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## The need for adequate argumentation for the protection of biotic community

### Summary

The changing state and quality of the environment is now taken for granted by communities living in many distant parts of the world. It is felt more and more intensely that disadvantageous interference in the natural environment will sooner or later have an impact on the biotic community, including humans themselves. However, the problem has not yet been so clearly accentuated, so as to prevent the effects, which often become irreversible.

Environmental ethics is one of the scientific disciplines which has attempted to find proper arguments for the protection of the biotic community, as well as to enhance the feelings of responsibility and care for the socio-natural environment. Among the ethical ideas which are developed in this context, the holistic view presents the broadest scope of human moral responsibility for the natural world. Such an approach is considered to have originated in the writings of the American researcher, Aldo Leopold. His ideas and great determination have become well known to those who were not indifferent to the issues of respect for the environment and environmental protection. The article outlines the possibility to incorporate arguments based on the thought of Aldo Leopold, in the process of environmental education, whose aim is the protection of biotic community.

**Key words:** biotic community, land ethics, Aldo Leopold, education, environmental awareness

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## 1. Introduction

The approach to the problem of adequate understanding of biotic community protection<sup>2</sup> has become a point of reference for numerous pro-ecological organisations. This is because, information about the relationship between humanity and the environment has entered social consciousness. To a large extent, the information concerns the ongoing processes of environmental degradation, further extinction of species of flora and fauna, or the cruel treatment of animals by human beings. Therefore, more radical steps have been taken to divert the consequences of growing industrialisation and consumerist lifestyle. In this context, it has become crucial to find adequate argumentation, which plays an important role also in the educational process. It is what triggers actual practice, which results in the protection of the environment, in the sense of biotic community.

## 2. The concept of biotic community as argument in Aldo Leopold's ethics

Aldo Leopold explains the concept of biotic community in the context of certain assumptions, which had impact on the traditional notion of ethics. This concerns the fact that an individual is part of a community, which makes it dependent on the other elements. Particular individuals owe their activities primarily to instinct, which determines them to compete with each other. The reason for this is to acquire the best possible position in the community. Making mention here of the role played by ethics, Leopold claims that it concerns a certain type of cooperation between individuals which constitute the whole

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<sup>2</sup> Biotic community should be understood as an ecosystem, that is, an ecological unit, which includes biocoenosis – living organisms – and biotope – the inanimate part of the environment. Compare G. Łabno, *Ekologia. Słownik encyklopedyczny*, Wrocław 2007, p. 80. The notion of biotic community was introduced to meet the needs of the present paper, as Aldo Leopold, the representative of the major notion of environmental ethics, uses this particular term.

community, so that certain positions develop to which they might aspire. The role of land ethics is to broaden the concept of community so as to include what we typically associate with the notion of land. Leopold suggests a holistic understanding of the word, that is, the inclusion of soil, fauna and flora to the reflection on ethics (Leopold 2004: 252). Supporters of the theory of evolution appeal to land ethics in order to justify the extension of human moral obligation towards other beings. This enables us to consider a new position of the human species in relation to nature and underlines the fact that the human is biologically related to other organisms. The theory of evolution, which has emphasised the bonds between human beings and other, non-human forms of existence, has led to the inclusion of all components of the biosphere into one community. Community ethics is also supported by the arguments provided by the, so called, economy of Nature, that is, ecology. Its proponents dismiss the findings produced by pre-Darwinian scientists or even by classical taxonomy. These would conceive of the world of nature as a set of independent elements which do not show any strong links. Such an understanding of the order in the world of nature<sup>3</sup> has been overridden by the finding that the natural community is a set of natural ecosystems that have their respective internal order, which has an impact on the mutual influences of living organisms (Piątek 1998: 53). By way of evolution, the particular animate beings have formed characteristic features, which underlie the functions they perform and the proper workings of the whole system as such. Therefore, in the context of the holistic notion of environmental ethics, it is essential to carry out an adequate evaluation which could assess the role of particular beings in the smaller systems, as well as the species and communities in the context of the whole system (Piątek 1998: 53).

