as, protected wilderness areas management, endangered species and biodiversity conservation, wilderness preservation, sustainable

development, corporate environmental responsibility and population policy.

In fact, Rolston presents us with a philosophically sophisticated and defensible case for a value-centered ecological ethics, one which derives ethical conclusions from descriptive premises. Rolston clearly states that intrinsic values *objectively* exist at the species, biotic community, and individual levels in nature and that these values impose on humans certain direct obligations to nonhuman entities, such as species and ecosystems. These obligations are separate from, and sometimes in conflict with, those based on the instrumental value of nature, which may motivate humans to protect the environment for their own benefit.

As Rolston separately accounts for the values in animals, in organisms, in species, in eco-systems, in nature, so we also like to enquire into his views of values one by one as follows.

Valuable Animals : To say, the best and easiest breakthrough in traditional ethics is made by confronting higher animals, making room for interhuman ethics transcending species-boundary. Animals defend their lives; they have a good of their own, suffer pains and pleasures like ourselves. Human moral concern should at least cross over into the domain of animal experience. A mother free-tail bat, e.g., catches many insects each hour on the wing and return to find and care her own young. That gives evidence of bat valuing. She values the insects and the pup. Now, it seems absurd to say that there are no valuers until humans arrive. An animal values its own life for what it is in itself intrinsically without further contributory reference. Obviously, these values are non-anthropogenic.

But if we allow only animals for values, then the promised environmental ethics will degenerate into a mammal ethics. We certainly need an ethic for animals, but that is only one level of concern in a comprehensive environmental ethics. Still, until recently, the scientific, humanistic centuries since the so-called Enlightenment have not been sensitive for animals, owing to the Cartesian legacy. Animals were seen as mindless, living matter; biology has been understood mechanistically. Even psychology, rather than defending animal experience, has been totally behavioristic. Philosophy has protested little; on the contrary, has been concerned to locate values in human experiences, has dis-spirited and devalued nature. Across several centuries of hard science and anthropocentric, speciesist ethics, there has been little compassion for animals.

Animals enjoy psychological lives, subjective experiences, get felt interests satisfied, intrinsic values that count morally. Even the question, Can they suffer? is not as simple as Bentham thought. What we *ought* to do depends on what *is*. The *is* of nature differs significantly from the *is* of culture, even when similar suffering is present in both. But the pains, pleasures, interests, and

welfare of individual animals are only one of the considerations in a more complex environmental ethic that cannot be reached by conferring rights on them or by a hedonist calculus, however far extended. We have to travel further into a more biologically based ethics.

Valuable Organisms : To say, if we are to respect all forms of life, we have still another boundary to cross, from zoology to botany, from sentient to insentient life. But the problem is, a plant is not a subject, neither is it an inanimate object, like a stone. Plants are unified entities of the botanical variety, though not of zoological kind. (It may here be noted that botanic life has no locomotion, no centralized nervous system, irritability, etc. like zoological animals.) That means they are not unitary organism highly integrated with central neural control. But, it is to be noted, they are modular organism, with a meristem that can repeatedly and indefinitely produce new vegetative modules, additional stem nodes and leaves when there is available space and resources, as well as new reproductive modules, fruits and seed. A plant, sentient or not, is a spontaneous self-maintaining system, sustaining and reproducing itself, executing its program code in its DNA, which is prescriptive.[9] This good is of its own kind. In this context we may quote Rolston: "Man is neither the measurer nor the measure of things; value is not anthropogenic, it is biogenic."[10]

Some may object, as plants do not feel anything, how can they be able to value? Traditional philosophers would say that plants have no value, as there is no felt experience choosing from alternatives, no preference being exercised. Rolston, on the contrary, argues that a valuer is an entity that defends value. Insentient organisms are the *holders of value*, though *not beholders*. Even those who think that all the tree's intrinsic value has to be conferred by humans still think that matters can be better or worse for the tree, and this amounts to saying that the tree on its own has its goods and harms. To say, unlike inorganic things, living organisms have 'vitality'. In contrast to inorganic things, every living organism has four features: (i) each individual has an identity; (ii) it defends itself; (iii) it functions for an end *(telos);* and (iv) it has within itself, in its DNA, information that is passed on, or communicated, to others *via* reproduction.

