

ECOCENTRISM. HOPES AND CONCERNS

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Purpose: Ecocentrism analysis, based on selected themes of Aldo Leopold's and J. Baird Callicott's ideas, in the context of the debate with anthropocentrism; An attempt to indicate a new axiological foundation for ecocentrism.

Design/methodology/approach: The achievement of the article's objective results from the utilization of a set of tools, including hermeneutics, analysis of relevant literature, and comparative theory. Through these methods, a set of ecocentric values has been reconstructed, carrying the potential to develop a more rigorous protection of the natural environment.

Findings: The ecocentric approach to environmental conservation can be more effective than the concept of „sustainable development”, as it considers the well-being of the ecosystem, refrains from treating nature as a resource, takes into account abiotic factors, opposes long-term environmental degradation, and places biodiversity at the core. Simultaneously, it is a flexible approach, basing its axiology on both biological and social community values. It's not about negation, but rather a modification of traditional ethics.

Research limitations/implications: The transformation of the cultural approach to the relationship between humans and nature requires social acceptance and a coherent value system. Ecocentrism is challenging to embrace in societies where anthropocentrism (a focus on human interests) prevails. Practical application of ecocentrism is difficult when it is not widely known and understood. Some of its propositions may encounter resistance, such as ethical consideration directed towards abiotic factors.

Practical implications: Ecocentrism can be applied in everyday life, in businesses, and many other areas. It is a theory with immense practical potential, worthy of consideration in the realm of business practices, resource management, urban planning, agriculture and food production, education, politics, and legislation.

Social implications: Adopting the principles of an ecocentric approach would have a profound impact on society by altering values, priorities, and actions to focus on the well-being of ecosystems.

Originality/value: The value of the article lies in the original systematization of ecocentric ideas in the context of the concept of „ecosystem” and „anthropocentrism”. For the first time, the article identifies concepts, and simultaneously metaphors, that can serve as a vehicle for the popularization and further continuation of the ecocentric tradition. The highlighted terms are „home” – directly referring to the etymology of the word „ecosystem” – and „family” (a triad of values also appears: life, safety, well-being).

Keywords: ecocentrism, anthropocentrism, biocentrism, deep ecology.

Category of the paper: Conceptual paper.

1. Introduction

The theoretical scope of the article encompasses the analysis of the concept of an ecosystem and the issues presented by the classical proponents of ecocentrism, Aldo Leopold and J. Baird Callicott, as well as the influence of this concept on practical aspects of environmental conservation. The first part of the article presents the methodology applied (2). In terms of content, the text begins with an analysis of the ecosystem – a concept that plays a fundamental role in the context of the theory presented (3). Next, the central themes of Leopold's and Callicott's thoughts are analyzed, and the demarcation lines distinguishing ecocentrism from deep ecology and biocentrism are indicated (4). In the following section, attention is drawn to examples of conflicts and difficulties in the implementation of ecocentrism, which stands in opposition to anthropocentrism (5). Part (6) reflects on the hopes and concerns associated with ecocentrism. The issues concerning inspiration and criticism related to the further development of ecocentrism are covered in section (7). The conceptual nature of this article is also explained here. In the summary, the practical consequences stemming from ecocentrism are pointed out (8).

The recipients of the article are not only specialists in the fields of philosophy, ethics, ecology, and environmental conservation, but also individuals interested in sustainable development, sociology, and public policy. The text provides a fresh perspective on how evolving ethical views and societal attitudes can impact the future of the planet. Ecocentrism can significantly influence the expansion of ecological awareness, offering valuable insights to various organizations and decision-makers, in pursuit of more resolute and innovative actions to maintain ecosystem stability.

2. Methodology

In the context of the growing ecological crisis – from climate change to the loss of biodiversity – the search for ethical and philosophical foundations for rigorous environmental protection is becoming increasingly important. The identification of values that could provide 'strong' protection of the natural environment is carried out (in this article) based on a set of selected methodological tools. These methods include hermeneutics, which involves the interpretation of selected philosophical texts – along with the relevant literature on the subject

– as well as comparative analysis, whose aim is to contrast different ethical approaches to the environment, i.e., ecocentrism, biocentrism, anthropocentrism, and deep ecology. The text subjects the source term „ecosystem” and a number of other issues (including „speciesism”, „plant ethics”, „abiotic ethics”, „value conflict”) to analysis. This is an example of a methodological approach that focuses on the evolution of a key concept as well as selected contexts that provide insight into the lineage, development, and central theses of a given field. From a methodological standpoint, the content of the article seeks to answer ontological questions: What is ecocentrism? What characterizes its specificity? What set of values expresses what is most important and characteristic for ecocentrism? What underpins the attractiveness and unattractiveness of ecocentrism („ecological terrorism”)? Does the set of values affirmed in ecocentrism have a chance to become the basis for active pro-environmental attitudes? Apart from historical and contextual analysis, the article is associated with normative research. On one hand, the goal is to identify classic ecocentric values. On the other hand, it's about their critique and pointing out the path for further development of ecocentrism. Proposed (new) values could then be tested in real social contexts (interviews, surveys, case studies). If ecocentrism were to be increasingly integrated with recognizable ethical norms, social activities, and political demands, the values it represents would have to be well understood, widely discussed, and (at least in part) socially accepted. To make this possible, it is necessary to build a clear transition from the field of ethics and value theory to politics, based on the „strength” of the language that shapes opinions regarding ecological problems (this task is served by metaphors of „family” and „home”). Let us add that creating a new set of concepts and values, based on critical analysis, requires the use of linguistic methodology. Creating a new conceptual language of ecocentrism must be based on the semantic and pragmatic analysis of terms, along with the study of their potential impact on changing thinking and attitudes towards nature. In developing ecocentrism, focus should be placed on the role of language, cognitive structures, and symbols, as these phenomena are key in understanding reality (Goodman, 1968). What we think about nature is shaped by conceptual systems and metaphors that are dependent on a given language and culture. The potential of this type of cognitive relativism is utilized in environmental thought (Lakoff, 2010) – but it seems – to an insufficient extent.

3. Ecosystem and moral status

How should nature be treated? Various concepts of ecological ethics provide answers to this question. In the face of an ecological crisis, one of its streams gains increasing significance: „ecocentrism” (from Greek ‘oikos’ – house, environment, ‘kentro’ – center). To deeply understand this theory, it’s necessary to grasp the key concept underlying ecocentrism, which

is the „ecosystem”. The fundamental premise of ecocentrism is to grant moral status to ecosystems that constitute the Earth’s biosphere. The biosphere is the global sphere of life on Earth, encompassing all ecosystems and therefore organisms in their correlation with the Earth’s crust (lithosphere), water (hydrosphere), and air (atmosphere) (Vernadsky, 1997). On the other hand, an ecosystem is (put simply) an ecological arrangement in which living organisms and their environment interact with each other. An ecosystem is the „basic unit of nature”, a collection of living organisms in a specific area, along with their inanimate environment, where a continuous flow of matter and energy occurs between organisms and their environment (Tansley, 1935, p. 237). If we consider etymology, an ecosystem is a „whole composed of parts”¹. An ecosystem does not possess a hierarchy but rather a (food) structure, comprised of the physical environment, autotrophic and heterotrophic organisms, as well as organisms responsible for decomposing dead organic matter. In the work of Aldo Leopold, a classical representative of ecocentrism, there emerges a description of an ecosystem in the form of a specific structure and the flow of energy between its different layers². In the „pyramid” scheme outlined by Leopold, one should not perceive a hierarchy of values. Emphasis is placed on the mutual relationships among plants, land, insects, birds, rodents, and carnivores. The essence lies in the dependencies within the ecosystem, not in the „superiority” or „inferiority” of individual layers:

The species of a layer are alike not in where they came from, or in what they look like, but rather in what they eat. Each successive layer depends on those below it for food and often for other services to those above. Proceeding upward, each successive layer decreases in numerical abundance. Thus, for every carnivore there are hundreds of his prey, thousands their prey, millions of insects, uncountable plants. The pyramidal form of the system reflects this numerical progression from apex to base. Man shares an intermediate layer with the bears, raccoons, and squirrels which eat both meat and vegetables (Leopold, 1949, p. 252).

