

ENVIRONMENTALISM, SOZOLOGY, & ECOLOGY: FROM ATTITUDES TO SCIENCE**PETRIȘOR Alexandru-Ionuț, SKOCZYLAS Michał M.**

Abstract. The article attempts to provide a distinction between the two disciplines dealing with the environment (ecology) and its protection (sozology) and their interconnections, also focusing on the issue of environmentalism, which stands apart from the two sciences through its political nature. In analysing the dynamics of the two sciences, the discussion focuses on their development in Poland and Romania, underlining the most important contributions and contributors. The results emphasize the scientific grounds of ecology and sozology in contrast with environmentalism, especially in the modern times, and also highlight some differences between Poland and Romania, which are not exploited from a philosophical viewpoint.

Keywords: sustainability, conservation, politics, environment, epistemology.

Rezumat. Ecologism, sozologie și ecologie: de la atitudine la știință. Articolul încearcă să realizeze o distincție între cele două discipline având ca obiect mediul (ecologia) și protecția acestuia (sozologia), prezentând și interconexiunile dintre acestea și adăugând în discuție ecologismul, separat de cele două științe prin natura sa politică. În analiza dinamicii celor două științe, discuțiile se focalizează asupra dezvoltării acestora în Polonia și România, incluzând cele mai importante contribuții și personalități. Rezultatele subliniază fundamentul științific al ecologiei și sozologiei, în contrast cu ecologismul, în special în perioada modernă, și pune în evidență unele diferențe între Polonia și România fără a le exploata într-o manieră filozofică.

Cuvinte cheie: dezvoltare durabilă, conservare, politică, mediu, epistemologie.

INTRODUCTION

The purpose of this article is to discuss the connections between the two disciplines dealing with the environment (ecology) and its protection (sozology), adding also to the discussion the active attitudinal and political side, the ‘green’ movement. In addition to presenting the concepts and their relationships in a historical perspective, we are emphasizing the dynamics and evolution of the fields in a comparative manner, using Poland and Romania as examples.

1. THE MAIN CONCEPTS

The present study addresses three concepts; ‘ecology’ and ‘sozology’ are scientific disciplines, and their names have a correspondence in most languages, making translations possible easily. The third concept, “environmentally-sensitive attitude or policy”, does not have a single name in English. According to HARRISON & BOYD (2003), environmentalism and ecologism are two sides of the ‘green movement’ or the ‘greens’, the political and, nowadays, also cultural side; the difference is that environmentalism is mostly concerned by threats to the environment, which can be effectively dealt with within the status quo, while ecologism addresses radical challenges to the entire economic and social structure, eventually proposing a new value system and morality. Based on these, Table 1 proposes a table of correspondence or dictionary of the three concepts.

Table 1. Ecology, sozology and the ‘green’ policy/movement: terms used in several languages used for illustration purposes.

English	ecology	sozology	green movement, ecologism, environmentalism
French	écologie	sozologie	écologisme
Romanian	ecologie	sozologie	ecologism
Polish	ekologia	sozologia	ekologizm

2. DISTINCTIONS AND DIFFERENCES

An article published by PETRIȘOR (2008) concluded that ecologists had a scientific background and promoted sustainability in the spirit of the Brundtland Report and Rio, while the green activists were stuck in the ideas of the Club of Rome, promoting a zero-growth strategy. In the current article, we are attempting to provide a fine-tuned view, adding sozology to the equation. In more details, we consider that the evolution of ecology as a science is influenced by the evolution of global development; the ‘ecological crisis’ challenges ecology for solutions, giving birth to a new ‘ecology of the environmental protection’, namely sozology.