Valuable Species :_We value species of swans and bears as, e.g. in Yellowstone decades after decades. But, the question is: how can a species be value-able all by itself? How can we value some member of an endangered species? A species has no self. There is no analogue to the nervous hook-ups or circularity flows that characterize the organism. But in singular somatic identity conserved is the only process that is valuable. A species, Rolston reminds us, is another level of biological identity, re-asserts genetically over time. Identity need not attach solely to the

centred or modular organism; it can also persist as a discrete pattern over time.

The genetic material, in which the *telos* is coded, is as evidently the property of the species as of the individuals through which it passes. Value is something dynamic to the specific form of life. The species is thus a bigger event than the individual with its interests or sentience. Rolston explains, "The individual represents [re-presents] a species in each new generation. It is token of a type, and the type is more important than the token."[11] Event can be good for the well-being of the species, considered collectively, although they can be harmful, if considered as distributed to individuals. When a wolf is tearing an elk, the individual elk is in distress, but the species *Cervus canndensis* is in no distress. The species is being improved, shown by the fact that wolves will subsequently find elk harder to catch. If the predators are removed and the carrying capacity crosses the limit, wildlife managers may have to benefit a species by culling its member individuals. Anyhow, value resides in species, in its dynamic succession. Not only that, even species is a kind of valuer. The genome which it imbibes is a kind of map coding the species; the individual is an instance incarnating it.[12]

A consideration of species is revealing and challenging, as it offers a biologically based counterexample to the focus on individuals—typically sentient and usually persons—so characteristic in classical ethics. In an evolutionary ecosystem, it is not mere individuality that counts, but the species is also significant because it is a dynamic life-form maintained over time. The individual re-presents a species in each new generation. It is just a token of a type which counts more.

As a species lacks moral agency, reflective self-awareness, sentience, or organic individuality, traditional ethic will be tempted to say that specific-level processes cannot count morally. Duties must attach to singular lives, most evidently those with a self, or some analogue to this. In an individual organism, the organs report to a center; the good of a whole is defended. The members of a species report to no center. A species has no self. It is not a bounded singular, no nervous hookups or circulatory flows that characterize the organism. But, argues Rolston, singularity, centeredness, selfhood, individuality, are not the only processes to which duty attaches. A more radical ethics knows that having a biological identity re-asserted genetically over time is as true of the species as of the individual. The species line is the *vital* living system, the whole, of which individual organisms are the essential parts. The species too has its integrity, its individuality, its "right to life" (if we use the rhetoric of rights!); and it is more important to protect this vitality than to protect individual integrity. The right to life, biologically speaking, is an adaptive fit that is right for life, that survives over millennia, and this generates at least a presumption that species in niche are good right where they are, and therefore that it is right for humans to let them be, to let

them evolve.

A shutdown of the life stream is obviously the most destructive event possible. The wrong that humans are now doing, or allowing to happen through carelessness, is stopping the historical vitality of life, the flow of natural kinds. Every extinction is an incremental decay in this stopping life, no small thing. Every extinction is a kind of superkilling. It kills forms (*species*), beyond individuals. It kills "essences" beyond "existences," the "soul" as well as the "body." It kills collectively, not just distributively. It kills birth as well as death. Afterward nothing of that kind either lives or dies.

Valuable Ecosystems: Humans can value whatever they wish in nature, and this can, according to Rolston, include ecosystems, and they can these intrinsically valuable. But the question is, can ecosystems be valuable all by themselves? An ecosystem has no brain, no genome, no skin, no self-identification, no *telos*, no unified programme. It does not defend itself against injury or death. It is not irritable. The parts (fox, deer etc.) are more complex than the wholes (forest, grassland etc.). It is too low a level of organization to be direct focus of concern.