A similar description of an ecosystem can be found in the works of the American biologist and founder of modern ecology, Eugene Odum, who speaks of an ecosystem as the flows of energy and nutrients between biotic and abiotic components³. It’s worth emphasizing how to understand the term „energy”, which serves as the source of changes within an ecosystem:

¹ The concept of „ecosystem” is composed of two words, the Greek word οἶκος (*oikos*), meaning „house” or „home”, and the word σύστημα (*sýstēma*), meaning „system”. The second word consists of the prefix σύν (*syn*), which signifies „together” or „jointly”, and the verb ἵστημι (*ístēmi*), which means „to place”, „to put”, or „to establish”. When the verb is used in the context of the word σύστημα (*sýstēma*), it signifies the arrangement of different elements into a whole, the creation of something complete, an organized collection, a coordinated arrangement. Therefore, a system is a „whole composed of parts”, and an ecosystem can be understood as a „house composed of parts”.

² Leopold employs the term „biotic community” as well as „land”, which correspond to the concept of an „ecosystem”. He refers to his concept as „the land ethic”.

³ Abiotic factors, such as temperature, humidity, light, soil, and water, influence organisms and interactions between them in ecosystems. Today, this is self-evident – its foundations were established by (Odum, 1971).

An ecosystem consists of all the organisms and the abiotic pools with which they interact. Ecosystem processes are the transfers of energy and materials from one pool to another. Energy enters an ecosystem when light energy drives the reduction of carbon dioxide (CO₂) to form sugars during photosynthesis (Chapin III, Matson, Vitousek, 2011, p. 5).

From the preliminary remarks, it is evident that ecocentrism advocates surrounding the vast organic and physical space with respect. As the stability of an ecosystem relies on the mutual interactions between organisms and their environment (equivalents in biology being „biocenosis” and „biotope”), ethics significantly broadens the scope of interest by encompassing valuation not only of living organisms. When discussing the ecosystem as a phenomenon with moral value, we must consider biotic factors (living) but also abiotic factors, meaning physicochemical ones. This fact might be surprising for individuals accustomed to ethical intuitions that primarily concern humans, possibly animals, but rarely plants, microorganisms, or rocks. Should ethical reflection be limited solely to living organisms with the capacity to experience? It appears not (Brennan, 1984). Traditionally, ethics has been focused on sentient organisms that possess specific preferences – primarily avoiding suffering and striving to fulfill their needs (this fact was reflected upon by J. Bentham). However, since an ecosystem consists of all organisms and the physical environment in which they live, objects of ethical consideration extend beyond various exotic organisms (due to the ecosystem’s span), such as extremophiles, to also include (as mentioned earlier) plants. „Plant ethics” is still a relatively new area of ethical research, as traditionally, ethics focused on examining relationships between humans and/or humans and animals. However, the development of ecology has led to a better understanding of the complexity of interactions in ecosystems, hence the need to also consider the role of plants and ethical issues related to them in these ecosystems⁴.

One of the fundamental terms in contemporary ethics is the concept of „moral status”, which can be attributed to a certain entity or not. If it is attributed, humans acquire moral obligations towards this phenomenon. The concept of moral status can take various forms and is developed within different philosophical traditions (Tannenbaum, Jaworska, 2021). In the case of ecocentrism, moral status is attributed to all ecosystems, encompassing life forms and abiotic components that constitute them. This status is assigned based on relationships and affinity within a given community (Callicott, 1989). Traits such as being a living organism, experiencing pain, possessing rational thinking abilities (etc.) are not necessary conditions to possess moral status. Ecocentrism is a holistic position where moral status depends on the role and function a particular entity plays within the community – its biological equivalent being the „ecosystem”.

⁴ In the context of pioneering views presented toward plants, it is worth mentioning the perspectives of Paul W. Taylor (Taylor, 1986). This biocentrist rejects the so-called „speciesism” which implies human „superiority” or „being better” than all living beings. He believes that ethics should be guided by „species impartiality”, avoiding harm to both plants and animals (Taylor, 1986). See also (Attfield, 2018).

4. Ecocentrism, origins, differences

Aldo Leopold is an ecologist and naturalist, author of the essay collection *A Sand County Almanac*, which was published posthumously in 1949. Leopold places the relationship between humans and the natural environment at the center of his focus, emphasizing the need to protect wild areas and biodiversity. Let's recall with Aristotle that humans are social creatures with the power of speech and moral reasoning. In the context of Leopold's reflection, we must add that he is also a biological being. Humans are members of the biotic community – together with plants and animals, we form a bond: a shared process of evolution.

J. Baird Callicott undertook the task of interpreting Leopold's legacy, focusing on the development of ecological philosophy, particularly pertaining to ethics extended to encompass the entire natural world. His works continue Leopold's ideas within the context of contemporary environmental philosophy. These authors share an ecocentric holistic stance (Callicott, 1989, p. 25). Leopold's attention is primarily drawn to wild animals; he doesn't emphasize the „defense” of domesticated animals that contribute to the decline of ecosystems. Both thinkers agree that all forms of life on Earth are the result of a long process of adaptation and changes occurring through evolution. Each organism has its place in the ecosystem and serves a specific role within it. Because different organisms fulfill distinct functions in the ecosystem, it's not the case that ants, elephants, plants, or rivers have the same moral value as family members or domesticated animals. The latter are members of a social community, therefore deserving special treatment:

Pets, for example, are [...] surrogate family members and merit treatment not owed either to less intimately related animals, for example to barnyard animals, or, for that matter, to less intimately related human beings (Callicott, 1989, p. 56).

While wild animals do not possess an equal moral value to humans, we have moral obligations toward them. The fundamental matter is the role a given animal plays in nature (Callicott, 1989, p. 57). Understanding this fact solidifies a holistic perception of reality and negates the mistaken desire to correct natural processes:

Among the most disturbing implications drawn from conventional indiscriminate animal liberation/rights theory is that, were it possible to us to do so, we ought to protect innocent vegetarian animals from their carnivorous predators. Nothing could be more contrary to the ethics of the biotic community than this suggestion. Not only would the (humane) eradication of predators destroy the community, it would destroy the species which are the intended beneficiaries of this misplaced morality (Callicott, 1989, p. 57).

