ENVIRONMENTAL ISSUES
COMMUNITY ANSWERS

Environmental Humanities Reader

Edited by

Judit Farkas

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Environmental Issues – Community Answers. Environmental Humanities Reader

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Environmental Humanities Reader

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Contents

Preface

Environmental Humanities (hereafter EH) is the product of the 21st century, an age in which it is no longer possible to grasp and manage environmental problems from a single viewpoint. This is true of the scientific method as well. Although fundamentally important for the understanding of ecological issues and changes to the climate, scientific knowledge is not sufficient for providing an adequate answer to the complex phenomenon that is the cause and consequence of the environmental challenges of our century. This is why traditional humanities subjects such as philosophy, aesthetics, literary and religious studies, history, and linguistics have been combined with the natural and social sciences and the arts into an interdisciplinary formation in an attempt to understand the causes, current forms, and future trajectories of the contemporary environmental crisis, and to give possible answers to it. This formation is EH.

The natural sciences have revealed climatic, hydrological, and ecological correlations that have radically changed – or will change – the entire world, including human and non-human life alike. The majority of society has been unaware of this, or reluctant to notice it, but the pandemic and the environmental disasters of the 2020s have made it clear that evading these problems is no longer possible. "Therefore, the morally legitimate and scientifically established question is not whether we are in trouble – but how we should cope with this situation, how great the trouble is, what work it imposes on us humans and, more closely, on us researchers." (Mészáros 2019: 144). In the words of the philosopher Roger Gottlieb: "What morality has had to face the banality of evil in which the most common everyday actions (driving an automobile, putting fertilizer on the lawn (but I might also add our morning coffee and croissant, or our washing detergent) could contribute to the devastating effects [of climate change] on future generations or people at the other ends of the world?" (Gottlieb 1997: X). Compared to earlier environmental problems, our problems today have crossed a certain boundary: humankind has become capable of turning the sunrays so vital for life into a serious hazard, or – as noted by the quotation above – we can put the lives of people living thousands of kilometers away from us in jeopardy through our daily routine.

The "tangible" cause of the environmental problems – and of the economic and social ones closely connected to them – is the incredibly rapid growth of the global population with the corollaries of consumption and over-consumption, the overuse and depletion of natural resources, a decrease in fossil fuels, and diverse forms of environmental destruction. Underneath all this, however, lies a worldview that evolved gradually in Europe and became prevalent in modernity.

This worldview – with both religious and philosophical roots – removed the human being from the rest of the world, created the dichotomy of nature and

society, interpreted the human being as the absolute master and exploiter of nature, and placed economic rationality in the foreground. At the same time, it laid the foundations for the separation of the natural sciences from the humanities and social sciences and subordinated all scholarship to the former.

The practitioners of EH, however, believe that the global environmental crisis requires new modes of thinking, new communities, and new forms of knowledge. They are convinced that this crisis cannot be solved solely through technological means which are simply "allocated" to passive consumers. Even the best technologies that most effectively mitigate environmental problems are rejected for cultural and political reasons. Unsustainable practices require cultural interpretation, as does the possibility of introducing good practices. Knowledge is needed "that is affective, or emotionally potent, in order to be effective, or capable of mobilizing social adaptation" (Emmett – Nye 2017: 8), and capable of overriding the logic of economic gain (Belfiore – Upchurch 2013). EH claims that this goal demands inter- and transdisciplinary approaches for which the humanities are indispensable. What EH does is actually *translation*: it transforms scientific and technological results into texts and sociocultural discourses which can capture the attention of both the public and the political and economic actors more than scientific reports can. Oppermann and Iovino conclude that EH is an ethical and pedagogical project with the help of which the above goals can be achieved (Oppermann and Iovino 2017: 1 – 6).

Accordingly, EH is not a new academic discipline, but:

a *field of research* that highlights the relationship between the human being and nature, and which is concerned with environmental questions;

a *worldview* that rejects the interpretation of the human being as the absolute lord and legitimate exploiter of nature; it strives to understand the intricate relations between the human being, society and nature, integrating all the disciplines that scrutinize these problems;

a *method* that wishes to transgress disciplinary boundaries and the limits of creating theories and descriptions. In addition to the customary modes of knowledge transmission, it also draws closer to applications and to activism. This is not to say that each EH scholar is at the same time an activist. As put by the authors Hubbell and Ryan: it doesn't mean "that you will have to chain yourself to a bulldozer in an old-grown forest threatened by logging" (Hubbell – Ryan 2022: 10). It is more accurate to say that by virtue of its worldview and its fundamental issues, EH is inevitably an applied field of scholarship.

The book in the Reader's hands is intended to become part of the body of literature – introductions, chrestomathies – about EH, adapted to the Hungarian context.

The *Environmental Issues* block enumerates the important issues concerning the relations between human beings and the environment. EH is not an area unfamiliar to Hungarian academia (as will be confirmed in the Introduction), but it has never been summarized in Hungarian, hence the importance of starting the book with it. The chapter *Introduction to the Environmental Humanities* surveys the history, roots, views and goals of the concept and of the field of research, and also includes Hungarian examples.

The studies in the first block testify to the diversity and complexity intrinsic to EH in its intention to understand contemporary environmental issues and express

a position on them. The chapters *Environmental Philosophy* and *Religion and Ecology* (Judit Farkas) review the worldview that led to the duality of man and nature, and to the environmental problems rooted in it, on the one hand.On the other, they survey the religious efforts and philosophical trends that have appeared in reaction to it. In a similar vein, Tamás Kocsis outlines the pertinent economic question and possible economic answers in the article *Economic Answers to the Challenges of Environmental Sustainability*. Possible links to different fields of the humanities and the respective questions are discussed in the papers *The Environment and Anthropology* (ecological anthropology, Judit Farkas), *Green History? What is the Role of Historians' Works on Problems of the Environment in the Past and What Could It Become?* (history, Róbert Balogh), *Eco-social Work. New Challenges on the Horizon of Social Work* (social work, Szilvia Nyers), *Environmental conflicts, social answers* (political science, Viktor Glied), *Basic Problems of Regulation in Environmental Protection* (jurisprudence, Attila Pánovics), *The Conservation of Nature and Traditional Ecological Knowledge* (ecology, Anna Varga) and *The Tragedy and Comedy of the Commons* (human ecology, András Takács-Sánta). With a background in social geography and regional research, Gábor Máté and Gábor Pirisi place two issues under the microscope: global overpopulation (Gábor Pirisi) and the notion and significance of regions (Gábor Máté). Environmental problems also affect such vital human needs as food, an issue addressed by Dorottya Mendly and Melinda Mihály in their paper *Food Supply as a Global Challenge*. In his study *Environmental Justice*, Gyula Nagy discusses some more latent consequences of environmental problems which, however, gravely affect certain social groups. EH is of the position that the arts are important means of both communicating and solving these problems. The first large block ends with the chapter *Nature, Art, Activism* (Judit Farkas), which introduces several endeavors, trends and artists.

Although the first section also contains Hungarian examples, the second block titled *Communal Answers* focuses explicitly on communal examples. The authors discuss case studies, representing both cities and the countryside, which try to provide answers not only to ecological but also to social problems. The Old Cottage project in Kóspallag reveals the possibilities of an ecological local development project for a community center controlled by young people (Pál Géza Balogh – Luca Kaszás – Rebeka Kiss), the paper on the ecovillages discusses the international movement with a past of several decades and its adoption in Hungary (Judit Farkas). Two examples of urban communal responses are examined more closely: the Transition Towns movement and the communal gardens, both illustrated by Hungarian examples: the Green Spot Communal Garden in Pécs and the Transforming Wekerle in Budapest. András Takács-Sánta presents the communal initiatives he launched: the Small Community Program and the Új Koma Háló.

The book touches on many relevant areas, yet there are several other themes that should be included but remain absent. Such are psychology, urbanism, literature, and, among the arts, theater and film . The basic aim of this book is to acquaint the reader with EH as a framework of several interrelated themes, some of which it presents in more detail here. A future volume will continue its work of acquainting readers with more aspects of EH.

Today EH integrates a great many branches of scholarship, but some disciplines can be pinpointed in which its roots extend deeper. These include literary studies, cultural geography, history and cultural anthropology. It was no accident that I

became involved with EH. As a cultural anthropologist interested in environmental matters, I feel in my element in it. Its approach is familiar, resembling the approach and value system of anthropology. Further, anthropological knowledge can easily be integrated into EH research.

My aim as the editor of this book is to acquaint the Hungarian public with this field of research and approach. I hope it may serve as inspiration for the academic community by emphasizing the exciting research themes and important results which await those who pursue their activities with the approach of EH scholars. The book aims to provide the educated laity with information, to shed light on the complexity of environmental problems, and to encourage everyone to try to comprehend the world and the role of the scholarly fields in their complexity, instead of accepting oversimplified answers. The subtitle *A Reader* suggests that I ascribe a role to it in education as well: the authors intend to use it as a textbook in their university courses, and I hope it will prove valuable in other educational institutions as well.

11 April 2023, Pécs

Judit Farkas

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ENVIRONMENTAL ISSUES

INTRODUCTION
TO THE ENVIRONMENTAL HUMANITIES

Judit Farkas

The chapter gives an overview of the emergence, goals and basic theses of Environmental Humanities (hereafter EH). It outlines how it has incorporated the humanities, the social and natural sciences and the arts, and the role it has cast for itself in contemporary environmental issues. In addition to summing up international research and trends, it touches on the appearance of EH in Hungary. As there are innumerable publications and institutions across the world, it is impossible to provide an accurate enumeration, and therefore we have to restrict ourselves to topics of key importance.

History of the environmental humanities

What EH posits as its starting thesis is a negation: it disagrees with the tenet that rose to prominence in the 17th century, according to which man can be separated from nature – nature being taken as the objectively defined and controlled subject of scientific knowledge (see Latour 2014). As part of its prehistory, EH has identified several moments, texts, images and events that question this idea.

Noel Castree (2021) identified the famous article by the American historian Lynn White published in the periodical Science, *The Historical Roots of Our Ecological Crisis* (1967) as the first example of EH. White saw humanity's domineering attitude to nature as the root of the problem and thought that to solve the crisis, basic social convictions had to be questioned and new values created (a more detailed presentation of White's thesis is provided in the chapter on *Religion and Ecology*). EH counts among its most important antecedents Rachel Carson's book *The Silent Spring* (Carson 1962), historian Roderick Nash's *Wilderness and the American Mind* (1975), philosopher Peter Singer's *Animal Liberation* (1975) and Tom Regan's *The Case for Animal Rights* (1983), the latter two discussing the rights of animals. Others retrace the roots of EH to the 18th century with special emphasis on the work of David Thoreau, Aldo Leopold and George Perkins Marsh,[1] in which issues of the environment were already combined with social criticism (Emmett – Nye 2017, Hubbell – Ryan 2022).

The above-mentioned works and authors are among the many whose impact has led to the so-called "environmental turn" or "greening" of the humanities (see Castree 2021: 1), evolving later into the EH. And, although they are not the results of scholarship (but undoubtedly the outcome of scientific and technological development),

[1]   Henry David Thoreau: *Walden* (1854), George Perkins Marsh: *Man and Nature* (1864), Aldo Leopold: *A Sand County Almanac* (1949).

two highly influential and emblematic photos have, in the view of Hubbell and Ryan, also contributed to the emergence of EH: *Earthrise*, taken of the Earth from space by the Apollo 8 Mission (1968) and *Blue Marble* taken by Apollo 17 (1972). These photos are said by many to have changed humankind's attitude to the Earth, making it clear that our planet is not only beautiful but also fragile.

Figure 1.   **Figure 2.**

Source: https://en.wikipedia.org/wiki/Earthrise#/media/File:AS8-13-2329.jpg
Source: https://en.wikipedia.org/wiki/The_Blue_Marble#/media/File:The_Earth_seen_from_Apollo_17.jpg.

Among the natural sciences, it was ecology, specifically the study of traditional ecological knowledge, as well as landscape research, that occasioned the turn towards EH. (This is the topic of the chapters *The Conservation of Nature and Traditional Ecological Knowledge*, and *The Significance of the Landscape in Humanities Research and Local History*).

The emergence of EH is tightly linked to the first great wave of environmental anxiety in the 1960s, triggered by a few grave environmental disasters (the first oil tanker accidents) and the freshly published scientific findings about the degradation of the environment. That was when the first widely influential works expressing concern over the state of the environment appeared (e.g., Carson's above-mentioned book), and when the environmentalist movement gathered momentum (see Guha 2000, Glied 2016).[2] EH's interaction with the ecological movements served as a starting point for environmental activism and the scholarly approach exercising influence on each other even today.[3]

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[2]   Environment historians, including Ramachandra Guha, point out that anxieties about the environment emerged far earlier. The Industrial Revolution marked a turning point when several scholars, poets, artists, and thinkers began to express concern about the exploitation and ruination of nature. But they were relatively few, a thin layer of intellectuals, and their means (essays, studies, art works, exodus) reached only few people. This is what Guha calls the first wave of the environmental movement. The second wave, in the 1970s, reached far larger numbers and broader social strata. Its tools were also new, ranging from grass-roots environmental protests to radical movements and lobbying, as can be seen today as well. (Guha 2000)

[3]   "Reflecting its historical roots, EH is a dynamic cross-disciplinary field that combines academic scholarship with environmental activism." (Hubbell – Ryan 2022: 10).

Authors on the history of EH stress the *Earth Summit* organized by the UN in Rio de Janeiro in 1992 (in brief, the Rio Conference) whose participants, delegates of a variety of nations, voiced their concerns over the state of nature and the necessity of finding the balance between economic development and environmental protection. The event proved useful for EH on two counts. Firstly, it acknowledged as well as integrated the decades of scholarship on Indigenous culture, the re-evaluation of nature, and religious and artistic understandings of the environment. Secondly, it encouraged researchers under the broad umbrella of EH to know that they could meet with increased public awareness of the environment and that they could contribute to the political management of global problems (Hubbell – Ryan 2022: 9 – 10).

The academic literature dates the actual start of EH to the 1990s, or rather the 2000s. It is prominently tied to research in Australia: in the 1990s, historian Tom Griffith and law scholar Tim Bonyhady founded the *National Working Group on the Ecological Humanities.* The new approach and method we term Environmental Humanities began to be called ecological humanities at the Australian National University and the University of New South Wales. Though EH is now present the world over, Australian research still holds a special place for introducing several new ideas and methods.[4] The fact that most of their research is focussed on, or inspired by, Australian aboriginal cultures does not diminish their importance.

In the academic literature, the founding issue of the first EH periodical, *Environmental Humanities* (2012), is registered as the first mention of the term Environmental Humanities in print, but the notion existed earlier. In 1998, the biologist and sociologist Hana Librová initiated a program at the philosophical faculty of Masaryk University, Brno (Czech Rep.) with the title *Humanitní environmentalistika* (Schmidt – Soentgen – Zapf 2020: 225).[5] From the turn of the 2010s, several research groups, research centers and educational programs followed suit: the Rachel Carson Center was founded in Munich in 2009[6] and the Royal Institute of Technology in Stockholm set up the Environmental Humanities Laboratory in 2012. The interdisciplinary EH research network was founded in Augsburg, Germany, in 2015. In Europe the Oslo School of Environmental Humanities (OSEH)[7] and The New Institute Center for Environmental Humanities (NICHE)[8] in Italy deserve mention. The first MA course was held at Bath Spa University (UK) in 2016 with the express aim that "the natural sciences and the humanities shall give a creative answer to the environmental challenges"[9] (Schmidt – Soentgen – Zapf 2020: 225).

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[4]   See, e.g., Kate Wright: *Transdisciplinary Journeys in the Anthropocene. More-than-human encounters.* 2018. The book is an anthropological account of a journey written about Adelaide and its environs, the wonderful homeland of the Australian author. At the same time, however, it is a place created by settlers with force, theone-time home and sacred place of Australian aborigines, and the habitat of many non-human beings. In describing the journey and the encounters and interpreting the places, she defines the identity of a place of multiple interlacing stories.

[5]   Today The Department of Environmental Studies, see: www.muni.cz/en/people/630-hana-librova https://www.muni.cz/en/people/630-hana-librova.

[6]   The institute itself has been active since 2009. https://www.carsoncenter.uni-muenchen.de/index.html

[7]   www.hf.uio.no/english/research/strategic-research-areas/oseh/

[8]   www.unive.it/pag/44234/

[9]   www.bathspa.ac.uk/courses/pg-environmental-humanities/

After the first EH periodical, the above-mentioned *Environmental Humanities*[10] *Resilience: A Journal of the Environmental Humanities* was launched in 2013, followed by other papers on EH themes (*Green Humanities*, *Landscape*).

It can be declared that from the 2010s, EH has been explosively present in academia, attracting such authors to the field as the philosopher Timothy Morton, who has been rethinking the relationship between human and non-human beings; the philosopher, anthropologist and sociologist Bruno Latour; the forerunner of ecocriticism, literary scholar Lawrence Buell; anthropologist Tim Ingold, who studies the perception of the environment and human-animal interactions; chemist and philosopher Isabelle Stengers who focuses on the history of science; ecofeminists Donna Haraway, Wal Plumwood and Karen Warren; Rose Deborah Bird, the anthropologist pursuing multispecies ethnography and studying aboriginal cultures; Anna Tsiong, the anthropologist researcher of globalization and the Anthropocene; human geographer Nigel Clerk, who examines humans' environmental impact, etc. (see Castree 2021; Oppermann – Iovino 2017).[11] Several new ideas and perspectives were conceived which have provided new theoretical frameworks or motivation for EH, such as eco-racism, environmental justice, poverty and the environment, posthumanism, postcolonial criticism, ecofeminism, gender and queer theories and the *natureculture* idea. (See, among others, Oppermann – Iovino 2017; Emmett – Nye 2017; Gaard 2017).

EH has grown into a global intellectual movement which combines the natural sciences, the technological, social and humanities scholarly disciplines and the arts so as to attempt to more accurately understand the dilemmas generated by industrial society and contemporary environmental and social problems, and to find new perspectives for the solutions. (The history of the EH discipline has been summed up, among others, by Castree 2021; Emmett – Nye 2017; Hubbell – Ryan 2022; Schmidt – Soentgen – Zapf 2020).

Environmental humanities – basic principles

The authors Hubbell and Ryan define very accurately in the preface of their book what – to my mind, too – is the essence of EH: the radical recreation of knowledge. "Environmental Humanities is both a product and an agent in the radical reorganization of knowledge" (Hubbell – Ryan 2022: IX).

The global environmental crisis demands new directions in thought and communication which offer environmental solutions based on lay knowledge and are embedded into everyday life. This crisis cannot be solved by simply offering technological innovations or even the simplest solutions (selective garbage collection, packaging-free shops, saving water) to the masses of passive consumers, because they might ignore even the most effective solutions. Unsustainable practices and maladaptive reactions require cultural interpretations as does the introduction of good practices. Information that is "affectively or sensitively powerful enough

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[10]   In the first issue of the journal, the editors defined EH as follows: "The environmental humanities engage with fundamental questions of meaning, value, responsibility and purpose in a time of rapid, and escalating, change." (Bird, Rose *et al.* 2012, 1)

[11]   These scholars have naturally published a variety of other works. The intention here was to give an idea of the diversity and significance of the field.

is needed to be able to trigger off the change, the process of social adaptation" (Emmett – Nye 2017: 8). This, in turn, needs an inter- and transdisciplinary approach which cannot succeed without the help of the humanities. EH is in a sense *translation*: it translates natural scientific and technological results into texts, sociocultural discourses that can capture the attention of both the public and the political and economic actors more intensely than scientific explanation (Oppermann – Iovino 2017: 6).

EH is not a new academic discipline but rather an area of and attitude towards research that aims to integrate the disciplines that study nature with environmental issues. The general idea is that these themes belong to the field of the natural sciences, and that the humanities cannot competently address them. EH challenges the relevance of this statement, proving its untenability by adducing contemporary environmental-social problems and demonstrating that these highly complex problems also demand complex approaches. "The truth is we can't afford to look at problems in narrow ways anymore." Hubbell and Ryan emphasize (Hubbell – Ryan 2022: 4) in their explanation that we have arrived at the contemporary environmental crisis precisely because we looked at every aspect of a given problem separately and studied it using different scholarly disciplines, with the consequence that the resultant knowledge also remained isolated. "What happens to the climate of the Earth today happens at all – material, social and cultural – levels, including the individual's microlevel, his way of living. That is why EH declares that the environmental problems do not solely belong to the Earth sciences" (Castree 2021: 2–3).

The humanities (along with the majority of social sciences) apply an interpretive approach: they conceive of the world as one of diverse truths and possibilities where different, often contradictory views arise concerning moral, existential, and aesthetic questions, and where the plurality of views also applies to the environment. EH integrates the natural sciences and their findings, while at the same time attaching great importance to an interpretation of the actors' living space. The humanities' critical thinking through questions such as "How should we live?", "What is justice?", "How should we see and interpret the world?" etc., take us closer to understanding not only the relationship between human beings and nature, but also natural scientific information as well (Castree 2021: 1–3).

> *"While the sciences may be unmatched in describing environmental change and crisis, the humanities enable us to think more critically about the moral, ethical, social, and cultural dimensions of environmental change and crisis. They enable us to respond to ecological degradation and the dangers of human development and progress in ways that complicate, complement, and extend scientific inquiry"* (Hubbell – Ryan 2022: 10).

EH cannot do without self-reflection: it is aware, and it emphasizes, that it is a cultural product, so it is also influenced by the cultural perspective and historical viewpoint in which it is embedded. Consequently, it conceives of the notions of key importance (nature, environment, the human being, etc.) not as something given but as something interpreted (see Schmidt – Soentgen – Zapf 2020: 228). It is assisted by such contemporary critical studies and theories as post-colonialism, ecofeminism, etc.[12]

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[12]   Post-colonialism: a critical trend which emerged from literary and cultural studies, it addresses

When EH emerged, researchers were faced with serious conceptual problems; in addition to the conceptual systems of different disciplines, often such basic terms as ecology, nature, or the environment were heatedly debated within each discipline as well. There is nothing surprising about this. On the contrary, it indicates the natural operation of a discipline, for the different theoretical schools and the development of a discipline go together with the constant rethinking of the basic concepts. In response to terminological problems, some neologisms have also been born, such as Donna Haraway's theoretical term *naturecultures*, or Bruno Latour's *nature-cultures* (Latour 1993; Haraway 2003). These attempt to eliminate the separation of nature and culture, beyond the conceptual level.

Thus, instead of separating different branches of scholarship, EH strives to be cross-disciplinary, i.e., unite diverse specialties and perspectives, defy boundaries, i.e., transgress national, cultural and historical boundaries and be policy-focused, i.e., include politics within its focus (Nye et al. 2013: 8). This approach provides fuller and more practical knowledge to cope with complex social and environmental issues (Hubbell – Ryan 2022: 5). Regarding the environment-related scientific results, EH claims that its understanding takes place within cultural and social contexts, so it not only has relevance here but also a leading role. The practitioners of EH wish to broaden the scope of the kinds of questions EH poses about the world and our place in it (Hubbell – Ryan 2022: 5).[13] Historian David Nye and his colleagues also define the essence of EH as the new type of inquiry, a new approach to values and meaning "informed by nuanced historical understanding of the cultures that frame environmental problems" (Nye et al. 2013: 28).

EH shares the recognition that our environmental problems today have primarily been caused by humanity. It seeks answers via a study of human behavior, cultural values, historical patterns, social contexts, political ideas, religious and spiritual dimensions, moral questions and emotions (Hubbell – Ryan 2022: 5; Nye et al. 2013: 4; Sörlin 2012: 788). Of particular import is the thesis that a complex relationship exists between people, places, animals, plants, fungi, water, soil, land and air (see Tsing 2015), the study of which depends on the cross-disciplinary collaboration of diverse fields and the elaboration and cultivation of a new approach and method. Several researchers are convinced that this cannot be achieved unless the human being is removed from the center[14] and the emphasis is shifted back onto the natural world and the intricate relationship between humans and their environment in the humanities as well. It is after all impossible to sever human beings from nature because, for one thing, each human being, the human microbiome,[15] is the habitat of innumerable microscopic beings and thus humans are also "*interspecies beings*".

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the effects of colonization (including post-colonialism) and studies the economic, social, cultural legacy of colonization. For a description of ecofeminism, see the chapter *Environmental Philosophy*.

[13]   "Put simply, EH opens our eyes, minds, and hearts to the interconnections between all life in a radically changing world." (Hubbell – Ryan 2022: 5)

[14]   Others use the phrase *dehumanizing the humanities* to express this thought (Hubbell – Ryan 2022: 10).

[15]   Microbiome: an ecological system of microorganisms living together with the human being. "It is a community of microbes with distinctive physical-chemical characteristics belonging to a well-definable habitat. This definition refers to both the microbes (microbiota) and their living space, the venue of their activity, and its components" (Hancz 2021: 42–43).

It is also fundamental for EH to re-think and reframe the interpretation of both human and non-human beings, as well as the relationship between humans and other beings. An essential part of this conceptual framework is the radical criticism of (mainly) Western thinking, which blames the cause of the unsustainable practices on the logic of the power systems and the utter separation from nature, on the interpretation of "nature as Other".[16] EH, on the other hand, identifies with Timothy Morton's notion of *coexistentialism* (2010) and Anna Tsiang's (2015) idea of *transformative encounters*. It acknowledges that we humans are inseparable from nature and leads us to reconsider the scope of our deeds and attitudes (Oppermann – Iovino 2017: 2).

New ideas, new conceptual framework

The co-authors Emmett and Nye emphasize that currently every society is faced with global problems. In response to these challenges, new ideas and new terminology evolve, which frame the environmental concerns in a new way. The new, conceptual framework of multiple interconnected terms aims to address the issues previously dealt with separately. This article will now present – partly based on their work (Emmett – Nye 2017: 9–21) – these new ideas and conceptual framework. They will be discussed in detail in subsequent chapters.

Critique of the nature–human dichotomy

It helps to start with what – in my opinion – defines the entire research field and what the authors formulate as the negation of the Kantian *Ding an sich*, *The thing-in-itself*: it posits that there is no "thing", living being or object, in separation, isolation, *disconnected*ly. Everything is part of diverse networks of relations. It is defined in its relatedness and assumes its meaning in relation to them. This applies to humans as well, who cannot separate themselves from their environments, however much they tend to believe that they can. Consequently, the nature–human dichotomy has to be revised. It would follow that human beings have no special rights over other species, and that therefore there is nothing that could legitimize the activity that leads to the extinction of other species or the consumption of the entire planet Earth.

Critique of the hierarchy of cultures

An equally basic tenet claims that Western (or any) culture is not superior to other cultures. No technological development or any ideological argument can justify the contrary view. Though this tenet may appear evident and not in need of any explanation, since cultural relativism states the same, post-colonialist or ecofeminist

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[16]   Related notions are Plumwood's hyperseparation (Plumwood 2002: 117) and Colebrook's definition of hyper-cartesianism (Colebrook 2015: 169). To cartesianism, see the chapter on *Environmental Philosophy*.

theories have pointed out several latent modes of operation that sustain this idea of cultural hierarchy. It is EH's position that this latent attitude also contributes to the environmental-social problems. The exploitation of the resources of so-called third countries and the deposition of Western countries' waste in these countries are only two of the most conspicuous examples. (See Gyula Nagy's paper on environmental justice and Szilvia Nyers' paper on eco-social work).

Locality of knowledge

The basic tenet of locality-specific knowledge has led EH to realize the importance of local knowledge which is indispensable for researchers for the understanding of local problems. The imposition of a global ecological ethic – as Kottak calls it – is the wrong track if no due attention is devoted to cultural diversity (Kottak 1999: 26).[17] In discussing nature conservation, Anna Varga reviews this issue as well.

The crisis of the "commons"

The crises of collective economic activity and of the commons[18] reveal both how the weakening of a sense of belonging to a locality (e.g., due to migration) increases the overuse of common resources and furthers the absence of control over use and the privatization of common property, and how all this affects humanity's approach to nature. In these discourses, the restoration of collective proprietorship (or at least collective use) and collective care are discussed as possible solutions. EH finds the conception of the commons especially significant, because it regards not only humans but also all other species as members of the given community. András Takács Sánta's paper, *The Tragedy and Comedy of the Commons* discusses the issue of the commons and Anna Varga touches on it in her study on traditional ecological knowledge as well.

Environmental justice

The theories of climate justice, environmental justice and eco-racism[19] mostly highlight the disproportionately negative environmental impact on marginal groups

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[17]   This idea closely resembles Manuel Castells's proposition about the *global Green self*'s identity. He says that the environmental movements engender the emergence of a new social-biological identity, the biology-based culture of the human species conceived of as a component of nature which at the same time acknowledges the cultural authenticity fed by diverse traditions (Castells 2006: 232). See the chapter titled "Not *Everyone Can Move to the Countryside." Urban Communal Responses.*

[18]   Originally, the English term *the commons* had a somewhat different semantic content than collective farming or collective proprietorship.

[19]   Zoltán Nagy's comment on the term eco-racism: The word "racism" implies strong social inequalities which it aims to powerfully communicate to elicit a strong emotional response.It is not quite as applicable here because unlike the classical concept of racism, eco-racism does not allude to different "races". It basically suggests unequal power sharing. Consequently, it would be more accurate to allude to the notion of subaltern than to race.

(the poor, minorities, indigenous groups, the global South). The interests of the dominant groups harm the interests of those who lack sufficient resources, capabilities or possibilities for protecting themselves. This includes mining, felling, hydroelectric plants, dams in tribal areas, the removal and depositing of banned chemicals or any waste in poor countries, and the acquisition of resources by force, to name but a few examples. Environmental racism is therefore one form of institutional discrimination by the given institutions and projects not ensuring equal rights for the groups concerned. The consequence is that minority groups and communities become exposed to disproportionately greater environmental hazards. For instance, toxic waste is often deliberately deposited in areas where the inhabitants are unlikely to protest because they are poor, powerless, undereducated, and insufficiently organized. Environmental racism, however, is not always conscious or intentional. One case is when a project with a high risk of causing pollution is established at a place whence the more affluent then move out and the poorer move in to their places. Now they will live on in a dangerous environment (Kottak 1999: 29–30). All over the world, environmental and civil movements of indigenous peoples and the poor address the concerns of environmental justice and eco-racism.

The existence of an imbalance can be demonstrated in the less direct but no less grave cases of environmental impacts: distant islands gradually drowned by rising ocean levels are victims of the changes in the environment caused by the "advanced" Western societies. EH holds that certain societies have a greater responsibility for such damage than others. This insight has led EH researchers to postcolonial criticism and collaboration with such research. Gyula Nagy addresses issues of environmental justice in his paper in this volume.

Ecological imperialism

The notion of ecological imperialism describes the process in whose course – typically but not always domesticated – animals and plants brought in from other areas squeeze out the local populations. Accordingly, the history of extinctions may be written in parallel with that of the great geographical discoveries

The explorers did not only export, but also imported new species that had an impact on the European natural environment. The new plants like the potato, maize, the sugarcane or pepper not only had a profound influence on the diet, but also greatly affected the native plant populations by ousting former staples (buckwheat, millet) and foraged plants.

Anthropocene

The Anthropocene as an era in the history of the Earth is now a well-known term. The designation, which includes the Greek word for human (*anthropos*), deliberately alludes to the impact of humanity, indicating that in this era the human being has been capable of effecting such measurable changes in the natural environment as can be caused, say, by an asteroid or earthquake (altered ozone layer, inundation of islands, and the ability of human activity to trigger an earthquake). The

emergence of the notion of the Anthropocene has given new impetus to research in the field of environmental history, research which is of crucial importance to EH. In this book, Róbert Balogh shares his thoughts on dilemmas regarding environmental history.

Anthropause
It marks a period in which humanity temporarily withdraws from some of its customary activities. The term, brought into existence by the Covid19-induced lockdown, was coined by a research team which examined the impacts of human retreat on wildlife and nature in general. They published their findings in the journal *Nature Ecology and Evolution* in June 2020, whose cover featured the sentence *Welcome to the Anthropause* (Rutz et al. 2020).

Resilience

The concept of resilience has become almost as fashionable a household word as the Anthropocene. A resilient ecological system is healthy and self-regulating, capable of responding to external effects by adapting – within certain limits. Originally a scientific term of ecology, today it is also used in human and social studies applied to human communities. It involves the examination of a community's reactions and its techniques of adaptation (e.g., in war, economic crisis or climate crisis). The notion is relevant on the micro level, too, for an individual may also be hit by private or economic traumas to which he/she must respond somehow. An individual and a community with greater resilience can cope with external difficulties better, and this applies to nature in general as well.

Degrowth

The idea of degrowth emerged from environmentalist and anti-capitalist criticism of consumerism, and is now a political, economic and social movement. The idea of steady growth is seen by many as the key factor in the environmental and social problems. The infinite use of the finite resources of planet Earth is seen within EH thought as a fundamental contradiction and grave problem. Degrowth is addressed in the article by Dorottya Mendly and Melinda Mihály and in the paper by Tamás Kocsis.

Sudden violence, slow violence

Finally, let us look at the concepts of sudden and slow (or quiet) violence. Sudden violence is applicable to cases in which an environmental problem presents itself quickly and usually spectacularly. Emmett and Nye illustrated it with the 2016 events around Standing Rock, USA, when the Trump administration had given permission to lead an oil pipeline through a sacred place venerated by the native people (Emmett – Nye 2017: 19). This term is valid for forest clearings, forest fires, capsized oil tankers, etc. Slow violence is at first unnoticed, its effects becoming

apparent far later. The consequences of the disappearance of bees and birds, of toxic substances slowly seeping into the water, and the decrease of biodiversity belong here. EH has, I believe, a particularly significant role in the latter.[20] Viktor Glied's paper concerns environmental conflicts.

Solastalgia (solacium – Latin 'comfort', 'solace', -algia – Greek 'pain, suffering, sorrow') The neologism created by Australian professor Glenn Albrecht denotes the complex and often traumatic feeling one experiences when encountering a profound and irreversible change in a beloved, familiar locality: nostalgia, sense of loss, anxiety, and confusion caused by the loss of a setting or landscape that has determined the individual's identity. This includes, for instance, people who see their homes where they lived for generations being bulldozed so as to create a mine or suburban residents whose accustomed neighborhood is erased to make way for a new shopping mall or the extension of a motorway, or razed by the outbreak of a wildfire due to global warming.

The concept is closely connected to the notion of *sacrifice zones*, areas that are degraded by industrial activity (the extraction of energy resources, processing, the depositing of waste). Such are the surroundings of Chernobyl, Bhopal in India or the red sludge reservoir in Hungary. Both the residents relocated by force and those who remain may feel solastalgia. Such areas are eloquent examples of environmental injustice and eco-racism as well. (To this, see Hubbell – Ryan 2022: 52–53).

Methods and subdisciplines of EH

The emergence of EH had its roots mainly in literary science, human geography, history and anthropology, and its methods were inspired by these academic disciplines. Accordingly, its main methods are participant observation, discourse analysis, focus group methods, narrative analysis, story-telling, and visual ethnographic means, often supplemented by artistic projects. The findings of research work are also disseminated in a diverse way, depending on whether the target audience is the academic world, civil society or decision-makers. In an EH degree, it is not surprising that the graduation assignment is a work of art or a literary essay. Nor is it surprising that the task is assigned at an ethnography lesson by a professor who is both a biologist and an ecologist, or that a lecturer of anthropology explains certain aspects with literary examples in a course on the interrelation between nature and society.

As diverse as the roots of EH are, so great is the variety of subdisciplines connected to it (as seen earlier): eco criticism, environmental philosophy, environmental history, critical animal studies, queer ecology, ecofeminism, environmental sociology, environmental anthropology, political ecology, posthumanism, multi- and interspecies studies, plant ethics, and so on. Several of them will be addressed in this book.

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[20]   The term *silent violence* alludes to the title of Michael Watts's book Silent Violence: Food, Famine, and Personality in Northern Nigeria (1983).

EH in Hungary

Owing to the extremely broad theme and the interlacing of a wide variety of areas, it is extremely difficult to demarcate EH's exact field of scholarship. There are diverse areas and profiles, mostly determined by the orientation and interest of the researchers and the institutions. It is therefore hard to conclude whether EH exists in Hungary, and if it does, what research and research teams can be included within its remit. Róbert Balogh takes a close look at this question in his paper and cites works by Bertalan Andrásfalvy, Barna Éltes and János Géczi as examples that, in his opinion, embody the spirit of EH.

Since at present there is in Hungary but a single research group that bears EH explicitly in its name (Environmental Humanities Research Group at Faculty of Arts and Social Sciences of the University of Pécs),[21] we decided to list the research groups and institutions acting in the spirit of EH. Only a few of them are given a brief introduction here, as a detailed description of their activity can be read on their websites, the links to which can be found in the footnotes.[22]

The first that deserves mention is the human ecology major at ELTE (Eötvös Loránd University). It is more than a course. It is an important professional workshop, the center of human ecology in Hungary. Its aim is to interpret sociocultural processes from an ecological perspective, to study the social dimension of environmental problems, and to explore the interactions between natural and social systems.[23] Its former leader András Takács Sánta contributed two papers to this volume (*The Tragedy and Comedy of the Commons*; *Prophets and Local Ecocommunities*).

The EH perspective has been applied to the traditional ecological study by the *Traditional Ecological Research Group* of the ELKH Ecological Institute[24] and by the closely connected *"Momentum" Ethno-ecological Research Group* of the ELKH Ethnographic Institute.[25] In their interpretation, the landscape and the human being constitute a single socio-ecological system. The institute aims to study the interplay between rural communities and their natural environment in the Carpathian Basin. (One of the papers in the book, by Anna Varga, is also devoted to ethno-ecological research).

The *ELTE Institute for Transactions between Humanity and the Environment* approaches EH from the direction of environmental psychology.[26] The researchers use inter- and transdisciplinary paradigms to study the human being's interaction with its environment which forms the context of its behavior at every moment.

MOME – MAG/SEED, the project of Moholy-Nagy University of Art and Design, has as its objective a "campus" outside Budapest, "a future spiritual center

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[21]   https://btk.pte.hu/hu/pecsineprajz/human-kornyezettudomanyi-kutatocsoport-hkk
[22]   I owe my thanks to Anna Varga for helping me gather the Hungarian examples. She has played a great role in establishing EH in Hungary.
[23]   http://humanokologia.tatk.elte.hu/
[24]   https://ecolres.hu/kutatocsoportok/hagyomanyos-okologiai-tudas-kutatocsoport/
[25]   https://nti.abtk.hu/hu/kutatasok/jelenleg-futo-intezeti-projektjeink
[26]   https://ekti.ppk.elte.hu/intezet

existing harmoniously with nature in which it is to be embedded."[27] The focus of the workshop and communal space planned for the uplands of the Balaton will be fieldwork, research and the development of education. The aim of their research project "Landscape Futuring" is to connect diverse disciplines such as ecology, design, art and the natural sciences, for the development of educational and research methodologies so as to promote future research, and to devise artistic exercises.[28]

The *Ecological and Cultural Platform Szabadonbalaton* [Balaton freely][29] is based on the belief that "The Balaton is more than water: the lake, its shores and environment constitute a complex living system."[30] The platform combines a focus on ecological issues with research into the relation between the Balaton region and the built environment, as well as with contemporary artistic actions. (The chapter *Nature, Art, Activism* is about the relationship between the arts and EH.)

Research into environmental history had a significant role among the antecedents of EH. This holds true of EH's appearance in Hungary as well: the research project *Knowledge, Landscape, Nation and Empire* examines the practices of transforming landscapes in the Balkans and in Hungary between 1850 and 1945 from the perspectives of cultural, social and economic history integrated with environmental and climate history.[31] One of the research team members, Róbert Balogh, has contributed to this volume with the paper *Green History? What is the Role of Historians' Works on Problems of the Environment in the Past and What Could It Become?*

Last but not least is the Environmental Humanities Research Group of the Faculty of Arts and Social Sciences at Pécs University. The research team was hatched in the Ethnography–Cultural Anthropology Department of PTE where – from its very start – the study of the human being and its natural environment has enjoyed high priority. Since the teaching staff has been trained in a range of disciplines besides ethnography and anthropology, their common interests and inter- and transdisciplinary everyday practice led logically to the foundation of the research group. At present, the group consists of ethnographers, anthropologists, a historian, a geographer, a social policy expert, a political scientist, a biologist and ecologist and a sociologist, who conduct several joint projects, one of which is this *Reader* involving several Group members (Pál Géza Balogh, Judit Farkas, Gábor Máté, Anna Varga).

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[27] https://mag.mome.hu
[28] https://mag.mome.hu/#landscape/kutatas
[29] www.szabadonbalaton.hu
[30] www.szabadonbalaton.hu/kontextus.html
[31] Full title: Knowledge, Landscape, Nation, and Empire. Practices of Cognizing and Transforming the Landscape in Hungary and the Balkans, 1850–1945. www.environmentalhistory.hu

**PTE BTK EH Research Group members and their guests, with
Dr. Christoph Mauch, leader of the Rachel Carson Center for Environment and
Society in the middle. Váralja 2022. Photo: Andrea Zombory**

Recommended readings

Hubbell, J. Andrew – Ryan, John C. 2022. *Introduction to the Environmental Humanities*. Abingdon, Oxon, Routledge

It is admittedly a great source of inspiration for the current Reader. In its 14 chapters, it reveals how EH generates discourse involving the liberal, social and natural sciences, and the arts. It familiarizes the student with EH goal, basic tenets and terminology, its historical and scientific roots, and reviews its possible contribution to practices and theories of sustainability in the age of environmental crisis. Written in the style of textbooks, it is easy to follow. The authors have enhanced the book's appeal with several case studies, and also inspire the students to initiate their own projects, investigations, and argumentation about the problems it raises.

Emmett, Robert – Nye, David E. (ed.) 2017. *The Environmental Humanities: A Critical Introduction*. Cambridge, Massachusetts, The MIT Press.

The book is one of the first great introductions to the EH and a summary of achievements so far. Through the complex interpretation of a few examples, it demonstrates the basic principles, methods and goals of the field of scholarship (ecotourism, energy, cities, science, Anthropocene, alternative practices).

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ENVIRONMENTAL PHILOSOPHY

Judit Farkas

Introduction

In response to the environmental problems of the 1970s, a new generation of trends specifically preoccupied with pertinent issues began to develop within philosophy as one of the results of the green movement. Since already at that time and increasingly in the 2000s, they had to reflect on ever more serious and urgent concerns, it is not surprising that environmental philosophy identifies itself as applied philosophy and several ecophilosophers are engaged in environmental activism.

Environmental Humanities (hereafter EH) acknowledges ecophilosophy as a fundamental contributor to its evolution and as one of its decisive actors with its commitment to the more-than-human world and ecological justice. This chapter reviews the basic issues of Western environmental philosophy and some of its trends. The reason for this choice is that this worldview – owing to the economic and power dominance of the West – largely influences the rest of the world. The Eastern and other ecophilosophies will be introduced in a planned second volume.

What is environmental philosophy?

Before attempting to answer this question, let us examine two philosophers' definitions of ecophilosophy. Michael Zimmerman holds that the goal of ecophilosophy is to critically examine whether nature has inherent value, and to explore the possibility that humans have moral obligations towards animals, plants and ecosystems (Zimmermann 2001: 3). According to the Indian-American Sahotra Sarkar ecophilosophy inquires into questions of biodiversity, climate change, ecological integrity, sustainability, and issues of *non-humans* from the aspects of moral responsibility, intrinsic value and human–nature reciprocity (Sarkar 2012: 2–4). What is conspicuous from these definitions by its absence, as pointed out by Hubbell and Ryan (2022: 111), is the anthropocentric and utilitarian position which registers climate change or a decline in biodiversity solely as a loss to humans.

Speaking of ecophilosophy, Robert Kirkman claims that its domain is fairly diverse, and it is hard to typologise the different trends: at one end is deep ecology, at the other a more traditional environmental ethics, and between the two ends of the scale lies the diversity of ecofeminism, bioregionalism, social ecology, and diverse phenomenological trends. However, they are united by a common thread – and common difficulty: the ideology of connectedness (Kirkman 1997: 194), the quality of the connection between the human being, the non-human world and society.

Environmental philosophy posits questions about nature, and the relationship between nature and humans:

- – What is nature? Is it an abstract notion or a tangible object?
- – Does nature hold any value beyond its use value or economic value? Do elements of nature have intrinsic worth?
- – Is humankind entitled to overuse the natural resources of the world?
- – Was the human–nature relationship always problematic, or can it be tied to given historical periods or social formations? If it can, what is it: the hunting and gathering way of life? The emergence of the land-tilling, sedentary mode of life? The Industrial Revolution? The consumer society and globalization?
- – If the relationship between humanity and nature was harmonious at some point in the past, what kind of thinking characterized it?
- – How are the ideology of modernity and the ecological crisis interrelated?
- – How is social justice related to the use of natural resources?
- – How does responsibility for future generations emerge?
- – What kind of value order is necessary to eliminate the environmental problems?
- – Are we morally responsible to preserve the rainforests, for instance? Is it justifiable to eradicate invasive species for the protection of native species? Is an invasive flower less beautiful if it squeezes out local, vulnerable plants? Is a restored landscape worse than the original virgin environment?
- – Is it morally right to engineer transgenic species? (Hubbell – Ryan 2022: 110; Tóth 2005: 7–20).

These questions clearly reveal that ecophilosophy is the critique of the contemporary economic and social establishment on the one hand and that it views itself as an applied science on the other. By intention, environmental philosophy exposes and criticizes the ideology whose consequence is the ecological crisis – e.g., the treatment of living nature as a thing or the idea of domination over nature – and tries to offer feasible alternatives. How modern society is run is determined by reason, science and philosophy. Hence it is their responsibility to develop a worldview that protects the environment and to integrate it into both mainstream thought and the operation of economy and society. Ecophilosophers share the belief that the transformation of our thought about the natural world can promote positive environment-related values, thoughts and actions including protection, restoration, appreciation, empathy and emotional identification.