DYNAMICS AND EVOLUTION OF ECOLOGY, SOZOLOGY AND THE GREEN MOVEMENT**1. A SCIENTIFIC PERSPECTIVE**

Ecology emerged as a concept in the works of Ernst Haeckel (1866); although the reference has a clear year, in reality different sources date it in the period 1866-1869 (HAECKEL, 1866). Influenced by Charles Darwin’s idea of “struggle for existence”, Haeckel defined ecology as “*body of knowledge concerning the economy of nature – the*

investigation of the total relations of the animal both to the inorganic and to its organic environment; including, above all, its friendly and inimical relations with those animals and plants with which it comes directly or indirectly into contact – in a word, ecology is the study of all those complex interrelations referred to by Darwin as the conditions of the struggle for existence” (translation by EGERTON, 2013).

Ecology emerged as a biological science (IONAȘCU et al., 2019), but during its evolution, in tight relationship to the need for understanding the conditions of the inorganic and organic environment influencing the organisms mentioned by Haeckel, ecology developed into an interdisciplinary domain. While in the beginning it connected to other Earth, physical, and life sciences, after the acceptance of the idea that man is part of the environment and its living conditions and organization of the human society can be studied by the same principles, ecology also became connected to social sciences. During this process, several steps can be distinguished (VĂDINEANU, 1998, 2004; PETRIȘOR, 2007):

1. Autecology is the first stage, ascertaining the influence of the inorganic environment on the living communities (starting ~1900);
2. Synecology is the study of the relationships between the biological communities (starting ~1930);
3. The two steps are merged together in the concept of ‘ecosystem’ (TANSLEY, 1935); starting from this moment, ecology starts to study the ecosystems, including the structure and functions, approaching the structure of communities (starting ~1960), matter and energy flows (~1970), and diversity and its relationship with the stability of systems (starting ~1980);
4. Starting in the 1970’s-1980’s, ecology embraces the systemic conception and enters its systemic phase; in this stage, several steps can be distinguished: the eco-systemic theory (~1970), the eco-systemic theory of hierarchical organization (~1985), and the eco-systemic theory of sustainability (~2000).

At the same time, ecology developed, based on its connections with other sciences, into 53 branches (BALASUBRAMANIAN, 2019). These branches cover numerous types of environments (e.g., aquatic ecology, terrestrial ecology, urban ecology, soil ecology, marine ecology, etc.), different organisms (microbial ecology, insect ecology, human ecology, etc.), different scales (global ecology, landscape ecology, population ecology, etc.), results from the cooperation with other fields (ecological economy, social ecology, medical ecology, molecular ecology, industrial ecology, ecotoxicology, fire ecology, etc.), from different challenges or perspectives (conservation ecology, restoration ecology, quantitative ecology, theoretical ecology, systemic ecology, behavioural ecology, spatial ecology, palaeoecology, evolutionary ecology, etc.), to name just a few.

2. A DEVELOPMENT PERSPECTIVE

Usually it is universally accepted that, following the industrial revolution, the development of the human society occurred based on the unwritten assumption that natural resources are infinite, and the capacity of the environment to absorb pollution unlimited. However, when the effects of intensive agriculture, including the use of pesticides and fertilizers, became manifest, humanity realized that the industrial development has negative impacts on the environment. One of the first signals was Rachel Carson’s *“Silent Spring”* (CARSON, 1962), a book focused on the negative outcomes of using pesticides. The moment was also the starting point of environmental concerns, taken over by the ‘green’ (in today’s words) groups. Their lobby was intense, since at that time multi-national companies had a strong policy. Nine years later, the oil crisis added to the conflict, focusing this time on the finitude of resources. The moment coincided with the 1972 world summit, when a conflict arose between the concerns of the developed countries related to the environmental outcomes of industrialized development and the developing countries, which saw the emerging environmental restrictions as a barrier to their development; the voice of the second part was synthesized by the Chinese representative, who said that the worst form of pollution is poverty (ILIESCU, 2005).