Because bees play a very important role in the ecosystem, these insects should be subject to greater moral attention than, for example, rabbits or voles (Callicott, 1989, p. 25). On the other hand, invasive animals can be removed from the ecosystem (for its benefit). In Callicott's view, domesticated animals are part of a social community. They are dependent on humans,

and there is a kind of social contract that binds us to them. Human moral duties toward the ecosystem stem from both belonging to the biotic and social communities. Ethics must take into account the fact that these communities are not identical, yet they are interconnected. Ecocentrism aims not to supplant but to complement and expand traditional ethics. It is not about denying human morality, but about its modification (Callicott, 1989, p. 94). Ecocentrism does not advocate vegetarianism; it is flexible and non-dogmatic concerning animals. The well-being of the entire ecosystem takes precedence over the life of an individual mammal or insect.

A certain challenge in understanding ecocentrism is its resemblance to biocentrism and the concept of „deep ecology”, which can lead to confusion between these streams. In the development of contemporary ecological thought, the views of Arne Næss have played a significant role⁵. Similar to proponents of ecocentrism, Næss emphasized the importance of biodiversity, highlighted the idea of balance, interdependence, and integrity among all aspects of nature. While deep ecology and ecocentrism challenge a strictly anthropocentric approach, individual human experience remains a significant reference point in deep ecology and doesn't lose its importance. Meanwhile, ecocentrism places the ecosystem above the individual. This matter is clearly explained by J.B. Callicott:

[...] the good of the community as a whole, serves as a standard for the assessment of the relative value and relative ordering of its constitutive parts and therefore provides a means of adjudicating the often mutually contradictory demands of the parts considered separately for equal consideration (Callicott, 1989, p. 25).

Deep ecology appears to be a form of spiritual experience linked to profound sensations in nature. Its proponents seek an emotional connection with nature, which can lead to feelings of awe or excitement. Ecocentrism focuses more on ecosystem balance, energy flow, and the processes taking place within them. It doesn't emphasize personal experience or spiritual aspects. In comparison to ecocentrism, deep ecology seems to offer a more inspired proposition (thus, perhaps, more appealing). Descriptions of ecosystems don't contain an undefined sense of metaphysical „depth”. Nature isn't idealized. Life within the biotic community is challenging and full of threats. To put it bluntly, it comes down to the fact of eating and being eaten (Callicott, 1989, p. 57).

The demarcation difference also separates ecocentrism from biocentrism (Taylor, 1983). The latter focus on living organisms. The concept of „ecosystem”, however, forces attention to the relationship between organisms and their surroundings in the natural environment. Ecocentrism doesn't omit the abiotic environment, which involves non-living matter. An ecosystem comprises all organisms and the physical environment with which these organisms interact. Another distinction is that biocentrism concentrates on appreciating the value of each living organism. This view underscores the importance of individual beings in

⁵ Næss introduced the concept of „deep ecology” in the 1970s (Næss, 1973).

the universe and emphasizes respecting their existence regardless of the role they play in it. On the other hand, ecocentrism centers on a holistic perspective. Each organism plays a significant role in maintaining balance and the functioning of the entire ecosystem.

5. The dispute over anthropocentrism

Anthropocentrism is a viewpoint asserting that humans are the central point of reference and priority in determining what is morally good and bad. It is a philosophical concept assuming that humans are at the axiological center, thereby possessing superior rights and interests in relation to other species. Anthropocentrism can take various forms, depending on whether it focuses on the interests of the individual, community, or the entire species. Anthropocentrism can be understood individually⁶, communally, or species-wise.

In the 20th century, the most influential figure of communitarian anthropocentrism was presented by John Rawls in his vision of a just community brought to life through a social contract (Rawls, 1971). Due to the special respect shown for human dignity, autonomy, the ability to make decisions, and taking responsibility for them, including only human beings within the moral community seemed self-evident (Fox, 1986)⁷. Especially in Cartesian dualism, there existed a clear hierarchy between humans and animals. However, ecological ethics did not follow this path. Contemporary thinkers rather point to the necessity of a compassionate and more egalitarian approach to animals, based on research concerning their evolution, behavior, consciousness, and altruistic behaviors⁸. An important moment was the emergence of the concept of „speciesism”⁹. The terms „anthropocentrism” and „speciesism” are not synonyms, but they are related in the context of ethical debates. Anthropocentrism is a form of speciesism where human interests are favored over other forms of life. Ecocentrism should be considered a position in opposition to anthropocentrism and speciesism. Humans are part of the ecosystem, but their interests are not prioritized.

⁶ One can defend individual well-being and happiness as a moral priority. The American philosopher Tara Smith, drawing from Ayn Rand’s philosophy, advocates rational egoism as a moral value (Smith, 2006). However, this viewpoint has rather given way in contemporary times to anthropocentrism understood as the defense of society’s and the human species’ interests. Aligning with one’s own needs (as a moral priority) is often associated today with the defense of individualism, self-realization, and criticism of altruism (Shaver, 2021; Baier, 1973).

⁷ M.A. Fox is a figure who underwent an evolution concerning the issue of human responsibilities toward animals. Fox disagreed with Peter Singer’s position on animals and maintained a moral preference for the human species (pointing to the justification of animal testing). He subjected the arguments he put forth to criticism in subsequent publications (Fox, 1987; 2000).

⁸ One can argue that only recognizing animals as „others than humans” as equals to humans enables the recognition of all human beings as part of an authentically egalitarian community (Ebert, 2020).

⁹ The popularization of the term was contributed by P. Singer, who argued that the unequal treatment of other species is analogous to discrimination based on race or gender (Singer, 1975).

Will ecocentrism differ in practical action from ecological anthropocentrism? It seems so. Ecocentrism safeguards nature protection in a rather uncompromising manner as it remains impervious to rhetoric concerning human needs (Taylor et al., 2020; Washington et al., 2017). Unfortunately, despite the increasing degradation of the natural environment, incorporating ecocentric values into the recommendations of various institutions engaged in nature conservation encounters resistance. This happens due to the shaping of human morality and political actions based on anthropocentric premises. Ecocentric solutions can conflict with anthropocentrism, especially in the context of resource access. For instance, restricting access to water or forest areas in the name of ecosystem protection can clash with human rights to access food, water, and shelter. Another example could involve conflicts related to cultural traditions. Specific social practices may have a detrimental impact on the environment. These could include hunting endangered species or agricultural practices that harm ecosystems. Stringent environmental protection measures can lead to conflicts with the right to preserve traditional culture. Another significant conflict arises in connection with economic development. Modern understandings of „human rights” encompass the right to development and an improved quality of life. Ecocentrism, prioritizing environmental protection and all organisms, may curtail economic growth and impose restrictions on industrial activities. The concern for the well-being of the ecosystem may conflict with the rights to decent living conditions, work, and access to education. Mary Anne Warren criticizes J. Baird Callicott's position in the context of conflict resolution as follows:

The biosocial theory provides no satisfactory principle for the resolution of conflicts between different prima facie moral obligations – either those arising from within a single community, or those arising from the different communities to which one person may belong. Moreover, it requires us to deny moral status to person and other sentient beings that are not co-members of our social or biological communities. In this respect, it conflicts with moral judgments that most of us would make (Warren, 1997, p. 132).