It comes as no surprise that various ecophilosophical trends are tightly linked to practical activities, with some even generating social movements. These include deep ecology, masterminded by Norwegian public activist Arne Naess, the animal rights movements, and ecofeminism, for instance.

Australian ecophilosopher Richard Routley summed up all these movements when he said that ecological philosophy rests on two key concepts: one is the question of our moral duty; the other is the issue of the immanent worth of the natural environment. Moral duty means our responsibility to act in accordance with our ethical obligations to the environment. In contrast to the view that sees instrumental value in nature, inherent value means the value of nature in its own right. Thus, the value of an element of nature is not ascribed to it by being processed, or by generating an aesthetic enjoyment. Its value is its own unadulterated innermost worth. The value of a tree does not lie in the possibility of making

furniture from it, or from its ability to produce oxygen, or from being pleasing to behold – these are all external, added values (Routley 1973; cited in Brennan and Lo 2014: 10).

Environmental philosophy and environmental ethics are tightly related. This is understandable, for ecophilosophy – as seen above – identifies itself as an applied field of scholarship. The basis of ecological ethics is the criticism of the anthropocentric position; its goal is "to assign moral status to nature and devise frameworks regarding what constitutes a virtuous life within the limits of the biosphere" (Hubbell – Ryan 2022: 112). They also share a critique of the philosophical paradigm of positivism, which led to the primacy of science and the irrefutability of scientific validation in Western thought. Environmental ethics defines environmentally right and wrong behaviors, as well as eco-virtue (Traer 2020: 1–68). Concrete steps are proposed by the branch of ecophilosophy concerned with animals, by Aldo Leopold's land ethic, or Murray Bookchin's social philosophy.

ANTHROPOCENTRISM VERSUS BIOCENTRISM

The debate is a fundamental one in environmental ethics:
The anthropocentric position is centered on the human being and interprets the usefulness of the environment and people's duties to nature from this position. Its basic argument is acting "in the interest of future generations", hence the protection of nature is imperative only insofar as it promotes the welfare of future human communities.

In contrast, *biocentrism* (or *ecocentrism*: see the chapter on Religion and Ecology) is a life-centric ethical theory. It claims that every species or organism contributes to the health of the ecosystem, and, therefore, "it should be able to continue living free of undue human interference" (Boyland 2014: 115; Hubbell – Ryan 2022: 113).

Antecedents and key texts of environmental philosophy

The "keynote" work of environmental philosophy is Australian logician Richard Routley's paper, *Is There a Need for a New, an Environmental, Ethic?,* which he presented in Varna, Bulgaria, in 1973 at the 15th World Congress of Philosophy. In it, he called on scholars to elaborate a philosophical framework to define people's relations to the natural environment (Routley 1973: 205). His basic tenet is that we people have to supersede anthropocentrism, our "species bias", and "human chauvinism", because they prevent us from evaluating ecological issues correctly. He says philosophy's task is to employ its assets – creative thought and the conceptual analytic faculty – to lay the foundations for an understanding of the interests of non-human beings and of the environmental whole (ecosystems and habitats), and for environment-conscious action (Routley 1973).

Routley – along with ecophilosophy in general – levels his criticism at the contemporary concept of nature rooted in positivism and mechanical natural philosophy. The best-known practitioner of the latter was René Descartes (1596–1650), to whom is attributed – in the present context – the scientific validation of the instrumentalization of nature. The devaluation of nature and an emphasis

on man's role was already prevalent in Western thought (see the chapter on Religion and Ecology). Descartes further reinforced this position by scientifically "verifying" that the human being is not part of the natural processes but, by virtue of reason and will, is superior to them.[1] The philosopher Roger Gottlieb also confirms that the ideas of several philosophers supported or laid the basis for the profound alienation of humans from the non-human world. In his book of studies, *The Ecological Community* (Gottlieb 1997), he places the emphasis on two authors who laid the foundations for modern sociological and political thought: Locke and Marx. Locke's basic theses are: 1. the only value of nature is to serve man's interest; 2. if you change nature through your labor, it becomes yours. By contrast, Marx recognized and explored the destructive impact of capitalism on nature, and the environmental problems generated by the reduction of complex ecosystems to commodities, ie., mere objects. However, he did not take this process of thought beyond humanity's interests. Accordingly, he encouraged the social domination of nature in man's interest (Gottlieb 1997: IX–XIII).

This approach has been criticized by the key texts of the prehistory of environmental philosophy. First among them is the great classic work *Walden, or Life in the Woods* (Thoreau 1854) by the American writer Henry David Thoreau (1817 – 1862). Walden "laid the foundation for modern environmental philosophy" (Hubbell – Ryan 2022: 116). Thoreau spent two years in solitude by Lake Walden, taking care of all his living conditions (house, food, etc.) alone. In addition to physical chores, he spent his days observing nature and writing. The book is a diary of voluntary simplicity and a chronicle of exodus from society. He is said to be the first American environmentalist and the thinker who laid the philosophical basis for civil disobedience (see idem: *On the Duty of Civil Disobedience*, 1849). Also outstanding among the antecedents of ecophilosophy are the book *Nature* by Thoreau's teacher Ralph Waldo Emerson (1803–1882), published in 1836, and John Muir's (1838–1914) *My First Summer in the Sierra*. Both emphasize nature's intrinsic rights and humankind's moral duty to the environment.

The works from the middle and second half of the 20th century that are discussed in the following pages coincide with the consolidation of environmental philosophy. They were already motivated by, and were reflections upon, the active environmentalist movement. The main idea of Aldo Leopold's (1887–1948) land ethic[2] is that humans are equals and not oppressors of the earth's living community; nature is not a thing and not a property; further, the notion of ethnic community must be extended to the entire ecosystem. He stresses that love of nature is not only an emotional but also an intellectual process based on ecological consciousness and conscience (see Tóth 2005: 125–138).

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[1]   Several contemporary thinkers hold that Descartes's natural philosophy, Locke's economic philosophy and Adam Smith's economics jointly created the modern worldview which led to the environmental – and, in parallel, the social, economic and ethical – crisis. The basic tenets of this worldview are: natural goods have no inherent value; they are both plentiful and free; the free natural elements available in infinite volume acquire their value through being processed by man (labor-value theory).

[2]   The term land ethic comes from the title of the last chapter (The Land Ethic) in Leopold's book *Sand County Almanac* (1948).

The best-known work in 20th-century environmentalist literature is arguably Rachel Carson's *Silent Spring* (1962). Carson's claim that industrial agriculture would lead to the disappearance of birds is obviously not only about birds, but also about humans, their attitude to nature, and the close interrelation between the health of humans and that of nature. The academic literature acknowledges *Silent Spring* as the book which profoundly understood and made clear the existence and meaning of the ecological crisis, and which provided great motivation for action (see Guha 2000).

Similarly influential was Garrett Hardin's parable about the tragedy of the commons (Hardin 1968; discussed in detail in the chapter *The Tragedy and Comedy of the Commons* by András Takács-Sánta), as was *The Limits to Growth* (1972) by Donella Meadows and her colleagues. Both books discuss the dangers of overpopulation and the depletion of natural resources.

Among the endeavors which led to ecophilosophy, a prominent motivation was the animal rights movement, and its philosophical and ethical foundations. The idea that animals are beings capable of feelings and suffering is important to the animal rights framework.[3] As concluded by Australian philosopher Peter Singer – perhaps the best-known elaborator of the philosophical and ethical foundations of animal rights – the instrumental, utilitarian notion of animal life is culturally ingrained; changing this deeply ingrained bias requires the abilities of selflessness and empathy. Animals cannot protest against their mistreatment, or for their rights, so we must take action on their behalf (Singer 1974). This idea obviously reflects the first principle of ecophilosophy: nature is not merely a thing over which humans have exclusive and omnipotent domination, but rather it has value in its own right, which human beings have a moral responsibility to protect.

Certainly one of the most radical environmental philosophical theses of the 20th century is the Gaia theory of the English medical doctor, researcher, biophysicist and inventor James Lovelock (1919–2022), who conducted an extremely broad range of investigations. One was an analysis of the atmosphere which helped ascertain whether life is possible on other planets. Upon NASA's request, he studied the possibilities of life on Mars in the 1960s. During these years, he elaborated his famous Gaia hypothesis (Lovelock 1979). It boils down to the idea that planet Earth is a "living organism" capable of controlling and regenerating itself, all its animate and inanimate elements constituting a tightly interrelated system. Such a holistic interpretation of the biosphere was already present in several natural and world religions (Goddess Bhumi in Hinduism), similarly to Greek mythology from which comes the name Gaia ("Earth Goddess" in Greek). Lovelock held that the earth was capable of recovering from disasters of a certain magnitude. This ability relies on a strong immune system – by which he meant microorganisms, tropical forests, and the biosphere of the continental shelves. In the works of his old age, he became increasingly more pessimistic, seeing man as an environment-transforming creature whose impact can no longer be offset by the rest of the elements of nature. The equilibrium of the Earth becomes upset and an ecological crisis evolves, which eventually leads to the extinction of all life on Earth, including humankind.

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[3]   See the question of the 19th century philosopher Jeremy Bentham: „The question is not, Can they *reason*? nor Can they *talk*? but rather Can they *suffer*?" (cited in Hubbell – Ryan 2022: 117).

The three best-known ecophilosophical trends of the 20th century are Naess's deep ecology, Bookchin's social ecology and ecofeminism.

Deep ecology is associated with the name of Norwegian philosopher Arne Naess (1912–2009). Naess was deeply influenced by Rachel Carson's *Silent Spring*, the principles of Buddhist teachings on self-fulfillment, and Mahatma Gandhi's (1869–1948) non-violent resistance. He justified the name deep ecology by claiming that the environmental movement started in the 1970s and the philosophical thoughts that underlay it were shallow. They were not actually aimed at the interests, survival and wellbeing of the natural environment, but instead set the human being and its welfare in the foreground. In contrast, the deep ecological position and all movements and actors that adopt it are characterized by the position of biosphere egalitarianism. This means that all things are in deep, fundamental connection with one another and with everything else. All living beings have a right to life; nature, the richness and variety of the forms of life have a value of their own; all existing beings are equal and interdependent; all forms of life in the biosphere are entitled to survival and preservation, irrespective of their utility for human beings. He emphasized that humans have no distinguished value or role in the biosphere. The above statements apply to them just as they do to all other beings. Human interests are not superior to the interests of other species, and only to survive are they allowed to take other beings' lives, similarly to all other species. The social concept of deep ecology is against classes; it supports diversity, local autonomy, decentralization and self-government. Deep ecology is a theoretical framework which wishes to rally different worldviews, gather those of identical conceptual positions and promote their action. It has indeed linked up several worldviews, but also elicited criticism precisely for its excessively radical views on the world verging on the esoteric, which may discredit the whole environmental movement (see Hubbell – Ryan 2022: 118; Tóth 2005: 199–230). As noted above, trends in 20th-century environmental philosophy often function as bases for concrete movements. This is true of deep ecology as well: it motivated the foundation of the Earth First! movement (1980), Deep Green Resistance (DGR, 2011) and some anarcho-primitivist groups. The latter reject civilisation and wish to return to a pre-modern way of living (rewilding) (Hubbell – Ryan 2011: 118; Naess 1988, 1993).

The next trend of eco-radicalism, social ecology, is associated with the political philosopher, historian and social theoretician Murray Bookchin (1921–2006). Social ecology is a radical political movement whose aim is to create an ecological society. Though close to several political trends, Bookchin mainly regarded himself as an anarchist. The fundamental tenets of anarchist social theory are extremely noticeable in his philosophical work, and his views on the ideal society.[4]

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[4]   Bookchin largely relied on Rousseau's image of the noble savage and on traditional societies when arguing that man is innately good and that an ecological society can be realized. His critics argue that he reasoned deductively, and that, moreover, in justifying his thoughts, he used etiological examples to verify his presuppositions. For instance, he denied the existence of hierarchy in traditional tribal societies (Kirkman 1997: 202–203).

Anarchism (Archia – governance, rule, an-archia – absence of governance)
Anarchism is a social theory foregrounding the individual's responsibility against any – legal, dictatorial or parliamentary – governance or domination. By domination, it understands rule by property, law or state. An anarchist society is based on the free cooperation of people; instead of power systems, it evolves via solidarity, freedom, equality, and voluntary collaboration. It is characterized by anthropological optimism, i.e., the belief that human nature is fundamentally good. These characteristics (solidarity, etc.) are therefore inherent in human nature, which is why it is possible to realize an anarchist society. In an anarchic society, the basic principle of individual interactions is mutuality. Individuals do not execute orders but instead contribute to the common good by mutually helping each other out of self-interest.

Mutuality at the social level is realized as reciprocity or mutual exchange between communities of society; the life of a free society is permeated with the basic principle of reciprocity.

The anarchist worldview differentiates between social order and political order: a social order can be achieved without political intervention. Moreover, only in this way can it become the order of liberty , whereas a political order legalizes violence. The state is actually a group of people, the ones whose interests are asserted. The social order of anarchism is spontaneous: Its emergence does not depend on institutional power as that hinders the unfolding of the spontaneous order and represents the will of certain interest groups.

This new society – anarchy – is built from the bottom up, via forming of autonomous alliances, societies, and federations Anarchism does not oppose institutions or organizations as such, but only rejects power institutions, while it regards other unions and autonomous collectives as the natural integrative process of humankind (Bozóki – Sükösd 1991: chapter on *The essence of anarchism*).

Innumerable trends and branches of anarchism have evolved from reformist trends to radical revolutionary groups and from religious anarchism to a preference for political uprisings. Notable anarchist authors include Mikhail Bakunin, Piotr Kropotkin, Max Stirner, Pierre Joseph Proudhon, Josiah Warren, Emma Goldman, Daniel Guérin, Lev Tolstoy, and Mahatma Gandhi. Among the Hungarian anarchist authors are András Szalay, Jenő Henrik Schmitt, Count Ervin Batthyány, and Károly Krausz.

The anarchist vision of ideal society had a fundamental influence on the new social movements whose networks were undergoing grassroots organization.

While deep ecology is a typical example of eco-centric thought, Bookchin's *social ecology* advocates anthropocentric views – in a certain sense: he said that although humans are part of nature, they are in a position of special significance, which entails responsibility. He held that humankind's misconceived domination over nature was rooted in the dysfunctionality of society, and in deep-rooted social (economic, ethnic, cultural, and national) problems and that, therefore, environmental challenges could not be solved without addressing these problems as well. For the remedy, he proposed a free and harmonious society built on radically new foundations: ecological principles without hierarchy, classes or domination. The necessary prerequisite for the new society was the transformation of human thought and values. For, according to Bookchin, "human beings intervene in natural evolution with their best capacities – their moral sense, their unprecedented degree of conceptual thought, and their remarkable powers of communication"

(1993: 370, cited in Hubbell – Ryan 2022: 120). Not only are people capable of behaving in this way; it is also their moral obligation. Since the protection of nature is at heart a social problem, it requires social actions, i.e., human intervention: we have to serve natural evolution so as to preserve diversity and complexity. The decentralized society he envisioned is highly practical on the one hand, applying renewable energy sources, bioagricultural methods and measures to reduce pollution.[5] On the other hand, it tackles social relations and political structures which underlie the inequalities hindering the flourishing of people and nature. In his vision, the new social order involves domination over nature and through it the elimination of the ecological crisis (Bookchin 1982; 1993).

The term *ecofeminism* was first used by the French writer, feminist and environmentalist Francoise d'Eaubonne (1920–2005) in her philosophical work *Le Féminisme ou la Morte*, written in 1974. She laid the foundations of ecofeminism with a statement which stresses the special relationship between women and nature and which points at toxic masculinity as the root of all the harm done to nature. The idea that women have an inherent connection with nature, and, therefore, the fight for nature is their job inspired several researchers at that time, including Sherry Ortner (1972) and Carolyn Merchant (1980), to name the two best-known authors. A year after the publication of D'Eaubonne's book, Rosemary Radford Ruether's collection of essays titled *New Woman, New Earth* appeared in 1975 as one of the first publications of ecofeminist thought (Ruether 1975; Hubbell – Ryan 2022: 114).

Ecofeminism has several strands and rallies diverse – converging or competing – philosophical positions, so its basic tenets are hard to summarize. "*Ecofeminist* critique declares that climate change, its ecological consequences, as well as the oppression of women and the minorities, the exploitation of nature beyond regeneration have a common root. To understand the situation, it is important to explore the social-economic logics which may help a more profound comprehension of the situation" (Kiss 2020).

Early ecofeminism was strongly influenced by the argument that there exists a special interrelation between women and nature, a sort of female sensibility that forms the basis for women's effective role in the protection of the natural environment. However, this "female culture" rooted in the essence of womanhood was discarded by other trends (see Plumwood 1993). Ecofeminist thinkers reject the Western dualist worldview and its application to the genders (such as nature – woman vs. culture – man, emotion – woman vs. reason – man, affectivity – woman vs. cognition – man, body – woman vs. mind – man, etc.), and claim that the patriarchy which governs the contemporary world is an oppressive ideology that legitimizes oppression by means of this dualism. Ecofeminism is also a critique of capitalism: in this concept of dualisms, nature and all beings associated with it are degraded and used as exploitable resources. Capitalist logic approaches natural

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[5]   Some of his concrete proposals include: decentralizing cities; forming communities that respond sensitively to the specificities of their natural environment; ecotechnology, designing multifunctional industrial equipment; making tools that serve several generations; the primacy of manual work; spending leisure-time usefully; shared property belonging not to the producer but to the community; ecological society consisting of grassroots organizations and communities. Bookchin's idea of the ecological society has been elaborated in fiction – see, for instance, Ernest Callenbach's *Ecotopia* (1975).

resources, flora and fauna and the other "elements" associated with nature with the same attitude (see Salleh 2019). The ecofeminists emphasize that the subjugation of nature and such social groups as women, minorities, the disabled, and sexual minorities, stems from the same root in modern societies: "the same kind of domineering logic is used to legitimize the subjugation of nature as is cited to justify the subordination of gender, racial, ethnic or social groups" (Warren 1990: 131). This hierarchical, segregating attitude has caused the contemporary crisis situation as well.

In her book, *The Death of Nature* (1980), Carolyn Merchant closely examines the relations between the mechanical worldview supported by the technological revolution, the exploitation of the environment and the subordination of women. Karen J. Warren asserts that ecofeminism is a good solution, for – in her view – it provides a unified ethical framework for approaching the complex web of suppressions affecting women and the Earth (Warren 1993). The state of subjugated groups and the problems of nature cannot be separated. The ecological crisis can only be solved by handling them together (Hubbell – Ryan 2022: 114). As put by German sociologist Maria Mies and Indian writer and activist Vandana Shiva, "the liberation of women cannot be achieved in isolation, but only as part of a larger struggle for the preservation of life on this planet" (Mies and Shiva 2014: 16; cited in Hubbell – Ryan 2022: 114). Ecofeminism believes that it would be a great step, an advantage for society and nature if care and cooperation were placed in the foreground instead of aggressive and dominant behavior (Buckingham 2015).

The integration of ecofeminism into EH is indispensable – in Greta Gaard's view – because, for one thing, both rely on the fundamental rejection of the dualistic and segregating approach to the world, claiming that the latter approach is promoted by science, technology and the economy to the detriment of life on earth (Gaard 2017: 82). Both ecological humanities and ecofeminism demand a radical change in mentality and an epistemological revival.

PLANT ETHICS

Although a considerable part of the world comprises plants and every living being stands in some connection with them, they have a marginalized role in Western philosophy. This is probably because plants don't call attention to themselves. They don't make audible sounds; they are seemingly immobile, quiet, passive, static "background entities" (Kallhoff – Paola – Schörgenhumer 2018: 1), and it is therefore difficult to have a moral attitude towards them. Plants, however, have an important and specific role for environmental ethics, too: they are necessary, useful, beautiful, complex, diverse; they tell stories of people, times and places. Recent research has repeatedly refuted the above views of plants, finding them as intelligent, conscious and capable beings instead of part of a passive backdrop.

From the mid-2010s, the plant ethics research group of Vienna University (https://plantethics.univie.ac.at) has been concerned with including plants into philosophy by proposing themes for research such as the ontology and ethics of plants, the role of plants in diverse areas of use, moral questions connected to plants, axiology, morphogenesis of plants, etc. In their pioneering book of studies, *Plant Ethics: Concepts and Applications*, they outline spreading, dominant approaches in plant ethics (the

non-moral yet inclusive approach, the relational approach, the value-in-nature approach – see Kallhoff – Paola – Schörgenhumer 2018: 2–3). Some philosophers argue that an ethical approach to plants must rest on their value to other beings; others focus on human practices that depend on plants; others again examine plants, botanic life as such, separately. Eco-ethics also looks closely at hybrid breeding technologies, agricultural robotics, genetically modified variants and laboratory experimentation. With the new theoretical frameworks and methods, attempts are being made to rethink classic themes (such as the garden and food). Brand new areas (e.g. the planetoid – an object inspired by robots) are also being studied.

Conclusion

As shown both by the beginning of the paper and also some later parts, the radical trends of environmental philosophy have been tightly linked to movements of counter-culture. The representatives of these trends have aimed to expose the conceptual, social, cultural and historical background, drivers and functioning of the environmental crisis. They have argued that a fundamental social or cultural transformation is required for humanity to ward off a long-term ecological disaster. They differ from other trends in environmental philosophy by their lack of trust in political and other reforms. This is because on the one hand, these are too slow, while on the other, they concentrate on symptoms instead of causes (Zimmerman 2001; Hubbell – Ryan 2022: 122–123), without which only temporary, superficial solutions are possible.

However, the contemporary environmental and social problems are no longer mere problems, but rather crises that threaten the existence of life on Earth. The awakening world is eagerly awaiting urgent answers. This general state of mind and attitude influences the more recent, specialized ecophilosophical trends which address such ontological and epistemological issues as plant ethics, food ethics, climate ethics, climate engineering, Anthropocene feminism, and sustainability ethics, all of which would have been extreme as little as 20 years ago (Hubbell – Ryan 2022: 121). Such radically new ideas are, obviously, also motivated by contemporary scientific achievements. To remain with plants: the latest scientific findings that plants experience pain or that they communicate with one another – and the further perspectives afforded by research – may result in the complete reconsideration of our natural environment and our relationship to it. These scientific results also lay claim to what EH so often and emphatically reiterates: inter- and cross-disciplinary communication and collaboration.

Recommended readings

Robin, Attfield 2018. *Environmental Ethics. A Very Short Introduction*. Oxford University Press.

Robin Attfield traces the origins of environmental ethics as a discipline. He also explores diverse approaches and discusses different movements such as Deep Ecology, Social Ecology, the Environmental Justice movement and the Green movement. Finally, he demonstrates our responsibility for the environment from states and corporations to the individual.

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SCHOOLS OF ECONOMIC THOUGHT ON ENVIRONMENTAL SUSTAINABILITY

Tamás Kocsis

The chapter examines how economists from the 18th century to the present day have viewed the relationship between humans and the natural environment, and to what extent they have incorporated, or ignored, the scientific and other findings while elaborating their systems. This article combines neoclassical environmental economics (NEO) and ecological economics (ECO), the two major contemporary schools of economic thought in the foreground of environmental sustainability.

A historical overview[1]

The concept of nature in classical economics

Already in 1651, Thomas Hobbes pointed out that the material basis of welfare evolves in the economy in a similar way to the circulation of nutritive materials in the blood veins. Materials and nutrients extracted from the soil or the sea become the subjects of money exchange, and circulate through diverse transformational and commercial channels. Though his ideas were forgotten for some time, the forerunners and representatives of the classical model of economics, William Petty, Richard Cantillon, the French Physiocrats (e.g. Francois Quesnay), Adam Smith, and their 19th century followers held similar ideas on the material basis of production and prices (Christensen 1989: 19; cf. 1991: 76–77). First the Physiocrats and then Smith, differentiated between agriculture and artisanry, regarding farming as productive, because compared to the material input, its activity results in some surplus, while the crafts only transform the raw materials without producing material surplus (Christensen 1989: 20). They also laid down the *law of diminishing returns* manifested in agriculture, which means that the increasingly intensive cultivation of a given piece of land results in a steady decrease in the ever rising yield. In contrast, for the industrial sectors, they found that the law of increasing returns applied: they noticed, for example, that twice as much work (capital) resulted in more than twice as much output (Christensen 1991: 82).

The researchers of British industrial development in the early 19th century also realized the importance of energy in addition to the role of pure material. In McCulloch's view, the British nation owed its industrial upswing to the utilization

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[1]   This is not a systematic review of the history of economics. The outstanding thinkers and theories of the field have relevance here insomuch as they are concerned with certain elements of the relationship between the natural environment and society. This chapter relies mainly on works now considered classical, such as those by Edward B. Barbier (1989), Paul P. Christensen (1989, 1991), and David W. Pearce and R. Kerry Turner (1990).

of its coal stocks and to the technologies based on them (e.g., the steam engine). These allowed it to move beyond its limited stocks of firewood and to decrease costs (Christensen 1999: 21).

Any review of classical economic theories gives a prominent place to the dispute between Thomas Malthus and David Ricardo on the scarcity of the natural resources required by agriculture. Bennett and Morse (1963) summed up their positions as that of the absolute scarcity of the natural resources (Malthus) as opposed to their relative scarcity (Ricardo) (cf. Barbier 1989: 1). Indeed, Malthus spoke about the absolute limits of tillable land, and claimed that if all available agricultural areas were used, the feeding of extra numbers of people would only be possible if the intensity of cultivation was increased on the given area. The return (surplus produce) from the given area would grow, but at a declining rate. By contrast, Ricardo attributed the amount of diminishing returns to the *deterioration of the quality* of land put under cultivation, because he held that the highest-quality land was constantly tilled, while the remaining poor-quality areas began to be cultivated later (see table) (Barnett – Morse 1963: 51; cited in Barbier 1989: 1–2).

Table 1. Comparison of Malthus's and Ricardo's theories of agricultural land

	Malthus	Ricardo
quality of arable land	homogeneous	heterogeneous
emergence of diminishing returns	after full exhaustion	always occurs
nature of scarcity	absolute	relative
substitution of resources	none	some
source of scarcity	internal (subsistence level)	internal (subsistence level)

Malthusian absolute scarcity therefore means that the quality of all natural resources (arable land) is homogeneous and therefore that the phenomenon of diminishing returns occurs after depletion. Since at the time of the absolute limit, all suitable land would be under cultivation, there is no substitutability between resources. In other words, the rising cost of one factor cannot stimulate effective substitution. In contrast, Ricardo argued for the heterogeneous quality of natural resources, and consequently, the phenomenon of declining increments always appears. Rising costs (prices) may be signals for the economy – though latently in Ricardo's reasoning – and since not all resources are utilized, it is possible to substitute the relatively expensive and scarce resource for a cheaper one (Barbier 1989: 3–4; cf. Pearce – Turner 1990: 6–7).

While Ricardo's views may appear more optimistic than Malthus's, it must be pointed out that Ricardo pinpointed a more intriguing characteristic of nature – the limited fertility of arable land. At the same time, it is also significant that both Malthus and Ricardo regarded the ultimate source of scarcity as intrinsic to nature. This constraint appears because the subsistence level of the labor force presupposes a certain minimum, and the paid wage must reach a minimum level. However, if this was the single constraint on the growth of the economy, it would mean that the trap could be avoided by replacing labor with capital (Barbier 1989: 8–9, 11). Later critics of growth argue that this is a false conclusion (see later).

John Stuart Mill published his chef d'oeuvre, *The Principles of Political Economy*, in 1848. He enriched the classical economic tradition's views on the natural environment with several important elements. Compared to his predecessors, he laid greater stress on technological developments which might extend the inevitable final limits of natural resources. He expanded the concept of scarcity to the gradual decrease of natural resources (e.g. minerals). This exposed a new difficulty even without the Malthusian demographic problem caused by the insufficiency of crop land, for Mill was the first to consider the potential alternative uses of land. Land – apart from agricultural production – provides space for housing and has an important role as a resource of human recreation (through the contemplation of the beauty of a landscape, for instance). Crucially, Mill asserted that sooner or later an economy must reach a stationary, non-growing state. He saw the value of this alternative service by nature not as something to be determined by the market but as an argument for the halting of economic growth, long before the compelling necessity arose (Barbier 1989: 12–14).

The concept of nature in neoclassical economics

Classical economists usually focused on long-term economic problems, and explained economic connections from the angle of production. In the 1870s, this approach gave way to a static examination of the economy based on exchange. The capitalist mode of production having been consolidated in developed countries, the main task was no longer the elimination of the feudal institutional obstacles hindering the forces of production. The focus narrowed to the individual, the pursuer of business, and the central issue was how he could capitalize on the advantages of capitalist production and the market as fully as possible (profit maximization) (Christensen 1989: 22–23; Pearce – Turner 1990; 10).

This method presumes the independence of the factors of production from one another. The increase of one factor causes the increase of returns at a decreasing pace, while the other factors remain unchanged (*ceteris paribus* analytic technique). You will have noticed that this is none other than Riccardo's relative scarcity in agriculture extended to the realm of labor and capital. However, one might argue that while the classical thinkers failed to notice that more intensive agricultural production (for example, by raising the input of capital and/or work on the given crop land) caused the invisible matter and energy going through the land to increase, the neoclassical economists extended this failure to labor and capital (Christensen 1989: 23). A further problem with this extension is that industry – as already realized by the classical theorists – is characterized by increasing rather than diminishing returns (Christensen 1991: 82).

The new trend claims that the *economic value* of diverse goods and services is primarily determined by the subjective taste and preferences of individual decision-makers (consumers). This statement runs counter to the views of the classical thinkers who attempted to define value on the basis of used resources. The neoclassical economists did not look into the formation of preferences or the availability of resources, taking them simply for granted (Christensen 1989: 23). In this way, the whole of society has become the aggregate of transactions between individual actors, without any particular feedback on the individual (Christensen

1989: 26). According to this theory, the value of the goods and services does not simply evolve on the basis of individual preferences. Rather, these preferences *must* be used as the basis for defining their value (normativity). As exploring the preferences of future generations is impossible, one must resort to the subjective judgment of the present generation as it appears on the market whenever one considers the use of resources and the natural environment. Neoclassical economists think that there is no inherent law in the environmental or social systems that ought to influence the evaluation and use of resources. Market failures, of course, provide arguments for community (state) intervention, but such intervention is rather alien to this theoretical framework (Christensen 1989: 27; cf. Pearce – Turner 1990: 11).

The cradle of neoclassical economics was the so-called marginal revolution. Menger (1871) properly identified the role of raw materials and intermediate (half-ready) products in the production of goods. He also clearly recognized fixed rates among inputs. However, in his theory on the role of prices, he had to postulate the discretional substitutability of inputs so as to evaluate the effect of the presence or absence of a specific factor (Christensen 1989: 24). In his theory of capital, Jevons (1871) eliminated the difference between fixed and circulating capital. He thought that fixed capital was a more durable version of circular capital, and by circular capital, he understood solely the food and lodging necessary for the subsistence of laborers. In this way, his theory of capital completely ignored the significance of machines, raw materials and industrial fuel (Christensen 1989: 23). The final version of the mistaken idea that each input independently contributed to the output was Walras' General Equilibrium Theory (1874). Just as the croplands provide a harvest year by year, so too do machines, tools and equipment – under the mistaken agricultural analogy. But the theory is silent about how this process continues without the material and energy needed for the activity (Christensen 1989: 24; cf. 1991: 78).

Just as classical economics was formed into a coherent system by Adam Smith, Alfred Marshall (1920), through the mediation of Wicksell, composed a whole from the findings of the marginal revolution. Marshall's indecision and his cautiousness about the concept of marginal utility suggest that he was aware of the material implications of production and that he realized the incompatibility of this fact with marginalist equilibrium theory. He reiterated the flow of materials in economic growth, but this view is not reflected in his theory of production (Christensen 1989: 25).

Marshall accepted the law of diminishing returns in agriculture, but in his view, rising prices stimulated new organizational solutions and improvements in knowledge. Hence, in the final analysis, the fact did not put a constraint on economic growth. He differentiated between renewable and exhaustible resources and only held the law of diminishing returns to be true of the former. Concerning non-renewable resources (e.g., mines), the decrease of stocks calls for more and more cost-intensive extraction solutions. Gradual depletion, similarly to the more intensive use of renewable resources, is to be reflected by rising prices. Marshall acknowledges the alternative services of nature as recognized by Mill (e.g., the beauty of the landscape, etc.). In his view, they have no direct monetary value, yet on the market their price is usually lower than their actual value (Babier 1989: 16–18).

Marshall's attitude to the scarcity of resources accurately characterizes the predominant contemporary position. This is particularly true when the value of natural resources is to be incorporated in market prices in order to achieve more realistic prices that motivate innovations. However, some of Marshall's valuable insights into the economic role of natural resources are echoed mainly by the more alternative variants of mainstream economics. Unfortunately, compared to classical economists, Marshall devoted too little attention to the scarcity of resources, and this might have also contributed to the fact that mainstream neoclassical economics do not consider this field worthy of serious attention (Barbier 1989: 18–19).

The background of environmental economics

The school of economic thought which accepts the foundations of neoclassical economics but which displays a greater interest in environmental problems usually goes by the label environmental economics in the academic literature. Its first important representative was perhaps Marshall's student Artur C. Pigou. His work *The Economics of Welfare*, published in 1920, contains the foundations still used in taxing production (or pollution) today. Its aim is that the costs caused by an activity's external effects[2] should be paid by the producer, and, indirectly, be reflected in the price of the product. The objective is to use administrative tools (e.g. taxation) to close the gap between the private and social costs (Turner et al. 1994: 4–5). This means that – according to environmental economics – society may burden and pollute the environment, but care must be taken that the magnitude of this activity remain at optimal levels on the basis of cost-benefit analyses.

Ronald *Coase* added an additional consideration to the handling of externalities, namely that – in the case that the rights of ownership (or, in lieu of it, of disposal) are well defined throughout the economy – the parties intent on profit maximization should launch spontaneous bargaining. As a result, the size of the externalities will *automatically* settle on the social optimum, without any special state intervention. The economic policy instruments of environmental economics are summed up in the regulatory matrix of environmental loads (Kocsis 2002, Kerekes et al. 2018: 152–156).

The foundations of the neoclassical economic approach to non-renewable resources (e.g., mineral stocks) were laid by Gray in 1914 and Hotelling in 1931, while the general economic rules of the optimal use of renewable resources (e.g., fishponds, forests) were first described by Gordon in 1954 (Turner et al. 1991: 5–7). This trend makes considerable efforts to evaluate diverse natural resources in monetary terms. The aim here is to extend the advantages of the market operation to this area as well (Marjainé Szerényi 2001; 2011).

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[2]   The externalities affect the wellbeing of a person (or persons) not involved in a given economic transaction, for which they receive no compensation. It is important that the effect is not deliberate but rather forms an inherent by-product of the production process (e.g. smoking smokestacks) (Baumol – Oates 1988: 17–18). More recently, externalities (or external costs) have been interpreted according to place, time and „degree of familiarity" as well (Kerekes et al. 2018: 170–173; Kocsis – Kuslits 2019).

The background of ecological economics

In a specific review of economic thought, attention must be given to scientific and philosophical realizations which were partially or completely ignored by early economic theories. The three most important fields of scholarship for our theme are ecology, environmental ethics (philosophy) and physics: together with economics, these areas constitute the main interests of ecological economics.[3]

Ecology has developed from biology. Unlike biology, it tries to grasp living beings not individually but rather in their intricate interrelations with their animate and inanimate environment. The area occupied by living organisms on Earth (the biosphere) is divided into relatively independent units of varying sizes. Of special importance among these is the ecosystem, the smallest unit of ecological research. The living organisms of an ecosystem try to respond to changes with their constantly reorganized living communities (succession). This process results in a stable, resilient ecosystem via complex feedback processes.

As living organisms, human beings are also an organic part of their environment's ecological functioning, but in the modification of their natural environment – for the satisfaction of their own needs – humans have acquired incomparably greater power than all other species. Ecosystems modified or newly created by humans (the latter exemplified by agricultural areas, cities and water reservoirs) for the satisfaction of their material needs can be found everywhere. However, serious disorders can occur in the functioning of these artificial ecosystems which have a considerable – negative – impact on human beings. For example, an ecologically unsuitable agricultural system may lead to the depletion of nutritious materials in the soil, then to its erosion and desertification (Barbier 1989: 41–42).

Back in 1865, Marsch set forward the thesis that the complexity and diversity of nature has value in its own right, because human beings depend on the environment. In his view, it is impossible to consider nature from one single aspect, notably, that it supplies us with material and energy for the economic processes (if this aspect is acknowledged at all). These "services" are only reflected in market prices when supply for them is outstripped by demand. This school of thought also finds it unacceptable that another important function of nature, its ability to assimilate waste or pollution produced by the economic processes, is taken by economists into consideration only when the economy has overburdened this ability (and, in this case, contamination appears as a negative externality – Barbier 1989: 34–35).

Facing ecological threats may rightly lead one to the conclusion that preserving natural ecosystems and the broadest possible range of animal and plant species is imperative because the welfare of the human species can be expected to decline (anthropocentric reasoning). However, there are also serious ethical arguments in support of the position that considers nature as something more than a mere resource for the economy (Kelemen 2022). For example, accepting the *intrinsic* value of nature implies protection as a moral duty, because nature is the source of

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[3]   Among the several branches and sub-disciplines of ecological economics, this paper stresses the biophysical trend associated with the names – among others – of Nicholas Georgescu-Roegen, Herman Daly and Robert Constanza. However, for a radical critique from a public policy perspective, see Málovics and Pataki (2022).

all life. It is also an important question whether – and how – the interests of unborn future generations should be taken into consideration in our present decisions.[4]

Alternative economists have been following the science of physics with great attention since the 1960s. Its most pertinent field for the economy is thermodynamics, which is aptly suited for the characterization of the basic physical interactions between the economic process and the natural environment.

One of the first to realize the economic importance of the laws of thermodynamics was Nicholas Georgescu-Roegen, who illustrated the two main laws with the following vivid example. Imagine an hour-glass. As it is a closed system, no single grain of sand can enter or leave the glass container. The number of grains of sand is constant; no grain can be created or destroyed. This is like the first law of thermodynamics: material, or energy, cannot be created or destroyed. Although the number of sand grains is constant, their distribution constantly changes: the lower chamber is filled as the upper is emptied. This can be compared to the second law of thermodynamics: entropy (the grains in the lower compartment) incessantly grows. The grains in the upper compartment (low entropy) are working like water is in a waterfall. The grains in the lower compartment (high entropy) have lost their capacity to work. However, this hour-glass can't be turned around: wasted energy cannot be recycled, unless more energy is invested (Georgescu-Roegen 1971, quoted by Daly – Cobb 1989: 11–12).

The realm of the economy is hardly an exception from this general law. On the basis of the first fundamental law of thermodynamics, it can be declared that the increment of any growth in the production of physical goods in the economy has a dual effect: on the one hand, the amount of material and energy extracted from nature increases accordingly; on the other, the amount of waste emitted into the environment also grows by the same measure. It remains for the waste processing capacity of the environment to assimilate it (Nijkamp 1977: 12, quoted by Barbier 1989: 52). The second law demonstrates that energy becomes included in the economic processes in the form of low entropy (this type of energy is usable for mechanical work), then waste heat and other pollution leave the processes as output (high entropy). Thus, the flow of energy and material through the economy (throughput) becomes an important factor (Boulding 1966).

Indispensable low-entropy is available only from two sources: fossils and minerals condensed under the ground, and radiation from the sun. Mineral stocks are obviously limited, although the pace of their usage largely depends on human decisions. The stock of energy from solar radiation is practically unbounded, but its flow is limited. Solar energy and other renewable energy resources are limited by the volume of available solar radiation and by the growth potential of plants and animals. This implies a natural constraint on economic growth. However, economic growth may exceed – at least temporarily – this limit by utilizing our low-entropy reserves which stored up solar energy absorbed earlier. The throughput of energy (or social metabolism, see Dombi, 2022) sustains or increases order in the human economy, but – by depletion and pollution – it generates greater disorder in the rest of the natural world (Daly 1979: 74–76).

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[4]   Neoclassical environmental economics also addresses the issue of future generations and promotes an adequately chosen discount rate (Pearce – Turner 1990: 211–225). However, this concept devalues the future compared to the present.

We have thus pinpointed the use of energy stocks hidden in the earth as one of the main causes of increasing returns in industry. Increasing returns, however, is a positive feedback, and, therefore, such an economy cannot be regarded as self-regulating. It jeopardizes the sustainability of energy resources, which may lead to the deterioration of the natural environment and the decline of productivity. Consequently, such an economy needs to be managed, regulated and coordinated (Christensen 1991: 84–86; Harangozó 2022).

Ecological economics has developed a holistic approach, that is, a comprehensive view of the environment and the global biosphere. The implementation of the more sustainable forms of economic development is no longer the luxury of industrially developed countries suffering from the consequences of their overdevelopment. Their adoption also appears to be urgent in countries at the onset of the industrialization and expansion of their economies (Barbier 1989: 37).

Summary: A comparison of environmental economics and ecological economics

Here the focus is on the two schools of economic thought engaged explicitly in human-induced environmental problems. The recognizable methodological and structural differences between the two schools derive organically from their historical and systemic specificities. The overview is based primarily on the summary by Sahu and Nayak (1994) (Table 2).

Environmental economics tries to modify the neoclassical economic paradigm (NEO) so as to enable it to tackle issues rooted in the openness of the economy. It does not break with the dominant economic position, because it wishes to solve the environmental problems with the help of the market mechanism (the main goal is effective allocation) and it is based on possible substitution by technological development. Thus, man-made capital and natural capital, in the view of NEO, are mostly substitutable.

In contrast, ecological economics (here abbreviated as ECO) aims to integrate findings by physics, ecology and other social sciences in addition to economics. It attempts to conceptualize the relationship between economy and nature from the angle of ecology, stressing the entropic nature of economic activity (second law of thermodynamics). It is not satisfied with the theoretically achievable optimal market allocation, but it also analyzes the distribution of welfare (equity) and the scale of the economy (sustainability). ECO holds that man-made capital and natural capital are in a complementary relationship and can only marginally be substituted for each other (Bajmócy 2022).

NEO's concept of scientism (monodisciplinary) separates it from the other sciences. It is characterized by a mechanical world view and the simplification of reality (reductionism). Knowledge is interpreted via positivist and other "value-free" methods. ECO, on the contrary, strives for multidisciplinary scholarship, possesses a holistic view, and believes in evolutionary development. Its subjective methodology is imbued with ideology and values which it openly emphasizes, giving up the – often spurious – appearance of scientism.

**Table 2. Comparison of environmental economics
and ecological economics based on 15 scientific papers (Sahu – Nayak 1994: 15)**

	dimension, component, aspect	Neoclassical environmental economics (NEO)	Ecological economics (ECO)
1	PARADIGM	extended neoclassical	biophysical
i	main theory / principle	market mechanism, technological change and substitution; economic theory of the mainstream	ecological balance. natural laws; entropic nature of economic activity; Physiocratic and classical theory, Mill's steady-state economy resuscitated by Daly
ii	stress on thermodynamic law	on the first law	on the first and (mainly) the second
iii	approach	allocation	scale; distribution and allocation
iv	worldview	mechanic-reductionist	evolutionary-holistic
v	knowledge-acquisition process	positivist and value-free analysis	subjectivist, concentrating on values and ideology
vi	character	monodisciplinary extension of neoclassical economics to an environmental system	multidisciplinary; operation on the interface between biophysics, economics and other social sciences
vii	relationships	economy-environment; interdependence of humans and nature; capital and resources: near-perfect substitutes	ecosystem-economy; humans in symbiosis with nature capital and resources: fundamentally complementary with very limited marginal substitutability
2	SCARCITY PERCEPTION	relative	absolute
i	perspective	economy contains biosphere	biosphere contains economy
ii	perception of decline	not universally true	universally true
iii	economic growth	clean-green growth	maintenance of throughput as per carrying capacity
iv	sustainability	constraint on economic growth	security
v	desired equilibrium	Pareto efficiency	Boulding-optimum
vi	view of future	technological optimism	prudent pessimism
3	PROBLEM-SOLVING ORIENTATION	based on the market system	based on laws of nature
i	pollution	externality (market failure)	resource depletion (social trap)
ii	therapy	polluter/victim pays	pollution prevention pays

iii	focus	more practical and immediate problems – short-term perspective	harder and larger-scale problems – long-term perspective
iv	strategy	decoupling for growth; stress on risk management; impact assessment in monetary terms;\n\nmonetary reductionism; business as usual with treatment plant; energy efficiency and waste recycling protection of endangered species	decoupling for welfare; stress on uncertainty management, ecological cost-assessment through energy flow analysis; energy reductionism; ecological engineering\n\nrenewable energy recycling\n\nconsideration of interspecies rights
v	methods of (e)valuation	willingness to pay (WTP), willingness to accept (WTA) in cost-benefit analysis (CBA), total economic value (TEV) comprising direct and indirect use values, optional value and existence value\n\nhighly aggregated and ethically closed approach	environmental impact statements/profiles, effects of perturbation on interspecies dependencies, ecologic-economic models, positional analysis, system analysis, social trap analysis, contributory value analysis and carrying capacity assessment\n\nhighly disaggregated and ethically open-ended approach
4	RANGE OF INTEGRATION	economic ecology	ecologic economy
i	basic problem of study	relating technology, political economy and ethics	relating physics, technology, political economy, ethics and theology
ii	dominant theme	anthropocentric	anthropocentric with attempts to be open towards biocentric and ecocentric considerations

NEO claims that resource scarcity is mostly relative, from which it logically follows – although it is rarely made explicit – that the natural environment (biosphere) forms part of the economic sphere (weak sustainability). This approach suggests considerable optimism about the future, claiming that clean (green) economic growth can be realized in the long term. Its idea of equilibrium echoes Pareto efficiency.[5] ECO denies that nature is part of the economy and declares that the relationship is the other way round (strong sustainability). Consequently, the phenomenon of resource scarcity is absolute and inevitable (the biosphere is a closed and finite system) – this fact alone suffices as a warning that constant

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[5]   „Pareto efficiency is defined by economists as a situation where no one can be made better off without making someone else worse off" (International Encyclopedia of the Social & Behavioral Sciences, 2001).

economic growth is not possible (Szigeti 2022). Efforts have to be made to maintain economic performance within Earth's carrying capacity. Instead of economic growth, people's well-being should be enhanced; these are two different things (Easterlin 1974; Gébert 2022; Csutora 2022). The advocates of this school of thought consider themselves prudent – or cautious – pessimists and propose to set as their goal Boulding's equilibrium[6]; they are critical about growth (including green growth), and recommend a steady-state or degrowth economy (Harangozó et al. 2018).