Since the two positions seemed to be irreconcilable, a global decision was expected to favour one side against the other, especially when the Club of Rome launched its proposal for “zero growth” (MEADOWS et al., 1972), meant to stop development in order to eliminate its negative environmental consequences. However, the Brundtland Report (BRUNDTLAND, 1987) proposed an oxymoronic concept (LATOUCHE, 2004) aimed at postponing the decision, i.e. a development that meets current and future needs, integrating environmental and social criteria in addition to the economic ones in the process of drafting the strategies of development. The new concept, “sustainable development”, although criticized, was not replaced ever since, although development did not become sustainable according to its definition (BASS, 2007). Also, although the authors intended only to give the environmental and social pillar an importance equal to the one given to the economic one (BUGGE & WATTERS, 2003), most people equated sustainability with a pro-environmentalist attitude. The emergence of sustainability, appearing to have a better substantiation than the “zero growth” strategy (PETRIȘOR, 2008), was also the point of separation of the ‘green’ groups, who sustained it, from those who embraced the new concept.

In the over 30 years since the concept of “sustainable development” appeared, it became a buzz word. Similarly, the “green” or “ecological” labels lost their value, and even the green attitude evolved, eventually becoming a lifestyle (LORENZEN, 2012) supported by an industry (e.g., use of non-motored vehicles, living outside the cities or in low-carbon houses, vegetarian diet, cook or even produce their own food, etc.) Many of these practices are not necessarily scientifically substantiated; LORENZEN (2012) distinguishes a ‘religious environmentalism’, where behaviours are copied and taken for granted.

3. A JOINT PERSPECTIVE

While ecology continued its evolution, the new societal challenges of the ‘green’ groups determined the academics to investigate the issue of protecting the environment. Although the term “conservation ecology” keeps this research area as a direction of ecology, Walery Goetel (1889-1972) is credited for coining the new science of sozology as a discipline dealing with the protection of the environment (GAWOR, 2013). GRIFFITHS & DOS SANTOS (2012) identified, based on a scientometric analysis that population biology, habitat change, community ecology and species conservation were the main focus of the 320 articles analysed to determine the trends in conservation biology and ecology. GODET & DEVICTOR (2018) used a similar, but automatic approach to look at the nearly 13,000 scientific articles published during 2000-2015, finding out that most of these looked at the status of conservation, possible threats and solutions. However, BÜSCHER & WHANDE (2007) distinguish, based on a qualitative analysis, three trends of the research area, in relationship to the changes of global politics: neo-liberal conservation, bioregional conservation, and hijacked conservation.

With respect to the model of development, Serge Latouche continued the idea of the Club of Rome, showing that the incompatibility between economic development and sustainability appears because the economic development is based on economic growth; instead, he proposed an alternative de-growth-based economy (LATOUCHE, 2003; 2004), substantiated through a series of works published up to the moment (LATOUCHE, 2019).

ECOLOGY AND SOZOLOGY IN POLAND

The beginnings of environment protection in Poland grew from the observance of nature and the utilization of natural goods with respect for the nature called using the traditional word “przyroda”. Environmental protection was created and put into the practice with the law and thanks to the social and early-scientific activities of many persons, including kings – Bolesław I the Brave (protection of beaver), Władysław Jagiełło (protection of species *Taxus baccata*) and Sigismund I the Old (protection of European bison, aurochs, beaver, peregrine falcon and swan). In modern times there were many ways of acquiring knowledge about nature, conducting its protection and rational use developed in Poland – only to mention the exemplary persons who gave ideas, were conducting scientific research or acting in the field of environmental protection: Eugeniusz Janota (protection of animals useful for people), Włodzimierz Dzieduszycki (promoter of nature education and museologist), Maksymilian Nowicki (researcher and activist for nature protection in the Tatra Mountains), Bolesław Hryniewiecki (territorial nature protection), Władysław Szafer (protection of nature resources, initiation of restoring the European bison population in the Białowieża Forest), Michał Siedlecki (animal species protection and development of rational foundations for sea fishing), Adam Wodziczko (territorial nature protection, urban planning), Walery Goetel (protection of nature resources and sozology as a scientific discipline) – Fig. 2, Edward Potęga (environmental protection activities) and Włodzimierz Michajłow (evolution of parasites, ideology of sozology). The narrow sub-disciplines of sozology and various branched of applied science were represented by many more persons working on ecology or problems important in ecology, e.g. Wojciech Oczko (balneotherapy), Marian Raciborski (fungal infections in European carp, environmental protection assumptions), Tytus Chałubiński (treatment by climate), Teofil Ciesielski (biology and ecology of bees), Władysław Biegański (causality, theleology and previdism in biology and medicine, ecological problems in medicine), Emil Godlewski (absorption of carbon dioxide from the air by plants), Marceli Nencki (research on organic matter rotting processes and discovery of bacteria capable of living in an anaerobic atmosphere), Jan Czekanowski (statistics in anthropology), Józef Paczowski (creator of the concept of phytosociology), Zbigniew Pawłowski (medical aspects of carrier state and parasitic disease), Stanisław Tołpa and both Janina Jasnowska and Mieczysław Jasnowski (ecology of peatlands), Bronisław Wojciech Wołoszyn (bat ecology, including research of their thanatocoenoses in Cuba), Napoleon Wolański (human ecology), Edward Mroczkowski (medical ecology) and Janusz Uchmański (mathematical ecology).