Is the destruction of an ecosystem by humans, for example, draining a wetland habitat, morally wrong? From the perspective of anthropocentrism, we can consider such actions as wrong, but we cannot say that they are inherently wrong. We need to take into account the reason behind the human action, and this is done from the perspective of their well-being. For example, river regulation might aim to prevent flooding, protect buildings along rivers, enhance inland navigation, or raise local groundwater levels (these actions might have economic and social justifications). Anthropocentrism does not establish the protection of ecosystems like marshes, peatlands, or ponds as a fundamental principle. Ultimately, any action is wrong if it harms humans. Sometimes people do not know what is good or bad. Certain facts might not be immediately evident, and the benefits or drawbacks of specific actions might only become apparent over time. However, certain trends have been reversed. It is assumed that the less we interfere with a river, the more we gain. Regardless of whether someone is a supporter or opponent of river regulation, they primarily see the role it plays for humans (source of

drinking water, hydropower, fish farming, navigation, recreation). Forests, meadows, or wetlands are not perceived as independent ecosystems and parts of nature of which we are a part. Humans see themselves as the rulers of nature. Both the draining of wetlands and the absence of such regulation – both actions are taken for the benefit of humans. The same way of thinking is replicated in relation to climate, tropical forests, soil, fungi, or seas.

One of the most significant ethical topics is the issue of granting rights to animals (Regan, 1983). The concept of „animal rights” has weakened the traditional anthropocentric paradigm, introducing a new dimension to the perception of the relationship between humans and other forms of life. Ecocentrism is not yet a well-known idea and does not frequently appear in mass communication. Humans, as conscious and rational beings, possess higher moral status and greater entitlements than animals, plants, or ecosystems. The very formulation of „human rights” implies superiority over animals or abiotic factors, thereby paving the way for various forms of exploiting nature and animals (scientific experiments, food production, entertainment). It is worth noting that animal rights movements strongly challenge the legitimacy of anthropocentrism, arguing that human practices infringe upon animals’ rights to life, avoidance of suffering, maintenance of integrity, and behaviors driven by evolution. Ecocentrism, which attributes value to ecosystems – including animals, plants, and abiotic components – strongly challenges anthropocentrism.

6. Hopes and Concerns

Ecocentrism is a set of specific values. Which of them have been particularly highlighted? Aldo Leopold, a proponent of the wild nature, precisely indicates what is good and what is bad:

A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise (Leopold, 1949, p. 262).

J. Baird Callicott, striving to develop precise ethical principles that should guide human interactions with nature, emphasizes the importance of integrity, stability, and beauty as well:

The integrity, stability, and beauty of the biotic community depend upon all members, in their appropriate numbers, functioning in their coevolved life ways (Callicott, 1989, p. 57).

Callicott’s argument also includes the affirmation of unity, coherence, and self-consistency (Callicott, 1989, p. 50). Does such a defined axiological system resonate with any radicalism¹⁰? Does this specified system of axiology seem associated with any radicalism? Is it understandable for the average person?

¹⁰ Ecocentrism is also an ecological movement. It has become an influential viewpoint among radical environmental activists. The well-known organization Earth First! emerged from within the mainstream environmental organizations in the 20th century USA, such as Sierra Club, The Wilderness Society, Friends of the Earth (Woodhouse, 2018).

It seems that the values mentioned above can be considered abstract rather than clear directives that ignite ecological enthusiasm. These values are not transparent to individuals who haven't delved deeper into the theory of ecocentrism. Unity, coherence, and stability appeal to reason rather than to the heart. These terms aren't capable of constituting a distinct and appealing message. „Beauty”, which undoubtedly resonates, doesn't appear to be a value that supports a radical and „strong” concept capable of changing the fate of the planet. The lack of a compelling message is a certain challenge. Additionally, ecocentrism doesn't offer direct benefits to humans, only indirectly. What benefits does humanity gain by acting based on ecocentric values? Even posing this question assumes an anthropocentric perspective that we (potentially) need to depart from. Callicott points out the beneficiaries of ecocentrism – and humans are not among them.

Animals, plants, mountains, rivers, seas, the atmosphere are the immediate practical beneficiaries of the land ethic (Callicott, 1989, p. 25).

Human beings, like bears, are omnivorous mammals – not the „crown of creation”. There shouldn't be too many bears – the same applies to humans (ecocentrism advocates for a decrease in the human population). Let's ask simple questions: Would human life be easier, more comfortable, or safer in the perspective of ecosystem stability? Are people willing and able to, for instance, independently and pro-ecologically cultivate vegetables? Or perhaps they expect abundant agricultural produce, conveniently available at the nearest supermarket, at an attractive price? The ecocentric paradigm is not a model of consumerist living. In the ecocentric perspective, many things would have to be prohibited – such as monoculture agriculture, which enables mass production of cheap agricultural products.

As for diversity, what remains of our native fauna and flora remains only because agriculture has not got around to destroying it. The present ideal of agriculture is clean farming; clean farming means a food chain aimed solely at economic profit and purged of all non-conforming links, a sort of Pax Germanica of the agricultural world (Leonard, 1949, p. 199).

When thinking about nature and proper treatment of the environment, we usually focus on living organisms, especially mammals. Ecocentrism brings awareness that living organisms cannot be separated from their specific environment. This idea is introduced to ethics by the term „ecosystem”, encompassing non-living matter as well. The abiotic environment becomes the subject of intensified attention for ethicists. Human actions disrupt physical space, disturb geological structures, damage fossils, harm plants, and ecosystems. Rocks significantly contribute to maintaining ecosystem stability. Axiologically important are the Earth's surface, lower layers of the atmosphere, and even deeper layers of the Earth's crust.

Ecocentrism seems to overshadow sustainable development¹¹. „Sustainable development” often serves as a cover for further planetary exploitation. Through the concept of „sustainable development”, humans ensure the continuity of nature’s service function and can exploit it without being accused of doing nothing. However, humans are leading the natural environment into a widening circle of degradation („sustainable development” slows down and masks this process). The era of „sustainable development” turns out to be a period of intensifying ecological crises (Bendell, 2022; Lippert, 2004)¹². For this reason, ecocentrism can and should inspire the creation of public policies aimed at environmental protection. An ecocentric approach could more significantly modify regulations regarding waste management, natural resource utilization, and spatial planning. Implementing ecocentrism could lead to a revision of practices and standards in various industries. If we remain within the realm of anthropocentric thinking, it can be added that greater care for ecosystems would undoubtedly impact human health, access to clean air, water, and food.

The further development of ecocentric ideas should be factual and specific to effectively illustrate the underlying practice. At the same time, it should stimulate imagination. If we aim to popularize ecocentrism, we face the necessity of creating a new terminology that offers a vision and hope tailored to the ecological challenges of the 21st century. Outside of specialist circles, ecocentrism remains a relatively unfamiliar concept. This theory is challenging to implement because it shifts priorities from considering one’s own good to thinking about the well-being of the ecosystem. This is precisely why ecocentrism provides „strong” protection for nature. It adopts a stance that assigns value to all living organisms and their natural environment, regardless of their utility to humans, thereby blocking ethical arguments that treat nature as a resource. It seems that the concept of „home” could be a distinguishing term for ecocentrism (see further). Every ecosystem is a home that is built upon abiotic foundations. In this home, we don’t live alone but with a family: plants, animals, extremophiles. While residing in this home, we shouldn’t think solely of ourselves and strive solely for our own aspirations. In the realm of academic rhetoric, the concept of an „ecosystem” is a formal designation: it’s a „system” as well as a „whole composed of parts”. The hallmark of ecocentrism should be the notion of a „home” and the kinship of its inhabitants.