On the whole, NEO is a practice-oriented school of thought, with short-term ideas having a predominant role, while ECO lays the emphasis on harder and larger-scale problems which require consideration from a long-term perspective. NEO holds that pollution is an externality rooted in market failures, but it can be optimized if the polluter (or the victim) pays the additional social costs. Risk management is also an important aspect here. ECO regards pollution as a depletion of resources. Therefore, it does not accept social optimization, but instead wishes to make financial efforts to prevent pollution (see the principle of pollution prevention pays, which is not unfamiliar to NEO either). ECO's aim is not just risk management, but the need to identify situations in which even the approximate assessment of risks is impossible (uncertainty, post-normal science, wicked problems – Ravetz 2004; Kerekes 2023).

Since NEO attempts to monetize the impacts of the economy on the environment, it also indicates that it regards nature as part of the economy: a strictly social entity (money) is extended to the natural environment. However, the monetary valuation of environmental resources allows for those with zero monetary value to acquire positive weight in analysis in order to avoid environmentally erroneous decisions by economic decision-makers. The chief methods of valuation include cost-benefit analysis, willingness to pay (WTP) for the conservation of certain natural values, and willingness to accept (WTA) the loss of a natural value (Marjainé Szerényi 2011). In defining the total economic value of a natural resource, the aspect of future generations is also taken into account (optional value, existence value). There are further methods of evaluation which share an attempt to define the given natural factor's value by means of social value judgment. According to this, NEO's evaluating method is ethically closed (Kelemen 2022).

Since ECO focuses on the whole biosphere, it grasps the relationship between the economy and the natural environment in its natural terms, hence, instead of valuation in monetary terms, it prefers energy and material flow analysis. Evaluation does not depend on the preferences of society but on the real impact on the environment and on the effects that disturbs interspecies relations. Of special importance are system analyses, analyses of diverse social traps, and the assessment of an area's carrying capacity (Kelemen – Pataki 2014). These are open methods from an ethical point of view, as they take into consideration several types of non-human relations as well.

In sum, compared to NEO's focus on technology, economic policy and anthropocentric ethics, ECO expands all these branches with physics, ecology, and often theology.

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[6]   Kenneth Boulding used the term "cowboy economy" to describe an economy of infinite natural resources, and of "spaceship Earth" to describe a situation in which all of human needs are satisfied by renewable resources (Boulding 1966).

Recommended reading

Harangozó, G. – Csutora, M. – Kocsis, T. 2018. "How big is big enough? Toward a sustainable future by examining alternatives to the conventional economic growth paradigm". *Sustainable Development*, 26/2: 172–181.

It gives a systematic overview of the paradigms of positive, zero and negative economic growth, and their advantages and disadvantages in the economic management of the sustainability problem. A tabular summary provides a quick overview.

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RELIGION AND ECOLOGY

Judit Farkas

This chapter surveys the concepts held by different religions and belief systems on nature. Recent decades have shown that in addition to technical and technological results and political desires, there is also an urgent need to transform the human system of values so that people can comprehend environmental problems as legitimate problems that are in need of solutions. An eco-conscious religious or spiritual system of values and the technological solutions to environmental problems both aim at the same goal, yet they encounter difficulties in understanding one another. Their rapprochement and reconciliation could largely be promoted by the attitude of EH with its multi- and cross-disciplinary efforts. This is the reason for the chapter devoted to religion in a reader of EH.

Ecology and religion

Both concepts in the chapter's title – religion and ecology – are difficult to define. In a narrow sense, ecology designates a branch of the natural sciences: it studies the space of living, the relationships between living beings and their environment. At the same time, the term is often colloquially used to denote the environment (or – and this is rather problematic – as a synonym of Nature). Its contemporary interpretation is the exploration of environmental problems, concentrating on the interaction of humans and the natural environment. Religion is perhaps an even more complex notion, with innumerable different historical, scientific, theological and denominational interpretations. An examination of the definitions by a single field of scholarship (e.g., cultural anthropology – see the framed text below), reveals that the examination of religion and environmental protection is not an easy undertaking, nor is the elaboration of the theory and practice of religious environmentalism (Lodge – Hamlin 2006: 279–307). On the conceptual difficulties, see also Baumann – Bohannon – O'Brien 2017).

ECOLOGY, ENVIRONMENT, RELIGION

Ecology. The term is associated with the German biologist Ernst Haeckel (1866). "As a discipline of synthetic biology, it is interested in the laws of the relationship between populations of living beings (above the individual level) and the environment. Ecology's fields of interest include the study of interactions that determine the distribution and frequency of living beings. In other words, it studies the conditions which influence the populations of living beings and their impact. The word of Greek origin means a study of the milieu, environment. More recently, the importance of the issue has

given rise to a new discipline for the study of the relationship between humans and their environment called human ecology." (Mészáros 2010: 17).

"*Global ecology* is concerned with the general questions of the relationship between the Earth and the human being, and their interaction. The issues it looks into in depth concern the fundamental connections between humanity and the environment: What changes have people caused on Earth? This is first of all a question for the natural sciences. We must inventory the major changes brought about by humankind. - What are the social consequences of these changes? The analysis of this question belongs to the social sciences' sphere of interest. - What is the social cause for the changes brought about by humankind? The point is to determine which social forces are at work that motivate humans to generate or perform the transformations. This issue belongs primarily to the social sciences. - How could the changes and processes unacceptable for sustainability be prevented, stopped, altered? Answering this question requires scientific, technological and social scientific knowledge in all actual cases" (Kiss 2012: 17).

Environment: "The environment is the totality of factors that surround humanity, an individual or group. The notion of environment therefore includes all aspects that determine the surroundings of a human being, be they of natural or artificial origin, or related to social embeddedness." (Kiss 2012: 11–12).

Religion: "[…] the interpretation of religion as a social phenomenon differs according to diverse anthropological theories and trends; it is currently seen as a force of cohesion keeping society together (Durkheim), or as a model of reality surrounding the human being and of the life to be lived in it (Geertz, Rappaport), or as a means of power to guilefully maintain the social hierarchy (Bloch), or again, as a theoretical system which makes human beings' existential fears bearable (Tylor), or once again, as the projection of human thinking (Lévi-Strauss, Douglas) or, for that matter, of human desires and fears (Freud) (Hesz 2014: 220).

The churches joined the environmental discourses of the second half of the 20th century relatively soon. An important step in Christianity was the move by Pope John Paul II to proclaim St Francis of Assisi the heavenly patron of those concerned with ecology in 1979. With this step, the pope encouraged his flock to follow St Francis's example in his respect for nature, and he often touched on the ecological crisis and emphasized its fundamentally moral nature. Later, Pope Benedict XVI also stressed the environmental risks and the importance of promoting eco-awareness in his message for the World Peace Day in 2010.[1] Pope Francis, too, is widely known for his ecological commitment, which he expressed in his encyclical Laudato si' of 2015, subtitled "On care for our common home" (Francis, The Holy Father 2015).[2]

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[1]   https://www.vatican.va/content/benedict-xvi/en/messages/peace/documents/hf_ben-xvi_mes_20091208_xliii-world-day-peace.html
[2]   https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html

Just like Christianity, other world religious leaders also increasingly call for a solution to the ecological crisis and stress its religious and ethical aspect. Leaders and adherents of diverse churches feel an ever stronger motivation to join the ecological discourse, propose solutions, and elaborate action plans. Resounding manifestations are The Assisi Declarations, assisted by the WWF (World Wildlife Fund) (1986, Assisi, Italy) in which five great religions (Buddhism, Hinduism, Islam, Judaism and Christianity) expressed their message on the relationship between humans and nature, to which later other faiths (Sikh, Baha'i, Jainism and Taoism) also joined.[3]

In addition to joint declarations, signs of formulating common principles by the great religions have also increased in recent decades. Such principles include, for example:

- the natural world has intrinsic value; it does not exist for the good of humankind; its worth does not depend on the extent to which it serves the human being;
- the exploitation of nature is unacceptable; a religious person has a duty to protect non-human beings as well;
- people are obliged to live in harmony with nature, for which they can find examples in their traditions;
- God/the cosmic order/the supernatural enjoins that humans behave with ethical values such as righteousness, compassion, reciprocity. That applies to humans and non-humans alike (Grim – Tucker 2014: 12).

These basic religious principles are also being deliberated in environmental ethics, that is, in an environmental discourse broader than religion.

Another widely-stressed point regarding the role of religions and churches in the ecological discourse is that religious teachings and churches are already existing and functioning, rallying millions of people, and their organization and infrastructure may serve as a stable basis. Their task is to convey through their endowments the responsibility for the environment, by showing its religious foundations, and the interrelation between religion and ecology. As stated by researchers of this area, it would be foolish to ignore the potential implied by some ten thousand religions comprising about 85 % of the Earth's population (see Gardner 2002; Rasmussen 2013). The members of the organization *Alliance of Religions and Conservation* are of the opinion that the political, economic and cultural roles of the churches and religions must be utilized in the interest of solving environmental problems. They claim that religions provide a cosmology which shapes worldviews; they have moral authority; they can reach and mobilize huge numbers of people; they have enormous wealth in property, financial investments, and money; they practice long-term thinking essential for sustainability; they have guidelines for handling wealth in modest, just, and responsible ways; they are rooted in specific social and cultural contexts; they run many of the world's schools (cited in Hubbell – Ryan 2022: 139).

Religion has thus been discovered as a solution and method to combat the ecological crisis. Those followers of religions who are involved in the ecological discourse (both lay people and scholars) are intent on interpreting the tenets of

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[3]   Assisi Declarations
       http://www.arcworld.org/downloads/THE%20ASSISI%20DECLARATIONS.pdf

their respective faiths to underline that nature and all living beings are creations by God, or constitute part of the divine essence, or are endowed with some supernatural attribute. This would make any act of destroying or exploiting nature a sin committed against the supernatural and, therefore, environment-friendly behavior a religious duty.[4]

An excellent example of the linking of religion and environmental awareness is the book series published by WWF, each volume covering the relationship between nature and a major world faith:

Batchelor, Martine – Brown Kerry (eds.) *Buddhism and Ecology*, 1992.
Breuilly, Elisabeth – Palmer, Martin (eds.) *Christianity and Ecology*, 1992.
Khalid, Fazlun M. – O'Brien, Joanne (eds.) *Islam and Ecology*, 1992.
Prime, Ranchor: *Hinduism and Ecology*, 1992.
Rose, Aubrey (ed.) *Judaism and Ecology*, 1992.

Connecting religion and ecology is also supported by researchers who claim that both are involved in an attempt to understand the non-human world and explore the interaction between humans and the non-human realm.

Science is the primary, allegedly authentic source of knowledge about the working of the physical world. Religion can give answers to mystical experiences, to the desire for an all-embracing comprehension and to having a common ethical orientation which science – alone – fails to provide for many people (Rigby 2017: 275). "The science of ecology describes how organisms interact with other organisms, energy, and matter in complex systems that determine the abundance and distribution of organisms. Religion asks what the value of those organisms is, why they exist, what their purpose is, and what duties they may owe each other or to an other-worldly Creator" (Hubbell – Ryan 2022: 137). In addition to its ambition to understand the world, scientific research is also motivated by the aspect of utility. In its pursuit of an understanding of the world, religion seeks answers and guidance to the place and task of human beings, that is how religion is the strong law governing human behavior. "Worldviews determine how we see the world, a sort of permanent corrective lens that brings some things into focus and obscures others" (Hubbell – Ryan 2022: 135). People live by worldviews that reflect and approve of the social, economic, political and religious order (Eaton 2017: 125–126). That is why religion and the study of religion are important in environmental protection and also in EH.

In this process, a fundamental role is ascribed to re-reading the Holy Writs from an ecological-environmentalist viewpoint. Jenkins contends that however strange some of the sacred texts might sound to modern ears, if we consider their specific historical and ecological contexts, we can interpret them as local practices of the running of a sustainable society (Jenkins 2011). In the most famous debate on the connection between damaging nature and religion, the leading role was played by the re-reading and interpretation of a holy scripture, the Bible. This

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[4]   On this topic, see, among others, Bron Taylor's *Introducing Religion and Dark Green Religion*, Taylor 2010. On the connection between Abrahamic religions and the ecological crisis, and the polemic on the issue, see Kay 1998; Livingstone 1994; Taylor 2010, 2016; White 1967.

well-known dispute was set off by the theories of the Presbyterian researcher of mediaeval history, Lynn White.

The dispute concerned the critique of the Abrahamic religions (Hebrew, Christian, Islamic). It claimed that these religions separated God from nature and hence created a dual cosmology, which was anthropocentric, on the one hand. On the other, it degraded nature to a "thing" whose veneration or worship is interpreted as blasphemy. As a historian, White knew perfectly well that humans had been exploiting nature for a very long time (hunting, together with fire, had an impact on the emergence of the great grassy wastelands of the earth and the extinction of the mammals of the Pleistocene; the Nile is as it is because of human intervention some 6000 years ago, etc., see White 1967). That said, he also pointed out that the technological and scientific upswing rooted in the Middle Ages and coupled with the Christian worldview, which turned Europe into a world power, has led to the unlimited utilization of our natural environment. To sum it up: Judeo-Christian thinking about time is linear, resulting in a belief in constant progress along with the concept of creation. The concept of creation means that God created man in his own image. Thus man is not simply a part of nature. Rather, the world was created by God for man's good and dominion, so that the world should serve man. In short, man's rule over nature is by the will of God. White was aware that this was a rather simplified evaluation of the Christian worldview, and of course, he incurred much criticism. Some of these critiques point out that environmental destruction is not restricted to areas dominated by Christianity, but can be found in every corner of the world (Livingstone 1994; Thomas 1983). Others argue that in religion and spirituality, nothing is fundamentally opposed to nature or, for that matter, nature-friendly; what counts is how religions are interpreted and applied (see Pellow – Guo 2017). Others again held that White ascribed excessive significance to religion (see e.g. Livingstone 1994).

Degrading nature to a "thing" – the "disenchantment" (*Entzauberung*) of the world, to use Max Weber's famous designation – emerged in the world view of Roman Catholicism within Christianity, but it was consummated by the Reformation in league with the rise of the modern sciences (Rigby 2017: 278). It should not be forgotten that Cartesian philosophy's concept of nature as mechanical also had a contributory role to the devaluation of nature. Together with Adam Smith's labor value theory and Locke's economic philosophy, it boosted nature's reduction to the level of an instrument.

At any rate, the dispute of man as ruler versus shepherd – that is, how to interpret the Book of Genesis (Gen 1: 26–28) – had a stimulating effect on thinking about connections between religion and the environmental crisis. The Abrahamic religions consider it evident that Man's position is differentiated from Nature. However, the process of interpreting this position has already led to the deliberation of questions of dominion and responsibility. This has led to the developments discussed earlier: the activity of diverse faiths and churches in tackling the environmental crisis.

Today many religious organizations deal with environmental issues, and many accept the idea formulated in the Earth Charter about "care for the Creation": "Everyone shares a responsibility for the present and future well-being of the human family and the larger living world." (Earth Charter Commission 2000, 1). https://earthcharter.org/

Some similar organizations:
Alliance for Religions and Conservation (ARC) http://www.arcworld.org (terminated work in 2019 and functions as archives)
Earth Ministry https://earthministry.org/
The Eco Church https://ecochurch.arocha.org.uk
Interfaith Power & Light, and The Indigenous Environmental Network https://www.interfaithpowerandlight.org/wp-content/uploads/2017/06/IPL-AR-16-FINAL.pdf
Indigenous Environment Network https://www.ienearth.org/
The World Council of Churches https://oikoumene.org/blog/where-are-we-at-the-climate-change-negotiations

A few of the organizations in Hungary, without totality:
Naphimnusz Teremtésvédelmi Egyesület [Canticle of the Sun Association for the Protection of Creation] https://teremtesvedelem.hu/
Laudato si' Animator program: https://teremtesvedelem.hu/content;hirek/hazankban-elindul-laudato-si-animatorprogram
Teremtésvédelmi Kalendárium: https://teremtesvedelem.hu/content/cikk/teremtesvedelmi-kalendarium-sokszinuseg
Ökovölgy Alapítvány [Eco-valley foundation] https://okovolgy.hu/

The question of tending (i.e., taking care) is of key importance in this process. The religious duty of caring for our fellow humans can – and must – be extended to Nature as well. The principle of social justice appears in the care for Creation and believers' ecological righteousness, linking the traditional service with environmental protection. As Pope Francis said, "you can't have spiritual health without social justice, and you can't have social justice without healthy ecosystems." (cited in Hubbell – Ryan 2022:131). The shepherd's role, the religious thesis of stewardship can be compared to certain scientific efforts notably, with eco-engineering, with the goal of restoring the normal functioning of the Earth, currently disturbed by humans, with the help of science and technology (Hubbell – Ryan 2022: 134).

This parallel also proves that the study of religions is imperative for EH: fields of study seemingly far removed from one another (green-engineering and religion) may mutually reinforce each other and their rapprochement can largely be facilitated by the cross-disciplinary approach of EH.

Today it is generally (though not universally) accepted that a solution to the contemporary environmental crisis requires science, technology and political will. However, many doubt that this could be enough; they claim that a change of paradigm, the transformation of human thinking and behavior, would be needed for a sustainable future. In this process of transition, a new worldview, environment-centric ethics, religion and spirituality would play important roles as they provide substantial criticism of modern consumer society and offer alternative visions of a good life (Tucker – Grim 2017, Hubbell – Ryan 2022: 137). In the opinion of these co-authors, people with religious beliefs with an interest in ecology have to ask three basic questions:

"1. How can traditional scriptures, teachings, rituals, and beliefs be reinterpreted to support an environmental ethic?

2. How can marginalized, apocryphal, and ignored texts and teachings that support an environmental ethic be restored to the canon?

3. How can new beliefs, values, and practices be developed, consistent with the religious tradition, that will support an environmental ethic?" (Hubbell – Ryan 2022: 138).

The same researchers also warn, with reference to other colleagues as well (see Rigby 2017; Simkins 2018), that without political, economic, and social transformation, the new ideas will not automatically change the world (Hubbell – Ryan 2022: 139).

An abundance of literature is available on the theme of religion and environmentalism. People with religious beliefs who are well-versed in environmental issues and the re-interpretation of ecological works have important roles in tackling the environmental crisis. This recognition has led to great activity among scholars, theologians, and practitioners of diverse fields.

One discipline is *confessional literature*, which reinterprets the traditions and doctrines of a given faith. This re-interpretive work sometimes results in new trends such as *engaged Buddhism*, elaborated by Buddhist monk and activist Thich Nhat Hahn, or Catholic Thomas Berry's *geo-religion* which combined various religious teachings and earth sciences to focus on the miracle of the Creation.

Constructive literature consists of scholarly works that assess how diverse religions respond to the Anthropocene crises; how environmental changes shaped religions in the past, and how climate change may influence them in the future (Jenkins et al. 2017; Szerszynski 2017); how the eco-conscious utterances of central actors and institutions influence their flocks (Vatican, Dalai Lama, Council of World Religions); how eco-justice and care for Creation create new interfaith and ecumenical alliances. There are, at the same time, religious groups which reject an eco-conscious ethic or take a theoretical and practical position directly opposed to the (protection of the) environment (on this, see Kearns 2011; Taylor 2016).

A broad area of religion and the environment concerns religious activism (see Gottlieb 2006a; 2006b; 2017). Research is taking place into how the call to service of any given religion implies manifestations of environmental themes, ecojustice, or activities which promote solutions to environmental problems. Excellent examples of this trend are the British Christian and Islamic climate activists who see their ecological activism (participation in climate movements, praying and fasting for the Earth) as a mode of exercising their religion (Nita 2014).

Eco-spirituality, nature religion, native faiths

Next to the so-called "greening" of the major world religions, it is far more difficult to conceptualize that nature-centric spirituality not bound to any extant religion or church, which has been shown to be gaining ground in environment-conscious thought (Taylor 1995, 2010). This attitude is best expressed by the term *eco-spirituality*, which implies a profound experience of unity with nature and of the equivalence and interdependence of each and every living being. Eco-spirituality is often characterized by pantheism and a general holistic approach. Some of its adherents profess an ecocentric environmental ethic, seeing the human being as but one among the multitudes of beings in interaction, and not as the peak of

creation. There are some who avow an anthropocentric ethic, but they look upon the distinguished place of humans not as a right to power but as a source of responsibility. Both ethical stances instill in the individual a strong sense of duty that thoroughly influences their everyday practice. The most striking example is Lovelock's Gaia hypothesis, which presumes that the Earth is a living entity (Lovelock 1979; 2009).[5] Similarly radical theories of eco-philosophy are, for instance, Arne Naess's deep ecology or Murray Bookchin's social ecology (see the chapter on Eco-philosophy). Eco-spirituality is most typical of diverse spiritual movements, as found by religious scholar Bron Taylor, but adherents of traditional religions also often include this sort of ethic in their worldview (Taylor 2010). The foundation for the worldviews of the conglomerate of *environmentalist* movements is usually eco-spirituality.

In his examination of green movements, Bron Taylor uses the term *green religion* to designate the "greening" of historical religions, i.e., the environment-conscious turn of religious people whose ethics also imply that it is their religious duty to behave in conformity with the environment. He differentiates this from what he terms "dark green religion", the basic tenet of which proclaims that Nature is sacred and, as such, it is to be venerated and protected. He includes in this category animism, pantheism, pagan belief systems, the neo-pagan movements, the so-called nature faiths (and the closely related traditional ecological knowledge), the New Age movement and certain new religious trends. The spiritual foundations of the environmental movements are provided by elements of dark green religiosity.

In practice, the two kinds of religiosity – green and dark green – can hardly, if at all, be differentiated.[6] Bron Taylor is also aware that his distinction of religion, belief, spirituality, and green and dark green faiths is an effort at laying the theoretical foundations (Taylor 2010: 1).

Let us briefly digress to explain the uses of the three terms – religion, belief, and spirituality. Research on religion has shown that in contemporary discourse, people speaking about their religiosity more frequently talk about spirituality than religion, stressing the difference between the two: they identify spirituality with personal experience and development and with a more profound comprehension of the world and the individual's place in it, while religion is seen as institutionalized, ritualized and impersonal (summary: Taylor 2010: 1). Since within the set of beliefs labeled spirituality are elements that interpret a person's place in Creation, the world, and Nature, it is not by accident that this term appears more frequently in ecological movements.

In the study of contemporary religiosity in the West, certain phenomena have recently acquired the term *nature religion*. Though the term is not new, it has acquired new content as revealed by current investigations: its users basically mean any kind of religion characterized by a profound respect for nature and a practice that manifests it.[7] Apart from tribal religions, researchers use it to refer to all modern religious movements which revive pagan traditions: neo-paganism, neo-shamanism, Wicca, and various New Age groups. Peter Beyer even includes revival movements

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[5]   On the political impact of the Gaia theory, see Deudney 1995, Litfin 2005.

[6]   This is also stated by the conceptions of vernacular religion and interactive religion, see Bowman 1990.

[7]   This is what the title of Catherine Albenese's book alludes to: *Nature religion in America: From the Algonkian Indians to the New Age.* Albanese 1991.

in historical churches (Beyer 1998:17). In Beyer's view, the term is a *useful analytical abstraction*, which can be applied to the description of any religious belief and practice whose adherents regard nature as the manifestation of the divine, sacred, transcendental, spiritual force – whatever you may call it" (Beyer 1998: 11).[8]

Equally frequent is the use of the term *native faith* in this discourse. Studying Eastern European neo-paganism, Adrian Ivakhiv concluded: "East European practitioners mainly call native faith that which western researchers categorize as paganism" (Ivakhiv 2005: 195). *Native faith, native tradition*, 'ancient Hungarian tradition' or 'heritage of our ancestors' are used in the social sciences and everyday life. There are thus several different terms for describing groups close to neo-paganism in Central and Eastern Europe, and these designations often obscure their ties to similar traditions elsewhere in the world, while also alluding to the differences characteristic of the two regions.[9] Ivakhiv also stresses that the concept of nature, too, has different interpretations and connotations in contemporary Western versus CEE nature religions, and first of all neo-paganism. In his view, the dominant understanding of nature in the West is that it is an entity in its own right, while in CEE, nature is closely connected to the human being and the nation and vice versa: the people, the nation is closely tied to the local environment (see Ivakhiv 2005). Taking this as the point of departure, he discusses the problematic aspects of the term: he argues that the concept of nature must not be taken as unambiguously this or that. Rather, it must be seen as a constantly evolving definition, the outcome of construction, bricolage and discursive fighting (Ivakhiv 2005: 196).

The above themes are not only important conceptual questions in scholarly discourse, nor are they arbitrary word games. Instead, they shed light on the subtle differences that also influence the attitude to nature. An excellent example is that of the Indian environmental historian, Ramanchandra Guha's surprise at the differences. In India, his experience was that the environmental movements were concerned first of all with questions of social justice. Their subject and goal were equal access to natural resources, hence they were centered on the human being. Later, in the United States, he met with a wholly different environmentalism in whose focus stood not the human being but the animals, plants, and non-human actors of nature and their rights (Guha 2000). Innumerable examples could be cited from anthropological literature as well, but suffice it here to refer to Csaba Mészáros's work. He has shown, on the basis of his field work in Siberia, the huge differences in meaning between climate change in a Siberian community and in Western thought (Mészáros 2019).

To return to the phenomenon of eco-spirituality and nature belief: social scientific, mostly cultural, anthropological investigations have revealed that no homogeneous nature belief and related practice can be found even during the study of a single group. Nature religions are characterized by plurality and bricolage. Religiosity that comes closest to neo-paganism/nature religion/native faith and its

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[8]   To the theme, see also Harvey 2014; Letcher 2003; Pearson – Roberts –Samuel 1998.

[9]   On the question of terminology, see Simpson – Filip 2013.

   In addition to terminological differences, there are considerable ideological deviations between Central and Eastern European and Western European – let us call them – neo-paganisms. Its antecedents, causes and character are examined, by, for instance: Altamurto – Simpson (eds.) 2013; Szilágyi –Szilárdi 2007; Wiench 2013; Hobbes – Povedák 2014.

practice usually appears at the individual level, and can be tied to certain persons. Its elements are discernable in the orientation of some individuals, sometimes of smaller groups. However, even in the latter cases, where extremely diverse effects can be perceived, the individuals in question have varied religious ideas, so it is very hard to identify generally valid principles. Besides, there is a lot of room for individual interpretation within this phenomenon, so researchers cannot help refraining from generalizations even in the study of the beliefs and practices of people belonging to one and the same trend (see e.g. Farkas 2017: 93–111).

> "A central element of the ecovillage concept is a profound respect for nature; the whole way of living in an ecovillage is based on anxiety about our natural environment (and our future) and the ambition to do something for it. In addition to the rational recognition and tackling of the problems, in ecovillage thought and practice, the irrational also appears. In addition to the systemic approach, knowledge and application of systems theories, technological developments and up-to-date scientific knowledge, there is also room for what they normally define in their worldview as *nature faith* – actually as an organic part of it:
>
> I.K.: When I try to find a common platform that is shared by all Gyűrűfű inhabitants now after having lived twenty years together, I certainly find something, a sort of nature belief which is far removed from any religion or church but which probably implies all other criteria of faith.
> J.F.: What do you mean by nature belief?
> I.K.: Well, by faith I mean something that is beyond the rationally comprehensible things. Accordingly, a nature religion is the reverence of natural things, phenomena, connections, systems. It is way beyond simple 'understanding'; it's something different." (2013)
>
> My conversation partner says there is no established religion in Gyűrűfű, but there is a sort of shared faith such as characterizes elements of nature religions: "Genius loci, the spirit of the place, the spirit of nature, or in a certain sense the spirit of former residents of Gyűrűfű." (I.K. 2009)
> Unlike their counterparts in Western Europe, Hungarian eco-villagers do not label themselves or their practice (neo)pagan (at least, I have never heard them do so). Instead, they name an actual trend: "I am pursuing my shamanic things," "at that place the ancient Hungarian tradition is very strong." Nevertheless, in conversations about nature religion, pagan traditions are often mentioned and when it comes to the practical realization of their nature faith, they list rituals which they also regard as part of pagan heritage. I have also encountered the identification of paganism with nature religion in a letter: "Even Christian customs abound in references to paganism/nature faith (sic!), you just have to dig them up." (I.K. 2013) (Farkas 2017: 95–96).

Eco-paganism

Eco-paganism is one of the dominant movements of eco-spirituality. An eco-pagan is an environmental activist who adheres to the neo-pagan tradition and integrates the faith and practice of the neo-pagan faith in his/her activism (invocation of natural spirits, pagan rituals in the venue of the action, using Earth energies, etc. See Harris 1996; Letcher 2003). Since the doctrines of neo-pagan groups are effectively traceable to some nature religion, neo-pagans themselves emphasize respect for nature and the sanctity of all living beings. They hold that nature has intelligence and consciousness; it is well-meaning and can communicate with those who have ears to hear it. This forgotten relationship must be restored. They point to pre-modern people as good examples of a spiritual relationship with nature, so their model has to be adopted and their means – i.e., faith and spiritual practice – applied (Letcher 2003: 69).

Neo-paganism is thus fundamentally "green" in its philosophy and practice, which implies that it considers environmentally conscious thought and ways of life highly important. For many neo-pagans, cultic manifestations are rituals performed in nature in honor of God/Goddess/Earth Mother/Nature adjusted to the natural cycles, without any activism. Others participate in diverse ecological movements as part of climate activism on the political stage (Luhrmann 1993).

Eco-pagans vary widely, as do the forms of their ecological activism. Some arrive from the direction of deep ecology and a sort of spiritual eclecticism. They are DIY eco-religionists who draw from the broad palette of contemporary spirituality and combine it with a pagan dogma in addition to environmental philosophy to form part of their worldview (New Age, wicca witchcraft, neo-shamanism, Druidic faith, Goddess cult[10], theosophy, Rainbow movement, hippies, human potential movement, indigenous cultures, psychedelic teachings of the 1960s, folklore). The other possible category of pagan activists includes those associated with concrete pagan traditions such as the Celtic or Druidic traditions, the Diana cult, etc. (Partridge 2005). As regards their activism, Andy Letcher (2003) differentiates two groups of – mainly English – eco-pagans: the middle-class Fluffy group by their slogan "Keep it fluffy", whose attitude is characterized by non-violence and presenting a positive example. The other – Spiky – group (from "Keep it spiky") rallies mostly working class people who advocate political confrontation not without violent acts. The members of the two groups also differentiate themselves by outward appearance as well: while the Fluffies are more like hippies, the Spikies are characterized by a punk aesthetic. New forms of resistance are important tools in their arsenal, from expressionist to magic and religious resistance, which deviates from the methods of the mainstream ecological movement. The best example is perhaps the English eco-pagans' anti-road campaigns in which they hold pagan

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[10] Neo-paganism is closely connected to the eco-feminist critique of modernity. This is motivated, on the one hand, by the works of Carolyn Merchant (who declared in her works of the 1980s that scientific thought had put an end to the relationship between humans and nature) to the belief that the world is living and organic (Merchant 1980). Added to that was the image of the Goddess cult, meaning that with modernity, the prehistoric, pacifist, matriarchal Earth Mother cult was replaced by a violent patriarchal order, which degraded both nature and women. A criticism of patriarchal society and modernity is fundamental to both the neo-pagan and eco-pagan movements (see also Fletcher2003).

rites invoking the spirits of the Earth, nature and natural beings (eco-magic) during their campaigns and actions of resistance, in addition to their customary ecotage techniques[11] (Letcher 2003).

In 2005, Christopher Partridge pointed out that "geographically filtered eco-enchantment", as he defined it, has been gaining strength. This means that a given movement appears to find ties to the ancient tradition in the given area: such is the strengthening aboriginal tradition in Australia, the re-interpretation of Celtic mythology in England and neo-paganist ties to the native people in the United States (see Partridge 2005: 73). In Hungarian areas, several ecological, self-sustaining groups look for such ties in the traditional peasant way of life. The ecological knowledge of the traditional peasantry receives special emphasis and serves as a point of reference in these communities, interpreted as the safeguarding of the ancient Hungarian culture and the local natural environment. It is a well-known phenomenon in the Central and Eastern European region: "The peasant is the incarnation of the noble savage, being 'simple' in the best sense of the word: self-subsistent, modest, reliable, open, and above all, perfectly authentic." (Simpson – Filip 2013: 29). It can be concluded that indigenous traditions and other time-tested worldviews provide important inspiration for contemporary eco-spiritual movements and trends as well.[12]

SPIRITUAL ECOLOGY

The study of the relations between religions, rites, and ecosystems has formed part of cultural anthropological research since the emergence of the scholarship of the field in the second half of the 19th century.

Since the 1980s (that is, since its appearance), spiritual ecology has also been a topic of scholarly interest. According to Sponsel, one of the researchers of this area, spiritual ecology investigates the spiritual, emotional, intellectual and practical activities on the border between religions and the natural environment (Sponsel 2012). The aim of the researchers is to get to know the religious aspects of the environmental network of relations, to recognize the common denominator of an ethical interaction with the environment in the fundamental theses of diverse religions (Borsos 2004: 82), and to explore how the ecological movements use the traditional, tribal, vernacular religions for the solution of contemporary environmental problems. Some anthropological knowledge, as the result of research on anthropology and religion, has become incorporated into the arsenal of climate activists, and the re-reading of texts has begun.

Research interests relevant for spiritual ecology include Marvin Harris's and Roy Rappaport's studies of systems ecology. Harris looked closely at the principle of *ahimsa* (non-harming) as exemplified by India's sacred cows. The prohibition of slaying cattle, he argued, was not only the result of a religious taboo – which outsiders often found

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[11] Ecotage: a combination of the words ecology and sabotage, meaning: the sabotage of activities detrimental to nature, for instance, blocking roads, protesters chaining themselves to endangered objects, damaging the machines used in destructive activities (chain saws and lorries carrying timber), etc.

[12] Kate Rigby is expressly critical about the result: she claims that it is in part superficial and sentimental, while being a lucrative and easily appropriated manifestation of this knowledge and identity. This is why she stresses the native authors and actors who have found their own voice concerning their own culture and have contributed in no small measure to the creation of EH. See Americans Joni Adamson and Linda Hogan, or Australian Mary Graham (Rigby 2017).

senseless and even detrimental – it also had complex and relevant economic reasons (Harris, M. 2003). During his work among the Tsembaga Marings in Papua New Guinea in 1967, Rappaport analyzed cultural and non-cultural elements in a single system, and demonstrated how this system was sustained by a rite, the so-called *kaiko*. He found that this ritual regulated the equilibrium of the system in the same way as natural ecosystems do: by killing the excess of the pig population, it helped maintain the adequate state of the environment, and set a limit to the frequency of wars. It thus banished the threat to the existence of the regional populations, harmonized population and territorial rates, made trading possible and provided surplus meat for sharing (Rappaport 1968).

In the 1970s, Gerardo Reichel-Dolmatoff studied the forest and river use of the Tukans living along the Amazon in Colombia, and how it related to their social structure, myths, rites and symbols. He ascribed a sort of "environment managerial" function to the shamans in this complex of relations. Richard Nelson (1983) examined traditional ecological knowledge, hunting, respect of animals, handling and protection of natural resources among the Athabaskan Indians (Alaska, Yukon). Biologist Fikret Berkes inquired into the traditional knowledge, religion and practice as well as use of environmental resources of the Cree Indians in Canada (1999). During his research in Thailand (1992), Sponsel compared the Buddhist and Muslim villages in the same area, with special regard to the differences in the use of the environment by the different religions (summarized in Borsos 2004, Sponsel 2012).

This upgrading of traditional knowledge and religion has entailed increased efforts to protect sacred localities (Grand Canyon, Mount Shasta, Stonehenge, Uluru, etc., see https://sacredland.org/map/).

Spiritual ecology is thus a line of research within anthropology on the one hand, and a social, political, and intellectual movement on the other. It is sometimes hard to draw the line between the two. This is one of the reasons why contemporary spiritual ecology is mostly interpreted as an applied science: it seeks anthropological knowledge that can be applied to combat the environmental crisis. This is also a manifestation of a characteristic of EH: that its researchers are at the same time activists.

Summary

The chapter has reviewed the role of religion in the relationship between human beings and nature. It has made a point of stressing how an environmentally conscious rereading of the scriptures might influence this relationship, and how diverse historical churches and spiritual trends strive to join not only the ecological discourse, but also the solving of the environmental problems. Using the example of the dispute on the impact of Christianity, involving Lynn White, the chapter explored the possibility and effects of a constructive rethinking of responsibility. It discussed the relations of religion and science in the domain of environmental issues, and the issue of care, with reference to examples from confessional literature and religious activism. It also addressed the question of eco-spirituality with reference to such concepts and phenomena as dark-green religiosity, nature religion, native faith, and eco-paganism. The latter has links to traditional ecological knowledge, a theme discussed in more detail in a later chapter.

Recommended literature

Silvern, Steven E. – Davis, Edward H. (ed.) 2021. *Religion, Sustainability, and Place. Moral Geographies of the Anthropocene.* Singapore, Palgrave Macmillan.
This volume of studies belongs to works which explore the relations between religion, faith and sustainability. Its special focus is the geographic approach, the conviction that place is of key importance on this issue: a religious worldview ascribes a meaning to a place and influences how it and the natural environment should be treated. The essays in the book list examples and case studies about religions in diverse places of the world.
Taylor, Bron 2010. *Dark Green Religion: Nature Spirituality and the Planetary Future.* Berkeley, University of California Press. https://doi.org/10.1525/9780520944459
In this book, researcher of religions Bron Taylor examines late 20th century green religiosity, the green revolution of religions, and the groups exercising it.

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GREEN HISTORY? WHAT IS THE ROLE OF HISTORIANS' WORK ON ENVIRONMENTAL PROBLEMS OF THE PAST, AND WHAT SHOULD IT BE?[1]

Róbert Balogh

What does it mean that something is studied from a historical perspective? What is the form of historical knowledge?

It is not far-fetched to presume that with the environmental turn, human relationships, our concept of history, and the expectations and assumptions concerning the work of historians will all be rethought within a few years (Simon 2021). Should this occur, the key to change will be the shift of the focus of historical thought onto the more or less apocalyptic conditions believed to be possible or probable in the future. The new synthesis of the natural scientific knowledge of the Anthropocene has been achieved by a new field of scholarship, Earth System Science, which explores the physical, chemical relations of the planet, such as how the properties of ocean water affect the planet or various anomalies in the climate. Its counterpart in the humanities and social sciences in the coming years may be a new approach called Environmental Humanities (hereafter EH). As illustrated by the present volume, this involves a dialogue between the results, among other fields, of anthropology, historical ethnography, environmental history, the arts, art history and the natural sciences.

For the time being, it is easier to introduce the EH with examples than to describe it in abstract terms. While studying and reviving Sárköz's art of textile manufacture, Bertalan Andrásfalvy devised a model of the interrelations between traditional economy and the realm of various forms of folk art (Andrásfalvy 1967). János Géczi has described the intertwining of the arts, the culture of plant cultivation and the wealth of rose varieties in Antiquity and the Middle Ages (Géczi 2020). In recent years, Barna Éltes's works focussing on the interconnections of landscape, human activity and materials have shown that art is important for engendering thoughts about the nature and historical character of the environmental crisis and about the need to involve these questions in a dialogue with local identity (the Szeklarland in Éltes' case). All of his works exhibited at the Hungarian University of Art in December 2022 with the title *Cleft landscape* (including the piece below) reveal how a tiny but accurately chosen modification of the natural material can turn it into the representative of the relationship between the environment and the human being, and into a work of art.

Figure 1. Barna Éltes's work in his exhibition *Cleft landscape*, 20 December 2022

The piece depicts a house, or rather a church and the path leading to it, and higher up some cultivated fields. One interpretation it suggests is that human culture can be created or continued through careful observation. It requires only a few human interventions in the landscape on the basis of its thorough knowledge. Éltes's exhibition also emphasizes that there are still communities and forms of life that do not contribute to the environmental crises. One of the keys to the approach of the new EH is certainly the formulation of its issues of research relying on works of art.

But what kind of work, exactly, is to be done? The aim of this chapter is to outline the meaning of historical thinking and to discuss whether environmental history in its current state is ready to interweave historical research into the EH.

Historical corrections and well-known errors

Now, standing at a turning-point in historical thought, it can be stated that historians are specialists of reflexive thinking about the conditions of past and present politics, society, the economy and the environment. A historian is a researcher who enquires into the special circumstances of seemingly "natural" relations or their memory. Close examination of the explorable past of a commonly known phenomenon often leads to the questioning of seemingly self-evident implications. It is also possible that previously overlooked factors will come to light.

For example, it is well-known that in the period between 1920-2020, the area of Hungary covered by forests nearly doubled compared to the entire area. The research program working on the maps of the historical changes in the plant cover for the National Atlas of Hungary concluded that although the vegetation of today's Hungary has changed considerably over the course of tens of thousands of years, the past two hundred years has been characterized by an unambiguous and accelerating decline of habitats (Biró–Molnár–Öllerer–Demeter–Bölöni 2022; Molnár–Király–Fekete 2018). One might conclude from this that the wooded area in the territory of present-day Hungary steadily decreased between the Settlement in Pannonia and prior to 1920, until it reached an extremely low value. However, the historical reality is far more complex (Bartha 2000; Konkoly-Gyuró–Balázs 2016).

Figure 2. Landerer and Heckenast's printing press, which printed the National Song and the 12 points on 15 March 1848. The mode the photo represents the artifact reflects that the content of the 12 points, having become part of the national historical canon, are no longer subject to analysis, but instead serve as an illustration or a metaphor. Fortepan 177002 / Sándor Bojár 1938

Owing to the interconnectedness of forestry and the other branches of agriculture, the proportion of forests and agrarian areas as understood today changed more frequently and more drastically around the individual settlements than earlier presumed. For example, László Szakács's analyses of cadastral maps in the area of Zala county reveal that the areas marked as wooded by the military surveys of the second

half of the 19th century were often pastures or orchards in the second half of the 18th century. The settlement-limits provided in mediaeval diplomas shows a similar situation in the Árpádian Age as well (Szakács 2012). In the proximity of settlements, woodless periods alternated with reforestations, which eradicated many of the signs of earlier land use by settlements (K. Németh–Máté 2020). On the other hand, ethnobotanical and forest historical investigations have identified several forest types created by forest management in Hungary, which means that the word forest has several connotations (Szabó 2023; 2005; Varga et al. 2017; Molnár–Erdélyi–Hart-dégen–Biró–Pánya–Vadász 2022). The significance of forests – wooded gardens and groves – formed by conscious human activity has been increasingly stressed by researchers of other continents, too (e.g., Sri Lanka, Central America, the Amazon basin). The interaction between forests and human communities is a global story. It is worth selecting from it a turning point related to the global history of ideas.

A re-reading of the emancipation of the serfs has an important role for Hungarian environmental history in the modern age. The early- and mid-19th century liberal interpretation of the term emancipation and the intention behind it were the liberation of society from the bonds of serfdom, which entailed that millions would acquire private property and with it citizenship. It was included among the 12 demands of the nation, as proclaimed on 15 March 1848. However, liberation from bondage – attempted under the revolutionary and constitutional conditions of 1848 and eventually slowly unfolding during the centralized relations of the 1850s – did not solely mean the right to freedom. Agrarian historical investigations in the 1960s already established that the liberation of the serfs also transformed the peasantry's traditional way of life. The subdivision of land formerly used in common by the serfs and their landlord also entailed the abolition of the system of collectively used pasture and forests. This, along with arbitrary rules about land that serfs rented, meant that many serf families living in the village but having little to no land according to the socage ordinances of the second half of the 18th century were squeezed out of land use. On the other hand, the arable areas created by clearing the forests became the objects of decades of disputes. Likewise hotly disputed was the location of pastures to be allocated (Orosz 1998; Vörös 1976). Thus, the emancipation of the serfs is to be examined as an event in environmental history as well.

Memory, narrative and the historian as expert

We have now arrived at the other potentiality of historical knowledge: through historical analyses, we may point out the one-sidedness of its use in memory politics. Actually, historians often act as memory experts, specialists who know whether the episodes narrated and used as knowledge or as a basic platform which favored certain political interpretations indeed happened. Of what does this expert activity consist? On the one hand, historians must be aware that actors in the past also tried to design interpretive frames comprehensible in their age and conducive to their goals. Historical facts always go together with representation, and the analysis must interpret their interaction (Szécsi 2020: 92). Moreover, contemporary political actors also have a vested interest in picking certain modes of past narratives and keeping silent about others. They create their own representative frameworks

for certain events. Historians must therefore know that what appears like data is actually information that has undergone several transformations.