Environmental issues also resound to varying degrees in research on the individual development of man. Prominent figures in this area are Jędrzej Śniadecki (biological aspects in ontology and then, by inductive reasoning, in autecology, developed later), Jan Tur (teratology), Napoleon Wolański (biological development of man), Irena Norska-Borówka (ecological problems in pediatrics), Barbara Woynarowska (environmental problems in school medicine), and many other scientists and medical doctors developing Polish auxology, medical genetics and pediatrics in an open manner to the environmental conditions of this issues, for instance Andrzej Malinowski, Marian Krawczyński, Danuta Chlebna-Sokół, Alina Midro and Jacek Rudnicki (SKOCZYŁAS, 2019). The influence of the environment on human health and the problem of adaptation to the environment is visible in many more medical sub-disciplines, e.g. radiological imaging of changes in the period of parasitoses for general medical usage and narrowly specialized neurosurgery – as in the works of Zdzisław Dziubek and Jacek Juszczyk (DZIUBEK, 1999; JUSZCZYK, 2000).

The scientists who were the Polish pioneers of exploration of inanimate and animate nature in an integrated and geographical way should also be mentioned in this setting – among others Wiktor Godlewski, Benedykt Dybowski, Hugo Zapałowicz and Jerzy Kondracki with one of the first persons in the modern period – polymath Gabriel Rzączyński (1664-1737) who described the Polish–Lithuanian Commonwealth in a geographical way devoting a lot of attention to geology, biological diversity, living conditions and selected human health problems in his main work

entitled “*Historia naturalis curiosa Regni Poloniae, Magni Ducatus Lituaniae annexarumque provinciarum in tractatus XX divisa*” (SKOCZYLAS, 2020).

The educational effort is also noteworthy. Among the many excellent teachers and writers, it is worth mentioning the unique figure in terms of agriculture. This person is Dezydery Chłapowski who wrote the handbook “On agriculture” (orig. “O rolnictwie”) as a prisoner of the Prussian prison in Stettin (Szczecin) in the 1830s (CHŁAPOWSKI, 1835). Władysław Szafer emphasized the importance of education for protecting the environment (ZEMANEK, 2019). The in-school exploration of native nature and in other parts of the world enabled further studies of natural sciences, but also increased the awareness of young people to it. For example in “The textbook to learning about animate and inanimate nature for 6th class of primary school” (orig. “Podręcznik do nauki o przyrodzie żywej i martwej dla klasy VI szkoły powszechnej”) by Gajówna, Żłobicki and Adwentowski from the year 1934, children could read about many species known in Poland and others such as phyllium, pelican, wild water buffalo, reindeer, arctic fox and ways of protection of nature (e.g. main nature reserves in the Second Polish Republic), human ecology, general laws of nature and natural conditions of human civilization: buffalo breeding in India, artificial pollination of date palms by Arabs, reindeer breeding by Sami people, storage of plant seeds for sowing, history of mineral substances in the cultivated field, chemical fertilizers, obtaining iron from ores, brine and graduation tower, the use of lime for the disinfection of street gutters, kneading clay and porcelain vessels, friction and work – including work of people and animals, centre of gravity and balance of bodies, including the leaning tower in Pisa, Italy (GAJÓWNA et al., 1934; SKOCZYLAS & KALISZCZUK, 2018).