¹¹ „Human societies are utterly dependent on the natural world not only for material but also intellectual and spiritual sustenance” (Smythe, 2014, p. 927).

¹² The topic of sustainable development extends far beyond the thematic scope of this article. This issue requires separate consideration due to the vastness of the literature, the popularity of the idea, and especially its significance. „Sustainable development” is an idea that is even perceived as an alternative to the traditional model of philosophizing, specifically as: „a mechanism that should be embedded in the development of Western civilization” (Piątek, 2007, p. 5). The subject of sustainable development is widely analyzed and developed by Polish researchers. See (Ciążela, 2004; Kuzior, 2008; Tyburski, 2007; Hull, 2008; Gawor, 2006). When developing ecocentrism, it is worth considering the reflections and conclusions reached by Bryan Norton – see further, the section „Inspiration”.

In the subject literature related to ecological issues, there is a sense of pessimism regarding progress in solving environmental problems – such as in relation to global warming (Luke, 2008). Ecocentrism is necessary to find new energy for action and to establish principles upon which „something” can be changed. Through popularization, reflection, and understanding of the values advocated by ecocentrism, we gain a chance for a better tomorrow.

7. Discussion

a. Inspiration

When it comes to the debate concerning the appropriate foundations for nature and human relations, contemporary theories that emphasize the socio-political context of ecological ethics and the deconstruction of traditional social institutions – including the family – seem important. Special mention deserves to be made of Robyn Eckersley’s reflections, which hold that hierarchical structures based on class, race, gender, and nationality impact access to natural resources and the quality of life. The problem of anthropocentrism, therefore, extends not merely to the issue of the exploitation of natural resources and the loss of biodiversity but reflects broader social structures of domination. The exploitation and degradation of the natural environment are part of a wider system of hierarchical relations that are tied to anthropocentric politics and practices. For instance, marginalized and impoverished communities often suffer greatly from environmental degradation – even though they did not contribute to it to the greatest extent. Ecocentrism, therefore, is not limited to recognizing the value and rights of all forms of life but is simultaneously a call for social justice. Social structures of domination often support, and are supported by, forms of ecological hierarchy and exploitation. Striving for a just world requires understanding and abolishing both of these forms of hegemony and privileged positioning (Eckersley, 1992).

Val Plumwood emphasizes the convergence of social and ecological forms of domination. Her analysis of moral responsibility toward ecosystems is based on a new conceptualization of the relationship between humans and other forms of life. Both Eckersley and Plumwood aim to critique established hierarchies: gender hierarchies and species hierarchies. However, they differ in terms of specific ideas and employed methodology – Plumwood primarily relies on feminism as her main reference point. The thinker focuses on critiquing the opposition: „non-human beings-humans”, but also the dichotomy: „nature-culture”, which reinforces exploitation in both the social and ecological spheres (Plumwood, 2002). Instead of hierarchical relationships based on superiority and primacy, Plumwood advocates for reciprocity and a care-based ethics. Ecofeminism, which deconstructs the patriarchal structure of the family, serves as an important complement to the ecocentric perspective. The household, which (in my

conception) represents the ecosystem, is not based on violence and domination. See also: (Warren, 2000; Gaard, 1993).

For those wishing to develop ecocentrism, an important point of reference could be Bryan Norton's concept focused on conflicts and synergy between different environmental ethics. Norton is interested in the philosophical and ethical foundations of ecosystem management – himself proposing an adaptive approach to natural resource management (Norton, 2005). Interestingly, the researcher discards the dichotomy between anthropocentrism and ecocentrism, arguing that focusing on sustainable ecosystem management can satisfy the needs of both humans and other forms of life. This is a pragmatic approach geared towards sustainable development – less so „purely” ecocentric. Norton points to an interesting convergence of certain values. He argues that ethics based on different values (for example, anthropocentric vs. ecocentric) can lead to similar, sustainable environmental management practices. This kind of reflection is important as it attempts to reconcile different approaches to environmental protection, providing a significant contribution to the discussion about the tension between the idea of sustainable development and ecocentrism. This approach aims to integrate various perspectives – ecocentric, biocentric, and anthropocentric – in order to create a more holistic and adaptive management model.

b. Critique

In aiming to develop a more universally acceptable version of ecocentric ethics, it is important to consider the main arguments levied against it. A fairly obvious criticism against ecocentrism (as a form of extremism) is the unjustifiable rejection of anthropocentrism – that is, the idea that human needs should be the priority of ethics. This criticism is based on a variety of arguments, and even paradoxes: ecocentrism is considered to be, *de facto*, an „amplified” form of anthropocentrism (Schmidtz, 2011; Drenthen, 2011). It has been pointed out that the ecocentric approach fails to specify what concrete moral duties towards nature arise from adopting this perspective. Furthermore, there are various environmental policies that lack common moral principles – ecocentrism is not necessarily the best or universal model among them (Norton, 1991). Moreover, we lack a precise determination of the moral value of different ecosystem elements, making it difficult to make decisions regarding conflicts of interest within the ecosystem, as well as the occurrence of similar priority conflicts between what is good for humans and what is good for the environment (Light, Rolston III, 2002). Despite the development of ecocentrism, there are still no clear answers to many questions, such as whether humans should intervene in an ecosystem to save a species from extinction, or allow natural events to take their course (i.e., the extinction of the species). The literature offers arguments against ecocentrism that are both specific and indicate precisely oriented flaws – for example, in relation to agriculture (Comstock, 1995) – as well as those that point out its broader shortcomings. It is not just ecocentrism but ecology itself that is failing to address contemporary challenges, especially global warming. Therefore, ecology should disappear, allowing room for

a new political paradigm to emerge (Shellenberger, Nordhaus, 2004; Shellenberger, Nordhaus, 2009).

Is the „driving force” for nature protection really currently beyond the domain of ecologists? Answering „yes” would be an exaggeration. Nevertheless, ecology is increasingly intermingling with politics (one could therefore say that ecology is „weakening”, while politics is strengthening). In this arrangement, important are the voters who do not make political decisions (including those regarding the natural environment) based solely on cold and rational argument analysis. On the contrary, emotions matter in politics. And it should be remembered that one of the strong and negative emotions felt towards ecocentrism is the fear of the radical form of this theory and extremist ecological activism. Since ecocentrism negates the anthropocentric paradigm, the fundamental concern arises from the belief that ecocentric values may develop into radical anti-humanism. Therefore, one must confront (perhaps) the most serious concern directed towards ecocentrism, namely the possibility of using violence in the name of ecocentric principles, or some form of ecological terrorism (Manes, 1990). Although violence within ecological movements is rare and does not represent a general trend, there are researchers who use the term „eco-terrorism” (Laqueur, 1999; Mullins, 1997; Eagan, 1996). The radical ecological movement Deep Green Resistance goes so far in its concern for the planet that it recognizes violence as a means to achieve its goals (Jensen, McBay, Keith, 2011; Spadaro, 2020)¹³. Of course, violence can be understood differently – it can be an attack on people, but also on private property. Dangerous are sabotage, arson, and acts of vandalism attributed to groups like the Earth Liberation Front.