Leopold emphasises the obvious fact that we must implement the noble measures of environmental protection. Nevertheless, if in an afterthought we admit that in reality we are not consistent in our

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<sup>3</sup> Such an understanding of the world of nature as was developed on the basis of the philosophies of Plato and Aristotle.

actions, a certain problem arises<sup>4</sup>. There is no possibility for land ethics to prohibit the pleasure of using natural resources, as it is only a theory to which a social being might appeal to. This sort of ethics describes the right to exist and, in some cases, the right to remain intact, for all resources in the ecosystem community on Earth. According to Aldo Leopold, "... land ethics changes the role of *Homo sapiens* from the conqueror, who subordinates the whole earthly community, to its rightful member and citizen. This requires the feeling of respect towards other members of the community, as well as community as such" (Leopold 2004: 253). It seems that the role of the eternal conqueror in the habitat has not been profitable. This was connected to the state of knowledge about the particular group to which the human belonged. He was forced to know certain processes that take place within the group and such that influence the group from without. Therefore, he was obliged to establish an evaluation, which would lead to his failure if it happened to be incorrect. Referring to ecological research results which have been established so far, we might indicate, according to Leopold, that the human being is only an element in the whole system of biotic community. It seems to the point here to refer to the relationship between the human and the Earth, as it is a decisive factor which can influence the evaluation of human actions. A fall in the growth of a certain plant, caused by a variety of human activities, results, for example, in soil erosion, which, in turn, has a negative influence on other species of plants. A further consequence of unbalanced human activity is the migration of certain species of animals due to the fact that the plants they used to feed on had disappeared. It needs to be mentioned that the appearance of certain species has shaped the relations between particular elements of Earth community (Leopold 2004: 253-256). While thoroughly studying the consequences of human participation in a biotic community, the authors who

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<sup>4</sup> Referring to certain statements, Aldo Leopold signals that our day to day functioning in the environment leads to a variety of destructive effects, such as polluting rivers or treating water reservoirs only in the context of public utility, the merciless extermination of valuable animal species, etc.

take the holistic approach to environmental ethics, provide examples in order to enhance the understanding of the relationships in the biosphere. Piątek, taking a similar perspective, claims that "... plants or bacteria binding nitrogen are more valuable than, for instance, blue whales, as the extinction of the latter would not infer death of the biosphere, but merely impoverishment of its variety (Piątek 1998: 54). However, when considering the above example from the perspective of a holistic concept of environmental ethics, we could assume that a greater value should be attached to the species which might become totally extinct rather than the ones that are found on a large scale in the biosphere of the Earth. This would be the case with the above mentioned bacteria and blue whales. The former can be found almost everywhere, while the whales, despite being small in number, also require specific conditions in the environment where they occur. The difficulty we might face when we put a moral commitment on the components of ecosystems is connected to the notion of the well-being of the biosphere. The evaluation of particular species can be conducted only when we consider the well-being of biosphere as a whole. The good of the biosphere should be understood as preserving its stability and variety not only in reference to particular species but also as a systemic whole (Piątek 1998: 54)<sup>5</sup>.

### **3. Purely economical argument as utopia for the economy of a biotic community**

Any system which aims at the protection of the natural environment only for economical reasons might turn out to be quite inefficient. This is due to the fact that the majority of the elements of the Earth ecosystem do not have any economical value from the point of view of an average citizen. In the overall economical profit account only some species of plants or animals can be processed so as to receive

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<sup>5</sup> The author indicates the eternal philosophical problem which concerns the possibility of reconciling the well-being of the individual with the well-being of the whole, as the individual, together with the others, participates in the whole. *Ibid.*

a certain positive result. Having abandoned the purely economical approach, we come to the conclusion that irrespective of the material benefits, all species of fauna and flora give a rather favourable and more often than not – an irreplaceable balance in the so called ecological economy. It concerns a certain indisputable fact which indicates that every representative of a variety of species of plants or animals is a rightful member of the biotic community. Its preservation is dependent on the fact that even the “economically worthless” species (perhaps only temporarily so considered) will be respected by the human being and will have a right to exist further. To support the above logic, Aldo Leopold claims that for many centuries the people who cared for the preservation of biotic community have been forced to seek a variety of arguments, sometimes verging on the absurd. An exemplary case of such action was the public announcement that songbirds have been observed to be gradually dying out. In order to prevent this to happen, ornithologists were forced to come up with with economical arguments. They have thus announced that the preservation of birds is essential, as otherwise humanity will be threatened by bugs and other insects eaten by birds. On analysing the above example, we might conclude that the method chosen by the ornithologists had a huge impact on an individual person as it was primarily an economical argument. One further example could be the case of a certain mammal likely to become extinct. Biologists would argue how indispensable the species were. They claimed that mammals and carnivorous animals play an important role, as they guarantee balance and hygiene in the world of nature, which is based on the idea of eliminating weak representatives of a certain species of animals, or preventing rodents from destroying harvest. Therefore, carnivorous animals, in respect to their role in the natural environment, are a valuable element of the biotic community, and not only, as it has so far been believed, a threat to domestic animals (Leopold 2004: 260). Analogous examples are provided by Leopold in relation to a variety of tree species. In this case, the economic status also seemed to count, as only such species proved precious, whose growth was fast and market value high. The above approach should definitely