According to Rolston, this is to misunderstand ecosystems that they are selective systems, as surely as organisms are selective systems. The system selects over the long ranges for individuality, for diversity, for adapted fitness, for quality and quantity of life. Organisms defend only then own selves or kinds, but systems spin a bigger story. Ecosystems have thus the creative capacities of the earth's ecosystems to generate intrinsic and instrumental values over evolutionary time. Rolston upholds that ecosystems, as the generators and perpetuator of life, have a kind of value which he describes as 'systemic value.'[13]

Classical, anthropocentric ethics finds ecosystems an unfamiliar territory. It is difficult to get the biology right, and, superimposed on the biology, to get the ethics right. Fortunately, it is evident that human welfare depends on ecosystemic support, and in this sense all our legislation about clean air, clean water, soil conservation, national and state forest policy, pollution controls, renewable resources and so forth, is concerned about ecosystem level processes. The ecologist finds that ecosystems are objectively satisfactory communities in the sense that organismic needs are sufficiently met for species long to survive, and the critical ethicist finds (in a subjective judgment matching the objective process) that such ecosystems are satisfactory communities to which to attach duty. Further, humans find much of value preserving wild ecosystems and our wilderness and park system is impressive.

Valuable Earth : The Earth is the only biosphere, the only planet with an ecology. The only place able to produce vitality long before humans came. Anyhow, valuing the whole Earth is unfamiliar and so needs philosophical analysis.

What we really value is the life, not the Earth, except as instrumental to life. We generally suppose that we do not have duties to rocks, air, ocean, soil on the Earth; we have duties only to people, or at most living organisms. We can, if we continue being anthropocentrist, say that it is all valueless except as our human resource. But this is not a systemic view of what is going on. An ecological field-worker finds intrinsic or inherent value in the Earth and this discovery would generate a global sense of obligation.

We will not value the Earth objectively until we appreciate this marvelous natural history. This really is a superb planet, the most valuable entity of all, because it is the entity able to produce all the Earthbound values. It is the place able to produce values prior to the human arrival, and even now valuable antecedently to the human uses of it. It seems parochial to say that humans' part alone in the drama establishes all its worth. The Earth could be the ultimate object of duty, short of God, if He exists.

Valuable Nature : As already noted, William James thought that utterly valuable world is transfigured as a gift of the human coming. According to this old paradigm, there is no value without an experiencer, just as there is no thought without a thinker. Valuing is taken to be some preferring felt by human individuals. But there can be law without a lawyer, history without a historian, and so value without a valuer. And thus Nature has intrinsic value. We should keep in mind that the axiological scales we construct do not constitute the value, any more than the scientific scales we erect create what we thereby measure.

The ecological mood recalls us to a wisdom of relatedness, of our necessary linkage to a biological communities, to an affirmation of our exceeding prudence and pragmatism, human alignment with ecological law has become the great commandment. Ecology is science indeed, but, if we reflect on its motivation, we would see that it has in its core an 'ethical' component. It is the ultimate science that synthesizes even the arts and the humanities, its greater and overriding wisdom is universal.

Let us here stop for a while to understand the sense in which the term 'Nature' is understood. In general, we think, Nature is whatever is, all in sum, and in that universal sense the word is quite unmanageable. Even the sense of the physical universe, going back to the Greek root *physis,* is too broad and too simple. We may, however, reach the meaning if we refer to our

complex earthen eco-sphere—a biosphere resting on physical planetary circulations. Again, Nature is, most broadly, whatever obeys natural laws, and that also includes astronomical nature. Used in this way, the natural word has a contrast only in the supernatural, if there is any. Our typical use of the word 'nature' retains the notion of 'a system giving birth to life' [(the Latin root ''natus"/ the Greek root ''physis' (physical universe)], but, obviously, we do not follow just physio-chemical dead nature. What is invariably meant features that vital evolutionary or ecological movement we often capitalize as 'Nature' and sometimes personify as 'Mother Nature'. This Nature has intrinsic value and we must follow an eco-ethic to show respect to this value.