Many researchers argue against labeling radical environmentalism as acts of terrorism (Martin, 2003; Harmon, 2000). Personally, I believe that the radicalism (or extremism) of ecocentrism should not be understood as synonymous with terrorism and violence, but rather as a nonconformist stance. This radicalism should not be violent, but should take the form of constructing a positive program – for those who want to think differently and live in harmony with the ideals they espouse. Positive values (like „the ecosystem as home”) constitute a specific form of creation and departure – in relation to nature, beyond what is currently widely accepted (both ethically and socially). Anthropocentric axiology is widely accepted. The nonconformity of ecocentrism would consist in transcending and (communally) supplementing the anthropocentric perspective – not in resorting to violence.

c. Conclusions. The Ecosystem as Home; Animals (and Plants) as Family

Despite its positive potential, ecocentrism is not without flaws. One of the criticisms that can be leveled against this concept is its limited capacity for mobilizing social action in favor of ecological endeavors. The model focuses on abstract and passive values, where the concern

¹³ Determining whether ecocentrism promotes ecological terrorism depends on the approach of a given researcher and the interpretation of specific theory and practice. For example, how should one evaluate the actions of Paul Watson, the founder of the Sea Shepherd Conservation Society?

for the preservation and protection of nature is evident but less so for active intervention on its behalf. Aldo Leopold speaks reverently about ecosystems, but his body of work seems to lean more towards a contemplative (rather than activating) approach to ecology. Currently, we find ourselves in a situation where the tone of environmental ethics cannot be conservative. Wild nature is shrinking, the state of the natural environment is deteriorating (peatlands are disappearing, biologically rich tropical forests, etc.)¹⁴. Many positions offer rich reflection related to environmental ethics. However, there is a lack of clear, practical slogans and directives that would indicate specific forms of behavior, teaching from the ground up that every individual (not just „big” corporations and capitalism) bears co-responsibility for the world and the place in which they live.

Pro-environmental actions, derived from the biological term „ecosystem”, are difficult to quantify and implement in educational and public policies. Ecocentrism (for example, as conceptualized by J. Baird Callicott) appears as an elitist ethic, targeted at academic and intellectual circles. Such a sociological observation leads to the conclusion that the influence of ecocentric postulates on social and political discussions concerning the natural environment is limited. On a daily basis, people have other problems than the „intrinsic value of ecosystems”. If „care for the ecosystem” is to become a real demand and an important area of action, ecocentric values need to be concretized and skillfully illustrated. A wide-ranging education is needed, which will „narrate” about the Earth’s ecosystems and present ecocentrism in schools, media, and politics. Especially in schools, a greater scope of activities related to observing different ecosystems is needed, as well as stimulating interest in various aspects – even those considered „threatening”¹⁵. Ecocentric education can significantly increase social acceptability for the presence of wild animals and plants in their natural habitats and nature reserves, but also in areas developed by humans (cities, urban parks, agricultural areas, industrial zones). Achieving this goal will not be helped by theoretical complexity. Values such as integrity, stability, unity, and coherence are abstract, which makes it difficult to reevaluate anthropocentric attitudes. It is important to remember that synonyms for the word „abstraction” include not only „idea”, „theory”, and „mental shortcut”, but also „absurdity”, „pipe dream”, „utopia” and even „waste of time”.

One could venture to say that anti-anthropocentric values appear as distant ideas that do not relate to people’s direct, everyday experiences. As a result, they may not be capable of eliciting the positive and emotional response needed to mobilize mass activity. A compelling narrative

¹⁴ Here is one of the symbolic facts: the mass of humans and livestock significantly outweighs the mass of wild animals (Bar-On, Phillips, Milo, 2018). Of course, „is it better?”, „is it worse?” – the assessment depends on the adopted perspective and the selection of statistical data. At the beginning of the 21st century, Bjørn Lomborg pointed out that the expected lifespan of humans is increasing, air quality is improving in developed countries, and in developing countries the percentage of people at risk of hunger is decreasing from 35% to 18%, etc. (Lomborg, 2001).

¹⁵ The aim is to establish the value of safety, which should be characteristic of ecocentrism. If a species seems harmful (or unnecessary), it means that we know too little about it – this idea is attributed to Konrad Lorenz (an Austrian zoologist and pioneer of ethology).

would involve promoting a different set of values than those highlighted by the „source” ecocentrism represented by Aldo Leopold and J. Baird Callicott. In my opinion, a discourse related to the concept of home (as a metaphor for the „ecosystem”) could play a significant role.

One could argue that anti-anthropocentric values appear as distant ideas that do not relate to people's immediate, everyday experiences. As a result, they may not be able to evoke the positive and emotional response that is essential for mobilizing mass activity. A compelling narrative means promoting a different set of values than those underscored by „original” ecocentrism, as represented by Aldo Leopold and J. Baird Callicott. In my view, a discourse related to the concept of home (as a metaphor for „ecosystem”)¹⁶ and family (as a metaphor for evolutionary bonds with non-human entities) could play a significant role. George Lakoff points out the fact that metaphors shape our understanding and attitudes towards various political issues, including environmental protection¹⁷. It's important to note the correlation between emotions and a sense of identity (to a lesser extent, facts and arguments) and the making of specific ethical decisions in a political context (Westen, 2007). A value system centered on the family emphasizes survival, safety, and mutual well-being among its members (promoting a set of values: life, safety, good). How should we treat animals and plants if we are a family and share the same home? Should we conserve or waste water while at home? Should we pollute our home or keep it clean? Should we harm members of our own family? The answers to these types of questions are obvious and natural. And that's an advantage! If values appear indisputable and certain, they will be accepted and practiced daily. Meanwhile, conceptualizing and translating the protection of „ecosystem integrity and coherence” into routine actions appears to be a much more difficult task – perhaps even doomed to failure. To develop ecocentric attitudes, we can apply many ideas borrowed from the „domestic ethos”: mutual care, responsibility, limited consumerism, etc. The triad of values upon which ecocentrism should be developed and popularized is: life, safety, good. These values could be at the forefront, thereby negating the impression of the abstraction of classical ecocentrism based on previously mentioned values: integrity, stability, beauty (Aldo and Callicott), and unity, coherency, self-consistency (Callicott).

Individuals wishing to develop and promote ecocentrism should implement peaceful forms of ecosystem affirmation. The use of violence in the name of environmental protection contradicts holistic ethics. Ecocentrism is based on interdependence and respect for all forms of life – this fact excludes violence. Nonviolent action is inherent in ecocentric activism, as empirical evidence confirms. Many movements, such as Extinction Rebellion, focus on

¹⁶ A home is made up of specific materials and substances. For a home to endure and provide shelter, it must have a material basis, foundations. The metaphor of „home” indicates why ethical reflection should also be directed towards abiotic factors.