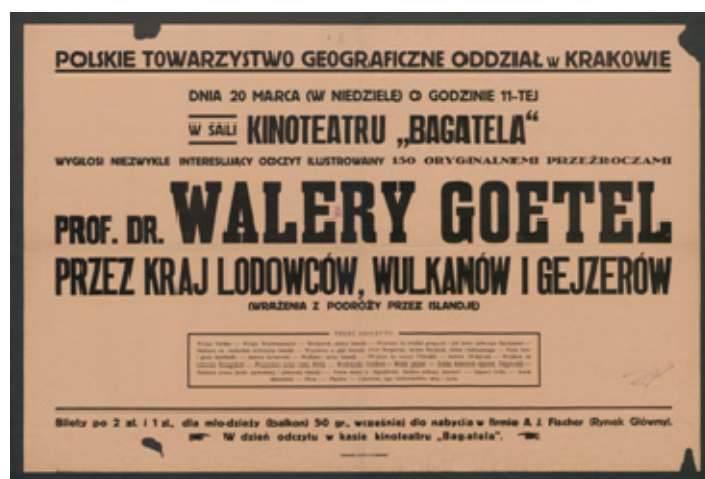


Figure 1. The poster with information about the lecture entitled “Through the country of glaciers, volcanoes and geysers (impressions of the traveling through Iceland)” by professor Walery Goetel for Cracow Branch of the Polish Geographical Society, about 1940 (source: Wikimedia Commons).

The totality of the achievements and limitations of the Polish science, which largely depended on events from the universal history, is a foundation for the development of sozology. The content of some works written before Walery Goetel proves the impact of foreign achievements in biology and ecology as well as trends in environmental protection, e.g. “The concept of causality in biology” (orig. “Pojęcie przyczynowości w biologii”) by Władysław Biegański and “Research and protection of nature monuments. Work program for cultural activists” (orig. “Badanie i ochrona zabytków przyrody. Program pracy dla działaczy kulturalnych”) of the authorship of Marian Raciborski and Ludomir Sawicki (BIEGAŃSKI, 1906; RACIBORSKI & SAWICKI, 1914). The subsequent ideas, including his own, were presented by Walery Goetel among others in the “Development of the national parks concept” (orig. “Rozwój idei parków narodowych”) and “On the durability of using nature resources” (orig. “O trwałości użytkowania zasobów przyrody”) (GOETEL, 1959; 1963). He presented general ideological assumptions and emphasized the importance of sources of environmental pollution and the need for protective actions. Włodzimierz Michajłow developed the theoretical aspects of sozology and described them in “Comments on the science of nature conservation, its theoretical foundations and methodological assumptions” (orig. “Uwagi na temat nauki o ochronie przyrody, jej podstaw teoretycznych i założeń metodologicznych”) (MICHAJŁOW, 1958; MEADOWS et al., 1972). He suggested calling the science about the environmental protection using tentatively the word feidoleology (orig. “feidoleologia”). In the works of both Goetel and Michajłow and followers of their thoughts and actions the ideas phrased in response to the rapid industrialization, urbanization, mechanization and use of chemicals in agriculture came to the fore. There were many further effects of the development of the new branch of science (sozology) and education in biology focused on the beauty of nature and ways of its protection. In the second half of the 20th century and beginning of the 21st century in the field of environmental protection the emphasis was mainly on reducing the fuel consumption for car engines, noise protection and minimization of air, soil and surface water pollution together with the protection of water and wood resources, creating more national and landscape parks (e.g. Tatra National Park, Biebrza National Park, Sulejów