be dismissed in the overall accounts of ecological economy of the biotic community presented as a whole. It should be noted that even the species of trees that cannot be processed into wooden furniture play a key role in the symbiosis with other species of plants by way of the so called mycorrhiza (Łabno 200: 216)<sup>6</sup>. It is alarming that in the socio-natural environment whole biotic units are eliminated because they do not bring any profits for the industry. Here, urban design can serve as an example, as it often relies on the draining of terrain designed for residential areas or road infrastructure. Aldo Leopold indicates the difficulty in protecting such naturally precious areas, as in most cases they are in private hands and legal action to create nature reserves is impossible. The only solution is to appeal to the ecological conscience of the owners, who should be able to understand how valuable the biological and natural diversity of their land is. However, it is often the case that economical gains prevail. An important element of introducing and developing the system of land ethics is the understanding that it is actually up to the individual how we are to prosper in the environment, which is indispensable for future existence (Leopold 2004: 261-263). By way of conclusion, Leopold warns his readers that “ethical commitment of the private owner is the only solution in such situations” (Leopold 2004: 263).

#### **4. Role of education for the protection of biotic community**

Education as a process shaping the individual has always been bound with upbringing. This is due to the usual succession of steps taken by parents or tutors. It is them who, through their care for their charges, attempt to show them some appropriate forms of behaviour

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<sup>6</sup> Mycorrhiza is a type of symbiotic association of two organisms – a fungus and a vascular plant, in which they form an anatomical link so as to draw mutual profits. The process allows both organisms to acquire nutrients essential for growth. The fungi provide the plant with mineral nutrients absorbed from the soil and the plant converts them into organic compounds which are shared with the fungi. Mycorrhizal plants have been observed to grow faster and to be more immune to periodical droughts and temperature fluctuation.

in the surrounding environment. Education serves as a method of influencing the development of a human being so as to bring about some particular changes in their personality (Bołoz 2010: 150-151). Broadening the ramifications of the educational process in order to enhance environmental protection, education needs to become more like upbringing. As noted by W. Bołoz “education... takes place when one takes another into an outside, wider world, and presents new horizons, providing them thereby with incentives to broaden their perspective, and encouraging proper behaviour in respect to environmental protection” (Bołoz 2010: 151). The set of basic assumptions underlying the process of upbringing, if it is to achieve the goal, must needs include ecological values, which stimulate the charge to respect them.

Among many definitions which attempt to define what environment protection actually is, we can find one which indicates reaching a state of balance between human beings and the Earth. As is signalled by Aldo Leopold, in the social discourse one often hears about ecological postulates but actual practice is lacking. Discussing the problem in the lobby instead of the conference room is definitely not enough. He further draws our attention to the views on environment protection which express the need to put more emphasis on environmental education. According to him it is a problem not to be underestimated but one which requires a deeper analysis of the actual contents of eco-education. A shortcoming of management directly correlated with environmental protection, is the lack of responsibilities of the human towards the land which he cultivates in a number of ways. For an ordinary man, the only responsibilities which count are the ones which directly concern his own business. Farmers often give no proper thought to their actions and cultivate land in places where any interference leads to soil erosion. Leopold refers to the example of people cutting down forest located on a steep hill in order to graze herds. No one seems to have predicted the consequences, involving the fact that deforestation would destroy the vegetative layers that bind the soil together. Next, the livestock grazed on the area in question would eliminate the plants which prevent the soil from being



washed away and degraded. In conclusion, Aldo Leopold appeals to conscience which might help to find the right way to act. Naturally, conscience needs to take into account not only the consequences of social interaction but also the well-being of the planet. After all, we would not be able to improve or change anything, even equipped with the profoundest ethics, if there was no will to trigger an inner transformation indicated by our reason (Leopold 2004: 256-259). Therefore, land ethics should be correlated with our everyday activities and not merely with occasional tasks that can be attempted without much effort.