¹⁷ People's relationship to the world is primarily conditioned emotionally. Conservatives and liberals operate within different metaphorical frameworks, which is why they understand ecological issues differently. Conservatives emphasize the importance of private property, the hierarchy of beings, and the strict father figure, while liberals focus on helping the vulnerable, empathy, equality, and parental responsibility (Lakoff, 2017, pp. 322-323).

peaceful protests and civil disobedience. In works on ecological ethics, violence is generally rejected as a means of achieving ecological goals. The metaphors of „family” and „home” emphasize a theoretical distance from violence. A home is not a space of violence. A family is based on positive emotions and mutual understanding of needs. Home and family are spaces of „good” living and a sense of security. Modern ecology should be aligned with these values. „Security” is not an abstract value but a specific directive focusing attention on particulars, for example: remedial measures against attacks from environmental terrorists, intelligence data collection techniques, and security planning (Likar, 2011).

Active and effective nature conservation should nowadays be a „team game” at the ethical, political, and social levels. Activists cannot operate solely on the fringes of society, arousing associations with terrorism. Loneliness implies weakness, and weakness invites the temptation of using violence. The aim of ethical reflection is to socially ground ecocentrism by highlighting its positive potential: anti-violent and activating. It’s not just about analyzing the ethical foundations of ecocentrism, but about reformulating them into the form of recognizable ethics and social practice. It’s important to move beyond old schemas with a new ecological rhetoric that resonates with clear and recognizable values. The metaphor of family (and home) should be the basis for further development of ecocentrism. The values of family and home are fundamental in shaping and perceiving reality – also in Poland. We need a new understanding of ecological ethics, in the spirit of recognizable values that are antithetical to terror. The vision of the family comprises a set of specific moral priorities – not supremacy and recourse to forceful arguments.

Engaging in discussions about seeking more rigorous ways to protect wild nature, it is worthwhile to study as wide a range of approaches as possible, not overlooking the classics, starting from Aldo Leopold’s land ethic, J. Baird Callicott’s holistic approach, Arne Næss’s deep ecology, or Paul W. Taylor’s biocentrism¹⁸. These approaches include not only humans but also other living beings and ecosystems in the ethical sphere, thus expanding the scope of ethical responsibility. These concepts aim for the long-term utilization of natural resources, which is more aligned with the ecological principle of ecosystem balance and stability. A holistic approach allows for a comprehensive analysis of ethical value – contrary to anthropocentric reductionism, which relies on a narrow perspective: utility for humans. However, does Western civilization need strict ecocentrism? Is an ethic needed in which the value of things derives from their contribution to the integrity, stability, and beauty of ecosystems? In the era of global warming, we need enduring, complete, and rich ecosystems. Each of us should develop ideas that (in our opinion) are capable of confronting the most pressing challenges of contemporary times. At the same time, we need to cultivate skepticism, vigilance, criticism, and readiness to learn and change our views within ourselves. It may turn out that the values most urgently needed in the contemporary world lie beyond the reach of ecocentrism.

¹⁸ See also (Varner, 1998; Attfield, 2003).

8. Summary

Due to the ecological crisis, there is an increasingly strong clash between the anthropocentric and ecocentric paradigms. This is not just a theoretical dispute. Ecocentrism opposes the resolution of environmental issues within the existing social and economic framework, in which nature is (more or less implicitly) exploited. Ecocentrism emphasizes the need to reevaluate the relationship between humans and nature. The problem is not only inadequate management models, farming practices, construction methods, etc. Ecocentrism demands profound changes in the way of thinking and recognizing the interdependence of humans with other organisms and abiotic factors in the ecosystem.

Further development of ecocentrism requires moving it from the academic realm into the widely discussed sphere of ideas. Ecocentrism, as an approach that assigns value to entire ecosystems, has the potential to become a groundbreaking paradigm in which the relationships between humans and nature are fundamentally altered. An ethical transformation towards ecocentrism is both possible and desirable. For this kind of shift in thought and attitudes to occur, the popularization of the values associated with ecocentrism is necessary. It is important to understand why this theory matters and why it raises concerns. Ecocentrism is significant due to its broad scope and consideration of the long-term effects of human actions on the natural environment. Recognizing the Earth's ecosystems as our shared home, a unique and deserving-of-protection community, implies embracing a wide range of moral obligations towards non-human forms of life, natural habitats, and abiotic components.

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References

1. Attfield, R. (2003). *Environmental Ethics: An Overview for the Twenty-First Century*. Polity-Blackwell.
2. Attfield, R. (2018). *Forest ethics*. In: A. Kallhoff, M. Di Paola, M. Schörghener (Eds.), *Plant Ethics: Concepts and Applications* (pp. 121-130). Abingdon-Oxon-New York.

3. Baier, K. (1973). Ethical Egoism and Interpersonal Compatibility. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, Vol. 24, No. 6, pp. 357-368.
4. Bar-On, Y.M., Phillips, R., Milo, R. (2018). The biomass distribution on Earth, *Proceedings of the National Academy of Sciences*, Vol. 115, No. 25, pp. 6506-6511.
5. Bendell, J. (2022). Replacing Sustainable Development: Potential Frameworks for International Cooperation in an Era of Increasing Crises and Disasters. *Sustainability* 14/8185, pp. 1-19, doi: 10.3390/su1413818
6. Brennan, A. (1984). The Moral Standing of Natural Objects. *Environmental Ethics*, 6/1, pp. 35-56.
7. Callicott, B.J. (1989). *In Defense of the Land Ethics: Essays in Environmental Philosophy*. NY State: University of New York Press.
8. Chapin, III, F.S., Matson, P.A., Vitousek, P.M. (2011). *Principles of Terrestrial Ecosystem Ecology*. New York/Dordrecht/Heidelberg/London: Springer.
9. Ciężła, H. (2004). Idea zrównoważonego rozwoju a współczesna kondycja moralna. *Prakseologia*, 144, pp. 53-66.
10. Comstock, G.L. (1995), Do agriculturalists need a new, an ecocentric, ethic? 1994 Presidential address to the agriculture, food, and human values society. *Agriculture and Human Values*, 12, pp. 2-16.
11. Derrick, J., McBay, A., Keith, L. (2011). *Deep Green Resistance: Strategy to Save the Planet*. Seven Stories Press.
12. Eagan, S.P. (1996). From Spikes to Bombs: The Rise of Eco-Terrorism. *Studies in Conflict & Terrorism*, 19, pp. 1-18.
13. Ebert, R. (2020). Are Humans More Equal Than Other Animals? An Evolutionary Argument Against Exclusively Human Dignity. *Philosophia*, 48/5, pp. 1807-1823.
14. Eckersley, R. (1992). *Environmentalism and Political Theory: Toward an Ecocentric Approach*. State University of New York Press.
15. Elliot, R. (1993). *A Companion to Ethics*. Peter Singer (Ed.). Blackwell, pp. 284-293.
16. Fox, M.A. (1986). *The Case for Animal Experimentation: An Evolutionary and Ethical Perspective*. University of California Press.
17. Fox, M.A. (1987). Animal experimentation: A philosopher's changing views. *Between the Species*, Vol. 3, Iss. 2, pp. 55-82, doi: 10.15368/bts.1987v3n2.1
18. Fox, M.A. (2000). The case against animal experimentation: Comments on Dunayer's 'in the name of science'. *Organization & Environment*, 13/4, pp. 463-7.
19. Gaard, G. (Ed.) (1993). *Ecofeminism: Women, Animals, Nature*. Philadelphia: Temple University Press.
20. Gawor, L. (2006). Idea zrównoważonego rozwoju jako projekt nowej ogólnoludzkiej cywilizacji. *Diametros*, 9, pp. 84-104.