Landscape Park, Rogalin Landscape Park, Przemków Landscape Park) and popularizing pro-health behaviour, including cycling instead of car communication, when it comes to daily travel to work or school, as well as recreational trips (bicycle path network in Szczecin, Police and Trzebież; Green Velo trail from Końskie, through Kielce, Sandomierz, areas of Rzeszów, Przemyśl, Roztocze, Zamość, Krasnystaw, Chełm and the Bug river, Białowieża Forest, Białystok, Biebrza and Narew Valley, Augustów, Suwałki, Masurian Lake District and Lidzbark Warmiński to Vistula Lagoon with Frombork and Elbląg – detailed description on: <https://greenvelo.pl/en/general-information>). This way, sozology connects with the area of health promotion and tourism, gaining social acceptance.

The issue of environmental threats resulting from civilization changes, including lifestyle changes, was the subject of work of representatives of many areas of life. In addition to exploring inter-individual relationships in specific conditions, interspecies relationships and relations in ecosystems (“scientific” ecology in many branches of biological sciences), in the range of the practical use of ecology emphasis was placed on both protecting the natural environment (sozology) and improving the health of the human and farm animal populations (e.g. medicine, veterinary medicine, agriculture). This fact can be considered to be favourable to the development of human ecology (science on man in the environment) with its sub-discipline called medical ecology related to many specialization fields, such as infectious diseases and parasitology. Next to the outstanding scientists mentioned above, it is necessary to notice groups of people involved in the practical implementation of the assumptions of sozology, among others sanitary authorities, employees of sanitary services, landscape architects, creators of culture and biology teachers. Natural sciences, including biology, ecology and medicine, were the basis for developing the assumptions of sozology and its introduction to practice in the conditions of the socialist system in Poland and after the change of the political system at the end of the 20th century. The images of a few persons mentioned above are shown in Figure 2.



Dezydery Chłapowski
(1788-1879)



Tytus Chałubiński (1820-1889)



Eugeniusz Janota (1823-1878)



Maksymilian Nowicki
(1826-1890)



Marian Raciborski (1863-1917)



Bolesław Hryniewiecki
(1875-1963)



Władysław Szafer (1886-1970)



Adam Wodziczko (1887-1948)

Figure 2. Pioneers of ecology and sozology in Poland.

ECOLOGY AND SOZOLOGY IN ROMANIA

Most authors (TUFESCU & TUFESCU, 1981; IANCU, 2003; MARIN, 2010; DEDIU, 2012; GEACU et al., 2012; DZIĘCZKOWSKI & LATOWSKI, 2013; MĂCIUCĂ, 2017) agree on the main stages in the development of ecology in Romania, as presented in this section. In tight correlation with the steps in the development of ecology worldwide, the precursors of modern ecology were botanists who studied several aspects of autecology, including Dimitrie Brândză (1846-1895), founder of the Botanical Garden of Bucharest; Iuliu Prodan (1875-1959); Traian Săvulescu (1889-1963); Emil Pop (1897-1974); Alexandru Borza (1887-1971); and Gheorghe Bujorean (1893-1971). The images of most people mentioned above are shown in Figure 3.



Dimitrie Brândză (1846-1895)



Iuliu Prodan (1875-1959)



Traian Săvulescu (1889-1963)



Emil Pop (1897-1974)



Alexandru Borza (1887-1971)



Gheorghe Bujorean (1893-1971)



Emil Racoviță (1869-1947)



Paul Borcea (1819-1999)



Constantin Motaș (1891-1980)



Nicolae Botnariuc (1915-2011)



Andrei Popovici-Băznoșanu
(1876-1969)



Paul Bujor (1862-1952)



Grigore Antipa (1867-1944)



Angheluță Vădineanu
(born 1946)



Adriana Murgoci (1909-1986)



Ion Simionescu (1873-1944)

Figure 3. Pioneers of ecology and sozology in Romania.