At the same time, the conscious deliberation of representation is not always and not necessarily a weapon for garnering votes and does not need to deepen political cleavages. In the opinion of Noémi Zsuzsanna Both, István Imreh, the Hungarian historian of Romania who also became attuned to issues of environmental history, built his life's work around the ideal of serving his nation: his research did not only concern the Szekler community in Romania, but strengthening them formed part of his aim (Both 2018; 2021). Imreh's choice of themes and his way of presenting them were conscious political and communal acts, but this did not damage their authenticity.. It is true that in commemorating Imreh's work, contemporary actors (mostly the politicians) address the present from their own positions during their acts of remembrance, but it also fitted the Szekler national consolidation program professed by Imreh (Both 2022). Imreh's examinations of the forestry laws can be used as powerful arguments in the conflicts and political disputes in Romania about the protection of woods, responsibility for forest destruction, and the relationship between human beings and wildlife. Imreh the historian was apparently also motivated by the need to comprehend modernity as a change of periods, and to explore how this related to the wooded landscape. This latter part of his oeuvre awaits re-discovery due to the epochal change in the 21st century to be discussed in more detail below.

Historians' ability to direct attention to lesser-known traumas and losses and to their accurately observed human aspect may also have an integrative role. Research on events related to the deportations and genocide that occurred in Central Europe in the recent past have revealed the importance of one's attitude to the landscape in experiencing forced relocations (Praczyk 2018; Huhák 2020; Kelbert 2016).

Revealing the history of the sense of environmental crisis has a role in understanding its essence. Is this but a new chapter in the history of experiencing crises, or are we entering a brand new age, the likes of which humanity has never encountered before? According to current scientific knowledge, the latter is the case, though the history of ideas about the environmental crisis still holds significance: We may discover, for example, the factors which have limited the spread of knowledge about, and the responses to the crisis (Rich 2019).

If historians play such a crucial role in creating narratives, should past historical narratives be held accountable for the crisis? In fact, the profession has recently shown interest in reflecting on the constraints and difficulties of the contradictions arising from the act of historians' story-telling, beyond the issue of memory politics. The everyday significance of mediatized activities has increased. Perhaps this is why several fields of knowledge have realized the importance of the fact that humans who long to know themselves and the world do so through "elaborat[ing] their information and shar[ing] it with others in stories. Their concepts are arranged and become basic units of their knowledge embedded in stories" (Szécsi 2020: 93). The unwritten laws of publications – "academic writing" – which enable communication, progress and evaluation within the professional community, place limits on historians' story-telling as well as establishing a need for it. The compulsion to tell stories brings history closer to literature, making its narrative similar to the narrative schemes found in literary fiction. The persons described or cited by a

historian become characters. The popularity of cliometric historiography which aims to present statistical operations was short-lived in the 1970s and 1980s, but owing to the digital breakthroughs of recent years and easy access to software tools, ever more studies employ maps and diagrams to visualize textual narratives. Although the manner of representation and the choice of scale and colors in diagrams are not neutral processes, these draw the readers further into the interpretations and allow for the simultaneity of different narratives (Champagne 2016).

As will be seen in the next subchapter, it is exactly the subtler approach to the role of human activity among the events of the Earth that may revitalize historical thought.

Figure 3. Fortepan 15726, Heavy diver on the Danube bank in front of the Óbuda Gas Factory, 1965. Hungarian Defence Association (MHSZ)/Fortepan

The fragmented nature of history as reflected by hybridity and the Anthropocene era

One of historians' main and most trivial problems are that they are in search of fragmented traces from which they have to construct a story. This fragmentation can be so excessive that it forestalls the narration of the story which the historian seeks. With further persistent research, this difficulty might be overcome, but in some cases it does not help either. Yet, when a model reflects historical reality, it may be found in the traces – the sources – in a great many forms. This brings us to the third important function of historical knowledge. In searching for traces, the scholar's attention may be directed to hitherto little-known phenomena or processes. Gleaning sources from different places is also part of the historian's activity, creating as it were his/her own archive of the given theme. This is particularly imperative when new questions have been asked, such as about hybrid phenomena.

One such question – the most intriguing one for environmental history – is how to simultaneously grasp the various natural and cultural aspects of the immense number of phenomena which have come into the focus of social scientific research – first of all thanks to the work of the philosopher and historian of science Bruno Latour – and which are called hybrids in academia (Latour 1993). Latour's interest in hybrid phenomena took shape as he was studying the late 19th century activity of Louis Pasteur. The success of Pasteur's procedure owed to its embeddedness in the functioning of French society, and to becoming a spectacle. The laboratory activity, and the connection between bacteria and milk became hybrids because of their social roles. Research into the history of dairy farming in Hungary has brought to the surface an exciting but little known early 20th-century economic form, the dairy cooperatives (Vörös 1965; Knézy 1980; Bednárik 2009; Umbrai 2021). Their importance stems from the alternative they present to large industrial milk processing, which massively contributes to humanity's detrimental ecological footprint. The history of dairy farming is also significant in that it leads us to the level of the aforementioned deep history. The milk of cattle in some areas of Europe and Africa has been present in human communities for millennia, sometimes as the basic staple for survival. At the same time, lactose intolerance can be found all over the world. However, the beginning of the 20th century represented a turning point in the millennia of human history. It is from this point that one can speak of supply chains, the dairy industry, and the growing role of butter and cheese in international mass trade.

The hybrids include the rivers, and – perhaps more surprisingly – the forests. Spectacular examples thereof are the disappearing border islands, for example Ada Kaleh between the Austrian-Hungarian Monarchy and the Ottoman Empire, which disappeared in 1971 with the regulation of the Iron Gate section of the Danube, then already in Romania. The web of relations between rivers, islands, human communities and state violence (Yao 2022; Vadas 2021) is represented and traced with poetic sensibility in the 2014 film *Corn Island*, directed by George Ovashvili. Éva Bodovics's research on Miskolc warns us that flood disasters are also hybrid. Floods are often caused by thoughtless constructions or draining, and their impact may fundamentally change the social relations, economic activities, and, of course, infrastructure of a region (Bodovics 2022).

**Figure 4. A herd of Hungarian gray cattle at pasture.
Hortobágy, 1941. Fortepan 20964**

The reality of the Central European forests is complex; they no longer constitute wild, untouched wilderness. People regularly accessed woodlands a few dozen kilometers away from their settlements, thus, these forests have been shaped by human activity. Up until the forest engineering of the modern age, this often had the effect of increasing biodiversity (K. Németh–Máté 2020; Szabó 2005; Molnár et al. 2022). Moreover, forestry work pursued in the forests was also adapted to the social hierarchy. A good example of this is the case of the *vákáncsos* people [from vacant (plot)] around Debrecen. They were employed in the first few decades of the 20th century to plant forests (mainly black locust) and could live in frugal conditions, planting crops and keeping a few animals in the forests around the city (I. Balogh 1936).

The most radical transformation in historical thought in the past decade can be ascribed to the discovery of the existence of the Anthropocene as the present era. The word means: recent human stratum. According to the current position of the natural sciences, the conditions of life on Earth have changed to such an extent in response to human activity, and the evolutionary, chemical and physical signs of these changes are so marked and irreversible, that their aggregate can be taken to constitute a new geological era. The changes may even cause the extinction of the great majority of the species extant today. Humankind may suffer mass losses and disasters, in the first instance due to the incalculability of the weather and extreme climate phenomena. In the early 2010s, more and more historians began to wonder about the advantages and disadvantages that revisiting their research themes and the archives from the perspective of the Anthropocene would bring to this critical situation. Some say it would not be fortunate because the very possibility of a narrative gives a sense of normalcy; thus, people and the public opinion would be even less willing to change and to call for change (Simon 2020). Seen from another angle, however, historical research has a decisive role in several

tasks, for instance in deciding the starting date of the Anthropocene (R. Balogh 2021). The current consensus is that 1945 is the point in time from which, thanks to the era of power plants, an unprecedented leap in carbon emissions occurred. Further, the overuse and pollution of freshwater started increasing to an alarming degree and the number of domestic animals began to grow unsustainably, to mention but a few of the indicators that warn of the crossing of limits (Horváth 2021). This choice of the starting date, however, tends to suggest that the demand for energy, plantation farming or industrial-scale husbandry came out of the blue, and did not have alternatives. Historical research would have a fundamental role in creating links between regional experience and dramatic planetary changes, in other words, in a change of scale.

History as environmental humanities?
Environmental history from the viewpoint
of historians and non-historians

The interaction between the environment and human society is banal, or self-evident. Accordingly, it was already present in classic historical works at the onset of the 20th century. For example, the section on the 17th century in *A History of Hungary* by Bálint Hóman and Gyula Szekfű begins with a lengthy tableau of the effects of Ottoman rule on landscape and environmental history: "This follows directly from the fact that south of the Győr–Buda–Debrecen line, the Hungarian population had perished and in the absence of human hands to till the fields year by year around the villages and to maintain the road network, Nature took control and produced its new vegetation and even climatological changes, independently of humans, not forced into paths for human goals," (Hóman–Szekfű 1935–1936).[2] The scheme implied by the description strongly suggests familiarity with Károly Kaán's thesis on the relations between the Great Hungarian Plain and the forests (Kaán 1939; Biró–Molnár 2009; Vadas–Szabó 2021). The so-called total history approach associated with the French periodical *Annales* – that is, efforts of historians to include all mental, temporal and geographical dimensions of history in a single narrative– was not alien to Szekfű's approach. The preeminent example of this attitude is Fernand Braudel's grand and poetic undertaking about the Mediterranean region (Braudel 1996).

In Hungary, research on the temporal changes in the relations between humans, landscape use and environmental circumstances are not only, and not primarily conducted by historians. Éva Konkoly-Gyuró and her colleagues have, as part of their work on the concept of region, used digital methods to examine 18–20th century changes in the forest cover and their causes separately for each landscape type in the Carpathian Basin (plains, hills, mountains of medium height, high mountains) (Konkoly-Gyuró–Balázs 2016). In the field of geography, Gábor Máté's and András K. Németh's historical landscape research on the scale of areas around settlements and their observations, call attention to the frequency of changes in afforestation and to the extent of human presence and its fast disappearing traces

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[2]   I express my gratitude to Pál Hatos for pointing out this locus to me.

(K. Németh–Máté 2020). Their focussed regional history, spanning five hundred years, also lends a historical perspective to the process of forest clearing by peasant communities known to scholars from the classic studies of Lajos Takács. Margit Kőszegi and her research team wish to study the concept of human and environmental value on the national parks of the karst region from a historical perspective (Kőszegi–Bottlik–Telbisz– Mari 2019). Honed in historical ethnography, Bertalan Andrásfalvy's model of floodplain agriculture became the central theme, or part thereof, of several studies on the growing water shortage in the 1980s, and again in the early 2000s (Rózsa 2021; Molnár 2011; K. Takács 2000–2001; Dóka 1982; Ferenczi 2006). As already mentioned, medievalist Péter Szabó, working in a botanical research center, is attempting to draw up a comprehensive model and chronology of Central European fire-botes. On the border areas of historical ecology and ethnography, the research teams of Anna Varga, Zsolt Molnár, and Dániel Babai have opened up new vistas for social, economic, and landscape history by studying the relations of grazing, big livestock husbandry and landscape use. Having climate history as their central interest, researchers of paleobotany (Magyari et al. 2012) have estimated the chronology of the vegetation over a broad period of tens of thousands of years on the basis of pollen examinations. It is now perfectly clear that the chronology is a sequence of considerable turns instead of permanence even within the Holocene alone. The indicator role of plant species is a fundamental methodological element in the dating of the appearance of plants in an area. Gábor Demeter and his research team have published atlases on the changing use of the land, and they point to the environmental history of 19th century drainages and proprietary changes (Demeter et al. 2020).

That being said, it is important to stress the difference between historical ecology focused on past landscapes and the interaction of species living there, on the one hand, and environmental history, which studies the mutual impacts of human communities and the landscape, on the other. Among the first Hungarian practitioners and organizers of environmental history, Ágnes R. Várkonyi applied the term historical ecology to her hypothesis of the late 18th-century environmental crisis, but actually she spoke of a historical environmental problem, namely the decisions and culture underlying altered resource use (R. Várkonyi 1999a; 1999b). Interdisciplinary practices in history can go as far as stating the connection between, for example urban power relations, wars, nation building, the functioning of regimes or differences among lobbying interests, and the decisions related to the landscape. It is also important to stress that in the 1960s, when environmental history as a field of scholarship evolved in the United States, its approach was one of social criticism. The "founding mothers and fathers" of the literature of environmental history, William Cronon, Donald Worster, Alfred Crosby and Carolyn Merchant, focused on the inequalities in bearing the burdens of nature-destructive power use and exploitation, on the interconnection of the capitalist economic system and the landscape, and on the environmental impacts of the violent attitude of the USA as a state toward its indigenous population (Eszik 2021; Cronon 1993; Merchant 2003). This attitude was strengthened by linking environmental history to postcolonial criticism, which by the end of the 1990s had already produced a considerable body of academic literature in South Asia. The crucially important outcome of this criticism is the demonstration, on several examples and regions, of the importance of the interrelation between "Western"

scientific and "indigenous" non-scientific forms of knowledge. It has been found that in discoveries thought to be fully Western in origin, non-Western, "indigenous" specialists and communities played an important role.

All things considered, it would be high time to synthesize historical thought and environmental historical research, even if it were not so urgent to interpret all this knowledge within the frames of a menacing and incalculable era, the Anthropocene. If one tried to epitomize the essence of history in terms of the Anthropocene era, one would research and describe the modes of energy use, food production and supply, the ideas of the human body and its capabilities, and the protection of the environment, as well as the history of the sense of crisis rich in power relations and existing alternatives as the interaction with materials and living beings, instead of dealing with the history of political power or human society and culture. The main emphasis in EH would be on the alternatives, and the significance of matters and living beings. This would form a new synthesis, rather than the discarding of former knowledge. In the new framework, the anthropocentric characteristic of the earlier attitude to history would be replaced by the hybrid appearance of natural and cultural features, and it would be necessary to eradicate from the research topics the explicit and implicit idea that human richness and influence are to be hailed as a triumph. This shift would require new mental associations created through narratives, rethinking and cognitive reshuffling of the sources and the creation of new virtual archives. The basic elements of historical thinking outlined above would then also be found in research conducted within the framework of the EH.

Recommended readings

Horn, Eva – Berghtaller, Hannes 2019. *The Anthropocene: Key Issues for the Humanities.* Abingdon, Oxon, Routledge.
A great overview of the concerns that researchers in the humanities should include in the Anthropocene. It discusses the problems of coordinated action in international politics and the various concepts which relate nature and culture as well as the issue of scale. Of particular interest for EH is its call to include the local level in discussing changes on a planetary scale.

Patel, Raj – Moore, Jason 2017. *A History of the World in Seven Cheap Things. A Guide to Capitalism, Nature and the Future of the Planet.* Oakland, CA, University of California Press.
An essential work, which makes a strong case for how various actors using either legitimate or illegitimate violence achieved a very low price of goods, energy and money as well as labor and its reproduction throughout the late medieval and modern period. It clearly proves that this mechanism persists but is also incommensurate with the need to overcome the ongoing ecological crisis.

Bonan, Giacomo 2019. *The State in the Forest. Contested Commons in the Nineteenth Century Venetian Alps.* Winwick, Cambridgeshire, The White Horse Press.
This book is an important history of the commons and resource use in the 19th century Alps. It tells how local inhabitants of a particular region rich in timber resources tried to preserve the fundamental system of the commons through modernization and adaptation to the changing political, legal and commercial contexts from Napoleonic times until after the unification of Italy. It is a social and political history of forestry in a region with unique characteristics.

Brown, Kate 2020. *Manual for Survival. A Chernobyl Guide to the Future.* London, Penguin Books.

The author concludes that after the explosion of the Chernobyl plant, decision-makers still tried to have a considerable portion of the contaminated materials processed, while the workers were already aware of the biophysical impacts of radiation despite the issue being suppressed. Medical data intentionally misread during the compiling of bureaucratic statistics show a considerable leap in thyroid and leukemic cases. International science and the professional discourse try to sweep these long-term influences of the Chernobyl disaster under the rug.

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ENVIRONMENTAL CONFLICTS, SOCIAL RESPONSES

Viktor Glied

Environmental conflicts

Over the past half a century or so, an increasing number of disputes have centered on the transformation of the environment through deliberate changes or destruction. In order to understand the phenomenon of environmental conflict, the notion of *conflict* has to be clarified. From the perspective of the environment, a conflict is tension caused by the intrinsic or externally induced change of a natural state, which entails social and/or political antagonisms and the suggestions for whose resolution posit diverging objectives. In the 21st century, a conflict is no longer defined solely as an armed conflict, but rather also as a factor that endangers our safety, whether it is a state caused by the degradation of the environment or by the dwindling of natural resources (Kacziba 2017: 105). An environmental conflict is always triggered by the change of, or the intention to change, our environment. There are global, regional and local conflicts in general, but in each and every case, the connection between environmental change and social, political and economic processes needs to be explored and identified. Complex conflicts are characterized by the antagonism of interests in the pursuit of resources and tools, and those involved can only act upon their interests to the detriment of the opposite party (Fülöp 2018: 6). Since environmental pressure and scarcity usually prevail or even become graver, the actors of a conflict expand the scope and tools of the assertion of their interests from diplomatic pressure through blackmailing to violence and armed conflict, often resorting to several at once (Gleick 1990; Homer-Dixon 1991; Lányi 2001; Libiszewski 1992; Glied 2013; Fülöp 2018; Glied–Pánovics 2022). It is also arguable whether environment-related conflicts are to be seen as environmental conflicts or just as conflicts in which the environmental factor plays an important role. Since in 2022 as many as 8 billion people live on the Earth, this question appears irrelevant, for there are hardly any political or economic decisions that do not impact the environment, and ,consequently, do not generate conflicts.

It is the job of researchers and experts to find and analyze the causes of environmental conflicts, to prevent them, and when the conflicts cannot be avoided, to mitigate their social and ecological effects. In his research, Arthur Westing has attempted to identify the role played by the environmental factor in the major armed conflicts of history. He concluded that the most important role was played by the acquisition of natural resources (fresh water, surface waters, catchment areas) and energy resources (hydrocarbons, mineral resources, precious metals), followed by the possession of the necessary fishing resources and arable land (Westing 1986). It must be added that endeavors to transform the natural resources, the lasting, irreversible degradation of the environmental complexity (ecosystem) and the scarcity of natural resources (pastures, farm land, fresh water) already led

to conflicts in the 1990s and 2000s, or greatly contributed to their outbreak. When an ecosystem sustains damage and is incapable of healing itself, it is human intervention alone that might create a new balance. The actors of this necessary intervention will also be humans, just like those who caused the deterioration. It is therefore important to emphasize that a conflict cannot – or should not – be managed with the same tools as those that caused it. The change in the atmosphere's potential to absorb carbon dioxide intensifies the greenhouse effect. This, in turn, changes the thermal conditions of our planet and leads to a rise in the atmosphere's average temperature. The slow but steady rise of the average temperature is capable of altering a great many ecosystems, pushing them to extremes. These mutually intensifying problems will, in turn, generate challenges which can be expressed in a simple question: Will humanity have the ability and the will to adapt to these well-nigh irreversible changes? If the answer is in the affirmative, political and economic decision-makers will have to exercise far greater prudence and responsibility, and every individual greater self-restraint, than today. This process will not take place overnight, and in knowledge of human history and the human psyche, the chance that we are capable of taking this important step currently appears slim. If the answer is No, then we will have to count on diverse collapses and breakdowns under more extreme and disastrous circumstances than today, when the challenges facing us will no longer be simple environmental conflicts but instead life-and-death struggles for dwindling natural resources.

The only way to counter the degradation (deterioration) of the environment is to eliminate the causes of the decline. The "elimination" may be part of the regulation of a given process. The best solution is not having to deal with the factors that cause degeneration because regulation and control have ruled them out. This is called prevention, which is most effective when the legislator or decision-maker explicitly obstructs the destruction or pollution of the environment. When the decay could not be prevented, various other possible solutions such as moderation or adaptation enter the picture. They also depend on social and political decisions, which leads us back to the original problem.

The interpretation of the factors which cause environmental conflicts also forms a subject of debate. For a long time, the political and economic actors believed that natural resources were inexhaustible. They thought that everything humankind needed was at their disposal without limits. In the 1970s, it dawned on people that this was far from being the case. Natural resources turned into commodities and services under the conviction that everything could be commercialized: fresh water could be bottled and sold, raw materials could be transported in huge volumes, arable land could be acquired and expropriated and air temperature could be changed inside and, gradually, outside as well. We accepted that all these goods were provided for us when there were 5 billion people on Earth and we accept it today when there are 8 billion. The growing number of people, however, need more living space and more goods to consume. Larger systems have a larger demand for energy, while social needs can only be satisfied with higher living standards all over the world. Prevalent economic theories posit that satisfying the need for higher living standards goes together with steadily growing economic performance in order to ensure broader employment and higher quality of the major supply systems. All this would not automatically entail the degradation of the quality of the environment, if decision-makers did not pursue a path of economic growth

motivated by profit and would deign to think in terms of development in harmony with ecological units.

Environmental protection and the distribution of natural resources are special forms of the emergence and settlement of environmental conflicts. It is not a difficult issue in diplomacy or in cases that can be solved via negotiation, as the antagonism normally does not require acute, fundamental intervention. Negotiation appears to be the solution in the prevention of pollution, steady deterioration or volume decline, and would also be advantageous for all concerned in cases of detrimental or allegedly detrimental investments. Alternative solutions can be worked out, new sites sought, agreements to ensure the safety of the investment reached. Provided that the investor and the political decision-maker are open, the issues and concerns raised can be solved in a *consensual* manner. In such cases, the investment will not make headlines, except for a brief news item on the shift to a new site. However, there are several cases past and present in which one party does not properly inform those concerned about changes caused by a development project to the environment. Instead, the party acts alone, and uses the resources in a self-interested manner, reducing or even exhausting their volume. In such cases, there are also diverse possibilities for those affected to reach a settlement, but the solution is no longer peaceful. This is the *confrontative* option when protestation takes one of diverse forms from collecting signatures and demonstrations through to violent actions such as blocking roads and causing damage. In democratic political systems, it is possible – with few exceptions – to initiate national or local referenda which clearly reveal the local population's position on the given issue, even if local referenda are only informative, and even if a referendum is invalid. The number of local referenda in Hungary dropped from 15-25 in the early 2000s to below 10 after 2015 (Radocs 2019: 31). It is to be noted that political pressure can be exerted on the licensing authorities or the government/ local council without any legal procedure, either directly through social media, or through traditional media. The most frequent form of protest is to seek legal recourse, whether it is an international conflict or a local issue.

In a broad sense, all issues that affect the natural environment or its sustainability, that aim to change it, to expropriate some environmental value or to commercialize it, are called *environmental issues*. As such, they have an impact on society, for the creation, preservation and protection of a healthy environment is everybody's responsibility. It can therefore be declared that the interest of the environment is at the same time the interest of society, too. Why is this not clear to everyone? The disruption of the ecological balance, environmental pollution and the destruction of nature have generated entirely new conflicts. By enhancing and artificially creating demands, the efforts at modernization attain their goals in most cases to the detriment of the interest of the environment. At present, we are witnessing the inevitable clash between economic growth and environmental sustainability, between mutually exclusive social needs, particular interest hierarchies and value choices. The interest of the environment is a complex and special phenomenon, a public good, the protection of which is in everybody's interest but in nobody's particular interest. The interest of the environment is articulated through the environment-related interests of the diverse actors. The roles are given: there are the investor, the polluter, the aggrieved party, the authorities, the local population not affected by the damage, civil organizations, and local politicians. It aggravates

the situation that in local cases the roles may overlap, and it is not rare for an actor to experience a conflict of interest within himself about a certain issue, because he knows what would be right, yet his political and economic interests override his ethics (Tóth I. 2002).

ECOLOGISM

Ecologism is a set of theories and diverse efforts that regards humans as part of a larger ecosystem and wishes to sustain the balance of this system with an attitude of dynamic development. It may be labeled a "System of Green Thoughts" in which theory and practice are connected, creating a bridge between theoretical and pragmatic actions – participation, strategy creation, proposal of alternatives, assuming political roles –, and which develops the concept of *ecopolitics* and its field of activity . It does not merely emphasize the protection of the environment but rather provides a framework for collective thought and a search for alternatives with the complex attitude of environmental protection and a critique of consumerism. It has become crystal clear that the particular approach of traditional individual disciplines is insufficient for the understanding of global problems, let alone their management. Ecologism leaves behind pure theory in order to create both the academic and political dimensions of human ecology.

Local environmental conflicts

Community decisions affecting the environment can be made at a local, regional, national and supranational (international and/or global) levels. Decision-makers in charge of decisions with substantial influence on the environment are faced with uncertainties and difficulties implied by the complexity of such questions. The consequences of a decision ought also to include irreversible damage caused to the natural environment, which puts those concerned in a position of great responsibility . Its potential effects cannot be precisely defined; sometimes the processes triggered by an action (delayed effects) become clear only much later, after the intervention. Its impacts may be extended in time and space, hence the number of those affected might be large. The actors do not enter into the decision-making process all at the same time, and they enter with different information and chances. The investor usually tries to usher the necessary procedures and the process of social communication to their conclusion as fast and in as narrow a circle as possible. The environmentalists and the affected inhabitants enter into the decision-making process later, "at the other end of the line", that is, after the preparatory phase. What remains for them is to target "the lesser evil", that is, to suggest the halting, transfer, postponement, etc. of a project which has already been begun. The events have to move along forced courses, as the investor not necessarily interested in solving the problem wishes to achieve a quick and favorable solution for himself (Glied 2013).

There are two basic categories of environmental conflicts. One is a long-term systemic conflict related to the exploitation, exhaustion, and contamination of limited natural resources. This can be seen at the global level in the systematic plundering of certain continents or regions where the specific high standards of

environmental protection regarded as binding in the 21ˢᵗ century are ignored. The other category occurs mainly at the local level, in a certain area or settlement, as the outcome of the environmental impact of new developments (investments, constructions, projects). The hierarchy of interests is present in both categories, when the economic and political actors refer to some allegedly higher interest – of the economy or the nation. The interest of the environment – which, as seen above, is also a social interest – after all, clean air, clean and healthy drinking water, a liveable city, welfare and a pleasant landscape should be the interest of everyone – is regularly demoted to a lower rung in this hierarchy. It is not clearly understood whose interest the superior aspects serve, and whether they are indeed to the benefit of the majority. What is more, sometimes the expected profit, the promise of new jobs, higher tax revenues or government/corporate compensation for the settlement conceal the risks of the investment, risks which only surface decades later. Sándor Fülöp (2018) points out that underneath environmental conflicts, one often finds the scarcity of a local government's financial resources. Settlements need money, therefore they sell their land and give up green areas in exchange for fast-food restaurants or supermarkets. Often, the infrastructure of a larger settlement is used by those who do not live there; they visit for the day or for a holiday, and then go home. This means the exposure of local residents to enhanced noise and air pollution, even though they do not have a share of the local government's increased revenues and, later, the local government is often not interested in strictly controlling the investor's completed project.

The cases of the landfills at Garé and Hidas are well known and caused great uproar. This is where, from the late 1970s, the Budapest Chemical Works deposited its chloric waste (byproducts of tetrachlorobenzene) which contaminated the soil, subterranean water and air of the vicinity owing to incompetent storage. The perilous chloric compound spread for decades before the company started to deal with the issue. As part of the solution, the company planned to build an incinerator in the area. The inhabitants of Garé accepted the plan in return for the compensation offered by the firm, but the residents of small settlements in the region and the famous wine-growing regions (Villány) and tourist centers (Siklós, Harkány) launched a massive protest. The movement thwarted the plan of the incinerator, yet the final revitalization of the area has still not occurred. According to a survey by Greenpeace in 2015, the concentration of potentially carcinogenic tetrachlorobenzenes in the groundwater was 1600 times higher than the normal amount; that of trichlorobenzenes was nearly 1200 times higher. On account of the contamination of the soil and underground water, the South Dunántúl Environmental Inspectorate obligated the BChW to take steps, but these are yet to take place.[1]

Those affected (the local population and green organizations) are usually brought into contact with decision-makers through diverse development projects, since these might necessarily imply the transformation of the environment (Kákai 2020). Strategic policy planning began to include elements of sustainable development

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[1]   Toxic substance presence exceeding several thousand times the threshold values in Hidas and Garé – Greenpeace has published data acquired via legal action. Greenpeace https://www.greenpeace.org/hungary/sajtokozlemeny/3302/mergek-a-hatarertekek-tobb-ezerszereseben-hidason-es-garen-a-greenpeace-nyilvanossagra-hozta-a-kiperelt-adatokat/

from the late 1980s, such as the recognition that economic growth is not a value but only a tool which – in optimal cases – does not result in disrupting social values or upsetting the balance between natural and built environments. The dominance of the principle of economic growth in development policy brings about forced courses of adaptation, which may give rise to imbalance, and this negative spiral prevents the system from restoring its balance. The disruption of the balance and the prevalence of imbalance lead to social and environmental conflicts. Strategic development planning is not only a technical but also a moral activity, which aims to explore and eliminate the value differences beneath the divergence of interests , taking into account the endowments and the geographic, regional, and local situations. This is made absolutely necessary by the progress of technological knowledge ahead of the development of the other scientific disciplines. This leads to development projects being interpreted as growth or technological advance.[2] Consequently, the use of development policy's sustainable elements is a "compulsion" of adaptation, calling for prevention, converting constraints into possibilities and helping the venues of action with strategic planning. Consensus which strives for stability, carries on a social dialogue and seeks channels of progress has an important role here (Csete–Láng 2009: 87–89). Creating a social discourse depends on the possibilities and ability of involving people, which in turn are strongly determined by the traditions and the level of political culture, the models of participation and the quality of social capital. The new perception of societal sustainability not only regards the democratic institutions as a kind of framework within which it has to collaborate with diverse social groups, but also understands it as a space of communication in which articulating values and constructive action have an impact on strategic development policy. That is, it does not hinder the political will, but rather lends it help in its search for paths to the future.

Comprehending the interests of different interest groups, solving the conflicts between them, and working out compromise solutions are the fundamental preconditions of socially sustainable decisions. Some decisions might significantly affect the welfare of the individuals, but the degree of impact may vary among individuals and social groups. The social backing of a decision depends on the groups affected by its repercussions (externalities) and the degree to which they are affected (Bela–Pataki–Valené Kelemen 2003).

The literature on hazards often points out that once a society has accepted a certain level of risk at some point in the past, it will presumably continue accepting it. Viktória Szirmai (1992) has found that the population of settlements where a factory or plant that burdened the environment was established in the past are likely to accept new environmental pollution or at least protest against it less adamantly. Take, for example, the extension of the Paks Nuclear Power plant, which clearly shows that the Hungarians are divided on the project. Half of them support the use of nuclear energy, the other half reject it, but – as the Medián poll has found – the majority of the surveyed people were against the construction of the new plant with Russian support. Obviously, the data are prone to manipulation in how the questions are put and how the answers are interpreted, but it is an

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[2]   Iván Gyulai: Vitaindító a fejlesztéspolitika és fenntarthatóság témájához [Keynote speech on the theme of strategic policy and sustainability]. MTVSZ, Budapest, 2007. https://www.mtvsz.hu/dynamic/2007_06_21_ff_forum_gyulai.pdf

eloquent fact that 80% of those polled said that the state should support renewable energy sources instead of nuclear energy.[3] At the same time, the overwhelming majority of those living in and around Paks are in favor of enlarging the plant, as they are connected to it in myriad ways.

It is also important to assess the local population's risk perception, because the actors concerned may judge the risks and dangers of an investment project in different ways. Among the arguments for and against a project, the technological and economic aspects appear to carry less weight than the risks and worries about possible accidents or harmful consequences. The low level of trust – local society simply does not believe the authorities that a certain investment will not exceed its limits, will not be polluting, harmful or hazardous (Szántó 2008) – plays an important role.

During the planning phase and the implementation, the investor is always interested in verifying the project's usefulness, safety, lack of risks and adherence to the limits agreed upon (Fekete 2006). All this must be substantiated with measurements, data, and statistics that may authenticate his activity. When those concerned are not satisfied with the provided information or find it unconvincing, they may protest, take part in the evaluation of the investment as participants or halt it with their legal objections. As a conflict reaches the public through the media, the arguments and interests gain greater plasticity in accordance with presumed and real values. The perceptions, motivations and will of diverse individuals, communities, civil networks, and political and economic groups affect the debate. In conflicts which drag on for years, rational argumentation gives way to emotional argumentation, but in the majority of cases a court ruling terminates the conflict.

The parties often disagree on the nature, and importantly on the negative impacts, of the processes which have further consequences. In Hungary, the heritage of the socialist past very often surfaces in the form of inadequate remedies for polluted areas, the destruction of nature, and various industrial or mining activities. A significant number of Hungarian environmental cases involve the increased exposure of the soil and the catchment areas and the necessity of protecting them. Environmental problems also include excessive land use, and the expropriation and erasure of green areas inside or outside settlements. A serious burden is smog and the ecological pressure of traffic, primarily in the winter and spring, when urban smog concentration may exceed the permitted amounts several times over.

Two cases

The processing and safe storage of used batteries was a salient environmental issue in Hungary after the political turn of 1989/90, because local populations regularly protested against the planned factories (Monok, Gyöngyösoroszi, Tatabánya, Komló) (Szántó 2008). In more recent years, too, tensions over gigafactory plans have emerged between the concerned populations and the developers, as well as

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[3]   Miklós Hargitai: Hatástalan a propaganda: nem akarjuk Paks 2-t [The propaganda is ineffective: we don't want Paks 2] https://nepszava.hu/3002452_hatastalan-a-propaganda-nem-akarjuk-paks-2-t.

the decision-makers. Such a "poster child" was the battery factory established in Göd where several conflicts have arisen since its foundation in 2016. First, inhabitants protested against the planned project, saying that they had had no chance to express their position (the public was inadequately informed, not being regarded as a party to the decision). This was followed by voicing worries about pollution as customary in environmental conflicts (risk perception, endangerment). In 2018, complaints were made about the closeness of the factory to residential areas, noise pollution and a stinging chemical smell (worry about a definite pollutant) . In that year and in 2019, the clearing of forests and expropriations of agricultural areas shocked the local residents and they expressed their anxieties at a public forum (environmental destruction, lack of partnership). The concern was raised that the factory put the inhabitants at risk, but the leader of the firm who had conducted the safety analysis assured the gathered residents that the storage of the 200-ton electrode would not be dangerous for the population. Many argued that the security system of the plant had not been installed as required by regulations and that the plan for serious disaster management was missing, as the plant was situated closer than 300 m to residential neighborhoods. They also protested that the construction of the storage facilities had begun before the permits had been issued and some parts of the building were less than 20 m away from local residents' houses (legal offenses in the procedure). The petition about the protest was signed by more than 500 people (the population of Göd is over 18,000). The requests for public information by the affected party were not answered by the competent Pest County Government Office.[4] In 2022, the government declared the factory and the water utility investments in the vicinity to be priority investments of public benefit. The battery factory's water consumption is comparable to that of a city with 100,000 inhabitants. This means a daily amount of 27,000 cubic meters of industrial and drinking water, which arrives in the special economic zone of Göd along pipes partly affecting Natura 2000 areas.[5]

It was made public in November 2022 that a Chinese battery factory – as one of Hungary's ever largest investment projects – would be constructed in the Southern Industrial Park of Debrecen, on a total of 221 hectares. The government pronounced the gigaproject of some 3 trillion HUF to be a major priority investment of national benefit. It means that without asking or informing the stakeholders and people affected by the deployment, the construction can be launched with tight deadlines. A local referendum has been initiated on the issue.[6]

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[4]   Zsuzsanna Bodnár: Engedély nélküli építkezés, letarolt erdő, gyorsított kisajátítás: nő az elégedetlenség Gödön a Samsung-gyár miatt [Construction without permission, clear-cutting, accelerated expropriation: rising discontent in Göd over the Samsung factory]. Átlátszó. https://atlatszo.hu/2018/11/26/engedely-nelkuli-epitkezes-letarolt-erdo-gyorsitott-kisajatitas-no-az-elegedetlenseg-godon-a-samsung-gyar-miatt/

[5]   György Farkas: Kiemelten közérdekű lett a gödi Samsung szennyvize [The waste water of Samsung in Göd is declared a salient public concern]. https://24.hu/belfold/2022/11/03/kozlony-samsung-szennyviz-kozerdek-vac/

[6]   Ferenc Bakró-Nagy: Helyi népszavazást kezdeményez az LMP a Debrecenbe tervezett kínai akkumulátorgyár építéséről [LMP initiates a local referendum in Debrecen about the planned Chinese battery factory]. https://telex.hu/belfold/2022/10/07/lmp-debrecen-nepszavazas-kinai-akkumulatorgyar.

The NIMBY concept

It is well-known that people dislike hazardous or allegedly dangerous economic activity in their neighborhood or in close proximity to their homes. This is identified as the NIMBY (Not In My Back Yard) phenomenon. Though as citizens, people agree in general that certain factories, power plants, military installations and landfills must be based in the country, they usually disagree with having them close to where they live. This is taken to the extreme when people explicitly question the legitimacy of a planned installation and reject it on principle. This might be labeled the BANANA attitude (Build Absolutely Nothing Anywhere Near Anybody). The NIMBY reaction may appear as individuals' personal concern and personal risk which materializes in the forms of protest and rejection. Rejection channeled into collective action usually refuses compromises until eventually the investor moves out or offers compensation in due time and measure. The amount of compensation is generally calculated in terms of economics after input-profit analysis. Several factors are taken into account, such as the financial conditions of the development site, its natural endowments and infrastructural situation, and the living circumstances of the local population. Adding all this up, the investor offers realistic compensation, which he finds sufficient to eliminate the inhabitants' presumed resistance. Michael O'Hare (1977) warns that the calculations do not lay as much emphasis on psychological effects as on financial solutions. Decisive elements can be the upgrading of the potential sacrality of the living space, the sense of the extended personal sphere which experiences the planned attempt at changing the environment as an intrusion into the intimate sphere, the enhancement of risk perceptions, the transformation of the local protest into an uprising, as well as defiance without any obvious reasons.

O'Hare focuses on how apparently rational individual actions turn into irrational collective action in which the different opinions do not converge as they are not formed along some collective interest, but instead coalesce into a lot of individual suggestions. The researcher calls this "the dilemma of collective captivity". It means that an unwanted investment may be realized, despite rejection by 90% of those affected, when the remaining 10% manage to convince the majority with reference to the community's interest. This applies even more when the minority includes the prominent figures of the settlement or neighborhood,or is supported by the local government.

Main causes of the NIMBY behavior (Kraft–Clary 1991):
– mistrust in the investing firm or its representative,
– lack of information; signs of secret-mongering,
– the advantages and potential negative consequences are not equilibrated,
– proneness to conflict in local traditions,
– negative memory of similar investments.

To understand the NIMBY syndrome, it is worth considering Doug McAdam's (1986) theory on movement extension and mobilization, which may shed light on collective action for environmental issues. The researcher differentiates low-risk and low-cost activism from high-risk activism, which costs time, money and sacrifice. The goals of the former are more general: it rejects hazardous, presumably environment-damaging future investments, e.g., siting a nuclear waste repository or a cement factory, etc., in a certain settlement, and tries to have this intention

reach legislative formulation or appear in policies. It writes petitions forwarded to decision-makers, collects signatures, publishes articles and organizes street action. In the case of low-risk action it is mainly the activists of an organization or movement who make efforts to inform and convince people they get in contact with (the public, the "people of the streets") or definite social groups (local youth, specialists, politicians, etc.).

As for high-risk participation, it always concerns a concrete issue which affects people, leading a community to rally to prevent a planned facility close to homes, schools, workplaces or any venue with an emotional charge. Such a movement is built of looser organizational bonds, since its identity is not formed by loyalty to an organization or by a vague idea, but by personal attachment and fear of possible future harm. Such co-operations are usually active as long as the problem prevails, then dissolve or halt their activity temporarily, but they may serve as models for other initiatives.

The NIMBY reaction has relevance in the field of conflict research. There is consensus among researchers that NIMBY is a local network of individuals and groups which is an intermediary between global and local protest. The set of arguments proposed in the protests have connections to local features and can be reinforced by general ideas that may lend weight or justification to the group's demand. The networks are rarely formed from scratch; the trust is usually rooted in acquaintanceship and common spheres of interest. Though the possibility of a compromise solution is not rejected by all initiatives, the parties are pitted against one another mostly as enemies, not as opponents owing to the clash of interests. The behavior of local politics fundamentally influences the possible radicalization of the NIMBY group. Should the politicians competent to make decisions refuse to deal with the will of this group or to take part in the search for solutions and, further, are unable to mediate between the interests present, a crisis of legitimation may arise. The initial protest may later spread to other fields and create alliances that would never work harmoniously under "natural" circumstances. It is also possible that the early successes of the movement grow into a larger, more comprehensive formation that may also undertake political action to attain its goal(s) (Krauss 1994). In Al Gore's view, the NIMBY symptom marks the beginning of a healthy tendency, because it brings home to the decision-makers the fact that the "courtyard" is the common home of all humankind.

Based on their goals, NIMBY initiatives can be categorized into seven groups.
1. Protests against creating landfills, repositories and incinerators of waste.
2. Protests against high voltage power lines, transformers and oil and gas pipes close to residential areas.
3. Protests against power plants, specifically against nuclear plants.
4. Protests against founding polluting factories, radiating facilities, mining complexes and industrial or military establishments.
5. Protests against erecting buildings for institutions entailing noise (ambulances, police, fire brigade).
6. Movements for a clean environment (proactive work for keeping the settlement or the neighborhood clean or for cleaning it up).
7. Movements for a safe alternative, a safe future.

The ends and means of single-issue initiatives may change during the process of protesting and negotiating. Although the original goal remains in effect, the

expansion of the protesting group may imply the appearance of additional interests at the local level, while also spreading the initiative to a larger region or the whole country. The rhetoric also often changes, as it gets adjusted to the set of goals and possibilities. Initially, the "rhetoric of the direct goal" – thwarting the planned development – dominates the communication of the protesting individuals and the community. Later, the discourse may acquire additional values from voicing the protection of global environmental values and their "vulnerability". The purpose of the latter is to win the public over to their cause. David Snow and Robert D. Bendford's (1988) research proves that important factors to consider when choosing the right rhetoric include the protestors' social position, their financial standing, school qualifications and the index of trust. NIMBY is most effective where individuals and groups from the middle and higher middle classes with good political connections take part in the initiative, as they can exert considerable influence on the opinion of the community (Shemtov 2003).

In support of the opponents of a development project, green organizations and networks usually join a NIMBY conflict as well, trying to enlarge the expected risks. Terance J. Rephann (1997) compiled a typology of protests against diverse prospective investments, in which he stresses the responsibility of the Greens. He claims that the Greens appear in NIMBY issues in conflict enhancing and not mediating roles, because they only point out the hazards but do not propose an alternative. For the sake of completeness, one must add that sometimes a local collective may support or tolerate the expected or hoped for compensation for the building of a facility judged as polluting. The population may have the hope that the gains from the investment (e.g., business taxes and infrastructural developments) will offset the negative impacts. This is called Put In My Back Yard (PIMBY).

Possibilities for the resolution of environmental conflicts

In the mitigation and prevention of conflicts, important roles can be played by diverse mechanisms of information and the reconciliation of interests, as well as the decentralization of decision-making (Linhárt 2020). Providing the affected population and civil organizations with information is of key importance. Access to information on environmental matters, public participation in decision-making and legal remedies are detailed in the Aarhus Convention of 1998, which was signed by 35 countries under the aegis of the UN Economic Commission for Europe. Its novelty lies in being the first international document of binding force which tries to define the environmental rights of public participation, creating a close link between the protection of human rights and environmental aspects (Pánovics 2015).

Although, considering society as a whole, few actors choose the possibility of avoiding conflicts and an alternative way of life by isolating themselves from society, it is still an option. This can occur in various communities such as those of squatters or in ecovillages. In these cases, the community members' goal is not to resolve the tension but to create a way of living for themselves in which the possibility of conflicts lessens or is excluded (Farkas 2018).

Several methods exist for the avoidance of environmental conflicts.

1. This is mainly effective in non-democratic countries: the population is not informed of the development until they no longer have a chance to change it. Those concerned may feel they are victims of injustice, with decisions being taken over their heads. Conflicts might start which drag on for many years, but neither party will obtain any benefits, so eventually there are no "winners".
2. Another method is compensation: the developer compensates the settlement, region or country while loudly voicing the economic usefulness of the development (higher tax revenues, creation of jobs, innovations, subcontracting possibilities, etc.). The expected profit overrides the obviously negative impacts.
3. Under the third scenario, the developer and decision-makers collaborate with the local population and local and national NGOs to create alternative plans, optional sites, alternative methods of production or operation and clean – or at least cleaner – technology. In such cases, partnership, publicity and constant communication are effective and, as a result of the collective work, trust can be generated among all affected parties and solutions can be born which reassure everyone (Szántó 2008).

Recommended readings

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The population of the Earth reached 8 billion in 2022. In the coming decades, the use and depletion of renewable natural resources (arable land, fresh water reserves, forests, etc.) are going to increase. We have to expect growing gaps between social groups as well as several social conflicts right down to the level of armed clashes caused by the scarcity of resources in certain countries. In this book, the author examines the social conflicts caused by environmental problems in the developing world.