21. Goodman, N. (1968). *Languages of Art: An Approach to a Theory of Symbols*. Indianapolis: Bobbs-Merrill.
22. Gus, M. (2003). *Understanding Terrorism. Challenges, Perspectives, and Issues*. Thousand Oaks/London/New Dehli.
23. Harmon, Ch. (2000). *Terrorism Today*. London, Portland: Frank Cass Publishers.
24. Hull, Z. (2008). Filozoficzne i społeczne uwarunkowania zrównoważonego rozwoju. *Problemy ekorozwoju, Vol. 3, No. 1*, pp. 27-31.
25. Kuzior, A. (2008). Paradygmat odpowiedzialności w perspektywie koncepcji sustainable development. In: V. Gluchman. (Eds.), *Moralka a súčasnosť*. Preszów: Filozofická Fakulta Presovskej Univerzity.
26. Lakoff, G. (2010). Why it Matters How We Frame the Environment. *Environmental Communication, Vol. 4, No. 1*, pp. 70-81.
27. Lakoff, G. (2017). *Moralna polityka. Jak myślą liberalowie i konserwatyści?* Warszawa: Aletheia.
28. Laqueur, W. (1999). *The New Terrorism. Fanaticism and the Arms of Mass Destruction*. Oxford University Press.
29. Leopold, A. (1949). *A Sand County Almanac*. New York: Oxford.
30. Light, A., Rolston, III H. (2002). *Environmental Ethics: An Anthology*. Wiley-Blackwell.
31. Likar, L.E. (2011). *Eco-Warriors, Nihilistic Terrorists, and the Environment*. Bloomsbury Publishing.
32. Lippert, I. (2004). *An Introduction to the Criticism on Sustainable Development*. Cottbus: Brandenburg University of Technology.
33. Lomborg, B. (2001). *The Skeptical Environmentalist*. Cambridge: Paperback.
34. Luke, T.W. (2008). Climatologies as Social Critique: The Social Construction/Creation of Global Warming, Global Dimming, and Global Cooling. In: S. Verheiden (Eds.), *Political Theory and Global Climate Change* (pp. 121-152). Cambridge/London.
35. Manes, Ch. (1990). *Green rage: Radical environmentalism and the unmaking of civilization*. Boston: Little, Brown.
36. Mullins, W.C. (1997). *A Sourcebook on Domestic and International Terrorism. An Analysis of Issues, Organizations, Tactics and Responses*. Illinois.
37. Naess, A. (1989). *Ecology, Community and Lifestyle*. Cambridge University Press.
38. Norton, B.G. (1991). *Toward Unity Among Environmentalists*. Oxford University Press.
39. Norton, B.G. (2005). *Sustainability: A Philosophy of Adaptive Ecosystem Management*. University of Chicago Press.
40. Odum, E.P. (1971). *Fundamentals of Ecology*. New York: Saunders.
41. Orton, D. (1999). My Path to Left Biocentrism: Part I – The Theory. *A Journal Towards Wildness, Vol. 1, No. 1*.
42. Piątek, Z. (2007). Filozoficzne podłoże zrównoważonego rozwoju. *Problemy ekorozwoju, Vol. 2, No. 1*, pp. 5-18.

43. Plumwood, V. (2002). *Environmental Culture: The Ecological Crisis of Reason*. Abingdon: Routledge.
44. Rawls, J. (1971). *A Theory of Justice*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.
45. Regan, T. (1983). *The Case for Animal Right*. Berkeley: University of California Press.
46. Sarkar, S. (1999). *Eco-Socialism or Eco-Capitalism? A Critical Analysis of Humanity's Fundamental Choices*. Zed Books.
47. Shaver, R. (2021). Egoism. *Stanford Encyclopedia of Philosophy*. Retrieved from: <https://plato.stanford.edu/entries/egoism/>
48. Shellenberger, M., Nordhaus, T. (2004). *The Death of Environmentalism*, env_v3.indd
49. Shellenberger, M., Nordhaus, T. (2009). *Why We Can't Leave Saving the Planet to Environmentalists*. Houghton Mifflin.
50. Singer, P. (1975). *Animal Liberation: A New Ethics for our Treatment of Animals*. New York: Random House.
51. Smith, T. (2006). *Ayn Rand's Normative Ethics: The Virtuous Egoist*. New York: Cambridge University Press.
52. Spadaro, P.A. (2020). Climate Change, Environmental Terrorism, Eco-Terrorism and Emerging Threats. *Journal of Strategic Security, Vol. 13, No. 4*, pp. 58-80. doi:10.5038/1944-0472.13.4.1863. ISSN 1944-0464
53. Tannenbaum, J., Jaworska, A. (2021). *The Grounds of Moral Status*. Stanford Encyclopedia of Philosophy.
54. Tansley, A.G. (1935). The Use and Abuse of Vegetational Concepts and Terms. *Ecology, Vol. 16, No. 3*, pp. 284-307.
55. Taylor, B., Chapron, G., Kopnina, H., Orlikowska, E., Gray, J., Piccolo, J.J. (2020). The need for ecocentrism in biodiversity conservation. *Conservation Biology, Vol. 34, Iss. 50*, pp. 1057-1322.
56. Taylor, P.W. (1983). In Defense of Biocentrism. *Environmental Ethics, Vol. 5, Iss. 3*, pp. 237-243.
57. Taylor, P.W. (2021). *Respect for Nature: A Theory of Environmental Ethics*. Princeton University Press.
58. Tyburski, W. (2007). Etyczne założenia edukacji dla zrównoważonego rozwoju. *Problemy Ekorozwoju: Studia filozoficzno-socjologiczne, Vol. 2, No. 1*, pp. 41-47.
59. Varner, G. (1998). *In Nature's Interests? Interests, Animal Rights, and Environmental Ethics*. Oxford: Oxford University Press.
60. Vernadsky, V.I. (1997). New York: Copernicus.
61. Warren, K.J. (2000). *Ecofeminist Philosophy: A Western Perspective on What It Is and Why It Matters*. Rowman & Littlefield Publishers.
62. Warren, M.A. (1997). *Moral Status. Obligations to Persons and Other Living Things*. Oxford: Clarendon Press.

63. Washington, H., Taylor, B., Kopnina, H., Cryer, P., Piccolo, J.J. (2017). Why ecocentrism is the key pathway to sustainability. *The Ecological Citizen, Vol. 1, Iss. 1*, pp. 35-41.
64. Westen, D. (2007). *The Political Brain: The Role of Emotion in Deciding the Fate of the Nation*. New York: PublicAffairs.
65. Woodhouse, K.M. (2018). *The Ecocentrists: A History of Radical Environmentalism*. New York: Columbia University Press.