

THE CONCEPT OF “LIFE COMMUNITY” IN INFORMATION ECOLOGICAL ETHICS

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Abstract: *Ecosystem is a life community composed of organisms and the natural environment they live in. Philosophy of information puts forward the ontological view of the dual existence of matter and information, and the evolution view of the dual forms of evolution in material and information. The process must be the evolution or degradation in material form and information form at the same time. The essence of life community is "life." A natural system that cannot sustain life should not be called a life community or an ecosystem. Thus, an ecosystem must be a natural system that can sustain life and its prosperity. Although we may talk about the concept of value from the perspectives of existence and universe, we can only talk about ethics, good and evil in the frame of life community. And we do not bear ethical responsibility for the entire universe.*

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Introduction

With the development of complexity science, human understanding of the world jumped out of the limitations of anthropocentrism and began to rediscover the world from the views of system and evolution. The term "ecology" was created by the German zoologist Haeckel Ernst in 1866. [1] He defined ecology as "the science of studying the relationship between organisms and the environment." The prefix “eco-” stems from ancient Greek translation of “home” or “our environment.” Combined with system thoughts, we often use “ecosystem”

to refer to it. Ecosystem is a life community composed of organisms and their natural environment.

1. Analysis of Ecology and Life Community from the Perspective of Evolution

If ecology is about the study of life community, then life community is the core object in the study of information ecological ethics. Nowadays, it is generally believed in ecological research that the interaction among various elements in the ecosystem has laid the foundation for the occurrence of biological evolution, which makes ecology the core part of biology. Theodosius Dobzhansky once said, "Nothing in biology makes sense except in the light of evolution." [2]

While Leigh maiorana van Valen mentioned that "evolution is the control of development by ecology." [3] Philosophy of information puts forward the ontological view of dual existence of matter and information, and the evolution view of the dual forms of evolution in material and information. Philosophy of information believes that the evolution of system is accompanied by both evolution and degradation. When an object changes in interaction, that is, in the process of evolution, its material structure and information content will change at the same time. That makes the evolution of things and world caused by this change dual. The process of either evolutionary evolution or degenerative evolution must be in both material form and information form. [4]

The information ecological ethics we established is based on Chinese Philosophy of information, ecology and ecological ethics in western. Firstly, we need to define the concept of "life community" in information ecological ethics. Life community refers to the whole ecosystem.

First of all, although life community is a part of nature, we cannot simply equate life community with nature in a broad sense. The scope of life community is much limited, compared with nature in a broad sense. Nature in a broad sense can refer to the whole universe, and even can be equivalent to the concept of the world of existence. While life community refers to the whole ecosystem on our earth (there may be other ecosystems on other planets, but we do not know about them yet), which is a unified whole composed of organisms and

environment. The essence of life community is "life." A natural system that cannot sustain life should not be called a life community or an ecosystem. Thus, an ecosystem must be a natural system that can sustain life and its prosperity.

Secondly, the life community we are talking about now refers to the current ecosystem. If we look at the life community from the perspective of evolution, we will figure out that the earth's ecosystem had been evolving into the current ecosystem step by step, and the life community has been changing with the influence of various factors such as climate, solar illumination intensity and so on. Life has existed on earth long ago, while human is a species that appeared in the late stage of evolution. Therefore, ecosystem or life community should appear before human beings and be above human beings. It is the basis for human birth and survival.

Not all ecosystems in the process of evolution can meet human survival need, while the current ecosystem is just suitable for our human. So our hope for certain is that it will not change too much. Excessive development will only bring disaster to us and other lives. So the life community specifically refers to the whole ecosystem on the earth.

Think about that: "does the idea of life community still start from human beings?"

First of all, it is impossible for us to conceive a life community without people. There is no real "wilderness" which can escape from human influence in the earth's ecosystem. Not to mention the destruction of the ozone layer, the pollution of various refractory garbage and synthetic chemicals ---- the consequence of today's global warming declares that it has global ecological impact. According to the World Meteorological Organization (WMO) global climate report in 2020, 2020 will be warmer than years from 1850 to 1900 by $(1.2 \pm 0.1) ^\circ\text{C}$, which is one of the three warmest years in its observation records (the other two are 2016 and 2019). Due to the use of massive fossil fuels since the human industrial revolution, the concentration of carbon dioxide in the atmosphere in 2020 will exceed 410×10^{-6} , which is 148% of that in 1750. [5] The impact caused by human beings is global, and it is the impact on

the whole life community. Any element in life community cannot escape from that.

Secondly, it is meaningless to talk about the ethical issues of information ecology in life community without consideration of human beings. If there are no people, all ethical theories will lose the significance of existence. As mentioned above, only human beings have the ability of conducting ethical behaviors. We cannot ask other elements in the life community to have ethical responsibility and ethical behavior. Without human beings, there is no need for ethical thoughts. Therefore, there must be people in life community as ethical actors. Information ecological ethics is thus designed to regulate the behaviors of people as moral subjects.