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FUNDAMENTAL CHALLENGES OF ENVIRONMENTAL LAW

Attila Pánovics

Introduction

It seems self-evident that states seek to solve problems primarily *through legal means*, within the increasingly widely-recognized framework of the rule of law. However, the emergence of crises in the first quarter of the 21st century raises the question: why have the international community and international law failed to effectively address and prevent global environmental problems in recent decades? If one looks back at the history of 'modern' institutional environmental protection, one will find that the spectacular increase in the number of international treaties and other documents and of scientific and educational books and programmes *has led to hardly any positive changes* in the state of the environment.

Some regions have seen improvements, but overall there have been no spectacular successes or real solutions. Despite our scientific knowledge, technical skills and sophistication, the only environmental challenge in recent decades to which countries around the world have been able to respond relatively quickly and effectively, albeit with a delay, has been the reduction of the use of ozone-depleting substances (Shaw 2017: 740). Indeed, it has now become clear that the two most serious environmental challenges facing humanity as a whole are the acceleration of climate change and the loss of biodiversity. These are also closely interlinked, mutually reinforcing processes that have an increasingly direct effect on the future of individuals, societies and the global economy.

Despite the fact that economic interests and considerations continue to enjoy clear priority over environmental requirements in decision-making, we are no longer only concerned about pollution caused by the economy, but increasingly about environmental degradation as well, and more specifically its economic and social consequences, which increasingly threaten the UN's main objective: the *maintenance of international peace and security.*

Law as a specific system of norms

By definition, law is a set of rules of conduct created by the state (their creation is linked to state bodies), are generally binding in a given society and are ultimately enforced by state bodies. The public power of the state is manifested through various institutions (e.g., public authorities, courts), thus ensuring the enforcement of legal norms at the state level. The legal norm is thus '*normative*', i.e., it determines the direction of future behavior. Under the rule of law, therefore, it is in principle possible to do everything that is not explicitly prohibited by law (by means of precise legal provisions or so-called general clauses).

The *rule of law* requires that legal norms prevail in regulated legal relations, that is, that the recipients of legal norms comply with the legal rules that apply to them. Hungary's constitution (Fundamental Law of Hungary) also considers the rule of law to be a fundamental value,[1] the most essential conceptual element of which is the *principle of legal certainty* (Sólyom 2001: 92). As the Hungarian Constitutional Court formulated at the very beginning of its operation: *"One of the fundamental requirements of the rule of law is that bodies with public power carry out their activities within the organizational framework established by law, within the operational framework established by law, within the limits of the law, which is known and regulated in a predictable manner for citizens. In other words, the State must also operate according to the law, in compliance with the rules of law."*[2]

The principle of legal certainty gives rise to various *legislative principles* (which determine, among other things, the basic conditions for the validity of legislation) and to so-called '*procedural guarantees*' (e.g. the right to access justice or guarantees in criminal proceedings), which are also essential for respect for human rights and fundamental freedoms. It is no coincidence that an increasing number of states are enshrining in their constitutions the most important provisions necessary for their functioning.[3] This also reflects a choice of values. At the supranational level, the rules of international law[4] (*ius cogens*), which require unconditional application, are of similar importance.

The importance of the precise definition and application of these concepts in jurisprudence would be difficult to overestimate. This is why including the terms '*sustainable development*' and '*sustainability*' within environmental law has been a problem for decades and in fact remains unresolved. The academic literature is far from unanimous on how it should be viewed: as a principle (including a political or legal principle), as an objective, or perhaps as some other element that plays a role but is nevertheless central to the legal system as a whole.[5] What is certain is that its role in enforcing legislation is very limited, in contrast with *principles of environmental law* (prevention, precautions, the polluter pays, etc.), which are also not enforceable per se, but which can play an important role in the interpretation and application of legislation (Scotford 2017: 192; Sands – Peel 2018: 9).

Law is inherently '*anthropocentric*' in nature, in that it regulates human behavior in the context of legal relations, and the people behind the lawmaking and law enforcement (judicial) bodies are the people who operate them. Legislation is addressed not only to natural persons, but also to companies, NGOs and other legal persons, which, as legal entities established and recognised by law, are also represented by human beings. The titular question of Christopher Stone's 1972 book (Should Trees Have Standing?) still requires an answer today (Stone 2010), particularly with regard to the practical applicability of the so-called '*biocentric*' approach. Interestingly, the law has only gone so far as to say that the Romans

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[1] Article B), paragraph (1).
[2] 56/1991 AB [Constitutional Court] ruling. ABH 1991. 454–456.
[3] This is why national legal systems prescribe special provisions for amending the constitution.
[4] These include, for example, the right of peoples to self-determination, the prohibition of violence, genocide, torture and slavery, and the fundamental rules of international humanitarian law.
[5] Bándi, Gyula 2013. A fenntarthatóság értelmezésének egyes jogi szempontjai [Some legal aspects of the interpretation of sustainability]. Akadémiai nagydoktori thesis, PPKE (http://real-d.mtak.hu/651/.

were already able to grant certain rights to the fetus in the womb, so that in legal terms we can speak of the *'present generation'* from the moment of conception, and thus distinguish it from future generations who have not yet been conceived. But for the latter we cannot grant '*rights*'.

Specificities of environmental law

In general, the role of the norms that make up the legal system should not be underestimated, but neither should it be over-emphasised. Law can effectively take into account short-term, individual interests and can react and deal with problems that arise during economic activity relatively quickly, even if they do lead to serious crises from time to time. However, it has much more difficulty in dealing with more complex social, cultural and other challenges. Of course, other norms (moral norms, religious precepts, rules of etiquette, fashion, etc.) also influence the functioning of a society, but legal norms form a hierarchical system. Within this system, *environmental law* emerged as a specific field of regulation in the second half of the 1960s and is still popularly referred to as 'a cross-cutting branch of law' today.[6] This specific area of law is therefore relatively young and has been actively developing in recent years, not only in terms of the number of laws (both national and international) but also in terms of doctrine.

The situation is particularly difficult in the field of environmental law, where, in addition to the problems which characterize legal regulation in general (the constant increase in the number of laws, the complexity and constant changes in the rules, the 'casuistic' nature of the legal system, the bureaucratic nature of enforcement, the judiciary's heavy workload, etc.), there are a number of specific problems which make the development of effective legislation almost impossible:

a) the boundaries of environmental law are difficult to draw (actually, the entire legal system should be permeated by environmental considerations and requirements);

b) a comprehensive and integrated approach ('holistic approach') is needed, as opposed to traditional sectoral regulation;

c) by its very nature, legislation is often only able to respond to changing circumstances *ex post facto*, while risks are increasing;

d) human activity affects all environmental elements, so that environmental impacts do not occur in isolation but rather are 'cumulative', and pollution can 'migrate' from one environmental element to another;

e) the complexity of the problems makes it difficult to predict the medium and long-term environmental impacts of human activities;

f) these impacts can be delayed in space and time, making it difficult to prove liability;

g) tackling most of the challenges (e.g., building waste management systems and improving air and water quality) properly involves long-term and costly decisions, which require political will and adequate capacity (in particular, substantial capital for investment);

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[6]   Initially, it was called the 'law of nature protection' and later the 'law of environmental protection', but the subject of regulation has since been significantly narrowed down.

h) industrial accidents and other disasters demonstrate that human negligence cannot be eliminated as a factor of uncertainty;

i) when the environment is damaged, restoring it to its original state is often impossible, no matter how stringent the legislation is.

International environmental law

Environmental pollution does not stop at national borders, and therefore effective international cooperation (global environmental governance) is essential for tackling global environmental problems. However, the fundamental organizing principle in international relations is the sovereign equality of states (at least in a formal sense). Current international law is in fact "inter-state law", since the most important actors are nation states and, to a lesser extent, international organizations organized and operating on an intergovernmental basis.

A further problem of timing is that the framework for international cooperation was established during the Second World War (mainly with the creation of the UN and its specialized agencies), so that the recognition of global environmental problems and the launch of international environmental cooperation had to fit into the existing institutional and legal systems (Kotzé 2012). It is also no coincidence that the UN includes three organizations that form the backbone of the international economic system (the World Bank, the International Monetary Fund and the World Trade Organisation), but there is no specialized organization explicitly dealing with environmental problems that could counterbalance the dominance of the former (Faragó 2021: 153-154).[7]

International law is created through international treaties or the development of general rules of international law. The latter are binding on all members of the international community and include the rules already mentioned, which require unconditional application (*ius cogens*), certain general principles of law, and customary international law, which is 'evidence of general practice accepted as law'. Customary international law has also played a prominent role in the development of international environmental law, based on the general and actual practice of states and their belief that they follow this practice on the basis of a legal obligation (Kende et al. 2014: 422). Principle 21 of the Stockholm Protocol, which states that "*In accordance with the Charter of the United Nations and the principles of international law, States have the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction*" spells out just such a rule of customary law".[8] Customary rules may even be enshrined in international treaties at some point (Bruhács 2011: 135).

Another fundamental feature of international environmental law is that it is mostly made up of non-binding documents that fall into the category of *'soft law'* (Boyle – Redgwell 2012: 35-38). Of course, the number of international

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[7] The UN Environment Programme (UNEP), founded after the Stockholm Conference and based in Nairobi (Kenya), is certainly not one of them.

[8] https://wedocs.unep.org/bitstream/handle/20.500.11822/29567/ELGP1StockD.pdf.

environmental treaties is increasing over time, but they are mostly limited to setting out directions, expectations and principles (in order to build the consensus needed for adoption).[9] It is therefore not surprising that no binding international agreement was reached at the Stockholm Conference, the first UN World Conference on the Environment, in June 1972. In this respect, the World Conference on Environment and Development,[10] held 20 years later, was the most successful international event to date, as it produced two key international treaties: the UN Framework Convention on Climate Change,[11] and the Convention on Biological Diversity.[12] Most recently, 2015 was a very important milestone at the international level, with the adoption of the UN 2030 Agenda for Sustainable Development with its associated Sustainable Development Goals, and the Paris Agreement (Bodansky – Brunnée – Ramajani 2017: 209; Dupuy – Viñuales 2018: 20).

The best-known international environmental treaties are the so-called *Multilateral Environmental Agreements* (MEAs), especially those that could enter into force upon being signed and thus start to be applied in practice (Sand et al. 2019). Examples include the 1973 Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora, the 1979 Geneva Convention on Long-Range Transboundary Air Pollution (LRTAP), the 1985 Vienna Convention for the Protection of the Ozone Layer (MEAs) and the Montreal Protocol of 1987 on Substances that Deplete the Ozone Layer, the 1991 Espoo Convention on Environmental Impact Assessment in a Transboundary Context, the 1998 Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, the 2001 Stockholm Convention on Persistent Organic Pollutants, or the 2013 Minamata Convention on Mercury. In addition to these are an increasing number of regional and more limited multilateral treaties (e.g., at the European level).

Problems of implementation

It is clear that the effective management of global environmental problems and the avoidance of damage requires states to exert coordinated action , but there is no effective mechanism under international law to force states to comply with their obligations in the event of breaches of international environmental rules. This was clearly demonstrated when Canada withdrew from the 1997 Kyoto Protocol in 2011 and Russia, Japan and Australia announced their intention not to commit to its second period. A similar situation was created by Donald Trump's announcement in June 2017 that the US would withdraw from the Paris Agreement, and it did four years later.[13] The road to the Paris Agreement and the developments since then show perfectly that, in addition to the difficulties in developing and

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[9]   The specific obligations and accountable standards are usually set out in the additional protocol(s) to be adopted at a later stage.

[10] United Nations Conference on Environment and Development (UNCED)

[11] UN Framework Convention on Climate Change (UNFCCC)

[12] Convention on Biological Diversity (CBD)

[13] In 2021, Joe Biden launched the procedure to rejoin the Agreement with one of his first presidential decrees after his inauguration.

adopting common rules, the practical implementation of those rules is no less problematic.

For this reason, it is crucial to have independent and impartial courts that can ultimately decide when the rules are broken. However, the International Court of Justice in The Hague can only act in a given case if the states concerned have accepted its jurisdiction (e.g., by a declaration of submission or by concluding a special agreement[14]). In the absence of such a declaration (*'ex officio'*), no case can be brought before the ICJ or any other dispute settlement forum at the international level (Lamm 2005). However, even if there is a legal proceeding, the mere fact that a judgment is delivered is no guarantee that the court's decision will actually resolve the dispute. An example of this is the 1997 judgment of the International Court of Justice in the Gabčíkovo-Nagymaros Dam Case, which has yet to be enforced by the parties concerned (Slovakia and Hungary)...

In 1977, Hungary and Czechoslovakia concluded an agreement on the construction of dam structures along the Danube river, consisting of an upper dam (Gabčíkovo) and a lower dam (Nagymaros). The agreement aimed to improve navigation, flood protection and regional development, in addition to the production of electricity. According to the technical design, the river would have been dammed at Dunakiliti, creating a reservoir above it. From it, the service water canal would have branched out, with the Gabčíkovo dam on it. The Nagymaros water step would have been built as an energy and hydraulic unit. By regulating the water flow, the hydropower plant would have been able to adapt flexibly to energy demands (a process called „peaking").

The controversy was triggered in 1978 by a People's Inspection Commission inquiry into the shortcomings of the plans. In 1983, the agreement was amended and the completion date was postponed to 1990 for Gabčíkovo and 1994 for Nagymaros. In the meantime, Czechoslovakia had completed the bulk of the work on their part. From 1984 onwards, the public became involved (e.g. via the Danube Group), and in 1989 the Hungarian government first suspended and then stopped the works at Nagymaros. In 1991, the Czechoslovak authorities announced the continuation of the project under the ‚temporary solution', also known as ‚Variant C', which involved both the unilateral diversion of the river into a service canal and the creation of a smaller reservoir on Czechoslovak territory.

As a result of the failed negotiations between the two countries, Hungary declared the unilateral termination of the 1977 treaty, while Czechoslovakia started to divert part of the river on its own territory (at Cunovo) by building a new dam. The dispute was submitted to the International Court of Justice in the Hague, which issued a controversial decision on 25 September 1997 (Hungary had no right to suspend and later completely stop the works on the Nagymaros project and the part of the Gabčíkovo project that fell on it, while Czechoslovakia had the right to continue implementing the „temporary solution" but had no right to put it into operation). The parties were told to negotiate in good faith and take all necessary measures to ensure that the objectives of the 1977 Treaty were achieved and a joint operating system established. Substantive negotiations between experts from the two countries only started in 2005.

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[14] This is what happened, for example, in the Gabčíkovo-Nagymaros Dam Case, when the Republic of Hungary and Slovakia concluded a special agreement in 1993 to refer the dispute between them to the International Court of Justice.

Since then, there has been full agreement between the parties on the need to implement the 1997 judgment as soon as possible, but they differ on how to solve the navigability of the river section in question without the lower barrage.

International recognition of the *right to a* (safe, clean, healthy and sustainable) *environment* as a fundamental right for all would probably help to alleviate this situation. However, this was only declared by the *UN Human Rights Council* in October 2021[15] and confirmed by the UN General Assembly in July 2022.[16] Protecting and respecting human rights is an obligation for all, but it will take a long time before the contents of the right to the environment are clarified in all countries and the mere invocation of a violation of this right is sufficient for the effective protection of the rights of those affected (Majtényi 2018). It is worth emphasizing that we are talking about a 'human right', which again demonstrates the anthropocentric nature of (environmental) law.

Environmental law is characterized by weaknesses not only at the international level, but also in general. In addition to states and international organizations, many other actors and interest groups are involved in the development of legislation and so-called environmental conflicts arise much less frequently between countries (although these cases garner the most publicity) than at the local level, between various interest groups. As a result, the principle of public participation in environmental law has been strengthened, as members of the public (environmentalists and NGOs) can often use legal means to draw attention to breaches of the rules and the marginalization of environmental concerns in decision-making. They can even use their right to appeal in order to force a change in a decision that has already been taken (see the study by Viktor Glied).

The role of the European Union

The European Union of 27 developed countries can serve as a model for other organizations and regions, because compared to where the Western European integration process started in the early 1950s, the EU's main objective since 2019 has been to achieve the dual (green and digital) transition resulting from the *European Green Deal* (Bándi et al. 2022: 175-178). In order to achieve this, the EU's main goal is to become the world's first climate-neutral continent by 2050 (thus contributing to the Paris Agreement objectives).

The *rule of law* is also a key element for the EU, as one of the fundamental principles derived from the constitutional traditions common to the Member States and the Union. It is one of the most important values on which the Union was founded,[17] and is linked to democracy and respect for human rights. Although the jurisprudential position is not uniform, the majority view of EU law is that it is a *distinct legal system* ('European Union law' or 'EU law'), fundamentally different both from traditional international law (as is evident in its level of effectiveness) and from the law of nation (federal) states.

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[15]   A/HRC/48/L.Rev.1.
[16]   A/76/L.75.
[17]   See the Treaty on the European Union, article 2.

In the European Union, it is essentially the Member States that are responsible for the implementation of EU law at the national level; this is constantly monitored by the European Commission as the 'guardian of the EU Treaties'. The practical application of EU law therefore depends essentially on the effectiveness of the cooperation between the Commission and the Member States. As mentioned earlier, international law is essentially intergovernmental, whereas the European Union has what is known as *supranational* characteristics. The most important of these, alongside the Brussels Commission already mentioned, is the *Court of Justice of the EU*,[18] which both cooperates with national courts in the Member States (to ensure a uniform interpretation of EU law) and is ultimately the highest judicial forum for the settlement of disputes in accordance with EU law.

The effectiveness of the Court of Justice of the EU is therefore primarily due to the fact that, compared to other international judicial forums, the new Member States must, upon accession to the EU, recognise the exclusive jurisdiction of the Luxembourg body in matters of EU law. In *infringement proceedings* brought against EU Member States for breach of EU law, generally by the European Commission, the Member State concerned is obliged to participate as a defendant and may not refuse to participate in the proceedings.[19] However, it is by no means certain that a judgment will be delivered at the end of the proceedings, and it is very rare for a sanction (a penalty payment and/or a lump sum) to be imposed on a Member State for breaching an EU obligation, since this is not the purpose of the proceedings. Rather, it is to bring the infringement to an end as soon as possible and to enforce the obligations arising from EU law (Osztovits et al. 2021: 305). Thus, the compulsory jurisdiction of the Court of Justice of the EU is the main guarantee of the effectiveness of EU law – also in environmental matters.

EU environmental policy and law have evolved in parallel with the development of international environmental cooperation and have now created the most comprehensive regime in the world (Delreux – Happaerts 2016: 12), although *single market* legislation currently still forms the core of EU law. The EU environmental acquis is sufficiently comprehensive and ambitious in nature to have a direct impact on the environmental performance of EU Member States. Effective implementation requires, in particular, public authorities (e.g., environmental inspectorates) with adequate capacities (staff, funding and resources) at the level of the member states . The EU does not specifically support this, but it does expect full implementation of member states' obligations under EU (environmental) law (Krämer 2012: 397).

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[18]   The Court of Justice of the EU (formerly the Court of Justice of the European Communities), based in Luxembourg, is not to be confused with the European Court of Human Rights, based in Strasbourg and serving an institution of the traditional international organization known as the Council of Europe. Its main task is to interpret and apply the European Convention on Human Rights (1950) and its protocols, while the Court of Justice of the EU is specifically responsible for ensuring respect for EU law.

[19]   See the Treaty on the Functioning of the European Union (TFEU) article 258.

Summary

Over the past decades, environmental policies in developed countries have been clearly *dominated by the use of legal instruments*, with measures focusing on damage prevention, pollution reduction and the symptomatic treatment of existing problems, as well as on visible point sources, even as the pressure on the environment and the use of natural resources have both increased in absolute terms. In the context of the rule of law, of course, the law and legal instruments must play a prominent role; however, this role can only be played effectively by legislation if society as a whole is aware that the law itself is only an *instrument*, even though it is an instrument which has indeed determined the functioning of societies for thousands of years. It is easy to see that legal instruments should not be taken for a sort of *'panacea'*.

Unfortunately, due to the complexity and interconnectedness of environmental problems, we still lack sufficient information, scientific evidence, reliable indicators, and understanding of the workings and drivers of environmental change. We have no precise knowledge of the limits, nor a clear ability to justify the costs of action or, where appropriate, inaction. Therefore, much more emphasis should be placed on the use of other means of raising environmental awareness, on environmental education and training, on exchanging experience and good practice, on transferring knowledge and skills, and on persuasion, *in addition to* (not instead of!) legal instruments. This will of course have a knock-on effect on the approach of legislators and practitioners, which could ultimately lead to a further 'greening' of the legal system as a whole.

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THE ENVIRONMENT AND ANTHROPOLOGY

Judit Farkas

Ecological anthropology has played a leading role in the evolution of the Environmental Humanities (hereafter EH), and not without reason: this strand of cultural anthropology (hereafter: anthropology) focuses on the understanding of the interrelationships among humans, human culture and society, and the natural environment. Ecological anthropologists study nature use, local communities' traditional ecological knowledge, biological diversity, the motivations behind and impacts of environmental destruction, contemporary environmental issues, natural disasters, climate change, Green movements, environmental justice, etc. Its research field – like that of anthropology in general – ranges from the jungle to metropolitan centers where nature or its absence can be observed. Its working methodology (interviews, observation, possibly long stretches of living with the community under study) allows for a deep dive to explore the given group's worldview and daily life. It shares with human anthropology the desire to integrate the knowledge of diverse disciplines and interpret any given question in a broad context with its help. Not unlike other social sciences, it discards the view that it has a secondary role behind the natural sciences, and regards itself as an autonomous and innovative discipline (Latour 2013; Cs. Mészáros 2019).

Ecological anthropology

Anthropology has always been engaged in studying how nature influences human society and culture, and conversely, how humans shape the natural environment. This will not come as a surprise if one is aware that one of the discipline's first specialties in the field of social science was the examination of tribal cultures, human communities which live in direct dependence on natural resources. 19th century researchers focussed mainly on the patterns of subsistence to find out how people living in the most diverse settings can survive through hunting and gathering, herding or farming.

Scientific ecology's closer involvement with anthropology may be attributed to two factors: the development of ecology as a scientific discipline, and the emergence of systems theory and attempts to use it (Borsos 2004: 13). The difficulty of the process is indicated by the key question worded by Balázs Borsos as follows:

> *"Can culture be included in the sphere of ecological examinations in the scientific sense, or does it differ from the rest of the pertinent factors to such an extent that a separate scholarly discipline has to be devoted to examining the relationship between culture and the environment using the scientific apparatus of ecology?"* (Borsos 2004: 15)

This is still an open-ended question, owing to the contradictory use of the terminological apparatus (see ecology, environment, nature) and to methodological dilemmas. Moreover, the term ecological anthropology has also occasioned heated debate.[1] Nevertheless, Borsos thinks that the term ecology, used in the biological sense, is suitable – with due caution and absorption – for use in the social sciences. If we accept that ecological investigations must have an object (diverse organisms, plants, animals) and that the above-mentioned actors are bound by the conditions of the external world (soil, climate, etc.), then

"… the definition of ecology is sufficiently broad to have any given organizational level of organisms as its object, with external conditions shaped by the external world. The object under examination, as a complex level of organization, may be a human community with a specific culture, while the external world, the shaper of coercive conditions, may include natural, social and cultural environments alike" (Borsos 2004: 17).

It is therefore the task of ecological anthropology to investigate the impact of the natural environment on the given culture and society; the ecological relation of culture and society to the natural elements (light, temperature, water, plant cover, etc.) (Borsos 2004: 26); and humans' response to the natural environment. Adaptation, resilience, and the ecosystem have become organic parts of the terminology of ecological anthropology.[2]

ECOLOGY, ENVIRONMENT, NATURE – AS DEFINED BY ENVIRONMENTAL SCIENCE

Ecology. The term is associated with the German biologist Ernst Haeckel (1866). "It is a discipline belonging to synthetic biology; it deals with the laws of the relationship among multitudes of living beings (the levels of organization above that of individuals). The scope of ecology includes the study of interactions that determine the distribution and frequency of living beings. In other words, it studies the populations of living beings and the conditions that influence them, as well as the impacts they exert. This word of Greek origin means the study of the environment. More recently, due to the issue's significance, a new discipline called environmental science has evolved that studies the relationship between humanity and the environment, also called human ecology" (E. Mészáros 2010: 17).

"Global ecology examines the relations between Earth and the human being and concerns itself with the general questions of their interaction. These deal with the basic relations of humanity and the environment: What changes do humans cause to the Earth? This is primarily a question for the natural sciences. – What are the social consequences of these changes? Examining this issue belongs to the social sciences. – What are the social causes of the changes effected by humans? Global ecology attempts

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[1]   For more detail in Hungarian, see the summary of Balázs Borsos (Borsos 2004: 13–26) and the section titled Dispute: Ecology in the social sciences in Borsos' book (Borsos 2004), as well as Mészáros 2019. To the debate see also: Descola 2013, Moran – Lees 1985, Vayda – McCay 1975.

[2]   More recent Hungarian ecological anthropological studies are reviewed in Acta Ethnographica 62.1 (Babai – Borsos 2017).

to identify the social forces which motivate people to cause the changes being studied. This also is primarily a concern for the social sciences. – How could changes, processes that are unacceptable from the perspective of sustainability, be prevented, stopped, changed? To answer this question, scientific, technological and social scientific knowledge is always required" (Kiss 2012: 17).

Environment: "It is the landscape surrounding living beings, the complex system of the terrestrial domains of animate (biosphere) and inanimate elements (atmosphere, soil, water surface). The living world and its environment are in permanent interaction through the exchange of energy and matter. The natural environment is complemented by artificial or built (man-made) environments" (E. Mészáros 2010: 147).

Nature: "Representatives of diverse fields of scholarship, the laity - and most probably the readers of this book as well - differ in their understanding of nature. To put it differently, the concept of nature is a "construction", the content of which may differ among individuals, groups and cultures. Seen through the perspective of an ecologist, nature and the natural environment are taken to mean the elements of the surrounding world that were not made by humans and that appear at different levels of organization (e.g., a sapling, a tree, an urban park, a forest, a wetland habitat or a landscape composed of several habitats" (Mihók et al. 2021: 18).

Natural environment: "The natural environment consists of elements of nature. For the characterization of an environment, it is useful to further divide it into natural environment, tended natural environment and cultivated environment. – The natural environment is what results from a lack of human intervention. This can be a jungle, an intact coastline, anything with which humans have not interfered. – A tended environment also comprises natural elements but humans have also contributed to its emergence. – A cultivated environment is composed entirely of artificially created natural elements" (Kiss 2012: 11–12).

The relationship between humanity and nature has always constituted one of the central interests of anthropological research. One of the basic questions of these studies has been the extent to which the natural environment determines culture. The determinist view says it is fully determined by it, while possibilism proposes that it provides only the frames and possibilities for culture.

Environmental determinism appeared in human thought fairly early on, including Hippocrates's humoral theory, Plato's and Aristotle's views of the forms of governance and Montesquieu's theory on the emergence of religions.[3] Both ethnography and anthropology were deeply influenced by the work of Friedrich Ratzel (1982). He established the fundamentals of the discipline of

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[3]   In the view of Hippocrates, the character of a person is determined by the humors in the body. These depend on the climate, so eventually climate influences the character of a person. Plato and Aristotle were of the opinion that the moderate form of governance, democracy (see Greece) is caused by the temperate climate, and the hot/tropical climate is the source of dictatorship. Montesquieu thought that a warm climate was behind passive religions, while in a cold climate, religions become aggressive. Summarized: Borsos 2004: 27.

anthropogeography and attributed cultural differences to geographical factors (Borsos 2004: 27–28).

In contrast, possibilism ascribes only an influencing role to the natural environment and provides primarily historical explanations for cultural phenomena (Borsos 2004: 27–28). One of the major critics of environmental determinism, American geographer Carl Sauer accuses determinism of ignoring the fact that different cultures evolved in similar environments. In his view, there is a permanent feedback between culture and the natural environment. In addition, this trend describes humankind as being in constant struggle with nature, which restricts progress (cited: Hubbell – Ryan 2022: 79–80).

A new, more strictly ecological approach appeared in anthropology in the 1950s (Bodley 2002; Borsos 2004; Orlove 1980; Poncelet 2001). In his – by now classic – categorization, Benjamin Orlove identifies the first period with the work of Julian Steward and Leslie White (the 1950s) and the second period with the so-called neo-functionalists, most notably Marvin Harris and Roy Rappaport (the 1960s – '70s). The third period he ties to processual studies and an increase in historical interest (Orlove 1980). Authors who later summed up the trends of ecological anthropology also agreed that around that time the focus shifted towards the macroscale examination of human activities. The analytical entity of research became the ecological population, instead of culture, culture being interpreted by many (e.g. Julian Steward) as a tool to be adapted to the environment. (Summary: Kottak 1999; Poncelet 2001). By now, researchers mostly regarded human communities as part of the ecosystem and addressed themselves to questions such as the importance of a certain culture's adaptation to the environment during the course of evolution (specific evolution, see Sahlins 1960; 1964); the comparison of the efficiency of diverse survival techniques; the tracing of the evolution of energy use in human populations, and the impact of all these issues on social stratification and cultural development (White 1949; Service 1966; Sahlins 1968; Wolf 1966); the study of the patterns of adaptation (Julian Steward 1955), and the role of social and cognitive structures in sustaining the balance between humans and the surrounding ecosystem (Rappaport 1968) (see Poncelet 2001). While the 1950s were characterized by neo-evolutionary trends concerned with questions of energy use, technological development, and adaptation, the chief feature of the dominant neo-functionalist trends of the 1960s and '70s, in Balázs Borsos's interpretation, was the strong scientific foundation provided by the methods and categories of biological ecology. These researchers (the most frequently mentioned being Marvin Harris, Roy Rappaport and Andrew Vayda) studied the social and cultural system as analogous with the ecosystem. The unit of examination was the populace instead of culture and the main issue of research was the given area's sustaining capacity and the interpretation of cultural phenomena in relation to the environment (Borsos 2004: 43–44; Kottak 1999: 23–24). Marvin Harris's case study on the prohibition on killing Indian cattle (sacred cows) is also available in Hungarian. Harris – as intended – contended that the ban was not kept alive by an illogical religious custom, the principle of *ahimsa* (not to harm), but for economic reasons (Harris 1992). Rappaport interpreted the rite of an ethnic group of New Guinea as an element that helps maintain the equilibrium of the natural ecosystem (Rappaport 2003).

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Ecological anthropology also inspired the emergence of ethnoscience in the 1960s. Ethnoscience investigates the concepts formed by the members of a given nation or community about the world, including physical objects and abstract ideas alike, as well as how they come to know the surrounding world, the opinions they form of it and how they function in it. Its method and theoretical frames were initially closer to linguistics, then later to cognitive psychology (see cognitive anthropology). The best-known results of ethnoscience are its classifications, most of them highlighting traditional taxonomies (ethno-taxonomy, ethno-botany, ethno-pharmacology). Studies have revealed that the greater their functional use, the more extensive their system of categories and names. In industrialized societies where people are isolated from the natural environment, this taxonomic system is far less differentiated. However, even in these societies there can be exceptions, for instance a community which lives directly from natural resources, e.g. fishermen (in Kempton's example). (On ethnoscience and cognitive anthropology, see Borsos 2004; Kempton 2001). Ethnoscience arrived at the study of traditional ecological knowledge in a natural way and went on to utilize this knowledge through therapy and nature protection (see the chapter Anna Varga: *Nature Conservation and Traditional Ecological Knowledge*), or to solutions to contemporary environmental problems.

At the end of the 20th century, the focus shifted again in ecological anthropology, owing to the radical change in the relationship between humanity and nature, the increasingly conspicuous environmental problems, and the ensuing social and economic issues. In addition to examining cooperation with the natural environment and forming a balanced relationship, studies of activities which disrupt the equilibrium between humanity and nature have come to the foreground.

The reinterpretation of modernization began in the 1980s, with questions concerning the tilting of the ecological balance and dilemmas about the unstable situation not only of nature but also of humankind. The terminological framework was extended[4] and an important concept for the interpretation of contemporary processes – maladaptation – emerged. This term signifies the use of certain forms of subsistence which are incompatible with the environment, for instance if, due to their development, they overexploit their environment, a process which eventually leads to collapse (Borsos 2004; 34–35). Jared Diamond's well-known work *Collapse* (2004) addresses this situation, as does Thomas Homer-Dixon's *Environment, Scarcity, and Violence* (1999), which discusses the correlations between overuse and depletion of natural resources on the one hand and violent conflicts on the other. The attention of anthropologists has thus turned to environmental degradation and overuse of resources. They have begun to study the political, social and economic dynamic that triggers the above-mentioned processes and the conflicts that break out in response (Poncelet 2001: 274).

Anthropological research into the relationship between diverse groups and their natural environment and into forms of adaptation and maladaptation, has acquired a new aspect: that of globalization. Local processes are more and more deeply influenced by global processes (climate change and the global economy), so the consideration and understanding of these aspects are indispensable for research.

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4   Bruno Latour considers the most decisive new concept, that of the Anthropocene, as a tool for leaving modernity behind (Latour 2013: 144). On the Anthropocene, see the chapter titled Green history?

Another important development to be considered is the variety of responses to the environmental crisis by civil society, activists, policy-makers, etc. Similarly to the nature concepts of both jungle and city dwellers[5] and their communities, the above-mentioned movements and social phenomena are also important fields of study for anthropology. As a result, new trends have evolved in anthropology, such as environmentalist anthropology, activist ecology, political ecology, etc.

Ecological anthropology, environmental anthropology

The differences between ecological and environmental anthropology are not unanimously agreed upon in the environmental literature. Some authors treat them as one; others separate them; others still view environmental anthropology as a subdiscipline of ecological anthropology (Borsos 2002; Little 1999).

Those in favor of differentiation hold that ecological anthropology continues to make attempts to bring into a single explanatory system, building on the methodology and results of related disciplines (archaeology, biology, linguistics, historical science) and integrating new themes (globalization and neo-colonialism, eco-colonialism, environmental racism and human rights, biodiversity and cultural diversity, ecological awareness, distribution of energy resources, etc.) (Borsos 2004: 67–68).

This approach views environmental anthropology as an applied science which uses ecological anthropological knowledge in practice: "it tries to help the solution of local and global environmental problems, using the theories and methods of anthropology" (Townsend 2000: 106; Borsos 2004: 71). Conrad Kottak calls environmental anthropology "new ecological anthropology" and claims that anthropology must re-interpret itself because – owing to population growth and the transnational flow of people, trade, organizations and information – there are no longer territorial groups in contact with a single given ecosystem. By the same token, anthropologists must pay attention to the external organizations and forces (such as governments, NGOs and businesses) which lay claim to local and regional ecosystems throughout the world. Therefore, environmental anthropology must blend theory and analysis with political awareness and policy concerns (Kottak 1999: 25–26). Carole Crumley argues in the same vein, stating that the Anthropology and Environment Section of the American Anthropological Association (AAA) was not founded by chance in 1996. By then, the environmental problems had become obvious through instances such as El Nino and their multiplication made it evident that there was serious trouble. The section was founded by researchers motivated by anxiety for the environment, many of them also participants in diverse kinds of environmental activism. The aim was to

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5   Works in cognitive anthropology also deem important the study of the nature-related cultural model of those living in static societies, because although they don't live „in the lap of nature" , they still perceive and interpret their environment, including the natural environment (see Kempton 2001). This is particularly intriguing for those involved in environmental movements, activities, and environmental development policies, who may – with good intentions – impose their models and ideas on other groups. There is usually a great difference in power between the above-mentioned policy makers and smaller local groups and in this process local knowledge and interest may get lost. We shall return to this topic in discussing the role of anthropology.

cooperate with diverse disciplines and contribute their anthropological knowledge to the common stock. They deemed it important to voice the warning that scientific knowledge is also culturally determined and not objective, so this knowledge must also be handled critically. They must render the results of anthropologists understandable and accessible for local, regional and global policy makers and communities with that critical attitude (Crumley 2001).

Ecological anthropologists fight for the preservation of habitats and the importance of biodiversity and cultural diversity on the basis of anthropological knowledge, and use this knowledge to fight against environmental risks, in opposition to the forces of the state and global economy. This requires that they be in contact with political ecology, the Green movements and Green lobbies, and other actors who listen to and both can and want to use their knowledge. Environmental anthropologists are concerned not only with tribal cultures, but also, for instance, with consumer society as well, which is one of the sources of the environmental problems, if not the greatest. The holistic approach incorporated in anthropology is fundamental for the study of individual elements in a broad global context (Borsos 2004: 71–72).

The place of anthropology in contemporary environmental questions

Since the turn of the millennium, anthropology has been actively involved in environmental, climate-change related research.[6] This may be attributed to the grave effect of environmental changes on the groups and places habitually studied by anthropology; to the acknowledgement of the importance of investigating the human dimensions of climate change; and to the fact that anthropological knowledge both allows and requires anthropologists to take part in diverse interdisciplinary research projects regarding climate change and adaptation to it. According to a basic tenet of anthropology, culture determines how people perceive, understand, experience and respond to the elements of key importance in the world in which they live. This applies to their natural environment, too, and is particularly important when the world is undergoing a radical change.[7] Anthropology attempts to explore the interpretive framework with typical in-depth investigation. In their study on anthropology's position on climate change, Carla Roncoli, Todd Crane and Ben Orlove posited four axioms, the examination of which, in their view, leads to the understanding of the following processes:

1. how people perceive climate change through the lens of their culture ("perception");
2. how people comprehend what they see based on their mental models and social

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[6]   Bruno Latour clearly declares that the current situation is a great chance – a gift – for anthropology, for the disciplines which deal with contemporary environmental questions (geochemistry, economics, ecology, genetics, etc.) are forced to address issues belonging to the domain of anthropology (cited: Brightman – Lewis 2017: 23).

[7]   The possible responses are determined by the cultural model of the given community; "the individual and collective adaptations are shaped by credible, desirable, feasible and acceptable common ideas" (Roncoli – Crane – Orlove 2009: 87).

locations ("knowledge"); 3. how they give value to what they know in terms of shared meanings ("valuation"); and how they respond, individually and collectively, on the basis of these meanings and values ("response") (Roncoli – Crane – Orlove 2009: 88).

These questions can be asked in small local communities and metropolitan societies alike.

Like the environmental problems, the environmentalist/Green movements reflecting on them did not pass unnoticed by ecological anthropology. In the introduction to her volume of studies *Environmentalism. The View from Anthropology* (1993b), Kay Milton argues that environmentalist movements have been studied by sociologists, political scholars and economists since the 1970s and she asks what anthropology could add. Her answer is that culture theory can complement the perspectives of social, political and economic theories in this regard as well, not only in environmental questions in general. Moreover, the analysis of environmentalist movements also contributes to the theoretical development of anthropology: for example, the anthropological examination of the global nature of environmental problems promotes the study of the globalization of culture (Milton 1993a: 2). That the movements do gain a lot from anthropological knowledge is beyond doubt – at least for the profession:

– this knowledge contributes to the public debates about environmental themes,
– the understanding of environmental problems and implementing solutions are often transcultural actions, which is a specialty of anthropology, so this kind of knowledge and experience can also be of help to environmental activism (movements, lobbies) (Milton 1993a: 2–3).

Eric Poncelet thinks likewise, arguing that an environmentalist partnership of various interested actors is currently the best approach for solving environmental problems and that anthropology can aid it via providing scientific field experience, methods and a theoretical orientation. Anthropology understands and can identify the cultural and social features with whose help the limitations become understandable and thereby the solution more easily attainable (Poncelet 2001: 288).

In Sarawak Region, Eastern Malaysia, extensive logging began in the 1980s, which local populations attempted to stop with blockades. The protests were not successful, the protesters were removed with force and jailed, and the logging companies received more protection. The world was unaware of the whole matter until 1987, when the protest of the indigenous Penan tribe and the violent response by the state made headlines all over the world.

In his ethnographic study, Peter Brosius described the story of the movements, trying to understand the roles of diverse agents, their marginalization or rise to dominance, and the power dynamic which formed over the course of the discourse. His case study has shown how the movements concerned with environmental questions, indigenous rights and social justice are evolving, and also what such movements mean for anthropology.

The Penan used to live a migrating, hunting and gathering way of life until the mid-20th century, when the state – in an effort to modernize them – forced them into a sedentary way of life. Legally, however, they were not owners of the area where they were settled, hence they had no legal tools for protesting against wood felling. The area

held special importance for them not only in terms of material resources, but also in a biographic, social and cultural sense. This is what the fellers eradicated. Further, the government viewed them as savages in need of rescuing and civilizing.

In 1987 a Malaysian NGO started supporting their efforts and sent news, photos of the environmental devastations, the protests and their violent crushing to Western Green movements. The movement and the photos appeared widely in the media and soon grew into a symbol against environmental destruction and of the struggle for indigenous rights. Political actors, celebrities, Malaysian and large Western NGOs took their side, paid lawyers for the imprisoned people, taught the local people methods of resistance, tried to put pressure on the government, etc. The legitimation of the affected group was also enhanced by the international attention and the films which were made about them. The Malaysian government, however, did not retreat, but instead launched a communication offensive aimed at a character assassination of the Western movements: they were presented as neo-colonialists, who should be concerned with tree felling in their own countries; they were accused of trying to prevent the aborigines from enjoying the blessings of progress. In addition, the government launched a sustainable forest management project aimed at rendering the protests invalid. The international movements soon realized that the conflict had taken on a moral dimension and that they were losing. They changed strategies and started to focus on the destination of timber, the Western markets, and to influence consumer habits so that the felling of trees would become unnecessary. The Malaysian government keeps the issue within the framework of sustainable forestry where passionate protests and activists are unnecessary. Thus, these methods were marginalized as a consequence of institutional action.

Brosius, Peter 2001. *The Politics of Ethnographic Presence: Sites and Topologies in the Study of Transnational Movements.*

Speaking of anthropology's contribution – not only to the sphere of activist movements but also to environmental changes in general – it is worth citing the position of Csaba Mészáros:

"The cultural anthropological approach and the field experiences it conveys may contribute to the discourse on global ecological and climate change on two counts. On the one hand, through case studies of successful and unsuccessful examples of adaptation, with analyses of the characteristics of the functioning of resilient and less resilient communities; on the other hand, through affording an insight into mentalities and systems of categorization (hence worlds) of communities, each of which consists not only of humans but also other animate and inanimate entities which to a European mind are part of nature" (Cs. Mészáros 2019: 147).

The aim of anthropology is not only to enliven this discourse with exotic examples: "it offers alternatives and possible outlets and excludes sociological, economic and ecological conclusions which do (can) not work, or which raise moral concerns" (Cs. Mészáros 2019: 147).[8]

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[8] One way of applying anthropology is highlighted in the book of studies *Environmental Anthropology Engaging Ecotopia: bioregionalism, permaculture, and ecovillages* (Lockyard – Veteto 2013). The editors collected writings by anthropologists on the possible collaboration between the titular

Obviously, anthropology's research attitude to small local communities does not perish when national and global frames of reference are included within the examination. This is confirmed by several anthropological studies on the effects of climate change (see Crate – Nuttall 2009), which aim to expose the impacts of climate change on local cultures, and "to stop the gaps in defective Western knowledge on anthropogenic modifications" (Moore 2016: 34). One of the motives which drives them is the strong West-centrism and through-politicization of the dominant ideas and guidelines about environmental problems and climate change, which also deeply influence indigenous communities, marginalized groups and the poor. In this situation, "anthropologists should stand firm in their tradition of committed localism and ethnographic reflexivity" (Roncoli – Crane – Orlove 2009: 88).

BIOREGIONALISM AND ECO-COSMOPOLITANISM

In our contemporary world, the notion of locality is being reassessed and we need to take a new approach to it within the framework of globalism. Bioregionalism and eco-cosmopolitanism are (local and global, respectively) concepts and interpretive frames that reflect upon this demand.

Bioregionalism
Bioregionalism holds that human activities and collective structures – politics, economy, architecture, etc. – are formed and take place within the boundaries of bioregions. The border of a bioregion is determined by nature, typically the outline of a catchment area or the features of the terrain. One definition holds that a bioregion "is the general pattern of the natural features of a given area", including relief, climate, seasons, configurations of the terrain, soils, plants, animals and insects (Berg 2002). Bioregionalism is also a movement which appeared in the 1970s with writings by Allen Van Newkirk, Peter Berg, Raymond Dasmann, Kirkpatrick Sale, Gary Snyder and others. Bioregional thought has exercised considerable influence on the American environmentalist and sustainability movements and plays a central role in the socio-ecological vision of the environmental philosopher Murray Bookchin, in which cities are decentralized semi-autonomous city-states integrated within commonly managed natural resource regions (Hubbell – Ryan 2022: 81). On Bookchin's social ecological vision, see the chapter on Environmental Philosophy; on bioregionalism, see also the chapter of Dorottya Mendly and Melinda Mihály on the global challenges of food supply.

Eco-cosmopolitanism
In response to the predominance of bioregionalism and place-based discourse, environmental humanist Ursula K. Heise elaborated the theory of eco-cosmopolitanism in her book *Sense of Place and Sense of Planet* (2008). Its essence is that each individual and group should be envisioned as part of a planetary community, which ought to involve, besides humans, other kinds of living beings. The point is that people and communities in any part of the world should be viewed as the inhabitants and co-

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three ecological and social movements and anthropology. On bioregionalism and permaculture, see the chapter, Food as a global challenge; on ecovillages, see the chapter Ecovillages.

creators of our common global ecosystem (Hubbell – Ryan 2022: 81). (For similar ideas, see the chapter Introduction to the environmental humanities.)

A young woman living in an eco-village I met during my research expressed the same idea in different words, calling it a community feeling:

"For me, community feeling means that I can feel fellowship not only with my neighbor but also with the African baby who has no drinking water […] If we could say that we live in communion with the flora and fauna and we are one another's fellows in the world, a different world would evolve around this idea. I would therefore say that communal feeling is not only a human feeling" (H. L. 2009).