In his deliberations on the attempts to develop the most adequate ethics directed at the improvement of the relationship between human and the natural environment, Aldo Leopold warns his readers that the well-being of land is not always the objective. The educational process, which takes place at various stages of human development, is undeniably helpful in the shaping of proper attitudes that protect the biotic community. Hence there is a definite need that common practice be preceded by an educational process. It is education which can reach the society sensitising individuals to the postulates of the economy of biotic community. What is more, it is possible to promote the new trend which is the sharing economy, in which "... everyone will receive exactly what is needed and at the time when it is needed" (Fücks 2016: 375). Changes in daily habits and the development of new attitudes, friendly towards the holistically perceived environment, are possible also thanks to appropriate arguments. They need to be seen as a strong stimulus, which shapes human awareness and, in consequence, influences the emergence of ecological culture or the culture of sharing, so essential for the modern world.

## **5. Conclusion**

The arguments provided above clearly show that they should be implemented in the educational process. Nowadays, the living environment is a complex system consisting of wildlife, society and historical events (Sztumski 2012: 33). In a holistically perceived environment, which

provides space for strictly biological life as well as social life, one which creates both material and spiritual culture, is seen to undergo permanent changes. The 20<sup>th</sup> and the 21<sup>st</sup> centuries differ from the former times by the fact that the changes take place at a far greater pace, which, in turn, means that "... we happen to live in a fast-changing social space and in the context of the pace of life accelerating at unprecedented speed" (Sztumski 2012: 23). Everyday choices of an average man do not take into account the preservation of biotic community, as they demand a far greater engagement. However, apart from these premises, the lack of adequate care for the protection of the socio-natural environment stems, to a large extent, from the fact that the society is still not sensitive enough to the problem. This is testified by numerous empirical tests connected to the analysis of the level of ecological awareness (Strumińska-Doktór 2010: 276-277). There is a need, therefore, to acknowledge that biotic community is a range of components which make the environment. As a result, every being can realise itself in an appropriate and often indispensable way. The socio-natural environment is a complex of many, huge systems which function independently of each other, but it is also a network of smaller systems all bound together. Irrespective of the definition, we can be sure that every group of systems participates in the global ecosystem, which is nothing else but a biotic community. Contemporary man, who has started the development in the arts and the sciences is responsible for the choices made, decisions taken and actions carried out in order to ensure the preservation of the biotic community. This is why, educational processes realised in the context of environmental protection must needs base their methods on appropriate arguments. This involves adjusting the argument in the programmes for particular audiences or participants of educational processes in order to bring about the best results. Every age group has some characteristic ability to acquire knowledge and this is reflected in actual daily practices. In this context, adequate argumentation constitutes an essential tool in environmental education which is correlated with the rise in awareness and the need to protect the biotic community.

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### **Potrzeba właściwej argumentacji w edukacji na rzecz ochrony wspólnoty biotycznej**

#### **Streszczenie**

Etyka środowiskowa należy do tych dyscyplin naukowych, w ramach których dokonuje się prób argumentowania ochrony wspólnoty biotycznej oraz budowania poczucia odpowiedzialności i troski za środowisko społeczno-przyrodnicze. Wśród koncepcji etycznych, jakie rozważane są na jej gruncie, ujęcie holistyczne wskazuje na najszerszy obszar zobowiązania moralnego człowieka względem świata przyrody. Za głównego twórcę tego nurtu uważa się amerykańskiego naukowca Aldo Leopolda, który zasłynął w środowisku osób nieobojętnych na sprawy poszanowania i ochrony środowiska, swoimi poglądami i ogromną determinacją. W artykule przedstawiono propozycję wykorzystania argumentów, sformułowanych w oparciu o przekonania Aldo Leopolda, w procesie edukacji środowiskowej, mającej na celu objęcie ochroną wspólnoty biotycznej.

**Słowa kluczowe:** wspólnota biotyczna, etyka, Aldo Leopold, edukacja, świadomość ekologiczna