But we cannot say that the idea of life community must start from human beings. The previous part mentions that we should jump out of the confinement of traditional anthropocentrism, look at the relationship and interaction between human and life community with thoughts of complexity, system and information, and rethink what is life or human from the perspective of life community. Only in this way can we truly build new ethical thoughts for the common prosperity of human and life communities. In the past, the western ecological ethics thought did not really jump out of the limitations of anthropocentrism. Or it went too far so that completely abandoned the key position of human in ethics and the conclusion appeared extremely weak. Therefore, we need to find the corresponding theoretical basis or principles for the information ecological ethics based on the idea of life community.

2. Life Community and the Axiology of Information

Luciano Floridi proposes a set of ethics ideas based on "information," the is, the macro information ethics. He tries to interpret the whole natural physical world and all things in it as "information," and hopes to explore the essence of the universe from the perspective of information. He believes that the mission of philosophy of information is to explore whether the universe is fundamentally formed by information, and whether the evolution of the universe itself can be explained by information dynamics. [6]

Floridi's attempt to extend ethics to the whole nature is worth to be supported, but this idea is open to discussion. First of all, ethics is based on the core concepts of value, good and evil. How can we define and understand these three concepts at the level of the whole generalized nature and universe?

Floridi directly applied the concept of intrinsic value in western ecological ethics to all information bodies. He believes that the information body can be regarded as a moral actor, and the information body can have intrinsic moral value so that should be respected. [7] Therefore, about the concept of value, Floridi merely changes the natural subject in the intrinsic value theory into the information body.

Floridi further puts forward the concept of "infosphere," which can be understood as the external environment of the information body or information system. [8] Describing the four basic ethical principles of the information circle, he follows the traditional idea that "information is negative entropy." [9] He believed that the information circle should eliminate the existing entropy and prevent the generation of new entropy. Unnecessary entropy increase is evil because entropy increase will lead to the disorder of the system; On the contrary, any act of maintaining and promoting the increase of information is good because the increase of information contributes to the stability of the system and makes the system more orderly. [9]

Combining information (as negative entropy) with order, Floridi directly unifies entropy, entropy increase, disorder and disorderliness with evil, and unifies information, entropy decrease, order and orderliness with good, so as to build the foundation of his information ethics.

According to the theory of good and evil in Floridi's information ethics, the degree of good or evil of the living or inanimate can be directly reflected by the degree of its structure (the degree of order); On the dynamic side, the degree of its transformation to evil or good can be directly reflected by the degree of its entropy increase or decrease. [10] Therefore, according to this theory, it can be concluded that the entropy increase of the universe is evil, and the environment with local entropy decrease is good. A strong idea of natural teleology emanates from this definition of good and evil. And it can be deduced that

nature, the universe or the existence have evil essence and the tendency of self destruction.

Wu Kun criticizes Floridi's thought of good and evil. He believes that a reasonable ethical principle should allow seemingly opposing factors to be compatible with one another and maintain a reasonable tension between these opposing factors, such as information and entropy, order and disorder, integrity and reducibility, certainty and uncertainty, determinism and non-determinism, purposiveness and randomness, inevitability and contingency. [11]

There are three main misunderstandings in his ethical theory. Firstly, the concept of information is simply reduced to negative entropy, and it is one-sided to explain information only by the concept of entropy; Secondly, it is one-sided and arbitrary to describe the concepts of good and evil only by entropy decrease and entropy increase; finally, his attempt to impose the concepts of good and evil on nature in a broad sense is a restoration of natural teleology.

Wu Kun's philosophy of information solved the problem of natural value. On the basis of the dual existence and evolution of information and matter, Wu Kun puts forward a theory of nature value and redefines the concept of value: "value is the effect achieved by things (matter, information, including the subjective form of information consciousness) through internal or external interactions." This philosophical definition of value really extends the concept of value to the field of existence, that is, the whole world. Such a definition of value can completely get rid of the debate to distinguish between the so-called intrinsic value and instrumental value in the western world. And it also gets rid of subjective value evaluation and endows existence with value. It can be used as the theoretical basis of the axiology of information ecology. [12]

However, the concept of nature in the axiology of philosophy of information is similar to the concept of existence as well as the concept of nature mentioned by Floridi. It is a broad definition of nature. Information ecological ethics is based on the ecological self-organization system, which is an ethical theory starting from the life community. Therefore, we can not directly use the natural ontology in the philosophy of information and should avoid falling into the misunderstanding like Floridi. The nature mentioned in the information

ecological ethics is a kind of nature in a narrow sense, which only refers to the natural environment in the earth ecosystem, that is, the life community itself.

Conclusion

In the information ecological ethics, we understand the universe the earth ecosystem staying in as the external environment of life community. Life community is an open and relatively independent self-organizing complex system. Although we may talk about the concept of value from the perspectives of existence and universe, we can only talk about ethics, good and evil in the frame of life community. In essence, there is no purpose and good and evil in the universe and existence; at the same time, we do not need to bear ethical responsibility for the whole universe. In fact, we do not have such ability.

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