In contemporary ecological and environmental anthropology, two dominant dilemmas appear to unfold. It is evident in both that a revival of approach and method is indispensable, whether the researcher is working on "classical" ground or elsewhere.

One of these affects the applications of anthropology, whether the discipline can retain its neutral position (many claim that it cannot in any way – see Kottak 1999; Milton 1993a), and how much it can contribute to contemporary environmental issues (see Kottak 1999; Poncelet 2001). The other, theoretical, dilemma examines how to resist the modern – or interventionist, as Kottak terms it – philosophy which outlines a global ethic and wishes to impose it on everything and everyone, irrespective of cultural differences (Kottak 1999: 26). In a similar vein, Amelia Moore, who developed the anthropology of the Anthropocene, believes that we need new frames of thought and a new conceptual set for the new era of planetary history (Moore 2016). This is supported by the ontological turn, largely facilitated by questions deliberated in ecological and environmental anthropology: the indigenous perspective (epistemological and ontological systems), exploring and foregrounding local ontologies, setting aside Western categories for the goal of "understanding" and redefining the interrelations of humans, animals, nature, the environment and society on the basis of new ecological and ethical foundations. (To this, see the chapters "Environmental Philosophy", and "Introduction to the environmental humanities")

Both dilemmas occur in the work of Csaba Mészáros, who wishes to find the possibilities and place of anthropology "in working out morally acceptable responses to climate change" on the basis of his own field research and of ontological anthropology (Cs. Mészáros 2019: 145). This depends, in part, on a revaluation of the conceptual apparatus, leading him to rethink conceptual dichotomies such as nature versus culture, nature versus society, Western/European versus non-Western/indigenous, Otherness–Selfness, and the possible anthropological interpretations of the Anthropocene. He also examines how the results and outlook of anthropological research could be integrated into the discourse on climate change, understood in a more accurate way (Cs. Mészáros 2019).

Two case studies

Anthropologists are convinced that their discipline requires relevant knowledge to enable them to contribute to contemporary environmental problems. With their help, one can describe "how the Anthropocene and climate change appear from a non-European, non-metropolitan perspective" (Cs. Mészáros 2019: 153). Below, I summarize two case studies which exemplify this conviction.

The first example concerns the attitude of two fishing communities, San Andres and Olo-olo in the Philippines, to changes in the climate and the environment, with the help of Katharine L. Wiegele's research (2019). Both villages are situated next to the Verde Island Passage, the world's most important marine ecological zone, part of the Coral Triangle.

Figure 1. Fishermen from the Philippines.
Source: https://i2.wp.com/philnews.ph/wp-content/uploads/2016/10/fishermen-1.jpg

The two communities are affected differently by the impacts of environmentalism (education, protected areas), tourism, proximity to industry, state of terrestrial and marine habitats, and use of fishing methods. Some of the people live by fishing. They roam the seas by ships, so it is vital for them to have reliable circumstances, to guarantee a sure haul. Others live from farming and only fish from small boats for their own consumption. Yet the customary, safe natural circumstances are just as important for them as for the professional fishermen.

In recent years, however, grave changes have occurred: the long peaceful period suitable for fishing is disappearing, the weather is unreliable, the arrival of tornadoes is incalculable, and life is further aggravated by extreme heat waves and drought. The presence of fish has also become spotty: sometimes they do not appear for weeks, or even months, during the fishing season. Besides, the sea level is constantly rising, already threatening homes. The experiences about nature and livelihood which were valid for many generations in the past do not work anymore.

In this case, the researcher's aim is to comprehend the fishermen's cultural model about nature. She wanted to explore:

"(a) What knowledge do local people have about how and why the climate and the natural environment change? (b) How and why do local food producing activities change? (c) How do the fishermen conceive of their relationship with diverse elements of the natural environment, including weather, climate, the fish, animals and the supernatural? (d) Are there differences between the two communities in the listed questions?" (Wiegele 2019: 230)

Fishermen have always been exposed to a certain degree of risk and uncertainty. In addition to professional knowledge about nature (seasonal winds, patterns of storms and weather, lunar cycles, fish behavior), the fishermen also use economic and organizational strategies and kinship networks, as well as good fortune rituals, magic, and Roman Catholic rites (blessing of ships). These traditional coping strategies, however, have lost some of their effectiveness owing to growing uncertainty about the weather. Similarly, the farming community's previous experiences of temperature, rain and wind have gradually lost value as usable knowledge.

In this situation, it was particularly interesting how the local cultural model of nature responded to the changes. The research found that:

- Local people regard the climate and weather as something beyond human control; people adapt to the changes but they can't alter the climate.
- Nevertheless, some commented that humans can produce contaminations that destroy the natural environment and people's life in it, but they mainly interpreted it as a local process.
- Some cited Christian teachings to explain the processes (the population is mostly Catholic), claiming that what had happened was God's punishment. Again others attributed it to the dissatisfaction of other supernatural beings (*duwende*s, tiny invisible dwarfs or imps living in houses, trees, or under the ground). In both cases the break in the reciprocal relationship between the supernatural and humans (breaching secrecy, neglect of prayers, lack of faith and respect) caused discontent and wrath.[9]

The dominant interpretation remained the first: these processes were beyond human competence, nothing could be done about them. To describe the change, they used the human being as a metaphor; they personified the weather and climate, saying that the weather was changing because it was getting old, and like old people, the weather becomes increasingly changeable with time. This means that both climate and the Earth have life cycles which reach their end one day.

In this cultural model of nature, the main components of nature: people, plants, animals, weather, physical environment and the supernatural are linked by a common characteristic, the life cycle, as well as the moods and feelings typical of humans. Accordingly, everything progresses from birth toward death, including the Earth, weather and climate, and everything displays the mood and imprint of this cycle. In short, they conceive of global concepts such as "Earth" or "climate" on the basis of human concepts.

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[9]   The model of the human being as the protector of nature was only cited by those who had some environmentalist education. Instruction is part of protocol for the strict protection of the coral reefs.

Figure 2. Yakutia. Lake Laakha. 14 November 2013. Photo Csaba Mészáros

**Figure 3. Offering sacrifices to the ancestors at the remains of the winter quarters
of the parents. Yakutia, Tiit Aryy, 2002. Photo: Csaba Mészáros**

The other example leads us to northeast Siberia, Yakutia, with the help of Csaba
Mészáros (2019). Readers may be familiar with this geographical name, as in winter
its extreme cold weather, with temperatures below –60–70 Cº, is often in the news.
Yakutia is not only characterized by extreme cold temperatures, but also by
extremities of the weather, because very cold winters may be paired with hot
summers reaching +40 Cº. Another important term is permafrost. Thanks to the

climate, the ground is frozen in winter and summer, and only for a very brief period (the period of vegetation) does the upper segment of the soil thaw. This permafrost produces a special landscape and the ecosystem here is extremely fragile.

The region is populated by the Sakha, among whom Csaba Mészáros has been conducting anthropological fieldwork since 2002. His research has revealed the attitude of the local people to their natural environment, and how this relationship has changed in recent times due to climate change.

The Sakha conceive of the landscape where they live as a sentient and perceptive medium with material characteristics and a soul. The landscape and its elements are independent entities, members of the community just like the people. The ponds and meadows (*alaas*), which have great importance in the lives of the Sakha, have personality traits that the locals, at least those who are in permanent contact with them (fishermen, hunters) know well. They communicate and even barter with them accordingly. The landscape elements may fall ill, get hurt, be healed (e.g., by exterminating the ondatras which dig up and destroy the lakeshore), and they can also die. Mészáros illustrated the latter with a concrete example. In 1978, the Soviet state performed an experimental nuclear explosion here under a field and lake. Since then, the local people regard the area as dead.

> *"It does not mean that these ponds died out; no fish live nor water birds rest there – the natives simply regard them as lifeless and hence they stopped having economic or spiritual relationships with them"* (Cs. Mészáros 2019: 156).

The impacts of climate change are particularly powerful in the arctic regions, and they have caused serious changes in this fragile ecosystem: the permafrost soil is getting eroded, thawed, watery. The ecological change influences the landscape and the individuals and communities living there. This receives a special interpretation in their view of the world:

> *"When the banks of a lake or a field become swampy, it is not only (not primarily) an ecological process for the Sakha, but the illness of a member of the community. Likewise, when new species of animals appear, the water and fish stock of a lake changes, the hunted game disappears or the haul of fish decreases, all this indicates the changed behavior of a member of the community. Consequently, global climate change is principally interpretable and interpreted in the specific terms of the living, feeling landscape. In other words: the Sakha enter the Anthropocene world not surrounded by climatic anomalies and altered ecological conditions, but amidst sick or dead lakes, revengeful or humiliated fields"* (Cs. Mészáros 2019: 155)

In their interpretation, people have violated the behavioral norms among members of the community, therefore the non-human members of the community turned away from them, refuse to communicate, or behave in a hostile manner. A previously functioning worldview and practice have lost validity owing to the ecological changes.

Similarly to Katharine L. Wiegele, Csaba Mészáros also states, on the basis of his field research, that the attention anthropology gives to local communities is valuable. What is more, it is worth adopting certain local environment evaluation practices and ontology, and solving the environmental problems of any given region by applying them (Cs. Mészáros 2019: 160).

Recommended readings

Crumley, Carole L. – Deventer, Elisabeth A. van – Fletcher, Joseph J. ed. 2001. *New Directions in Anthropology and Environment. Intersections*. Walnut Creek, AltaMira Press.

The authors of this book of studies are convinced that anthropology can be a bridge between natural sciences and the humanities; it strives to integrate diverse sets of knowledge about the world. Also, they emphasize the usefulness and importance of using anthropological knowledge. The essays in the first part are about questions of defining the environment (cognitive anthropology, linguistics, archaeology); the second contains texts on faith, values, and environmental justice; the third part presents examples of applied anthropology. The book was designed to be easy to use in university education in courses concerned with contemporary environmental questions.

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ECO-SOCIAL WORK. NEW CHALLENGES ON THE HORIZON OF SOCIAL WORK

Szilvia Nyers

The call to rethink the economy is not new. In his book *Small Is Beautiful*, Ernst F. Schumacher warned society about the multitude of production-related problems which were already a heavy burden on the environment in the 1970s (Schumacher 1973). The new transcontinental challenges of our days make their impact felt in nearly every area of life. Global warming, or the pandemic, have brought home to humankind for good that there are no local problems without global consequences. More and more people are convinced that the state of the Earth is deeply worrying, and the guarantee for the future well-being of humankind is a comprehensive change of attitude. As Jane Goodall writes in her recently published book (Goodall – Abrams – Hudson 2021), increasing frustration, hopelessness, and helplessness are spreading more rapidly than ever before. Yet the impact of thousands of small but ethical deeds gives hope of the possibility for change. Through diverse forms of social participation and collective action, the world can potentially become a better place for future generations.

In the 21st century, reconsidering the attitude of humans to nature is an ever more pressing task. In this process, education has an undeniable role, for teaching as a power resource may contribute considerably to achieving a sustainable environment and society.[1]

This paper aims to interpret the significance of the relationship between humanity and nature via the aspect of social work, and the possibilities it affords for alleviating the complex problems which surround this relationship. More and more people in this line of work think that the training and practice of social workers ought to be expanded with more natural scientific knowledge.

The *global definition of social work* was approved by the International Federation of Social Workers (IFSW) and the International Union of Social Workers Training Schools in Melbourne in 2014.[2]

"Social work is a practice-based profession and an academic discipline that promotes social change and development, social cohesion, and the empowerment and liberation of people. Principles of social justice, human rights, collective responsibility and respect for diversity are central to social work. Underpinned by theories of social work, social sciences, humanities, and indigenous knowledge, social work engages people and

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[1]   See the 17 goals of sustainable development formulated by the UN (Sustainable Development Goals). Access: https://sdgs.un.org/goals

[2]   Global Definition of Social Work. Access: https://ifsw.org/global-definition-of-social-work/

structures to address life challenges and enhance wellbeing. The above definition may be amplified at national and/or regional levels."

"*Social work is principally determined by the given context in which it is pursued*" (Szöllősi 2015: 8). Starting from a given problem and its environment, it applies universal or specific theories and practices. Let us take the example of Hungary: from a global perspective, the country has been less gravely hit by natural disasters (earthquakes, tsunamis, tornadoes), while the harm caused by human activity exert much more marked influence. One need only think of the red mud catastrophe at Ajka in 2010: the disaster claimed several lives and damaged those of many others, including the ecosystem. The nationwide solidarity this evoked, however, revealed the helping potential in diverse institutions and organizations, as well as civilians. At the same time, it also exposed the complexity of handling social problems. As regards social workers' possibilities of intervention, it clearly manifested the need for certain changes so that help could become effective in possession of adequate information and knowledge.

Another example of a cross-border solution is the handling of the refugee crisis. The causes of migration include climate change as well, which forces groups of people to leave their homes which have been hit by some *catastrophe* (environmental pollution) *caused by human activity* or a *natural disaster* (earthquake, volcanic eruption, flood, etc.). Owing to the complexity of the problem, social work can only offer effective help when it combines innovative approaches with new elements of knowledge – regarding local cultural relations or climate conditions. There are, however, several divergences between the Hungarian and international practices, first of all concerning the relationship between humanity and the environment. The extended interpretation of the concept of environment has also appeared in the Hungarian academic literature of social work: there is a shift away from the social determination towards the natural definition which claims that the human species has an inseparable relationship with the biosphere. In spite of this, environmentally sustainable solutions for the promotion of individuals' wellbeing has not become a decisive part of the practice of social workers.

In contrast, the public sector has played the role of a stop gap in the development of empowering the vulnerable groups of society. There are several institutions and services in the public sphere nationwide that try to ethically satisfy some of the needs of those who on natural resources, one example being social gardens. In their interpretation, a social garden is a communal garden whose therapeutic and economic gain is equally considerable. It provides the opportunity to influence views, teach, work and develop, experience success, decrease the risk of segregation, alleviate poverty, form local communities, built trust and even inspire social undertakings (https://diverzitasalapitvany.hu/oko-kert/)

The Budapest Bike Maffia have introduced gardens in several homeless shelters in the capital in which volunteers and the institution's clients as well as staff work together in a form of urban agriculture. The participants learn the basics of planting and plant management and recultivate the given areas. This provides the opportunity for different social groups to unite for a common goal. (For similar urban initiatives, see the chapter "Not everyone can move to the countryside" – Urban communal responses.)

**Figure 1. Homeless shelter of the Hungarian Red Cross in Madridi road, 2019.
Source: https://bikemaffia.com/**

By now, the issue has become unavoidable for our area. As Peter Jones, instructor and researcher at James Cook University, Australia, founder of a professional organization related to climate change (Social Workers for Climate Action[3]) put it:

> "At the heart of this small but significant body of literature, and the perspective it represents, is the idea that eventually the problems facing the natural environment will begin to have such a clear impact on society that social workers will need to make the environment -physical as well as social- and our relationship to it central to our ongoing development of theory and practice." (Jones 2010: 70–71).

Green (or eco) social work is a concept which stresses a holistic approach to help. It is a global paradigm which incorporates all human and non-human living species throughout the world. Its value system is egalitarian and stresses inclusion, the central role of a just distribution of resources, and the right of the individual to a dignified and sustainable life. General activities of green or eco-workers include: the assessment of needs among victims/survivors and in communities affected by a disaster; coordinating goods and services to mitigate suffering; building/rebuilding communities; protecting the rights of children; empowering individuals and groups; extending their capacities; developing their resilience; reducing risks to improve their chances in the face of future unfavorable events; guarding their interests and lobbying (Dominelli 2018). Green social work lays weight on the central role held by specialists in activities for the environment.

In our age, the complexity of social problems increasingly demands social workers to have ecological knowledge, be well-informed about the systems of nature and

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[3] Access https://www.socialworkersforclimateaction.org/

be aware of the impact of human activity on the environment, and vice versa (Woods 2021). The expansion of the urban way of life throughout the world has led to the devastation of natural habitats, and hence the decrease of biological diversity. It follows that it is more and more imperative to cooperate and transform the patterns of consumption so as to achieve human wellbeing and sustainable development. Green social work implies practices based on a communal approach such as communal action, communal learning, broad collaboration, and raising awareness to turn communities into indispensable resources in the fabric of society (Woods 2021). Social workers predominantly work with people in the lower social strata who are more markedly exposed to political and economic changes, or, for that matter, to climate change. (See the chapter on Environmental Justice by Gyula Nagy.) When communal resources are mobilized, poverty can be alleviated more effectively. Writing of the connections between poverty and contact capital, Fruzsina Albert (2022) argues that strengthening interpersonal relations might entail economic gain and also lessen the risk of dropping out. It is beyond doubt that specialists pursuing community-based practices are important, as they can explore the roots of problems in social relations or in their deficiencies, and they make attempts to revive society innovatively. Excellent examples are social undertakings, a form that has various definitions. "Originally, a social undertaking was created to enable those living in poverty and extreme poverty to make a living" (Illés 2021: 60). They were built on social innovations aimed at elevating the standard of living of the community and responding to challenges of humanity (Veresné – Balaton 2021). Further, this solid economic concept is aimed at reorganizing everyday life and making it sustainable in both social and ecological terms (Buda et al. 2020).

On a global scale, the idea of a future in which the whole population of the Earth lives a consciously ecological way of life still appears remote. In their book published at the end of the 2010s, Sattmann-Frese and Hill (2018) already called for the elaboration of a new profession. They use the term "sustainability worker" to designate green social work. They stress that specialists engaged in questions of sustainability have highly important roles in improving individuals' ecological knowledge and competence. Vulnerable groups are fundamentally less receptive to environment-friendly solutions. This is partially due to a lack of adequate information. They are also hard put to acquire resources. For example, burning household garbage (plastics, textile, etc.) to generate heat, or outdated heating equipment contribute heavily to the deterioration of air quality, and consequently, of individuals' quality of life. What is therefore needed are complex community-based services – thematic club meetings – which help people learn about unsustainable consumer patterns and create the transition from a consumerist society to a more sustainable, conservationist society.

Lena Dominelli's (2018) book on eco-social work contains several case studies in addition to the theoretical section. Their main point is the methodological knowledge imparted to the reader which may enable him/her to generate progressive processes at a local level, whether the topic is a new challenge to the urban way of life, communal gardening, a pandemic or terrorism. The example of Namibia makes the transdisciplinary character of green social work easily intelligible for ordinary people as well. Government interventions in response to the extreme drought afflicting the country only proved enough to mitigate the symptoms; finding alternative models of production and consumption became indispensable.

Through recording the narratives of local people, specialists could explore the deep layers of the problem. A considerable number of Namibians were already poor before the drought, and the drought made agricultural activity completely impossible. Most were forced to sell their property. The pressing need for change rallied diverse specialists together and formed extensive partnerships. That was followed by the local community developing process in which the population was the protagonist. During communal planning, they collected all adaptable alternatives, such as water collecting methods and the creation of wells, before all this was put into practice. Finally, the knowledge thus acquired was integrated into the local social worker training curriculum (University of Namibia).

In summary, it is the duty of social work to look into the depths of social and environmental structures and use relevant multidisciplinary interventions. Consequently, the transformation of the educational system is indispensable: ecological knowledge must be adapted and specialists' environmental competence improved. For individuals, their relationships to both the environment and the community are decisive, as they can greatly contribute to enhancing the subjective feeling of wellbeing. In other words, the healing power of nature and the community holds hope for a new type of self-care. This working model is still fairly far from mainstream Hungarian practice. The assumption of responsibility by the public may provide a good example for the profession. The global environmental crisis will certainly place great demands on human beings for a long time, but it also puts on them the constraint of collaboration. If society is capable of understanding that this partnership will have an essential role in a more liveable life and future, the transformation – the guarantee for a long-term survival of life on Earth – may come about.

Recommended readings

Dominelli, Lena (ed.) 2018. *The Routledge Handbook of Green Social Work.* London – New York, Routledge Taylor & Francis Group.

Professor Lena Dominelli developed the paradigm of green social work. At present she teaches and researches at the university of Stirling, Scotland. She has published on diverse disaster situations; her manual on eco-social work is outstanding. It puts the broad spectrum of local environmental problems in a global context. It is a 500-page synthesis of theory and practice. Set in a holistic framework, it is particularly useful for specialists, teachers, students, environmental activists, and even politicians. The lucid articulation of the work allows anyone to improve their knowledge through the sections they find useful and inspiring.

Goodall, Jane – Abrams, Douglas – Gail, Hudson 2021. The Book of Hope: A Survival Guide for Trying Times. New York, Celadon Books.

Ethologist and anthropologist Jane Goodall became famous for her research on chimpanzees. In this book written with Douglas Abrams, she voices her hopeful optimism and calls for action against climate change and for a conscious way of life and for making pressing decisions. Her experience gathered over more than half a century and her conversations with her co-author shed new light on what is probably the largest challenge of our age, climate change.

Schumacher, Ernst Friedrich 1973. *Small Is Beautiful: A Study of Economics As If People Mattered.* London, Blond & Briggs.

Statistician and economist Ernst Friedrich Schumacher says that small is beautiful: his vision is that of a more sustainable and ethically functioning world. It is proof of the lasting validity of the work that modern society's constraints of growth and consumption still inflict extremely heavy damage on the planet. Focusing on energy resources, the author tries to restore economic ideas on the foundation of a humane world. He praises the small, which is not only beautiful, but also forms the basis for the survival and development of the planet in the long run.

Recommended documentary

Morgan, Faith (dir.) 2006. The Power of Community: *How Cuba Survived Peak Oil.* Access: https://www.youtube.com/watch?v=aeM5emtaVC0
After the disintegration of the Soviet Union, Cuban society had to introduce environmental and social reforms. It set a goal of economic transformation that would be independent of non-renewable resources. Through phases of the introduction and implementation of communal solutions, the consequences of state intervention can be properly studied.

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Settmann-Frese, Werner – Hill, Stuart B. 2018. *From Social Work Towards Sustainability Work.* Academia Letters preprint. https://www.academia.edu/43775503/From_Social_Work_towards_Sustainability_Work

Szöllősi, Gábor 2015. „A szociális munka új, 2014-es globális definíciója" [The new, 2014 global definition of social work]. *Párbeszéd: Szociális Munka Folyóirat,* 2/1. https://ojs.lib.unideb.hu/parbeszed/article/view/5789/5419

Veresné, Somosi Mariann – Balaton, Károly 2021. A társadalmi innováció folyamatának mérési módszertana és a Társadalmi Innováció Irányítási Rendszer jellemzői [Measuring the method of the process of social innovation and the characteristics of the Social Innovation Control System]. In Siklos T., Tamás (ed.): *Társadalmi innováció – társadalmi jólét.* Budapest, Ludovika Egyetemi Kiadó, 27–42.

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NATURE CONSERVATION AND TRADITIONAL ECOLOGICAL KNOWLEDGE

Anna Varga

When people heard someone mention nature conservation any time between the late 19th century and today, what appeared before their mind's eye were mostly images of species either extinct on the verge of extinction, or images of national parks with park rangers in green outfits trying to protect the closed and intact pristine wilderness from humanity (Standovár – Primack 2001).

The protection of nature has been constantly present in the history of humankind, unnoticed. This paper discusses the paradigm shift in the science of ecology and in present-day conservation with the appearance of the role of humans and human sciences, as well as traditional ecological knowledge.

In recent years, with the spreading and application of the approaches of Environmental Humanities (hereafter EH), the focus has shifted to the historical and social aspects of modern nature conservation on account of it being a human activity. Moreover, the ecological and conservation professions themselves have also concluded – having realized their mistakes, their limitations and searching for effective solutions – that taking into consideration the social and individual contexts and human activity itself is indispensable for the conservation of natural values.

"Indeed: why shouldn't we let the full arsenal of our human faculties assert themselves (during our inquiries into nature), but in a more appropriate, wiser array? – emotions and fragmentary, but useful knowledge alike? Why should we repeat in this undertaking all our previous mistakes and blunders? seeing everything in a silly hierarchy, activism, art, science. Obviously, this undertaking is made compulsory by the 'sinking ship', the many concerns of the Earth, the devastation at a frightening pace of the biosphere, the flora and fauna. In this undertaking, we need and shall need more and more sorely the enrichment of our wretched nature concept with aesthetic, moral, metaphysical, etc. content; especially, in a wiser and more tolerant but radical re-interpretation of the relationship between nature and human beings. From another angle, it is necessary because the spirit of the modern age has de-sacralized nature, so its re-sacralization (in a more up-to-date sense of Saint Francis's existential democracy) is an imperative, inevitable program." (Juhász-Nagy 1993: 47).

The idea I presented as a motto of my paper is from the academician and Széchenyi Prize-holding ecologist Pál Juhász-Nagy's book *Nature and Man* (1993), in which he pointed out to the Hungarian biologist and ecologist profession the significance of understanding the "relationship between the landscape and the human being", then still an unfamiliar concept.

By today, it has become a significant research area among Hungarian ecologists, too, and its role in nature conservation is gaining traction (Zs. Molnár et al. 2009:

95–115; Cs. Molnár et al. 2010). It is exemplified by the survey conducted by Mihók and her collaborators (2015) who found that nearly half of the most important questions of Hungarian nature conservation stood in direct connection to landscape use or involved cooperation with people living in the landscape or with other interest groups. The theme of the relationship between humanity and the landscape first became an intriguing subject in connection with cultural heritage (Maffi 2005). Perhaps the finest imprints of the relationship between humanity and nature in the spiritual legacy of traditional cultures are the stories of folk tales and myths, which convey the character, morals and solutions of the attitude to nature of a community which lives in the given landscape (Cs. Molnár 2010: 81–88). Folk art can also be studied from this perspective (Turner et al 2000). One of the most outstanding Hungarian researchers of the connection between landscape and human beings, Bertalan Andrásfalvy was led by the study of embroideries and woven textiles to the interaction between the landscape and people of Sárköz and the Danube bank, at a relatively early date (globally speaking), in the 1950s (Andrásfalvy 2007). It also took the field of ecological science a long time to rethink the classical "dehumanized" *wilderness* and *fortress* type conservation approaches, and the Yellowstone type conservation model, and for the "human in the landscape", the interdependence and organic interaction of natural and cultural diversity, to become the central issues (Brown et al. 2005; Zs. Molnár et al. 2009; Mihók et al. 2015). Ecology has realized that human activity is not solely destructive, but that it may also enrich natural values (*Declaration of Belém* [1988], http 1.). However, this did not become widely recognized before the turn of the 20th and 21st centuries (Agnoletti – Rotherham 2015; Zs. Molnár et al 2019: 157–176).

Today we have many studies from all corners of the world confirming that very often the values of nature derive from hundreds or thousands of years of human activity adapted to the character of the given landscape. Ecological processes reflect the cultural legacy, world view, economic and social positions of those who live there (Brown et al. 2005; Takeuchi 2010; Babai – Molnár – Molnár 2014; Agnoletti – Rotherham 2015; Oldén – Halme 2016). Ignorance of these adaptive, natureforming activities often derives from the fact that a stranger not familiar with the local conditions cannot notice these often invisible activities fitted surprisingly snugly and deeply into the landscape. For instance, the Californian indigenous people shaped and maintained the landscape through conscious burning; they formed habitat types similar to European wood pastures, with scattered trees (oak species, *Quercus lobata, Quercus dumosa*) (Anderson 2005: 1–4). It has also been found that in some rainforest landscapes, especially along rivers, the richness of species is also considerably attributable to the activity of the indigenous people. In Mexico, for example, local communities created multifunctional landscapes alternately used for forestry and horticulture (Heckenberger et al. 2003; Toledo et al. 2003) The landscapes where the state of nature is determined by past or current human activity, belong to the category of cultivated landscapes (Plieninger – Bieling 2012).

Fifure 1. A restored wood pasture in the Bakony. Zöldág Farm, Eperjes hill, Olaszfalu. Photo: Anna Varga, 2017

As in other parts of the World, the European landscapes with natural vegetation and biota are almost exclusively cultivated as well (Europe 2000; Solymosi 2011; Konkoly et al. 2021). A mere 5 % of the territory of the European Union is exempt from any human influence, and is therefore exclusively influenced by environmental factors (Agnoletti – Rotherham 2015). It has been demonstrated for one of the EU's nature conservation habitat types marked Natura 2000 (Halada et al. 2011) that out of 231 types of biodiversity (a multitude of different natural kinds), the preservation of 63 types depended on some kind of agricultural activity, first of all pasturing and hay-making, e.g., the European dry heaths (4030), the Pannonic loess steppe grasslands (6250), or the Scandinavian (9070) and Iberian peninsula's evergreen wood pastures (6310). The greatest threat to these habitats and cultivated landscapes and their *biocultural diversity* is the abandonment of landscape use (Tárrega et al. 2009), the loss of traditional ecological knowledge (Rotherham 2007) and the cessation of the resilient use of the resources in the landscape (Fischer et al. 2012). In Europe, these processes gained momentum during industrialization and soared after World War II (Johann 2007; Chételat et al. 2013). There are regions where the break with traditional landscape use occurred relatively early, e.g., in England (Rotherham 2007) or Switzerland (Bürgi – Gimmi 2007), but there are other, mainly marginal, regions, such as some areas in Central and Eastern Europe, where these processes began to take off only recently (Ivascu – Rakosy 2017: 21). There is hardly any European landscape where giving up the traditional use of the landscape or intensifying agriculture has not created problems of conservation (MacDonald et al. 2000). The most spectacular forms of this change are the spreading of shrubbery in the abandoned areas, the homogenization of the landscape structure, and the emergence of compact forests, tree plantations or

plough-fields (Agnoletti 2007; M. Biró et al. 2013; Forejt et al. 2017). Partly owing to the abandonment of traditional land use, Western Europe has areas whence traditional ecological knowledge has practically completely disappeared (Rotherham 2007: 100; É.Biró et al. 2014). It can also be stated in general that, based on their long-term cooperation, the relationship between human beings and the landscape is gradually changing, getting weaker and weaker even in rural settlements throughout the world (Buijs et al. 2006). The latter situation is particularly perilous because it leads to the dissipation of the sense of responsibility even among those who live with natural values (Anderson 2005; Ewaso Lions, http 2).

Research of traditional ecological knowledge and its application in nature conservation

In the past decades, a new possibility and a new challenge have emerged worldwide to enhance the efficiency of the management of nature conservation: taking into consideration the *traditional ecological knowledge* (TEK) of the biosphere and the ecological processes, and applying it in both strategic and practical decisions, as this knowledge also constitutes part of natural and cultural diversity (Berkes et al. 2000:1251; Hernández-Morcillo et al. 2014; Sutherland et al. 2014; Schmeller – Bridgewater 2016). Traditional ecological knowledge forms part of traditional knowledge of nature, as defined by Hungarian ethnographic literature (Hoppál 1982: 271). Its most widely accepted definition is that of Fikret Berkes (Berkes 2008: 3): "*It is knowledge, practical experience, and a set of beliefs about the relationships among living beings (including humans), and between beings and their environment, which emerges in processes of adaptation and is transmitted through generations as part of their culture.*"

Zs. Molnár et al. (2008: 14–27) added the following to this definition:
"In Hungary, in the middle of Europe, where science and urban knowledge have long been influencing the knowledge and value system of the peasantry, we use the following definition: it is personal knowledge, experience, beliefs about the surrounding natural-agrarian landscape, its flora and fauna and about the influence of human activity on the landscape and its biome; it is based on several decades of personal natural, agricultural experiences but also incorporates collective elements of centuries-old knowledge; it is basically independent of science and is also connected to the rites of social life."

It is an important feature of TEK that certain of its elements (its beliefs and worldview) remain almost unchanged, while several components of practical knowledge change dynamically with the incessant change of the environment, being enlarged with newer and newer elements of knowledge (Menzier – Butler 2006: 1–17).

TEK basically consists of four organically related parts:
– general knowledge (facts and knowledge of the animate and inanimate natural environment),
– practical experience (of landscape use, agricultural practice and experience),
– beliefs (worldview and value system),

- traditional methods of learning (e.g., directly transmitting knowledge from generation to generation through tales and stories, as well as learning directly from nature) (Berkes et al. 2000; Turner et al. 2000; Whiteman – Cooper 2000; Berkes 2008: 203–220; Zs. Molnár 2014).

The research into traditional knowledge of nature, including traditional ecological knowledge (e.g. use of medicinal herbs and domestication of diverse animal and plant species) has intrigued the realm of science for thousands of years (first of all, medical and agrarian sciences, e.g., Cato *De agriculture* [c. 160 BC], Columella *De re rustica* [c. 61–65 AD; 2005]). Contemporary research in traditional ecological knowledge gathered momentum in the second half of the 20th century, first of all in response to cultural anthropological, ecological and environmentalist questions, and also connected to the protection of the human rights of indigenous people in the colonies (Smith 2010; Hunn 2007; Berkes 2008: 258). These investigations tend to formulate some recommendations for sustainability or nature conservation, which may refer to the solution of the given question (Berkes et al. 2000), or to the support and application of traditional ecological knowledge (Varga et al. 2017b; Varga et al. 2019). In the past decades, there has been a steady increase in conservationist activities which have effectively applied TEK at both theoretical and practical levels (e.g. Hunn et al. 2003: 79; Ens et al. 2015; Roué – Molnár 2017). It is important to mention, however, that there are also some less successful cases. These warn us to have a more thorough knowledge of this kind of cognition and a more humble approach (Nadasdy 1999; Ween Riseth 2011; Padilla – Kofinas 2014; Pooley et al 2014). There can be several factors that aggravate the employment of TEK in science and nature conservation. The extended list of Huntington (2000) and Heikkinen et al. (2012) include:

- traditional and academic (Western scientific) knowledge types are fundamentally (e.g. epistemologically) different (Barkes 2008: 10–16);
- TEK often provides knowledge of different species and habitats which conservationists would like to protect (Biró et al. 2014);
- in many communities, TEK is largely lost, often living in memory alone, and does not form part of living practice (Benz et al. 2000; Bürgi et al. 2013);
- the fortress-type nature conservation practice which completely excludes human activity, chased local people away; with them, traditional ecological knowledge of that area also disappeared (Riseth 2007);
- owing to the excessively accelerated social, economic and environmental changes, the former traditional ecological knowledge lags behind in adaptation, and may lose validity (Fernández-Llamazares et al. 2015);
- in many cases, only the easily applicable TEK elements (general practical information) were applied to nature conservation (Reo 2011: 1–2), whereas the ethical and effective application of TEK requires that all four aspects of traditional ecological knowledge be integrated and fostered in their entirety (e.g., Nadasdy 1999; Berkes et al. 2000).

**Figure 2. A ranger and herder discuss grazing in a pasture outside Marcali.
Photo: Anna Varga, 2012**

The application of TEK in conservation is particularly important for habitats whose forming and maintenance (e.g., mountain hayfields, wood pastures) can only be realistically realized and upheld in the long run in possession of this knowledge (Anderson 2005; Babai – Molnár 2014). The maintenance of these types of habitats requires traditional modes of landscape use, considerable human labor and managing care (Oteros-Rozas et al. 2013; Varga et al. 2017a). In the previous century, these modes of use were often given up, hence these areas of considerable natural and cultural value have drastically decreased all over Europe (Schmitz et al. 2012). The restoration and maintenance of habitats in the abandoned areas were begun, and is pursued almost exclusively by conservationists. In ideal cases, through the recognition of traditional landscape use, the underlying KET also becomes known, used and acknowledged. There are indeed positive cases (Hirschnitz-Garbers – Stoll-Kleeman 2011), but in the support systems and prescriptions (e.g. Natura 2000) or in practice, KET is not, or just nominally, recognized. The cause – apart from those mentioned above – is the education and working methods of conservationists. Top-down and science-based decisions are predominant; during their studies, conservationists almost exclusively only encounter Western academic scientific knowledge and its attitude to the natural world (Standovár – Primack 2001; Mihók et al. 2016). This is further reinforced by the fact that local residents with TEK usually have little ability to assert their interests(Heikkinen et al. 2012). It would promote the solution of the problem if an interest group could take an active part in the integration of TEK. This would require learning about the attitude to this kind of knowledge not only of the communities that provide and foster it, but also of those who would potentially

receive and use it. As regards conservation, one of the centrally important group of recipients are the rangers, officials of national parks and other conservation specialists (Lewis 1989: 940; Robinson – Wallington 2012; Varga et al. 2017b), about whose expertise, including traditional ecological knowledge, hardly any information is available (see: Babai – Molnár 2013; Oteros-Rozas et al. 2013; Hernández-Morcillo et al. 2014).

In Hungarian ethnography and ecology, there were precedents of research into the traditional knowledge of nature, but the term and concept of traditional ecological knowledge were introduced to the special field of ecology by Zsolt Molnár and his colleagues. In earlier periods, all that is and can be understood today by traditional ecological knowledge was earlier discussed as natural historical knowledge, animal and plant knowledge, or elements of vernacular religion, folk tales or traditional modes of transmitting knowledge (e.g. Herman 1914; Paládi-Kovács 1979; Takács 1980; Péntek – Szabó T. 1985; Paládi-Kovács 2001; Andrásfalvy 2007). Later, studies of ecological anthropology increasingly placed the issues of the relationship between natural scientific phenomena and society in the foreground (Borsos 2004; Babai 2021).

**Figure 3. Participants of the conservationist
and bird-banding camp get acquainted with the biome and agricultural activity
of wood pastures. Photo: Anna Varga, 2017**

Among ecologists in Hungary, the issue of TEK began gaining strength in the early 2000s upon the initiative and guidance of ecologist Dr. Zsolt Molnár; it has been given a place in the Traditional Ecological Knowledge Research Group of the Ecological Research Center of ELKH (formerly HAS Research Institute) (Molnár et al. 2009; Zs. Molnár – Babai 2021). Through its active international

presence and novel research methods in fieldwork, as well as their continuous communication with practical spheres, the research group has won acknowledgement for TEK and its research in the Hungarian scholarly and conservationist spheres within a relatively short time (Cs. Molnár et al. 2010; Zs. Molnár et al. 2019; Molnár – Babai 2021). In recent years, several publications by ecologists have argued that traditional knowledge of nature is a living system of knowledge in the 21st century as well, and its research in Hungary and in the Carpathian Basin, as well as its deliberation in practical matters may have an important role (e.g. Molnár et al. 2009; Molnár 2012; Dénes 2013; Ulicsni et al. 2016; Varga et al. a, b 2017; Biró et al. 2019; Babi 2021; Ulicsni – Babai 2021). It is generally true of ecological investigations that its aims should include practice-oriented objectives. Alternatively, the motivation for research might come directly from a conservation problem, for instance: what role could wood pasturing have in preserving the natural values of flood-plain areas? (Varga et al. 2019: 143). This is one reason for why it is important to bring the results of research out of academia and into social and decision-making spheres. Consequently, in many cases, popularizing is also an integral part of this research (e.g. Varga et al. 2019; Varga – Bajomi 2021, http 4).

Examples of international conventions and initiatives

One of the most important platforms of conservation goals and supportive regulations includes the various Hungarian and international agreements which are the main tools for the promotion of "the interest of conservation" among decision-makers. It is therefore significant that more and more international conventions and practical examples call attention and stress that natural and cultural diversity, as well as cultivated landscapes are of key importance for the natural values of the world; protecting and sustaining them is the central goal of conservation today (Fischer et al. 2012: 167–172; Rotherham 2015: 3405; Schmeller – Bridgewater 2016).

Several examples can be cited from recent decades to show how traditional landscape use, traditional ecological knowledge (Ianni et al. 2015) or a more direct contact with the landscape (Celentano – Rousseau 2016) can be revived. One example is the revived practice of pollarding trees in Italy (Coppini – Hermann 2007) and England (Read et al. 2010; Jørgensen 2013). A considerable amount of knowledge can be added by research in landscape history (Foster et al. 2001; Cevasco et al. 2015) and in traditional ecological research (Hunn et al. 2003). Investigations in recent decades have confirmed that the greatest efficiency can be achieved when all these studies and conservationist treatments take place with the active involvement of local inhabitants (e.g., http 2; Mihók et al. 2016). The purest examples are the areas preserved by the community (Berkes 2004; Varga – Bajomi 2021). This is also highlighted by several international conventions, of which the Landscape Convention and the Natura 2000 network (Agnoletti – Rotherham 2015) are the most important in Europe. The latter was not created for the specific goal of preserving biocultural diversity. Rather, it supports forms of cultivating activities that promote the practice of using the traditional landscape in a way favorable for habitat and bird protection (e.g. pasturing). This is also supported by the Globally Important Agricultural Heritage Systems project (http 3.),

coordinated by the FAO and UNESCO. Through the criteria of World Heritage, UNESCO has recognized since the 1990s those landscapes whose specificity is connected to some human activity, thus tightly interweaving natural and cultural heritage. A good example is the saline plains of the Hortobágy and the pastoral world related to their use. Several sets of knowledge and practices traditionally connected to certain landscapes are recognized by UNESCO as intangible heritage (e.g. traditional fishing along the lower stretch of the Danube in Hungary, the traditional knowledge of herders of the Hortobágy, http 5, 4).

One of the most significant 21st century conventions is the *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* (IPBES).[1] The aim of this body (established in 2012) is to facilitate solutions of ecological and conservation issues and problems by interpreting and using existent knowledge in the world; and further, to contribute to the wellbeing of humankind in a way that local communities be acknowledged, supported and involved in the safeguarding and improving of natural-cultural values (Palotás et al. 2019). IPBES not only warns of the significance of landscape use and the conservation of related traditional ecological knowledge, but it recognizes the latter as having equal rank to Western scientific knowledge (Molnár et al. 2019).

This kind of thought and goal is new in the sphere of international conventions, because it makes it explicitly clear that conservation can and must be built on concepts other than those derived from natural science as well. "Mother Earth" is named on the central image of IPBES, thereby recognizing all kinds of knowledge and worldviews that differ from the Western scientific world; this also resonates with Pál Juhász-Nagy's earlier quoted thought and can be interpreted as a step toward the re-sacralization of nature (Diaz et al. 2015; Schmeller – Bridgewater 2016; Molnár et al. 2019).

Recommended readings

Anderson, M. Kat 2005. *Tending the Wild*. Los Angeles, University of California Press.
The book could have been written about the traditional Hungarian landscape use and the conservationist and other efforts to revive it. The book introduces in detail the 'unnoticeable' but decisive farming methods of the Californian wooded (Quercus spp.) prairie which is very similar to Hungarian landscapes, and their role in preserving natural-cultural values.

„*Tending the Wild*" is one of the decisive foreign works that has influenced my own work. I heartily recommend it to anyone who would like to explore the depths of the diversity of the relationship between nature and the human being, or would like to learn more about Californian Indians' folk knowledge of nature and contemporary challenges. It is available in English, but it is easy to read.

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[1]   IPBES: "is an independent intergovernmental body founded by states in 2012; it has 132 member countries today. It makes scientific assessments of the fast-deteriorating biome, ecosystems and natural goods of the planet for politicians and decision-makers. It offers t tools and methodologies for creating policy in protection of natural values and their sustainable use."

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THE TRAGEDY AND COMEDY OF THE COMMONS[1]

András Takács-Sánta

A tale of the tragedy of the commons

Once upon a time, beyond the beyond, there was a small village. Outside it was a pasture rich in grass for any villager to use for free. There were twelve cattle herdsmen in the village, each with a cow. Every morning, the cattle were driven to grass and brought home for the night. That's how they lived for a long time, modestly but happily. The cows gave milk abundantly and not only the families of the herdsmen but everybody in the village had a good share of milk, butter, cheese and cottage cheese.

One day, a new herdsman moved into the village, who pondered: "Everyone has a single cow, what if I bought two, there is enough room on the pasture, and I would make more profit than the other twelve. I could sell the milk in the neighboring village where the pasture is not so good." The act followed the thought, and the next morning fourteen cows were grazing in the pasture. Another farmer grew envious of him: "If the new neighbor has two cows, why can't I have another one? He is right. Two cows yield more and the family will live better. Besides, if I don't put another cow to grass, the rest will pocket the profit that could also be mine." Soon fifteen cows were gorging themselves on the grass of the pasture.

And so on and on it went. Soon, all thirteen herdsmen were thinking in the same way. The process could not be halted and soon they all had two heads of cattle each, then three, then four and then five. Other villagers also took note of the lucrativeness of cattle farming, so seven of them entered into animal husbandry with five cows each. Soon a hundred cows were grazing the pasture and the herdsmen were selling their produce far and wide, away from home. They made extraordinary profit, and their kith and kin lived in formerly unimaginable abundance.

Had it been up to the cattle farmers, the number of cows would have kept increasing, but that was not to happen. After fair weather came the storm. The pasture was no longer so green and lavish, and soon it became quite barren as the cattle herd devoured the grass faster than its pace of regeneration. The cows lost flesh and fell ill. The herdsmen obviously noticed the deterioration, but they felt helpless: each of them thought that if he alone reduced his number of animals, that would be insufficient for a solution, and eventually he would be disadvantaged alone. This is how the tragedy was soon to come: all the cattle perished, the herdsmen went broke, and their families starved.

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[1]   Based on Takács-Sánta (2017) with minor modifications.

Environmental problems
as tragedies of the commons

The above tale is about far more things than would seem at first reading. It is actually a variant on the famous parable of the tragedy of the commons.[2] The model can be applied to a broad spectrum of phenomena. Let us leave pasture, cows and farmers, and look at the problem at a more abstract and general level. What does the story boil down to? We have a common (natural) good freely available to us.[3] We use it more and more in rivalry with each other till it becomes overused, leading to the deterioration of the quality of our common (natural) good, then its demise and eventually social tragedy. The model has two key premises: (1) there is free access to the pasture; (2) the herdsmen are motivated by short-term self-interest. When both postulates apply, the story inevitably ends in tragedy.