But by 'nature', Rolston generally means *non-human* nature. He carefully distinguishes 'nature' and 'culture'. Culture is an artifact made possible by human self-awareness and thoughtfulness, which are found to such an advanced degree in no other species, and which make possible the acquisition and transfer of knowledge, information, science, technology, art, and a host of other human achievements. In contrast to 'deliberative' culture, nature is 'spontaneous' and 'non-reflective'. Natural processes are law-like, orderly though also probabilistic, and open to historical novelty, as evidenced in the creativity in evolving ecosystems. Natural selection, combining with genetics, results in the genesis of value.

Rolston acknowledges that humans are in nature and part of nature in many important respects. The biology of our bodies, for instance, is fully natural. He often says that humans (and human culture) 'emerged' out of nature. For Rolston, 'wilderness' is a synonym for the environment of nature wherever it is free of human interventions. Wilderness, rural culture and urban culture make up the present world's three 'environments', each having its own particular intrinsic goods. Understanding Rolston's metaphysical commitments is essential to understanding his ethic. His explicit commitments are deeply biological and evolutionary. Yet, he parts company with contemporary theoretical evolution when he denies that nature operates by 'nothing but chance'.

Anyhow, if we reflect on what Rolston says here and there, we will find that five concepts frequently recur throughout his writings:

(1) the intrinsic value of nature, which value is non-anthropocentric and even anti-anthropocentric since it is independent of and apart from humankind;

(2) ecological-systemic holism;

(3) the derivation of duties to nature from the intrinsic value of nature, which logically entails the denial of the naturalistic/is-ought fallacy;

(4) the intrinsic value of species as forms, or groupings, of life; and

(5) biocentrism, that is, the intrinsic value of and derivative duty to respect every individual living

organism.

Central to Rolston's theory of environmental ethics are, as we have seen, the concepts 'intrinsic value', 'systemic value' and 'holism'. Aldo Leopold proposed holism under the rubrics 'community' and 'land ethic'. Holism is an essential concept in ecology, and has become a key component in every contemporary theory of environmental ethics. In Rolston's theory, ecological wholes are intrinsically valuable. His ethic is explicitly an ethic of duties, duties he derives from intrinsic value.

Some commentator has opined that Rolston's philosophy, in addition to being deeply biological, is also deeply theistic. The ultimate explanation for the origin, order and historical novelty in nature is God. Rolston's denial of chance is consistent with his Organic Principle, which is the assertion that every individual organism, from the simplest cell to the most complex multi-cellular organism, is intrinsically valuable and, therefore, worthy of appropriate respect.

This theistic turn has been an object of criticism by them who takes the *Genesis* story at the face-value. Theologians, of course, replied that appropriate dominion requires stewardship and care. True, there is a sense of dominion that means "Earth-tyrant", the humans subduing nature in a repressive sense, as conqueror does his enemy. Rolston seeks the more positive sense of dominion. Even within the military metaphor, a general has command over his own soldiers, about whom presumably he cares. Such an "Earth-commander" finds the interests of the commander and the commanded inseparably intertwined. Obviously, there is something ungodly about an ethic by which the late coming humans arrogantly regards the welfare of their own species as absolute, with the welfare of all the other five million species sacrificed to that.