The most notable contribution was the foundation of geo-botany by Alexandru Borza (1924). Important contributions were brought by zoologists, studying many aspects of autecology and synecology: Emil Racoviță (1869-1947), founder of bio-speleology and contributions to the study of sea and the extreme Antarctic systems, aquatic biologists Paul Borcea (1819-1999), dealing with the Black Sea, Constantin Motaș (1891-1980), and Nicolae Botnariuc (1915-2011), and zoologists Andrei Popovici-Bâznoșanu (1876-1969), founder of the research centre in Sinaia (1922), who studied terrestrial ecology and is author of the first classification of Romanian biotopes and the “bioscene” (bioskena) concept, and Paul Bujor (1862-1952), who investigated animal morphology. Nevertheless, the most prominent figure, considered the founder of Romanian ecology, is Grigore Antipa (1867-1944), a student of Ernst Haeckel, with outstanding contributions to the research of the productivity of aquatic systems.

Modern ecology starts with Nicolae Botnariuc (1915-2011), who developed the theory of ecosystems (1982), and continued with his student, Angheluță Vădineanu (born 1946), who developed modern ecology, including the theories of sustainability.

Important milestones in the development of Romanian ecology include the first plant ecology course, taught in 1923 at Cluj-Napoca by Alexandru Borza (1887-1971). Ecology was studied as a self-standing discipline starting 1961, when Adriana Murgoci (1909-1986) became the first professor of ecology at the University of Bucharest. The first published course, translated from German, appeared in Cluj-Napoca in 1965.

The protection of nature in Romania has a history going beyond the emergence of sozology. Several milestones (GEACU et al., 2012) include a 1881 article in “Revista pădurilor” (Forest magazine) on the European importance of two sites now belonging to the Danube Delta Biosphere Reserve, the addition of several Transylvanian protected sites to the 1908 “Law on the protection of natural and historical monuments”, the 1909 complex fencing and protection of an area, mentions of “the need for legal provisions for the protection of landscapes” in the 26th General Assembly of the “Forestry progress” Society in Bucharest (1912), the 1911 expression of the intention to stop grazing in the mountains and turn them slowly into natural parks. In 1919 Alexandru Borza (1887-1971) was successful in obtaining temporary protection for 15 sites of botanical interest.

Modern sozology was founded in Romania by zoologist Alexandru Popovici-Bâznoșanu (1876-1969); his works were mentioned previously. Important contributions to the field, but also to geology, geography, and palaeontology, were made by Ion Simionescu (1873-1944) through the popularization of science in general in publications and lectures, focusing on the ecological education of children. An important milestone is represented by the new journal “Ocrotirea naturii” (Protection of the environment) in 1955. Although the first natural protected area was declared in 1932 (GEACU et al., 2012), it is also important to stress out that the Romanian system of natural protected areas was devised even during the communist period in accordance with the recommendations of the International Union for the Conservation of Nature (MUNTEANU & SEVIANU, 2014), and 260 natural protected areas were declared by 1981 (TUFESCU & TUFESCU, 1981).

CONCLUSION

Environment, ecology, and sozology had distinct dynamics. Ecology emerged as a biological discipline that acquired tight interdisciplinary connections with other fields, and was strongly influenced by embedding the systemic conception. Sozology is its side related to the protection and conservation of biodiversity. Biodiversity is at the core of both ecology and sozology. Environmentalism is a political trend, more recent than ecology, which has little scientific substantiation and represents more a collection of attitudes towards the environment rather than scientifically grounded opinions, relying on data and facts.

This study shows distinction between the main trends and the characteristics of accomplishments in the range of ecology and sozology in Poland and Romania without valuing it in a wide philosophical dimension. A thorough presentation of the contents of the sources contained is beyond the scope of this article. Describing cooperation between Romania and Poland is a separate matter requiring another study.

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