The original parable was also about an environmental problem, but the pasture can easily be replaced by the game or wood stocks of the forests, the fish stock of the oceans, the water of the rivers, the atmosphere of the earth, etc. (e.g. Ostrom et al. 1999; Gardner – Stern 2002). (This means that the common natural goods comprise not only "natural resources" but also "natural devourers", the recipients – including the atmosphere – of our contamination, waste, and pollution.) We have to put ourselves in the cattle farmers' shoes. Importantly, it concerns not only individuals, but also groups, people or organizations (e.g. companies and governments). The parable can therefore be applied to innumerable environmental problems from the local to the global level. It applies to all environmental problems in which a natural resource or a natural devourer is freely accessible, that is, it is not owned by anyone (or the proprietary rights cannot be asserted, or only with great difficulties), or again, when there is rivalry among the users and one actor's activity decreases the chances of the rest (Ostrom et al. 1999). In light of the above, nearly all environmental problems have an aspect of the commons (Dietz et al. 2002).[4]

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[2]   The model of the tragedy of the commons was first proposed by mathematical amateur W. F. Lloyd, but today it is mainly associated with Garrett Hardin, who revived it in his famous article (Hardin 1968) (see also Hardin 1994; 1998). In Hungary, the model was made widely known by Elemér Hankiss (Hankiss 1979). In terms of game theory, it is generally described as a prisoner's dilemma of many actors in which those involved always choose rivalry instead of cooperation (Mérő 1996). There are, however, other possible game theory approaches to the tragedy of the commons, too (Dietz et al. 2002).

[3]   The term "tragedy of the commons" is misleading. It would be more accurate to say "tragedy of freely accessible pastures". "The commons" can be taken as a freely accessible pasture but it may equally be a pasture owned and groomed by a human community or, for that matter, by the state. Below it will be seen that one possible way to prevent the "tragedy of the commons" is the regulation of the use of the "common pasture" by a government or a (small) community, who devise certain institutions for the control of access. Yet, as the "tragedy of the commons" is a time-tested phrase, I also use it. (The Hungarian saying „közös lónak túrós a háta" (literally, a common horse has a sore back) is inaccurate and misleading; actually, the freely accessible horse fares badly, while one owned by a collective (or the state) does not necessarily suffer from common usage).

[4]   In his above-mentioned classic article (Hardin 1968), Hardin focused on one of the main causes of the environmental problems, overpopulation, and not on the ecological problems themselves. The analogy can thus be applied to the population as well, although not accurately, on two counts.

The sum total of all environmental problems in the world is termed the ecological crisis. Its existence was widely realized in the late 1960s and early 1970s, particularly in the countries of the center[5] (e.g. McNeill 2000). Today, global climate change, the decrease of biological diversity, the presence of synthetic chemicals in the environment, the air pollution of settlements, and soil erosion are regarded as the main elements of the crisis, although which is deemed the gravest depends on geographic location, system of values and other factors. These interrelated concerns threaten the lives, or at least the quality of life, of people and multitudes of other living beings alike. It is an important aspect that we humans are not only victims but also causes of the ecological crisis, for it is the consequence of the everyday decisions and acts of individuals, groups of people and organizations.

How can the tragedy be avoided?

Gianni Rodari, the great Italian storyteller, has written three different endings to several of his tales. It is at the reader's discretion to choose the one he/she likes best. Fortunately, the above tale is also similar to Rodari's: Hardin's model is only a zero-sum game (Dietz 2005). The tragic ending is not inevitable; tragedy can be turned into comedy in several ways. That such an ending needs greater effort is of course another question (Dietz et al. 2002). A comedy is also a dramatic play, but the ending – at least – is happy.

The avoidance of tragedy is, in theory, simple: from the above-mentioned two postulates, at least one has to be resolved: either we have to lay down the rules of using the pasture, that is, to stop free access to it; or, we have to change human motivation, that is, get the farmers to consider more than short-term individual gains.[6]

The first step needed to put an end to free access is for somebody to take ownership of the pasture. Then the owner(s) set up institutions[7]: some people are banned from using the pasture or rules are laid down so as to restrict the use of the pasture. Basically, three kinds of ownership are possible: (1) private property,

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On the one hand, the herdsmen – "the cattle" (the humans inhabiting the earth) "drive to grass" their own offspring. On the other hand, "overgrazing" depends directly on other factors as well, in addition to the number of the inhabitants (Takács-Sánta 2017; 2022).

[5] The countries of the center are the economically powerful states in the world that are capable of modifying the conditions of international trade so that the surplus value flows from the economically weaker states, the countries of the periphery, toward them. (On the theory of the center and the periphery, see, e.g., Wallerstein 2004).

[6] It must be noted that the prevention of the tragedy might be influenced by yet another factor: the nature of the "commons" (Dietz et al. 2002). For example, ecosystems with hard-to-predict dynamics (such as several water ecosystems) or mobile resources (e.g. fish) make it hard for people to be good stewards of these resources (Ostrom 2009), hence the tragedy is more likely to happen. This third factor is not discussed in this paper, because unlike the other two, this one cannot be modified by humans.

[7] The word "institution" is used in the sociological sense, not as colloquially understood: an institution is that which becomes systemic, regular (institutionalized) in a society. Social institutions are the constituents of society that can reproduce themselves and hence exist transgenerationally. These include economic, political, legal, etc. institutions (Miller 2019). Institutions make certain activities easier for people or organizations, while they may prevent, or at least hinder others.

(2) communal property, (3) state property[8] – all three being potentially suitable for preventing the tragedy, as are their diverse combinations (Feeny et al. 1990; Ostrom 1990).[9]

As regards the second postulate, in the tale, short-term and long-term interests are pitted against each other and the interests of the individual confront those of the group. Following rational behavior motivation in the short run (putting new cows to pasture) leads to the tragedy of the group (village, community) in the long run (meaning of course that in the long run the individual herdsmen – and their progeny – will also fare worse).[10] The question is how to change the competitive behavior of the group members (not solely that of individuals) who only consider their own short-term interests and threaten the wellbeing (public weal) of the group via environmental problems to cooperative behavior which also takes long-term aspects into consideration in the interest of the group's wellbeing (public weal).

Both the termination of free access and the alteration of the motivation are meant to encourage the cattle farmers to adopt a behavior of more care for the environment, of moderation and increased eco-efficiency (Takács-Sánta 2017; 2022).[11] In order to solve or alleviate the environmental problems or to prevent intensifying them, the behavior of individuals and groups of human beings – the constituents of larger groups and organizations – would have to change. But how can they be persuaded to adopt an environment-friendly attitude? There are basically four options (Gardner – Stern 2002; Ophuls 1973; 1977):

1. Via laws, regulations and incentives enacted by the governing bodies.
2. By initiating social, non-governmental processes for the creation of (small) communities.
3. By spreading information (to change attitudes and spread information about possible activities).
4. Via a change of the value system and worldview.

The first two are based primarily on changing (or creating) social institutions. The main aim of the latter two is a change in mentality. I review these four options in more detail below, on the basis first of all of Gardner and Stern (2002),[12] but also relying on several other works [only the latter are referred to separately].

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[8] It is an interesting question which form the municipal property of a settlement is closest to. In a certain sense, it is closest to state property, but in some other aspects to collective property – depending on the extent to which the inhabitants of the settlement have a say in decision-making.

[9] The case when common goods become private property is not dealt with further in the paper. We only discuss the two cases of collective property.

[10] In the model story, the herdsmen are motivated by their short-term interests in a narrow sense in all their decisions. In other words, they act in accordance with the dominant ideal of the human being cherished by modern economics: the *Homo oeconomicus.* Though this image of the human being does not describe real human behavior without fail, in today's market-oriented societies we have become *Homines oeconomici* to a certain degree, because the dominant socio-economic system rewards this kind of behavior in most cases.

[11] Eco-friendly is defined as the behavior of an individual or organization which lessens the pressure on the environment, irrespective of the intentions of the actor. By contrast, eco-conscious behavior – not discussed here in detail – implies the will of the actor to decrease the pressure on the environment, yet this intention may remain ineffective (cf. Stern 2000). For instance, in vain does an eco-conscious person collect waste selectively, if it is transported for processing to another continent. The pressure from transportation can easily exceed its impact caused by local "neutralization". In the final analysis, this person's behavior is not eco-friendly.

[12] In the academic literature, different authors discuss options for preventing the tragedy of the

Laws, regulations and incentives provided
by the governmental system

Realizing the deterioration of the quality of the pasture, the mayor of the village summoned the aldermen for an extraordinary meeting. The municipality decided to put the pasture into municipal proprietorship and regulate the maximum number of cows: nobody could drive more than two cows to the pasture. Breaching the limit would entail serious sanctions (large fines), to punish disobedient cattle farmers. The aldermen also decided that they would offer tax allowances to villagers who changed over to economic activities that did not depend on the commons – thereby trying to prevent more people from entering animal husbandry.

Though at the beginning there was uproar and protests and several herdsmen tried to dodge the regulations (at times successfully), the measures eventually proved successful. Although nearly everyone experienced a decline in their financial standing, the farmers and their families lived happily ever after for generations.

The diverse governing systems – at settlement, state or supranational (e.g. EU) levels – may provide laws, regulations and incentives in order (1) to prevent the activities of individuals, groups and organizations that are detrimental to the environment and (2) to encourage them to pursue environment-friendly activities.

Today, all over the world countless institutions: laws, regulations and incentives introduced by governing systems try to enhance ecological sustainability. The decisive feature of these government measures are the efforts to get individuals (groups, organizations) to adopt eco-friendly behavior in the interest of the public good by making it the most advantageous behavioral alternative (financially or otherwise) for them. In other words, the environment-friendly alternative will be in harmony with their self-interest in the narrow sense and in the short run (note that the cattle farmers in the tragic version of the tale also adopt this approach; they do not display any sign of altruism). For example, the company which fixes the filter on factory chimneys gets a tax allowance; those who do not comply with the regulation get fines. In theory, that is, this method can result in environmentally safe behavior even in the absence of any awareness of the environment's needs. This may be why it is perhaps the most popular of the four options all over the world.

Basically, this approach implies three difficulties. The chances are high that environment-friendly behavior which is not internally motivated but rather imposed on the actors by external constraints will not last long in democratic societies (and the societies of at least the countries at the center are democratic at present), because people tend to eliminate constraints. (For instance, in the next elections they may vote out of office an environmentally sensitive political elite who have passed strict laws in protection of the environment.) Secondly, the existence of laws is not

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commons from diverse angles. I have adopted the psychological approach of Gardner and Stern (2002), which focuses on how to change the behavior of the actors to be more eco-friendly. There are other relevant psychological views as well (e.g. van Vugt 2009), while several others concentrate on proprietary aspects instead of behavior, and try to look at possibilities for resolving the first premise (e.g. Feeny et al. 1990). Other, more complex approaches characterize the results of various disciplines in trying to find ways to avoid the tragedy (e.g. Ostrom 2009). Since I wanted to deal with the possibilities of changing behavior, I looked for psychological approaches, out of which Gardner and Stern's work appeared most convincing.

enough. They must be enforced, which often comes up against obstacles. It can be a problem that governments would have to set up and run too many control organizations to achieve complete obedience to the laws. In addition, powerful lobbies are able to corrupt the guardians of law enforcement. Thirdly, the governments – particularly those in charge of large geographic areas – are often insufficiently informed to be able to enact the adequate laws, regulations and incentives. For lack of information, a well-meaning governmental decision may also lead the processes onto the wrong track.

(Small)community, non-governmental social processes

Noticing the deterioration of the quality of the pasture, some leading cow owners called a meeting that was attended by all the cattle farmers. They all agreed upon the maximum number of cows: they agreed by consensus that each could drive a maximum of two cows to grass. The decision was rejected solely by the "outsider" farmer who was the first to buy a second cow, but he soon became so disliked in the village that he felt compelled to move out.

Though the farmers spent much time and energy on defining, enforcing and constantly improving the rules of pasture use, and they were not always perfectly successful, the measure proved on the whole and in the long run successful. It is true that the living standards of nearly all of them deteriorated considerably, but the farmers and their families lived happily ever after for generations.

In this case, the group of people (maybe organizations) organize themselves "from the grassroots" into a community, creating (typically unwritten) rules (norms) and having them mutually observed. They also effect changes on the rules collectively, without any governmental actor taking part in the process. The community members are inclined to abide by the norms for various reasons. First, because they keep an eye on one other. This exerts collective pressure on each member to observe the rules, and also, they are afraid of the punishment for breaching the rules. Secondly, it is in their interest to have a good reputation because in case of difficulties they can receive help from other community members more easily (Milinski et al. 2002; Rockenbach – Milinski 2006; Wedekind – Milinski 2000). Thirdly, the members of the community mutually respect and bear responsibility for one another and for the community – that is, where there is a community, the mutual moral commitment to one another is more likely to appear (McCay – Jentoft 2010). Fourthly, people more commonly and gladly conform to (partly) self-made rules than those imposed upon them from above.

Such community members tend to choose collaboration instead of rivalry. Though they do not necessarily go beyond their narrowly conceived, short-term self-interests, they often do. A prerequisite for this is that the group members should know each other well and that their collective will be coherent. In the past, tragedy was often avoided in cases of actual pastures and other natural resources (e.g., forests, shoreline fishing areas, etc.) by creating source management systems that were sustained for a long time, in some cases to this very day.[13]

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[13]   Several examples are discussed e.g. by Feeny et al (1990) and Ostrom et al. (2002). Other examples can be drawn from the Carpathian Basin. In the early modern age, village communities in the

The downside to this approach is probably that it only really works in communities with small populations. Above a certain size (one or two thousand people at most) the members can't know each other personally, which entails the weakening of trust among the members. Trust is indispensable for cooperation. When there is a lack of trust, members of a collective tend to choose rivalry instead of collaboration and the interest of an individual (or a smaller group) will override the common interest. In parallel with the growth of the size of the group, the feeling of coherence within the group will slacken, not independently of the factors mentioned above. The group affected by the global environmental problems (that is, the whole population of the Earth) can hardly have any feeling of coherence, because we hardly feel any sense of belonging with people who are personally unknown to us.

Moreover, the sense of cohesion is weakening even in a small group affected by small-scale environmental problems. Owing in part to people's growing mobility and the increasing atomisation of society, there are fewer and fewer stable and coherent human communities in the world. And even if the sense of coherence is still intact, this approach only works if the group mainly uses the natural resources of the territory they live on (but for the growing globalization of the economy, this situation is ever rarer) and the costs of resource use (e.g. pollution and waste) also weigh primarily on the group members, which is not generally the case.

In addition, the creation of rules can be aggravated, or prevented when mutual communication and regulating activity demands too much time and energy from the members of the community – and with the growth of group size, this is more and more probable (Ostrom 2008; 2—9).

Education (changing attitudes and spreading information on the possibilities of action)

Noticing the deterioration of the quality of the pasture, one of the herdsmen launched an education campaign among his fellows. He demonstrated the problem of overgrazing and warned them that if they did not introduce radical changes, they would all meet a tragic fate. He not only outlined the problem, but also offered a possible solution: if they kept only two cows per person, they would in all probability avoid the disaster. He persuaded two of his fellows quickly, so now they joined forces to influence the others.

Though a few materialistically minded herdsmen could not be persuaded that two heads of cattle were enough, they could make everyone understand that they should not increase the number of their cows, which was enough for preventing the tragedy. The material welfare of nearly all of them decreased considerably, yet the farmers and their families lived happily ever after for generations.

Education consists basically of two parts: First, the presentation of the nature and graveness of the ecological problem. People must be convinced that the problem is grave and important and requires immediate action on their part (that is, one

Székely country put down several municipal laws which testify to ecological awareness. They created binding rules in protection of collective goods – e.g. forests – and introduced bans (Imreh 1973; 1993. – See also Gellény – Margóczi 2016).

attempts to change the attitude of the people to the problem). The second part of the process is to describe the possibilities of action so as to promote the solution of the problem (informing).[14] The dissemination of information may be personal or occur via the media (television, radio, internet, printed press, books, etc.).

Education cannot effectively help the spreading of environment-friendly behavioral forms unless it is hindered by internal factors and not external circumstances. In vain do our attitudes change and in vain do we know alternative ways of facilitating a solution to the problem, if the social-economic institutional system forces us to carry out actions which undermine our attitude. (A trivial example: in vain are we persuaded to buy drinks in returnable bottles when there are none available and we are forced to buy throwaway bottles). Moreover, what is at issue here is individual action and self-restraint. Therefore, when the individual does not notice change anywhere else, he/she might draw conclusions similar to the zero-sum game: the action of a single person can't achieve much, or might even be detrimental, so he/she easily gives up . Actually, achieving profound, radical change merely through providing information is hardly possible, for it is almost impossible to get people to act in ways which oppose their value systems or worldviews.

Changing the value systems and worldviews

Noticing the deterioration of the quality of the pasture, a herdsman began to point out passionately to his fellows that their thinking was fundamentally mistaken, and if they failed to change it, they would meet a tragic fate because of overgrazing. In long conversations and disputes, he tried to persuade them that they should not be so materialistic in their thinking, and growth had its limits. He convinced several farmers fairly quickly, who joined him in trying to influence the rest.

Though the process was very slow, eventually all the cattle farmers' order of values and worldview changed to some extent, and the majority's view changed fundamentally. The new mentality brought about new behavioral norms. The most important one was: "Keep as many animals as are necessary to maintain your family and yourself modestly." As a result, most herdsmen radically decreased the number of cows, which was enough to avoid the tragedy. Though the material welfare of nearly everybody decreased, the farmers and their families lived happily ever after for many generations.

This approach is similar to the previous one (the goal being the change of mentality), but it is more radical. It aims at a more profound and general transformation than education does. Several thinkers proclaim that the root of environmental problems lie in the dominant values (value system) and basic convictions (the aggregate of which is termed worldview or cultural paradigm) (e.g. Quinn 1992; McDaniel – Gowdy 1999). These need to be changed and

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[14] It is a frequent shortcoming of environmental education that this second part is often omitted. They frighten people with the problem, but fail to present alternative options for action. This is a serious issue because the feeling of helplessness they cause often (usually subconsciously) leads us to use deterring mechanisms: for instance, we begin to deny or belittle the problem, instead of making efforts to solve it (Winter – Koger 2004).

replaced by new ones – which of course may mean foregrounding the dominant values and convictions of earlier cultures as well.

Today, for example, in the society of the countries at the center, material goods represent important *values*; many are convinced that more is at the same time better. This, however, does not apply to every human culture, hence it is not a universal human characteristic (cf. e.g. Gowdy 1998). Should our value system change and more free time or the integrity of nature become the dominant values, "overgrazing our pasture" would become less likely.[15]

One of the fundamental *convictions* of our culture is that there are no limits to growth (or if there are, they are distant) and hence economic growth can continue without restriction (this idea is particularly frequent among economists and politicians). Changing this conviction and recognizing the limits will reduce the risk of further intensifying the ecological crisis.

From the values and basic convictions, actual *behavioral norms* can be inferred. For example: "Earn as much as is enough for achieving a modest life for yourself and your family." New values and convictions lead to a change of attitude through new behavioral norms (Stern et al. 1999).

Others go a step further and propose religious solutions to ecological concerns (see e.g. Gardner 2003)[16]. Every religious teaching provides its adherents with basic values, convictions and behavioral norms. This alone would not suffice for turning it into a religion; two other components must be added. Firstly, rituals and ceremonies whose function is to reinforce values, convictions and norms. Secondly, spiritual elements that imply some sort of belief in the existence of transcendental powers (e.g. deities).

This approach has three drawbacks. First, the changing of the value system and worldview is typically a very slow process, that is, no quick result can be expected. What is more, our value system and worldview are so set in stone by the time we reach adulthood that there is hardly any chance to change them unless we take part in long dialogues (Dietz 2005) or perhaps undergo some crisis (as happened to Saul on the road to Damascus in the Bible). Second, our behavior does not often harmonize with our value system and convictions (or our attitudes, as discussed above).[17] Third, the problem issuing from the individual, self-restrictive character of action mentioned with the previous approach is also valid here.

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[15] For a list and grouping of values, see, e.g. Schwartz 1994.

[16] This need not only mean the existing religions, but can include the emergence and spreading of a new faith as well (e.g. Berry 1988).

[17] Under which approach could the much-discussed *environmental education* be subsumed? Under the dissemination of information or under the changing of values and convictions? It may belong to both in theory, but in most cases, it remains content to change attitudes and provide information and (at least for the time being), it rarely questions our culture's value system and fundamental convictions (e.g. Orr 1994).

The best solution:
the diversity of approaches

Which is the most effective of the four approaches? Which one(s) should we choose? Undoubtedly, each has its advantages, but, as has been seen, each has limitations, too. Consequently, none should be discarded, and none should be taken as the only remedy. Rather, *the joint, complementary application of all four approaches* might be the most effective method for the prevention, alleviation, or solution of our environmental problems. Nevertheless, we predominantly only experiment with governmental action and informative education, the other two approaches being rather ignored. Hence, the relative weakness of social responses to the environmental problems given so far might derive from the neglect of two of the four basic strategies. We need to replace some of the basic elements of our thinking (e.g. Orr 1994; Takács-Sánta 2007), and we should eliminate the current atomisation of Western societies, and discover (small) communities again (Takács-Sánta 2017).[18]

Recommended readings

Feeny, David – Berkes, Fikret – McCay, Bonnie J. – Acheson, James M. 1990. "The tragedy of the commons: Twenty-two years later". *Human Ecology,* 18: 1–19. (In Hung.: A közlegelők tragédiája: huszonkét évvel később. In Pataki, György – Takács-Sánta, András (eds.): *Természet és gazdaság: Ökológiai közgazdaságtan szöveggyűjtemény.* Budapest, Typotex, 2004, 142–163.)

An important critique of Hardin's classic writing. The authors show, on the one hand, that collective ownership of the commons may help evade the tragedy, and on the other, that none of the private, state or collective ownerships may be excluded from the options for preventing the tragedy.

Hardin, Garrett 1968. The tragedy of the commons. *Science,* 162, 1243–1248. (In Hung.: A közlegelők tragédiája. In Lányi, András (szerk.): *Természet és szabadság: Humánökológiai olvasókönyv.* Budapest, Osiris, 2000, 219–231.)

A classic article on the evasion of the tragedy of the commons, which has inspired endless further research and thought.

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[18] A notable microcosmic example of the implementation of ecological sustainability and the prevention of "the tragedy of the commons" is the history of the society of Tikopia island in the South Seas (Kirch 1997; Diamond 2005). Our research confirms that it was made possible thanks to the joint application of all four of these approaches (Takács-Sánta – Bódi 2016; Takács-Sánta 2017; Bódi – Takács-Sánta 2021).

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A FEW WORDS ON GLOBAL OVERPOPULATION

Gábor Pirisi

It is no exaggeration to say that people concerned about the future of human societies at any point in the past millennia have been preoccupied with overpopulation. The principles of population regulation, the achievement of stability and the prevention of overpopulation appear, for example, in Aristotle's description of the ideal society in *Politics* in the 4th century B.C., or in Thomas More's *Utopia*, published in 1516. The issue also filtered into the popular culture of all periods: in the 1950s, one of the fathers of science fiction, Isaac Asimov, reflected on the future of humankind through the lens of overpopulation, and in our times the iconic supervillain of Marvel, Thanos would settle the problem of galactic overpopulation with a snap of his fingers. These are just a few randomly selected examples but sufficient to illustrate that the problem at issue was, is and presumably will also be on the agenda for a long time.

The core of the problem of the rapid growth of humankind was succinctly and poetically worded by Imre Madách in *The Tragedy of Man*. It lives on in the Hungarian language as the adage "eskimos are many and seals are few" as an adequate formulation of the fundamental problem: the growing inequality between population and resources.[1] In his treatise, *On the Principle of Population*, published in 1798 and still making its impact felt in the present day, Thomas Malthus deemed the catastrophe more or less unavoidable. His statement that the rate of food production cannot keep abreast of population growth has elicited repeated responses to this day (Malthus 1798). In a far more up-to-date and scientific form, the same idea was repeated in *The Limits to Growth*, also known as the Meadows report, inspired by the Club of Rome on the basis of MIT computerized simulations. This report set the depletion of non-renewable resources against the growth of the population. Its conclusion is that the trap can only be avoided with a zero growth strategy, which is staggering and for practical reasons unacceptable (Meadows et al. 1972). The paradigm of sustainable development arose later partly from these foundations. It is desperately trying to balance between ecological, economic, social and political realities, in the long run with more failure than success. It also views the sustainable growth of the population as a key question (Elliott 2014; World Commission on Environment and Development 1987).

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[1]   In scene XIV, the playwright speaks even more brutally:
„True, I beat to death
Them that dwelt nigh me, but 'tis all in vain.
For ever come new folk, and seals are few.
Oh, if thou be a god, I pray thee grant
That there be less of men and more of seals."

In the last decades, the stress regarding global problems has slightly shifted: we are not so much scared of running out of energy resources as of the consequences of their use. The global climate crisis has taken center stage. One may regretfully but safely declare that it was primarily caused by human activity. Chief among them is the burning of fossil fuels, followed by human agriculture with some of its direct and indirect effects. In comparison, the problem of overpopulation has been somewhat neglected (rightly, for certain reasons, as will be seen), although it must not be forgotten that the demand for energy resources is fed by the immense growth of the global population. (The chapter by Melinda Mihály and Dorottya Mendly discusses the problems of food.)

The growth of the global population

The size of the population of any area is fundamentally determined by two factors: natural growth and net migration (the balance between immigrants and emigrants). Since – in an optimal case – the latter is zero for the Earth as an entity, the only decisive element of changes in the global population is natural growth (of course, migration is an extremely important factor for individual regions or countries). Natural growth has two components: number of live births and number of deaths. The difference between the two is the growth rate (or, for that matter, decrease). Both births and deaths are calculated per unit of population, usually 1,000 persons, rarely in percent. Both indexes depend on modifications in diverse components, both natural and social, political and economic. Though these rates may sometimes change in the short term in response to disasters or drastic shocks which hit society, they normally alter slowly, typically over decades.

In purely mathematical terms, the birth rate is determined by two factors: the fertility rate (the number of children per woman in the reproductive period of her life) – which actually indicates the "willingness of women to have children" or the "probability of having children" – and the number of women of reproductive age within the whole population. In demographic terms, the former is more important, as it predicts future processes. It may occur that a country currently experiences positive natural growth (more children were born in a period of higher fertility rate, many of whom are now of reproductive age), but when the fertility rate drops below a certain number (usually 2.1 in developed countries), population growth will soon be negative.

Globally, the maximum fertility rate is in excess of six (fig. 1): there are four countries in the world in which the average woman gives birth to over six children (!). There are more than 50 countries above the figure 3.0, which indicates fast growth. The global average is around 2.3. The average in Europe is already below 1.5, along with some 30 countries. The most significant negative anomaly is represented by South Korea, where the fertility rate does not reach 1.0. The figure clearly shows that there is a close correlation between natural growth and fertility in the interval between zero and five. The fertility rate of the countries which experience natural decrease is not much lower than that of countries with slight growth; in their case, the lower birth rate is due to an aging population. It can also be observed that above a certain limit, high fertility is not necessarily accompanied by the further acceleration of population growth, first of all because of infant mortality.

**Figure 1. Natural growth / decrease as a function of the fertility rate.
Source of data: Our World in Data.**

The fertility rate is the outcome of complex social processes, making it hard to pick one central factor. It can be presumed that the more developed a country is (not only in GDP, but also in HDI), the lower its fertility rate (Caldwell – Schindlmayr 2010). The inverse correlation between fertility and welfare applies within societies as well. Declining fertility is a typical concomitant of social modernization, but it is very hard to verify whether it is a precondition or a consequence. It is certain that apart from welfare, several factors are to be considered for the fine-tuning of the index, first of all the position of women within a given society (McClamroch 1996; Weinberger 1987). This may expose a peculiar U-shaped pattern: in societies with gender inequality in which the horizon of female life paths is narrow, fertility is regularly very high. Among developed countries, those with greater gender equality, for example the Scandinavian countries (Hoem 2005), perform better than those with somewhat less equality (Central and Southern European countries).

Similar values can be found for natural growth on a somewhat shifted scale: the highest values are around 3–4%, the lowest around 1%. Today, natural decrease affects some 40 smaller or larger countries, the great majority in Central, Eastern and South-eastern Europe. Among the most populous countries in the world, China is experiencing only slight decline with a fertility rate of 1.164. With its fertility rate of 2.03, India has a natural growth of 7 per 1000 in the United States, this number is barely over 1 per 1000.

In addition to fertility, mortality also influences population change. The most important data concern infant and childhood mortality, which may directly influence a society's reproductive potential. The mortality rate (annual deaths per 1000 persons, rarely given in percentage) depends on how youngish or oldish the age composition of the population is, and of course, what characterizes the people's state of health. As a result, among countries with high mortality rates one can find both low-income populations of a fairly young age and developed but aging societies. The lowest mortality rates are, consequently, in the oil kingdoms of the

Persian Gulf (high fertility rate, young age composition, high incomes, high-quality health service).

Let us here take a look at migration as a modifying factor. It is only one side of the coin that mass migration increases or decreases the population of a region or country. Migration also influences natural growth (Kulu 2005). In countries characterized by immigration, there is a constant influx of a population group whose average age is younger than that of the recipient country. This would have a positive effect on reproduction even if the fertility rate of the immigrating communities were not higher than the host country's average (Genereux 2007): they usually arrive from countries with a tradition of having more children, and they normally adhere to their customs in their new homes, at least in the first one or two generations, with the difference gradually decreasing later. Obviously, on the global scale, migration only modifies the distribution of people. What can be seen as its positive impact is that in the sender regions, migration slackens the pressure on resources and social institutions. Also, the emigrating families' fertility rate decreases faster than the rate of those who stay at home. It also mitigates – to however modest an extent – the problem of overpopulation. Leaving aside the several legal, cultural, economic and mainly political implications of international migration , we must still note that in countries (particularly on the eastern periphery of Europe) where emigration is coupled with a low fertility rate and the natural decrease of the population, its impact on the local societies is considerable (Atoyan et al. 2016).

To influence the growth of the population, some countries may draw up – more or less deliberately and more or less emphatically – demographic policies and may introduce certain measures. In actual fact, these policies can be one of two kinds: pronatalist (wishing to increase the number of live births) and (to use a rarely applied term) antinatalist (aimed at decreasing their number). Traditionally, the growth of the number of inhabitants in a nation-state is tied to the increase in the power of the nation: a growing population means growing labor reserves and military potential. It follows that authoritarian regimes expressly pursue pronatalist policies, and they are not over-scrupulous in choosing their means: their activity is characterized by obligations and restrictions (bans on abortion, restriction on access to contraceptives, punitive tax policies). Countries governed democratically may also pursue a pronatalist policy, but their means are less drastic. Instead of prohibitions and obligations, they try to use incentives. The extent of their success varies, for the effectiveness of these policies and the pertinent soft means are often doubtful. The introduction of a new tool may enhance fertility for a short time, but its effect often proves transitory. As Figure 2 reveals, individual countries spend widely varying portions of their GDP on family support (which is, of course, a broader concept than demographic policy), but the differences are not really reflected in the fertility rates. It is not too informative to compare countries of very different backgrounds, but some comparisons, for example, in Central Europe may be noteworthy: while Slovakia and Slovenia both spend about 1.75% of their GDPs on family support, the corresponding figure in Hungary and Poland is 2.6–2.75%, but the fertility rate in all of these countries is around 1.5 (which also reveals that religion is not such a powerful influencer as is normally believed, because every known survey has registered a far more intense religiosity in the Polish population than in the Hungarian) (Inglot 2020).
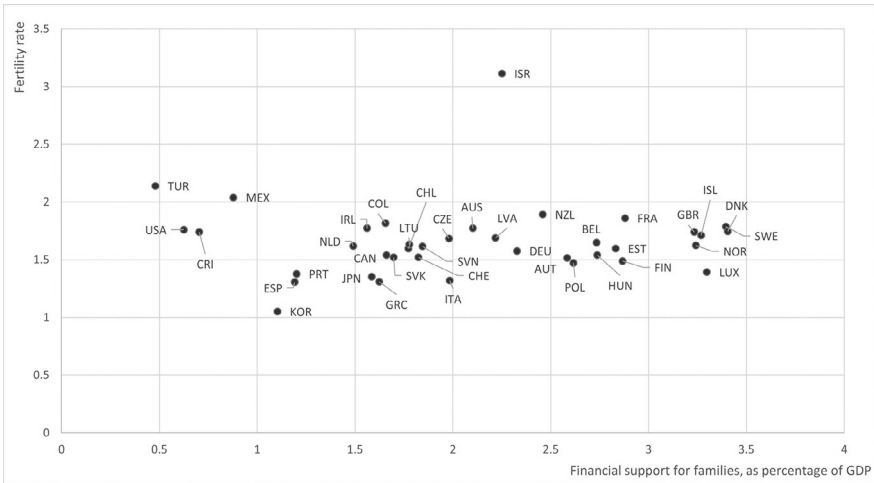
Figure 2. The part of GDP earmarked for family support and fertility rate in OECD countries, 2017. Source of data: Our World in Data (fertility), https:// data/pecd/org (expenditure)

From the perspective of overpopulation, a restrictive demographic policy may have an important role. We must again differentiate the measures that can be taken by democratic establishments from those introduced by totalitarian regimes. The means of democracies to directly interfere are relatively limited: educational programs, access to the instruments of family planning, degressive supporting policies. Indirect means, first of all the extension of girls' schooling (in time and space) and the idealization of small-family models appear effective in the long run (Eager 2017; Hartmann 1987). Sometimes even fundamentally democratic countries resort to sinister tools: in India, as late as in the mid-1970s, millions (mainly poor, male "dalits") were subjected to forced sterilization processes (Connelly 2006).

Of course, the best-known restrictive demographic policy was put into effect in China. In the People's Republic, efforts were made from 1970 to control population growth, as the badly underdeveloped and extremely authoritarian economy was incapable of keeping pace with the population explosion in the production of food and basic necessities (in addition satisfying the characteristically Communist demand of investing in modernization). Dissatisfaction with the results achieved until that point called for drastic measures in 1980, urging the Chinese party apparatus to introduce the single-child policy nationwide (Scharping 2013). The one family – one child rule (which was later slackened with exceptions) was practically in effect until 2015, while the fertility rate dropped from 2.74 to 1.66, and with 1.28 in 2020, the country was almost at the bottom of the list, so in 2021 all restrictions were withdrawn.

The evaluation of this program is highly contradictory. It was the largest-scale intervention in social engineering in recorded history. It brought immense suffering to the affected generations; the amount of personal tragedies is unfathomable. In the long term, at least two lasting results can be expected: the sudden application of the emergency brake caused the Chinese age pyramid to collapse: the "4-2-1"

problem has emerged, meaning that after consistent only-childism for two generations, a single grandchild would have to take care of four grandparents in a society in which respect for the aged is a very important organizing principle. This "hard landing" will eventually result in a fertility rate which continues at a lower rate than in the country's major rivals, and this will undermine the foundations of the Chinese model of economic growth even in the medium term (Feng et al. 2012). The other problem is well-known in traditional societies with other restrictive demographic policies: the upsetting of the gender balance. The only child should be a boy to perpetuate the family's name and traditions. This attitude resulted in the practice of sex-selective abortions and a male surplus about 10 % above the normal biological value. Though in a less extreme form, the phenomenon is present in India as well. It is also questionable how effective or necessary such a drastic intervention was: in the same time interval in Brazil, for example, the fertility rate dropped from 4.0 to 1.7 and in Thailand from 3.3 to 1.5 without similarly harsh measures. On the other hand, humankind can be thankful for such efforts and for restrictions in other countries. They were elicited by the demographic boom of the 1970s, which might have been alleviated as time passed, yet it is not far-fetched to declare that without these demographic policy measures, hundreds of millions more would be living on the Earth today.

The Earth of eight billion people

According to the United Nations estimate, the global population reached the 8 billion mark on 15 November 2022. It made headlines in the media and elicited much reflection on social media: it has certainly crossed the public's threshold of awareness. As is customary with such milestones (the previous one occurred 11 years ago, when the 7 billion mark was hit), the tone of the reflections has been that of anxiety.

The population of the Earth increased very slowly at the beginning; estimates put the number of human beings circa 10,000 B.C. at around 5 million. Growth was obviously not steady, with years or periods in which the number of people decreased. Some theories propose that humans were on the verge of extinction several times. Population growth is not presented by data picked randomly. Rather, we rely on a method that takes into account the periods necessary for the doubling of the population. These periods – longer at the beginning and getting shorter later – are called demographic or population cycles. Taking the date 10,000 B.C. as the starting point, ten such cycles can be differentiated in human history. The first lasted some 3,000 years, that is, humankind probably numbered 10 million around 7,000 B.C. The next doubling of the global population "only" needed 2,500 years: around 4500 B.C. there were some 20 million people on Earth. Thanks to steadily improving productivity and living conditions, the next doubling can be estimated to have occurred around 2,500 B.C., a mere 2,000 years later, and this 40 million doubled to 80 million by around 1,000 B.C. When Christ was born, the planet had maybe 160, or 100, or perhaps 250-300 million people. The latter estimates also adequately show the great uncertainties of historical demography.

Growth continued at a similarly slow pace in the next 1500 years, dotted with regional periods of population decline, for instance in Europe after the fall of

Rome, or in the New World after the conquest of America by the Spaniards. The next two cycles only needed 900 and 800 years, respectively. After that, growth progressed by leaps and bounds, doubling in 150 years in the eighth cycle and in 100 years in the ninth. The pace of growth accelerated further, and in the latest cycle 35 years were needed to double the population of the planet (from 2.5 billion to 5 billion). These days, the pace of population growth has slightly decreased. Owing to this and the large increment of 5 billion required for the next doubling, the length of the next demographic cycle is predicted to increase a little. The figures showing the rise of the global population over time are shocking, indicating an incredible population growth accelerated by modernization. The 6 billion mark was reached in 1999, the seven billion mark in 2011 (31 October, UN data). However, the pace of population growth in the future cannot be predicted with great certainty. Forecasts for periods of diverse length show a fairly large scatter. The UN's medium-term forecast in 1980 estimated 7 billion people for 2010 and 8.2 billion for 2025 (which, as seen above, proved wrong). This prediction was proposed at a time when the population grew by over 80 million people a year (in the second half of the 1980s by 85-87 million). The pace of growth slightly slowed from the 1990s: the annual growth of 2022 is expected to be "only" 66-67 million. It is good news that the estimated increments have to be adjusted downwards. The UN report (Department of Economic and Social Affairs 2017) completed in 2017 predicted 8.6 billion for 2030 and 11.2 billion for 2100. The prediction of 2022 (UN Department of Economic and Social Affairs 2022) only estimated 8.5 billion for 2030 and 9.6 billion people for 2050, and also projected that among the great regions of the Earth not only Europe and North America, but also Latin America and East and South-East Asia (!) have reached, or will reach their peak in the next few years. Considerable population growth was only predicted for Africa (separately for Sub-Saharan Africa from North Africa and the Near East) and South Asia.

This trend may be characterized by observing that the "seed" of the past decades of decreasing fertility has borne "fruit" (Fig. 3). It is easy to see that the fertility rate (right axis) began to decrease when the population increment (left axis) was still close to the annual 2%. In our days, another contributory factor, in addition to the decreasing fertility rate, is the smaller weight of generations of reproductive age within a given population than in the 1990s, let alone the 1980s. This has reversed the pace of the two indexes: today the fertility rate declines at a slower pace than the growth rate.

There is no consensus on the endpoint of the process, as to when and with how many people the global population will reach its peak. The most recent UN report (adjusted downwards several times in the past years) estimates 10.4 billion people for 2080 (and a plateau until 2100). Other estimates predict a turn at 9.6 – 9.7 billion people and set the date of the peak at between 2064 and 2070 (Adam 2021).
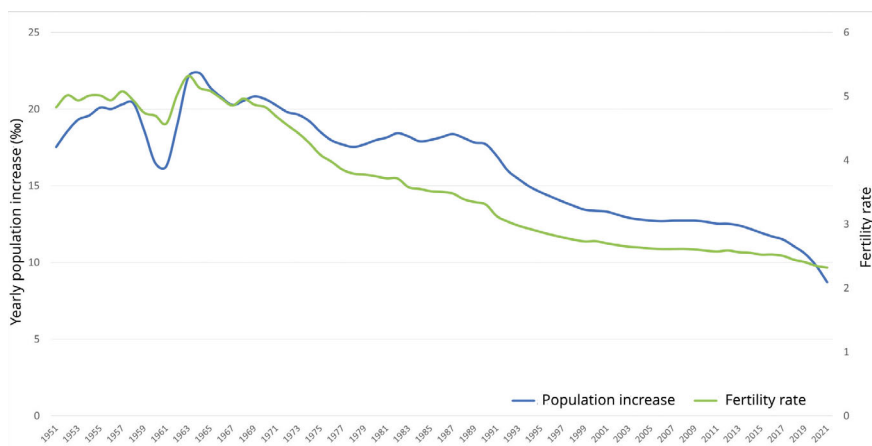
Figure 3. The annual pace of growth of the global population and changes in the fertility rate (1951–2021) Source of data: Our World in Data

The question is what comes next. The theory of demographic transition, present in the social sciences since the 1940s or 1950s (Coale 1989; Kirk 1996; Lee 2003), has stood the test of time. The theory links the four stages of demographic development to the modernization of society. In the first, the high fertility rate of the pre-modern era goes together with high mortality, producing a low population growth rate. In the industrializing phase, the death rate begins to decline but a continuously high birth rate causes a population explosion, which becomes mitigated in the third phase by a decrease in the fertility rate. In the fourth phase, a new, lower level of equilibrium has evolved (or will evolve), with low fertility and mortality rates. Apparently, every society on Earth progresses or has progressed along this course of development, although the differences are not negligible (in terms of the length of the phases and the intensity of the changes). The fourth phase, presuming a state of equilibrium, rather appears to be the product of wishful thinking or an aspiration for elegance; it is practical experience that there is no lengthy stability in the fourth phase, but the model needs to be completed with a fifth phase, in which a further decline of fertility will cause a massive drop in the population. This particularly applies to closed migration-free countries such as Japan which clearly illustrate that it is illusory to wait for the demographic processes to settle in a new equilibrium along some socially, politically and economically comfortable stability. In other words, we must prepare for a steady decline of the global population, as the demographic reserves are gradually depleted. In countries already past this major turn, there is a highly pressing and urgent social-political dilemma in need of an answer: are they willing to use in their own national economies the demographic resources still being produced in less developed regions by proclaiming an open, pro-immigration policy together with all its real or alleged conflicts, or will they accept the problems entailed by the inevitability of their shrinking and aging populations? So it seems that there is no third option, however strongly many people want to believe it.

It is, however, still an open question whether all this is to be seen as a problem. We rush to qualify certain demographic processes as "good" or "bad", whereas it is not sure that this approach is the right one to take. Actually, in a society, both

rapid population growth and the dwindling number of people generate challenges and constraints that need to be accommodated. Rapid growth puts an enormous burden on the network of institutions. In areas of high population density, there is a need for a great number of kindergartens, adequate housing, clean and healthy water, communal transportation capacities, and a great deal of other things. Even such a small demographic wave as the birth of the so-called Ratkó grandchildren in the mid-1970s required that certain primary schools in Hungarian cities work in two shifts. Some children had to go to school in the afternoon because there were not enough schoolrooms. On the other hand, a declining population gradually erodes the foundations of this institutional network. It becomes ever more expensive to maintain schools and hospitals and the growing burdens of old-age social insurance and health care have to be covered from the revenues from ever fewer taxpayers, as the proportion of old people within society has grown enormously. It can be concluded that the typical problems of overpopulation are concentrated in urban, metropolitan areas, as the people from the provinces all flood into the cities in search of livelihood. The effects of population decline mostly characterize the depopulated rural and small-town areas (Jarzebski et al. 2021; Konsella 2001; Makkai et al. 2017).

On the whole, most problems related to the decline of the population appear manageable – at least in the opinion of the present author. They are mostly questions of reallocation, taxation and institutions – areas where it is far easier to modify than to influence the demographic behavior of the population. If one also considers how intensively the realm of work is being transformed and how rapidly the automation processes supported by new generations of artificial intelligence and learning algorithms are spreading, then the shrinking labor force is perhaps not such an immense problem (Lutz et al. 2008). It is time to accustom ourselves to the idea that in the 21st century, it is no longer the number of people who can be deployed for work or warfare that indicates the strength of a nation or society but the technology it possesses.

An overpopulated planet?

The question of how many people can be sustained by Earth is unscientific and cannot be answered with a single number based on scholarly thought. First, one ought to define what is meant by sustaining: the minimum necessities for life or middle-class welfare?

When we think about sustainability from a historical perspective, we keep coming up against Malthus's conclusion: there were indeed situations in which relatively closed autarchic social-economic systems collapsed, owing to the agricultural crisis. The famines that periodically hit China, the fall of the mysterious civilization of the Christmas Islands, or in modern times the potato famine in 19th-century Ireland warn of the dangers of local overpopulation.

Before being overcome by anxieties about the future, let us recall the historical experience that despite all local crises, in the long run, humanity is living in increasing welfare. Just in the last few years, literally hundreds of millions have risen out of abject poverty, first of all thanks to the growth of China, and also India. Though calculating the threshold of poverty generated much dispute, it

would not be too mistaken to say that the rate of those living in extreme poverty halved between 1990 and 2020. Food production could also keep pace with population growth: FAO data reveal that from 1960 to 2020, the available calories per capita per day rose from 2200 kcal to 3000 kcal, and even the poorest countries registered an increase of about 15%. In the broadening of food production, extensive agriculture has played an important role, which means the increase of arable land to the detriment of natural ecosystems. Food increase also has intensive components: between 1960 and 2020, the global average yield of wheat per hectare increased 3.4-fold, that of maize 2.8-fold, that of rice 2.3-fold, that of soybeans 2.5-fold (World Bank). In principle, this growth is far from over: it will still take a long time to spread the technologies that most effectively utilize the environmental resources worldwide, thus further giving a considerable boost to food production. All things considered, there is no reason to presume that we would not be able to produce enough food for nine or ten billion people on the Earth (Seekell et al. 2017).