On the Charge of Naturalist Fallacy: A large number of moral philosophers see in Rolston the spectre of naturalistic fallacy. Rolston finds what biologically *is* in nature and concludes that something valuable is there, something which we *ought* to protect. Now, there is clear implication in this view from descriptive premises to axiological or ethical conclusions, and so there is naturalistic fallacy. Rolston explains, in the wilderness, hearing a thrush singing to defend its territory, may even be singing because it enjoyed it, seeing a coyote pounce on a ground squirrel, spooking the deer who fled fearing that we are hunter, searching for signs of spring after winter, even peering through a hand lens at those minuscule mosses, they had to be wrong.He goes on to add that we should think of a resurgent naturalistic ethics. We must learn that nature includes an intrinsic value system. For some observers at least, the sharp *is/ought* dichotomy is gone; the values seem to be there as soon as the facts are fully in, and both alike are properties of the system. But does it not

rather seem that facts here are value-facts, when we are describing what benefits the tree? Such value is pretty much fact of the matter. If we refuse to recognise such values being objectively there, have we committed some fallacy? Rather, the danger is the way round. We commit the subjectivist fallacy if we think all values lie in subjective experience, and worse still, the anthropocentrist fallacy if we think all values lie in human options or preference.

Let us stop to make a survey of the issue. It is generally held that naturalism is antithetical to ethics. G.E.Moore pointed out at the very beginning of 20th century that this destroys the very possibility of any ethics whatever. As Rolston's systemic holism is based on natural facts of ecology, the old dichotomy of *is* and *ought* or *fact* and *value* comes to the fore. The actual problem is of deriving *value* from *fact*: as a value is not derivable from facts, how can we have the deep moral value from ecology that studies merely facts? Is not the step to *value* from *fact* a step into the trap of 'naturalistic fallacy'? The ethics of systemic holism contends that it is morally wrong to destroy the richness and diversity of life-forms, and this moral norm (an *ought*) is here being derived from the facts of ecology. Are we not then committing the so called naturalistic fallacy?

One answer that is given from some quarters is that human beings have a positive attitude to the society and the ecosystems within which they live and grow. Contemporary ecology has demonstrated that the Nature is the host of communities to which we also belong. We human species like to survive meaningfully, and so feel obliged to preserve the ecosphere. Hence, the human response (an *ought*) is founded in biophysical realisation (an *is*) and moral view. Here the leap is relatively simple. This is because the psychological fact (man lives in a community and that he wants to survive) is derived of itself and not from the ecological fact leading to the problem.

Another thinker Edward Goldsmith has expressed his view against this so called dichotomy of is/ought by arguing that the *is* is drawn substantially from the positivistic paradigm with the insistence upon objective, non-intrinsic facts. The problem appears less significant when the valuer moves outside the paradigm within which the *is* is located, e.g., when the self is located in the larger biosphere—as to project the biosphere is to protect the self.[14] For just as the new science of ecology directs valuers to abandon the sharp dichotomy between the singular individual and the surrounding world, so too the so called distinction between valuing subjects and value-free objects should be abandoned.

Another way to diffuse the charge of naturalistic fallacy is to recognise that Nature has inherent value independent of human concerns. This independent value (*ought*) is found in the physical existence (*is*), and is of the natural object which is trying to seek a good of its own. Of

course, it is difficult to say exactly where the natural facts leave off and the natural values appear, but the general hurdle has been cleared. Accordingly, the percept that is right to protect the environment because of its independent inherent value commits no fallacy, as no *value* (inherent value is sometimes denied as value *per se*, as much as it is axiomatic) is derived from a fact of ecology.[15]

Some thinkers have spoken of non-naturalistic theory of intrinsic value, and suggested that the Nature has intrinsic value independently of the human subject. But, such a theory of value contradicts the very conception of it as part of a single whole. If non-human Nature has objective value and worth, then the human and the Nature are separate! J.B.Callicott holds that, notwithstanding the objection of naturalistic fallacy, which is essentially a logical problem for formal ethics, "...there appears very often to be at least a strongly compelling psychological connection between the way the world is imagined or conceived and what state of things is held to be good or bad, what ways of behaving are right or wrong, and what responsibilities and obligations we, as moral agents, acknowledge."[16]

Anyhow, for Rolston, values exist in the world objectively apart from human choice or human or animal consciousness. Rolston presses for a "naturalization" of values—a biologically based account of values. Values are pervasively embodied in the nonhuman evolutionary world. Insentient organisms too are holders of value, though not beholders of values.[17]

Notes and References

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