Famine and malnutrition repeatedly appear on a regional scale, always in countries that are poor and incapable of acquiring locally absent foodstuffs from the global market. In 2022, when this paper is being written, the extreme droughts affecting the northern hemisphere and the Russian-Ukrainian war devastating the croplands of Eastern Europe are putting the food system of the world to the test. The soaring of food prices is only an annoyance and inconvenience to the majority of the population in developed countries, forcing them to economize at most. However, it may have grave consequences for the least developed countries, which are reduced to food imports. This also confirms that the question of subsistence should be interpreted in economic terms: at what price can sufficient food be produced for ten billion people?

There are some more menacing contradictions which loom large on the horizon in the near future. The best antidote to population growth, as we have seen, is economic growth and modernization. This, however, entails an increase in per capita consumption, meaning growing demand for food. It is true that economic growth will also enable people to buy food at higher prices. At the same time, growing welfare generates demand for other goods as well: durable commodities such as transport vehicles, their fuel, and the costs of growing mobility will all tax the Earth's limited resources.

Nowadays, we are already familiar with the concept of the ecological footprint, which compares the resource needs of human consumption with the area required for their production. At present, this index shows 1.7-fold overconsumption globally. A similar indicator is the Earth Overshoot Day, which in 2022 was reached on 29 July, from which day not the yield but the capital is consumed for the remainder of the year. This has led us to the heart of the problem: can we satisfy the consumption needs of ten billion people without the collapse of the climate of our planet? or, to put it more sharply: despite all the destruction we have wrought on the biosphere, and despite all the damage that human-induced climate change causes to our agricultural systems, will we be able to satisfy these needs (Ray et al. 2019; Rockström et al. 2009; Schneider et al. 2011)? This is the issue that will determine global development in the next decades. If we cannot find a good solution, the struggle for the redistribution of resources may become all too real. In our common future, demographic questions play a key role, but the issue of

having children must not be deliberated from a social or ecological position alone, removed from where it primarily belongs: from among the most personal decisions of families, couples, women. Whether we have children or not, whether we have one or half a dozen, let us leave the worries over demographic implications to the statisticians, researchers and politicians, and let us serve the common cause of humankind by consciously preparing for the changes and teaching our children in that spirit.

Recommended readings

Haggett, Peter 2001. *Geography: A Global Synthesis*. 4th edition. Harlow, Pearson Hall. [New York, Harper & Row, 1983.]

The first edition of the textbook used widely in higher education appeared in 1972. Demographic geography cannot remain absent from an overview of geography. In part 6 (Population Dynamics), the reader is briefly informed of the changes in the number of people, of the demographic transition and current trends. Further chapters contain information about the issues of the correlation between environmental resources and the ecosystem.

Meadows, D. H. – Meadows, D. L. – Randers, J. – Behrens III, W. W. 1972. *The Limits of Growth. A Report for The Club of Rome's Project on the Predicament of Mankind*. New York, Universe Books.

The limits to growth has been an essential work for people wishing to engross themselves in the problem of overpopulation and remains so to this day. The computer simulation, a revolutionary innovation in those days, predicted a frightening future for humankind, a real Malthusian disaster with exhausted energy resources, deprecated soil and eventually a collapsing global population. Since its appearance, it has been strongly criticized for its methodology and conclusions, yet it opened a door to a discourse on sustainable development and impressed upon academia the hazards of overpopulation. In this sense, it may be one of the most important writings of the 20th century.

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THE SIGNIFICANCE OF THE LANDSCAPE IN THE RESEARCH OF ENVIRONMENTAL HUMANITIES

Gábor Máté

Frameworks and landscapes

Attraction to the landscape in different fields of scholarship is not new. Before the emergence of environmental problems, it was a sort of crystallization point from the emergence of human geography in researching the relations between humans and the natural environment. (On the evolution of Hungarian human geography, and the connection between ethnography and geography, see Novák 1997). Significantly, the notion has risen to an important level of analysis in the natural sciences and the humanities. This is also indicated by the emergence of diverse disciplines such as landscape ecology, landscape geography, landscape history, landscape archaeology, and landscape aesthetics. The essence and flexibility of the concept were revealed by the words of Pál Teleki, who said: *"The landscape is an excerpt, a large sample from the Earth's surface area, from the multi-rhythmic life of the world where many such rhythms coexist[…] The observation of the landscape, the perception of the known and unknown in combination, in the part of the universe in more – or most – direct contact with us, is a valuable complement to our knowledge, the generator of problems, and a guide along the path of deepening our thinking"* (Teleki 1937: 138).

Since Teleki's landscape geography, a lot of time has passed, but his thoughts – with due flexibility – still show where the landscape can serve as a suitable framework. English landscape historian Richard Muir illustrates the increased interest in landscape in recent decades with the growth of a tree. He says that in time, the foliage of a tree becomes ever more extensive and the branches grow away from one another. In such a way do new approaches to the landscape evolve. In other words, this symbolizes the increase of differences between scholarly interpretations of the landscape and the separate development of the concept of landscape. According to Muir's concrete example, the representatives of postmodernist perspectives would hardly be able to interpret the patterns of perished villages on the Earth's surface (Muir 1999: XIII–XIV). To explain why the "branches" have diverged so far from each other, the impacts of two "turns" need to be mentioned. One of the greatest changes in attitude was precipitated by the "cultural turn" in geography in the 1970s, which relativized the role of space, including the landscape. It called attention to non-material characteristics of units of the landscape, pointing beyond the physical parameters, such as, for instance, the importance of language, meaning, and representation. Landscapes are not things by themselves, but have cultural significance; they are enculturated (Atha – Howard – Thomson – Waterton 2013: XXI; Békési 2009: 185). The "spatial turn" that took place in historiography revalued the role of place and its

charge of meanings. It has eliminated the concept of homogeneous space (Keszei 2019: 101; Warf – Arias 2009; Withers 2009: 638). This change in attitude has influenced the natural sciences and humanities alike.

According to the research of Dénes Lóczy, the Hungarian word *táj* ('landscape, region') means a "definite area of land" (areal unit) and "the appearance of the land as we perceive it" (the sight from a vantage point) (Lóczy 2002: 18), but it also means province, landscape (painting), as well. Dóra Drexler has also pointed out other implications of the everyday meaning of the word, such as surroundings, countryside (Drexler 2010: 26–28). Its usage and meaning were also largely influenced by the artistic view of the landscape in the periods of the Renaissance and Romanticism and by politics (Antrop 2019: 1–3). The dictionary reveals that the Hungarian word *táj* was used in the first two meanings in the Middle Ages as well; in this regard it is similar to the German *Landschaft* (Drexler 2010: 39; Benkő 1976: 822). Dóra Drexler's meticulous comparisons of words have brought to light the fact that the French *paysage* and the English *landscape* do not perfectly correspond in content to the synonymous Hungarian and German terms, so the use of the latter as scholarly terms has not been without difficulties. Moreover, different interpretive, theoretical frameworks are attached to them (Drexler 2010: 37–40). (On the international usage, see also: Antrop 2019; Potsin – Bastian 2004: 2; Schama 1996: 10).

The term landscape was "made great" by science. In his above-mentioned work, Dénes Lóczy also points out that the word landscape, also widely used in the colloquial language, is hard to fill with content for analytic research. Therefore it is becoming increasingly customary to use "value neutral" special terms: words that indicate the spatial units but are not linked to the polysemantic and emotionally charged concept of landscape (Lóczy 2002: 14). Such are ecosystem (system model), ecotope (habitat), or a special ethnographic term, region, which appears mainly in the works of Balázs Borsos. In ethnography, it may be substituted for many technical terms (including landscape) with several connotations (Borsos 2002: 111). At the same time, the landscape is far more than a piece of space, and despite efforts to change, it is still present not only in the terminology of analytic research, but also in that of syntheses. Landscape is inspiration, habitat, a carrier of aesthetic values, and a source of scholarship, as well.

Eternal landscape

Were one to look for issues of environmental humanities whose prehistory is lost deep in the mist of the Palaeolithic, one would surely find the relationship between the landscape and the human being living in it as one. Palaeolithic hunters following hordes of wild game, Neolithic settlers tilling the soil, and Bronze Age people mining and smelting ore were groups of people living in, and from, the landscape. The landscape does not mean only the sight, or simply the environment. It is much rather a well-confined but also subjectively interpretable context which its users perceived as a system, and on the resources of which they subsisted. True, we have very little knowledge about it, as our ancestors rarely left behind such "data banks" as the works of painters, poets, and writers. It is, however, important to stress that "prehistoric" people were also capable of thinking about the landscape

in abstract terms, just like artists or researchers today. Archaeological investigations have severally proved that not only "high civilizations", but also illiterate groups of people and cultures were capable of observing the coordinates of the environment from above, from a perspective detached from matter, and after interpreting them, they could visualize the landscape (Mileson – Brooks 2021: 317–318; Tilley 1994: 202–208). The same has been registered by anthropological examinations which found navigating knowledge which served practical purposes and environmental knowledge used to evoke the ancestors and providing the basis of the belief system among the far from primitive "natives" (on the attitude of the Australian aborigines to the landscape: Morphy 1995). A relative of these systems has been created by humans of the 21st century who make GPS trackers of the routes covered in the landscape, erect and protect monuments, make excursions, or decode with their sense organs the information gained from the landscape and share it with others, today typically on online platforms.

THE BEDOLINA MAP

In Val Camonica in North Italy, we find rock drawings in the open, similar to the works of land art so fashionable today. Tens of thousands of "artworks" were made over the course of some 8000 years in this long Alpine valley. The representation on the Bedolina rock has several layers. Researchers date the engravings to the Bronze Age (1500–1400 BC) and the Iron Age (800 BC). On the rock with an undulating surface above the valley, we can see a map-like rendering of a landscape measuring 4.3 x 2.4 meters, depicting houses, roads, corn fields, and people in a typical scene of everyday human life in the environment of that time (Anati 1961: 242). Researchers are at variance as to whether the image is an accurate copy of the valley or an imaginary, symbolic map (Craig 2007: 387). Whatever the aim was, the makers carved into the rock a compact and interpretable spatial formation.

"THE TAIGA IS THEIR HOUSE"

The Khanti along the Vasyugan river in Siberia used to live on hunting and fishing before the appearance of oil mining. Zoltán Nagy's research has found that the indigenous people (the "Ostyaks") are characterized by a different perception of the environment than the newcomers, the relocated "Russians".

"The 'Ostyaks' know the forest excellently; they can find their way in it perfectly. They comprehend it as a whole and recognize its tiny differences. Their environment is internalized in them as a coherent and articulated system or entity. They perfectly know its paths, not only approximately whence and where they lead, not only the endpoints, but also their exact location in it. (…) The 'Russians' report the same thing. The game warden of the territory says that "an Ostyak never uses a compass in the woods. He goes out, looks around, well, yes, that's where I must go, he says and sets out. And he really arrives exactly at the destination. They were born here; they subsisted on it. The taiga is their house." (Nagy 2021: 244). (…) Their excellent sight or sense of space is eloquently proven by my host, who had never used a map, but when I showed him one, in a few seconds he understood it and having leant the cartographic symbols, could immediately orientate himself by it, and show me the places and roads I was inquiring

about. (…) Many people see this as the main difference between the 'Ostyak' and 'Russian' orientation: one finds his way in the forest self-evidently, the other with the help of maps and a compass (Nagy 2021: 249).

Though it can be a highly abstract thing, the landscape is an "earthy" phenomenon in several regards. Ethnobotany, or knowledge of the landscape, is an important notion in ethnography. It includes the knowledge of the physical conditions indispensable for life: the knowledge of mountains, brooks, and crop land. This is not only topographic knowledge, but rather includes some knowledge of topology (connections), chronology (temporal aspect) and function (utility). Excellent examples are provided by the ethnobotanical studies conducted in Gyimes. Dániel Babai and his colleagues registered landscape dynamism and landscape change as recognized by the local population and described the characteristic features perceived by the inner eye with local dialectal words and group systematization (Babai – Molnár – Molnár 2014). In Hungarian scholarship, place names that convey changes in landscapes and their intrinsic logic, have been ascribed great significance since Frigyes Pesty.

> Gyimóti well, Gyimóti well
> 'cause Gyimóti drowned in it
> Gyimóti the old first farmhand
> could be a hundred and twenty years old today
> (…)
> In a hundred years' time – who will know
> Who did Rácegrespuszta belong to?
> But the Gyimóti well will be there
> for Gyimóti drowned in it.
> It will be there, though it's long gone
> it has long been filled up.
> Now it marks a place in the fields;
> the old man is reluctant to leave…
>   (Illyés 1961)

As Gyula Illyés's poem reveals, work and various activities in the landscape humanizes the environment. People attach names to important places to aid their orientation in time and space. The rich glossaries of Hungarian gazetteers and the myths related to geographical names in folk tradition provide abundant information about relations of landscapes. The latter – in Bertalan Andrásfalvy's opinion – had a didactic purpose as well: "*the myths explaining certain place names deepened the knowledge of the landscape with the power of artistic creatio*n" (Andrásfalvy 1988: 78).

Thinking in terms of the landscape is of course undergoing constant change. The Renaissance and the Enlightenment resulted in changes of quality that modified the meaning of landscapes towards the creation of a picturesque quality, sight, and symbols. A veritable "landscape explosion" followed. On the one hand, diverse artistic styles redefined the ideal landscape and created new landscape fashions. On the other, landscapes became "laboratories" of diverse geographical, historical, biological and technical sciences. They were disassembled and reassembled again as the outlook and interest of the sciences required. An intellectual explosion

has also taken place. "Its shock waves" are felt perhaps more keenly now in the age of networks and virtual communication than ever before.

In light of the above, it is expedient to discard the idea that landscapes develop. Landscapes change and, in parallel, so do our thoughts on them. We should also set aside the evolutionist idea which ranks the quality of landscapes from primitive to advanced. This mentality is not alien to the scientific, and especially the agrarian and technical scientific approach, if one takes development as a synonym of a change in quality towards perfection (see Sárkány – Somlai 2004). Instead of development, one may speak of the polyphony of landscapes, of permanently changing spatial structures appearing within the minds of individuals and large collectives, which show immense variety when placed side by side both synchronically and also diachronically on the "timeline of history".

Thus, landscape was not brought about by Dutch landscape painting; it merely mediated the ideas about it in a new medium (cf. Radnóti 2022). True, landscape came to the foreground of ideological systems, fashions and policies in which it was taken out of its physical reality and began to "behave" in an abstract manner. It found a market for itself. A special, important aspect of this is implied in the identification of nations with certain landscapes. Besides languages, history, music, and costumes, landscapes can also have a national character, so much so that over the centuries, some have even become brands. Switzerland became identified with the Alps, Hungary with the puszta, Scotland with the foggy barren highlands. These are majestic areas of the presence of humans and nature, but to make them successful, one had to "fit" history to them. It had to remain unsaid that in the Middle Ages the Alps were the realm of ice and snow where people did not long to go, but rather fled from it. (On the "discovery" of the mountains: Albert 1997: 17–23.) On the Hungarian Great Plain, the disastrous devastations in the age of Ottoman rule cleared the way for the spread of the image of the puszta devoid of villages, with wild shepherds and melancholy inns. The dearth of the land in the 19th century almost perfectly eradicated its last remaining requisites (see Máté 2019a). The enclosures in the Scottish territory in the 18th and 19th centuries considerably redrew the earlier landscape, replacing the mosaic-like landscape with the planned agrarian areas of large estates. The spaces that were left out of the transformed cultivation with or without reason became promoted to an imaginary, exalted world full of good virtues ("Highlandism") (Withers 1999; Whyte 2002: 75–79). What is common to these examples? Travelers, artists, and landowners created them and fitted them into narratives about European nations, and in this way they became reflections of a certain Zeitgeist.

Landscape is thus a timeless, universal category, which is not identical with space; its meaning changes in parallel with human society, economy and thinking. In Richard Whyte's view, although landscapes are productions of the web of relations between the physical surroundings and human society, they are also social constructions. They cannot be correctly understood, unless they are examined in their natural and cultural contexts (Whyte 2002: 7).[1]

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[1] On the artistic concept of the landscape, see the chapter, Nature, art, activism.

Diversity of interpretations

So far, the landscape as a universal phenomenon has been discussed, and some important aspects required for a better understanding of it have been outlined. We now turn to the level of interpretation, progressing from the individual to the role of the body politic. A crucially important contribution was made by Sándor Békési, who says that "a landscape arises via the approach to it". This is at times a selective and constructive process. The "external environment" of individuals encounters mental and emotional factors, leading to diverse individual and social aspects, forms of interpretation and new symbols (Békési 2009: 189).

In Peter J. Howard's view, our "personal landscapes" are influenced by nationality, culture, religion, social status, rural life (aborigine status), gender, age, experience, occupation, fields of activity, and the media we use, which – like a sort of "perceptual lens" – changes the meaning of what we see (Howard 2016).

Every personality approaches things, screens and distorts information differently, and re-presents the landscape in a selective manner (Muir 1999: 115). A person may conceive of a landscape as a personally experienced place or a remote area beyond his/her reach, or again, it may be a place in the realm of the imagination. Landscapes can be friendly, snug, exotic, appalling, valuable, inspiring. What is certain is that we ascribe to them diverse connotations. In his famous work, Beloved geography, Zoltán Szabó writes in an intimate and warm tone:

> *"Certain angles of the mountain slopes, a water surface, the music of a gurgling brook, the nearby street corner, the procession of clouds over the plain, a piece of the landscape enclosed by the frame of a window, and in which familiar people like us are moving about […]"* (Szabó 1988: 16).

D. W. Meinig conducted a highly informative study about diverse modes of perceiving a landscape. The term landscape is not only a general concept, but as part of the academic terminology, it is a word of specific meaning which elicits different schemes of interpretation from different specialists. In his essay *"The Beholding Eye. Ten Versions of the Same Scene",* he looks at these interpretive frames one by one. He says that a landscape can be perceived as habitat, art work, system, problem, property, ideology, history, place, or aesthetic sight, to list the various schemes (Meinig 1979). An interesting example of individual landscape perception is given in John Connell's The Running Book, a report of his experiences of the landscape during his running. Based on the specific perceptive medium of running, the book presents memories, knowledge fragments, and personal confessions of the landscape as though on a conveyor belt (Connell 2020).

Ethnographer Vilmos Keszeg's biographical study reconstructs the tradition of living in the landscape (Erdélyi-Mezőség – Câmpia Transilvaniei) and the knowledge about the landscape and the environment based on the events and narratives of a person's life. It demonstrates the extent to which the landscape shapes the trajectory and life of the individual, but also seeks to answer the question of how changes in the environment produce experiences. As revealed by the previous examples, the individual's personality has a great role in perception and interpretation. At the same time, as Mitchell claims, the landscape is a cultural medium as well (Mitchell 2002a: 2; 2002b: 5): it is perfectly suitable for conveying messages. It may have

diverse purposes, for instance, political messages, or one may find and express one's identity in it, define a landscape as legacy, or involve it in individual or collective acts of memory. British historian Simon Schama holds that the role of human imagination and gregariousness are so important that landscape is more a product of culture than of nature. It is the projection of the imagination onto trees, waters, and rocks (Schama 1996: 61).

One of its most important aspects is perhaps its use as a "projection screen" for mediating political messages to a target audience. In the 18th and 19th centuries, the "moral landscape" was the symbol of orderly, ethical, better living and good government. This – as Sándor Békési writes – turned into the "homeland" in the age of Romanticism and at the same time into a surface of reference for Romantic art, geography, ecology, and nature protection[2] (Békési 1999). From the 20th century onwards, human beings gradually came into possession of incomparably larger amounts of natural resources for realizing their plans of transformation, which they had previously relegated to the category of wayward imagination. This occurred not only in the Age of Reason and with Western capitalism coveting more and more energy, but also in the Socialist block with its radical industrialization. There, the utilitarian view resulted in immense programs designed at transforming nature, making people believe that nature could be subdued by humanity (see: Hajdú 2006). Our current concepts of the landscape imbued in ideologies are increasingly influenced by the ever "louder" ecological crisis, which has led to the transformation of production, strengthening of nature and environmental protection, and also to the growing presence of Green political parties.

In Western Europe, characterized by a diversity of juxtaposed landscapes, landscape has become heritage. This implies many different identities (on this topic, see Csorba 2010). Researchers who value diversity created institutions and fortified with legal protection the requisites of the past. In addition to open-air museums showing the material cultural heritage of the past, from the 1960s, eco museums intent on conserving the morphology and values of the landscape began to appear as well (Borelli – Davis 2012). Connected to this is the common experience that the transformation of the landscapes has accelerated and the sight of change is a permanent source of tension. Changes since our childhood make us ponder visions of mortality, and decay. For those born in the 20th century, this implies the experience of the disappearance of the landscapes of the peasantry, i.e., of small-scale landscapes (see: Békési 1999). Therefore, in addition to becoming heritage, landscapes also represent longed-for states with "imagined" characteristics. This is partially due to their monetary value in the tourism industry.

On a related note, landscapes are also fields of rivalry. It is typical of our age to have a simultaneous conglomerate of diverse ideologies, religious dogmas, and political orientations, sometimes all influencing a certain space. An apt example is prehistoric Stonehenge, "where archaeologists, tourists, Druids, New Age travelers, English Heritage and the National Trust all have their own images, symbolism and views regarding the ways in which the area should be preserved and its landscapes managed and consumed." (Whyte 2002: 8).

The encounter of different value systems and attitudes can be observed in connection with the "one-thousand-year-old border in Gyimes" about which one

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[2]   Questions of landscape and nature protection are also discussed in Anna Varga's essay.

can read in Zoltán Ilyés's publications. The rivalry for landscapes often has an ethnic aspect (Ilyés 2007). One of the best examples is the conflict of interests and differences in landscape-related ideas between the indigenous population and the colonizers. The colonizers looked down upon the subjugated peoples as uncouth and uncultured. They lived in the wilderness, and, according to the prevalent view, the white man brought culture to an "empty land" and turned it into a cultivated landscape. Science has by now superseded this view, but it is by no means equally outdated among the public. In his classic work, William Cronon introduces the different land uses, "ecologies" and networks of contact with the environment of the indigenous (Indian) people of New England and the settlers, thus providing a choice example of the confrontation of diverse attitudes to the landscape (Cronon 1983). Occupying and incorporating the "empty lands" was a life-and-death issue for expanding empires. Hence in some ways it is the product of colonization, which they strove to justify with ideological, political and scientific arguments as well.

"LAND CONQUEST THROUGH ONION DOMES"

The so-called conquest through onion domes is a symbolic, national-political process of expansion in Transylvania, Romania. The Romanian Orthodox Church launched extensive campaigns of church building in the interwar years and after the change of the political regime in 1989. Its target area is the Székely country whose settlements are still generally populated by Hungarians. The prime locations are the exposed, visible urban centers, and the distinguished spectacular spots of the natural landscape. The expansion of the Orthodox religion, the national faith of Romania and the multiplication of its churches and monasteries in the Székely country fills Hungarians living there with a sense of losing ground and living under threat. The interviews conducted by journalist Zoltán Csáky with politicians and clergymen illustrate the everyday fears and dilemmas related to the "nationalization" of the landscapes. For example, the idea of "losing the landscape" appears in the opinion of Gábor Kolumbán, county representative in the European Council, in these words: "*The expansion of the Orthodox Church is to be seen as a sort of cultural colonization, for they create highly visible building complexes that modify the character of a landscape, and consequently, they leave a landscape-altering message, the activity, the trace, the footprint of another culture in this region. As far as I see, this is detrimental to the development of the Székely country in several ways*" (Csáky 2004: 48; a more recent approach to the question: Zahorán 2012).

Objective and subjective landscape history

After the review of the interpretations of the landscape, we narrow our focus to the question of landscape history. We do so, because landscape history is important for several disciplines of the humanities (ethnography, archaeology, historical studies) and it provides a good framework for analytical possibilities. In spite of its frequent use, only rarely can one read about it in Hungary.

Landscape history has no chair of its own in the traditional academic order of disciplines (if there still is such a thing). This is similar to the position of environmental history, which Lajos Rácz defines (with reference to Michael Powell)

as the "collective imagination" of researchers well-versed in environmental themes (Rácz 2011: 13). In Hungary, the need to learn about the history of landscapes is present in geography, botany, ethnography, history, archaeology, aesthetics, literature and the technical sciences. Instead of a unified landscape history, each discipline attempts to interpret and define the landscapes in accordance with their own attitude and sources. A good example in Hungary was the series of conferences organized by György Füleky with the title "*Changes of the landscape in the Carpathian Basin*." Despite having a new buzzword for each conference, the interest in the landscape was more kaleidoscope-like (see e.g. Füleky 2004, 2012). Another characteristic of contemporary approaches is that landscape often overlaps with environment and ecology and at times is synonymous with them. Accordingly, "landscape-relevant" contents do not necessarily appear under the category of landscape. This chapter cannot undertake an overview of landscape historical research, but it is important to mention two large groups of landscape interpretations.

Ian D. Whyte divided landscape historical research into objective and subjective approaches (Whyte 2002: 12–26; Antrop 2019: 2). The goal of objective research is to explore the long-term process of landscape changes traceable to human and natural impacts. What is important is the examination of the physical components of the landscape, hence it may be called a "structural and landscape approach" (Whyte 2002: 15). English landscape history has achieved significant results regarding the issue, method, interpretation of the sources, and local excavations. One of the classic researchers of this field of study is William George Hoskins, who described the landscape historical periods of England from the Neolithic to the mid-20th century in his book "*The Making of the English Landscape*" (Hoskins 1981). A milestone of his writing was using the whole landscape as a source of history. Landscape history, as it unfolded from the 1950s, urged researchers to answer questions which highlighted processes, and in particular to explore the kinds of social factors and environmental conditions which influenced how landscapes were shaped (Antrop 2019: 7; Johnson 2005: 120). The investigations were based on aerial photos, archival maps and documents, and intense field inspection. The critics of Hoskins's landscape history disagreed with its subjectivity, its sometimes overgeneralized, even ahistorical interpretation, without failing to emphasize its undoubtable merits (Whyte 2002: 15–16; Matless 1993). The criticism of posterity clearly shows that the differentiation of the objective and subjective approaches became the basic guideline of landscape historical research after the spatial turn.

The German cultural landscape historical school applies the objective approach by placing the process of the emergence of landscapes in the foreground. In several of his works, Zoltán Ilyés, who died young, wrote about this school (summarized in: Ilyés 2007: 18–21). With his research in Gyimes, he realized one of the classic Hungarian adaptations of the German trend. His book is an excellent epitome of the "morphogenesis of cultural landscapes", subjecting the landscape historical examination after dissecting it to find "persistent" and "relic" elements. Ilyés' research also follows the subjective approach in that he also presented the symbolic interpretive planes of the landscapes, apart from the system of landscape elements (hayfields, meadows, fences, etc.).

The essential part of objective landscape investigations is the recognition of the elements of the landscape, their cadastral registration and interpretation. One of

the most important and suggestive concepts of this, by now classic, landscape historical approach is the "*readable landscape*", which reveals itself to those "*who know how to read*" – that is, to researchers who can make landscape historical records speak. It logically follows that such researchers consider the landscape as "*the richest historical record we possess*" (W. G. Hoskins cited: Aston 2002: 12), the richest semiotic system of history. Reading the landscape is no longer the privilege of researchers alone. It is made widely accessible by easy readings which introduce – like a manual with few annotations or bibliography, but with a wealth of illustrations the landscape history of the whole or some part of the British Isles (Richard Muir's work is noteworthy in this regard; see: Muir 1984; 2000). The historian's job in these studies is often like the detective's and practical methodological guides are also provided for the "investigation" (see: Muir 2001).

The objective approach sees the landscape as a dynamically changing, impermanent phenomenon whose systemic determinant is change, rather than constancy (Aston 2002: 12). To quote Michael Aston's simile: "If we could see the English landscape developing over the last 6000 years in a speeded-up film, it would certainly resemble an ants' nest, with not only the ants moving about at a great pace engaged in many jobs, but the nest itself being shifted constantly!" (Aston 2002: 12). Works of the objective approach also often use the palimpsest as metaphor. A type of documents known in diplomatics, it signifies a document with an old piece of (effaced) writing on which a new writing is superimposed. In other words, the old text was scraped out so that the paper could be reused. The old writing can be made visible again with diverse procedures. The major value of these documents is provided by the different writings from different ages, often in different lettering and styles, and the contents also differ. The historical stratification, the different qualities of the strata, and the methodological challenges of reading them provide perfect comparability between the palimpsests and the model of the readable landscape. The objective approach often puts small places under scrutiny, i.e., an aspect of one of the characteristics of the landscape (for instance, land use or settlement research). Thus, it can be linked to ethnographic and local historical elaborations (Whyte 2002: 17).

As seen earlier, a landscape is not only a system of physical elements. It is a symbolic system as well. In this sense, it is a construction of the human mind. In the objective approach, we use diverse methods to make the data interpretable. For the subjective approach, we need to take a vantage point. Hoskins thought a landscape could be read like a text. Current interpretations of the landscape as text claim that it is a text of multiple layers of meaning suitable for being read differently in accordance with a wide variety of interpretations at a time (Whyte 2002: 18). Whyte illustrates the difference between the two approaches with a forest. The objective approach would be concerned with the composition of tree species, systems of forest use, and past changes on human influence and the underlying social implications. The same forest, for a subjective approach, would provide themes related to spirituality, mythology, the forest's ecological values, differences in male and female perceptions, and other less tangible aspects.

From the 1970s onwards, the change in the interpretive attitude has resulted in important changes not only in geography but also in other fields of scholarship. Landscape semiotics, landscape phenomenology, and landscape aesthetics appeared (Tilley 1994; Lindström – Palang – Kull 2013). A change in quality was brought

about by the understanding of the difference between the perception and recognition of the landscape. The landscape has become a research topic in ethnography and cultural anthropology, for filled with cultural phenomena and the values ascribed to it, the landscape shows various patterns as a mediating medium. (On the limits of mapping groups and landscapes in Hungarian ethnography, see Máté 2019). Ethnic, religious, political and power relations and intentions cover a landscape like a subtle membrane. During an empirical study, an anthropologist not only reads, but much rather "hears" the diverse resonances of different groups in the landscape (" us" and " them"). Csaba Mészáros' study discusses the changes in the *alaas*, the symbolic landscape of the Sakha in Yakutia and its connections to diverse age groups, political and economic contexts. In the taiga dominated by redwood, alaas is a meadow, hayfield or pond. Used earlier for cultivation, by today these places have acquired additional meanings, while they lost some of their significance. It was not only the local political elites which tried to attach this landscape to themselves as an ethnic symbol, using diverse power techniques. Its interpretation and use also reflect the ambivalence of their relationship with the Russians (Mészáros 2008).

A change of perspectives can be witnessed in the work of Julie Cruikshank, who directed the focus of research to a lifeless natural element, the glacier. She presents the glaciers from a variety of possible and equivalent perspectives in her book. North American Indian (Athapaskan, Tlingit) groups describe the ice rivers as feeling and hearing "beings" who respond to the environment. Travelers write about them differently and natural scientists also approach them from a different angle. The ontological perspective of each group is different, but none of their interpretations can claim exclusive validity, for none can encompass the totality (Cruikshank 2005).

The subjective attitude to, and evaluation of, a landscape can be found in Sándor Békési's work about the Fertő. Békési wrote about the changing evaluation of the "Majestic mire" in different ages. From "anonymity" and a scorned place, it has risen to the status of a popular tourist destination and a carrier of natural values. At the same time, besides the touristic and aesthetic discourse, there was also a profit-oriented and technocratic conception of the landscape, and the attitudes were further diversified by the new border (drawn by the Treaty of Trianon) (Békési 2009: 201–202). The study also demonstrates that a landscape is not always the outcome of the "peaceful" symbiosis of human beings and nature; it is also the cumulative result of conflicts between rival social groups and powerful interference (Békési 2009: 186).

By way of a conclusion, we contend that if the landscape is a "scholarly extract" of the "multi-rhythmic life of the world" and if we accept its hypothetical character, then the outcome of the research work depends largely on the window through which the phenomenon is observed, what light illumines the landscape for us to have a mental image of it. After all, the different scholarly disciplines, no matter how exact they may appear, recreate in their workshops the world which is manifested in matter or shaped by thoughts.

Recommended readings

Howard, Peter – Thompson, Ian – Waterton, Emma – Atha, Mick (eds.) 2019. *The Routledge Companion to Landscape Studies.* Second Edition. London – New York, Routledge.
This book sums up diverse scientific and non-scientific ideas of the landscape in 47 chapters, offering a broad overview of the landscape conceptions of diverse fields of scholarship from aesthetics through law and archaeology to geography. It is an excellent starting point for those interested in this topic.
Aston, Michael 2002. *Interpreting the Landscape. Landscape Archaeology and Local History.* London – New York, Routledge – Taylor & Francis.
A beautifully written, inspiring, richly illustrated book on the study of the structure of a landscape. It is recommended to all who wish to delve into the examination of the realm of forms of the Earth's surface. A „classic" for those interested in questions of history, archaeology and historical ethnography, not specifically to gain data, but to acquire a foundation in outlook and methodology.

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FOOD SUPPLY AS A GLOBAL CHALLENGE

Dorottya Mendly – Melinda Mihály

Introduction

In the 21st century, the global political agenda is often dominated by so-called "global challenges". Their main lineament is that the effects of each are exerted – albeit differently – all over the world via intricate networks of relations. Their management requires a degree of coordination among the efforts of diverse actors from various political areas, on a broad spectrum of geographical levels: global, continental, macro-regional, state and local. Access to food enjoys high priority among the global challenges, as its solution is the focus of the concerted political work – of so-called global governance – outlined above; after all, the food supply is beyond doubt a direct necessity for the survival of humankind.[1]

Providing each inhabitant of the Earth with sufficient, nutritious, safe food is itself a serious challenge for the global systems in charge of food provisioning. In view, however, of the possible requirements to be fulfilled by food systems (Ericksen 2008) (being, for example, culturally appropriate, socially or environmentally sustainable, and produced even in some regenerative manner), it might appear euphemistic to term this set of problems a "challenge". Like air and water, food is also ensured on Earth by the biosphere. The global system of food provision changes the surface and ecosystems of the Earth to an extraordinary degree (Takács-Sánta 2008). It is essential to declare that it not only transforms but also gravely damages the biosphere (Houtart 2010; Manning 2000; McMichael 2014; Weis 2007). Like in the case of solving the other global challenges, "sustainability" is a minimal requirement. Recent investigations have, however, clearly revealed that without the profound transformation of agriculture and food systems (including the social and economic structures that maintain them), the notion of sustainability is gradually emptied of meaning.

Data by the Food and Agriculture Organization (FAO) reveal that there are 3033 million hectares of good quality cropland, but this number is steadily decreasing, due to soil erosion, overuse and aridification. The dominant systems of agriculture contribute to the broad set of natural hazards (desertification, forest clearing, decreasing biodiversity, water pollution and overuse, etc.), to a rapid decline in the living conditions of rural populations, and thereby to the general erosion of social relations (Mészáros 2017). Food supply and agriculture are responsible for the emission of a quarter of greenhouse gasses (Poore – Nemecek 2018), while half of the habitable part of the planet is used by agriculture (Ritchie – Roser 2019a). 70% of freshwater is used by agriculture globally (FAO 2011), while this sector is responsible for 78% of the pollution of water resources (Poore – Nemecek 2018). At present, 94% of mammals in the world (not counting

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[1] On this topic, see Gábor Pirisi's study on overpopulation.

humans) are domestic animals, and agriculture is among the causes of the endangerment of the vast majority of endangered species (Potts et al. 2017). In addition to the data selected above, a wide range of statistics confirm that the current operation of our food systems should be understood as a key factor in the ongoing ecological crisis, at a global level (Ritchie – Roser 2019b).

This suffices to establish that the expected global food shortage and the 21st-century crises directly related to it will elevate food supply to the rank of the most crucial problem of the century. In this chapter, an attempt is made to outline the problems of this complex area via a global framework with the help of a brief historical survey and the presentation of the basic concepts. Next to be discussed are humanity's occasional, pragmatic and systemic solutions for the issue of nutrition. It is a basic principle of our approach that the problems of food must be deliberated at the systemic level so as to arrive at real solutions. It is therefore important to take stock of the compatible systemic alternatives that might easily be combined and to integrate them into the set of solutions to global concerns.

Framing the problem

How can one identify the problem so as to ensure that it is understood in the most profound way possible? Is it suitable to start out from the simple and palpable experience of the recent drastic rise in food prices? The answer is only partially positive. While for lower social classes, rising prices mean the narrowing of their opportunities to access food, if one employs Jason Moore's observant approach, it is clear that the relative cheapness of food cannot be taken for granted, nor is it self-evident. Moore's research has confirmed that food as a cheap resource is the special characteristic and supporting pillar of a form of social-economic organization. His main statement is that capitalism is a historical form of organizing the economy, society and the environment and that this depends on the availability of four cheap resources (Moore 2016): cheap energy, raw materials, labor and food were necessary for the evolution of this historical form of society (and environment) in the first place. Thus, the recent and considerable rise in food prices – among other factors – indicates the crisis of capitalism as a complex historical system.

Moore's reasoning fits the main theses of critical social theories in several regards. The main achievement of all these theories is recognizing that the key to the problems lies in the structures that support the accumulation of capital. Therefore, any adequate critique must focus on the systemic nature of food systems and on all aspects through which the global food system props up global capitalism. A cardinal point of the food system is agriculture, with its diverse possible modes of operation. At present, it is safe to declare that industrial (intensive) agriculture is the dominant mode of operation worldwide. Its basic feature is that it is deeply embedded in global capitalism's modes of production and in global trade.

Although its foundations already emerged with early colonization and its conditions were created by industrialization, the model did not become truly dominant before the second half of the 20th century. Mechanization, monocultural production, large-scale livestock farming, and the extensive use of external resources (various chemicals and fossil fuels) transformed agriculture according to the dictates of the capitalist mode of production. Albert Thaer famously characterized

agriculture as an industry which aims to create profit by producing vegetable- and animal-based products (Ángyán 2003). This means that agriculture – which by its nature, is also the functionally diversified management of the environment and the landscape (as it can provide a variety of ecosystem services and possesses both cultural and recreational functions), is degraded to "agribusiness" with one single goal, which it shares with every capitalist undertaking, the production of profit. Since this mode of production effectively serves mass production, the profit is primarily realized on the global market. Therefore, the produced food items enter the system of global capitalism as commodities. Everyone is familiar with such examples as cheap Brazilian chicken or Chinese garlic (they are cheap, because the environmental and social costs implied by their production are not being paid). But these are only a few typical examples of a globalized system. The detrimental impacts of the system on human health, the environment and the living creatures in it have lately gained an increasing amount of attention.

It is, however, important to consider the historical dimension, for systematic processes are relatively easy to define in time and space. Although the production and trade of food was also a key factor in the earliest phases of globalization – just think of the classic examples of sugar or cotton (Mintz 1986) – up to the mid-20th century, agricultural production followed the traditional model worldwide. Despite a few environmentally harmful practices at its core, such as plowing, it was more environmentally friendly in several regards. It produced practically no waste. The remains of plants and diverse by-products were utilized, so it was a closed circulation of matter and energy, while the system accommodated some of the other (biological and social) functions of the space used for agriculture (Ángyán 2003). Evidently, the traditional model of agriculture could not have existed without the special economic structure and social forms which supported it. Like in all other cases, the production, processing and trade of food were embedded in a complex social and economic system and functioned accordingly. The traditional peasantry, the social order resting on communities of peasants, has gradually been disappearing in the wake of changes in historical capitalism (van der Ploeg 2008).

The explosive breakthrough of the so-called " Green Revolution" in the 1960s, due primarily to the influence of Norman Borlaug's activity, meant the worldwide spread of industrial agriculture, primarily under the banner of food security. Despite serious objections, the mentality represented by Borlaug remains fairly influential to this day. Several arguments for food security claim, or imply, that industrial agriculture has and will have no real alternative. The "no alternative" type of argument is in accord with the political and economic doctrine of neoliberalism, which has been developing since the 1970s and 80s and which has achieved dominance all over the world. These intertwined parallel processes have kneaded the social-economic order – including food provisioning – at nearly every point of the globe into what can be seen today. The modern agriculture that emerged from the changes not only jeopardizes the existence of indigenous and local communities, but is destructive to the ecosystems and the biosphere, not to mention the issue of food security, which has received growing publicity in the recently-evolving global crises.

Occasional and pragmatic alternatives

In light of the above, it comes as no surprise that sustainability has become one of the key concepts in thinking about global challenges since the 1980s and 90s. According to the definition by the FAO, in agriculture, the term means "the management and protection of the natural resource base, and the channelling of technological and institutional changes, so that the needs of current and future generations could be satisfied. This sustainable development preserves the soil, the waters, the plant and animal genetic resources, is not harmful for the environment, is technologically adequate, economically viable and socially acceptable" (FAO 1991). This definition also makes it clear that the frameworks designated by the concept of sustainability are rather broad – arguably too broad –, allowing for a wide spectrum of alternatives that promise sustainability in agriculture. Apart from specific questions on production technology, there are solutions that offer workable alternatives through the reforms of diverse points in the food systems without radically transforming the socio-economic conditions.

One of the most frequently discussed and seemingly most promising tendencies is an attempt to achieve the desired change by modifying the geographical relations of the food systems. We have seen above that the food system is organized on a global scale. This means that the worldwide system is connected in several forms and at several points to smaller spatial units, including macroregions, microregions, and even individuals' actual microenvironment. Thus, "global" means the linkage, interlacing, and spatial stratification of diverse forms of localities. It is an important feature of global space that the connections between individual loci are imbued by the hierarchy of the current power relations, which obviously have impacts beyond abstract spatiality. These spatial power relations are at work when local farmers are in the position of dependent suppliers to multinational companies or the consumer only has access to Brazilian chicken and Chinese garlic. It might therefore seem to be a logical proposition that by consuming locally produced food – and thereby creating and strengthening the conditions which support it – may be the remedy to the problems caused by the global system. This effort may take several forms: "eat local" campaigns, the concept of "short food supply chains", local and farmers' markets and the various kinds of shopping collectives are all local by essence. However, one needs to realize that these alternatives do not alter the system dominated by market relations – or the presence of food as commodities within this system – and that therefore their effects remain limited.

In addition to the solutions stressing the spatial proximity of consumed goods, another significant trend of the reformation of the dominant food system is the modification of cultivation technologies to render them more environmentally friendly (and healthier). The "bio" label is perhaps the best-known, most widespread and most elaborately developed example. In line with consumer expectations, today the shelves of large food chains also offer many qualified bio food products. However, these goods' cost makes them a viable alternative solely for social groups above the middle class. This also applies to the products of small and local farmers, which leaves several unsettled questions for the movements committed to this trend (see in more detail Fordulat 2021). In addition to the "bio" trend, vegan and vegetarian ways of living have gained traction in public discourse. They argue that switching to a vegetable-based diet will reduce the environmental load of

animal husbandry (the emission of harmful substances and water consumption, as well as aspects of animal welfare).

However, a vegetarian diet or the growing, selling and consumption of bio products do not offer solutions to the systemic problems that have been identified as the greatest challenges in the global food system. Soy, which is of decisive importance for bio products and a vegan diet, also travels halfway around the globe, like any other food item. Vegetables and fruits produced with industrial methods can be as harmful to health and the environment as a traditional diet. Changing individual eating habits does mean a step towards sustainability, but it leaves the systemic problems unchanged, and more importantly, it leaves them unproblematized. In the review of systemic alternatives given below, we wish to draw the reader's attention to existing theories and practices which may help, either alone or together, to solve such fundamental problems as having control over our food, settling the relations between humans and nature, or linking expressly agro-technical questions to the social conditions with which they are interlinked.

Systemic alternatives in food provisioning

In response to the challenges of the 60s and 70s, several green movements evolved. Among these, bioregionalism, agroecology and permaculture will be discussed here. While bioregionalism emphasizes geographical organization, the tools for the systemic transformation of the food system are developed in permaculture and agroecology. Agroecology and permaculture can be interpreted in the food sovereignty framework which evolved in the 90s in equal measure.

Food sovereignty

Food sovereignty is a political framework which points out the systemic challenges generated by globalized food systems. It seeks possibilities of resistance and the systemic transformation of food provisioning (Patel 2007; McMichael 2008). As a movement, food sovereignty takes a stand against the Green Revolution and the dominance of industrial agricultural practices, neoliberal free trade policies (particularly the dumping of agricultural surplus into foreign markets), and the undemocratic governance of food and agricultural trade (particularly the organizational structure and rules of the WTO) (Carlile et al. 2021).

The framework emerged as a result of the ongoing internal dialogues of rural social movements in the early 1990s and was introduced by *La Via Campesina* (founded in 1993) at the FAO food summit in 1996. La Via Campesina is an international social movement of nearly 200 organizations from 81 countries, divided into national, regional and continental units. It represents the interests of farming families, peasants, indigenous people, landless peasants, agricultural laborers, rural women, and young people, totalling some 200 million families across the world (Martinez-Torres – Rosset 2014). The public forums organized in parallel with the FAO World Food Summits in 1996 and 2002 served as important venues for the strengthening of the food sovereignty movement. Food sovereignty was a consensually accepted narrative used by NGOs

participating in these forums to criticize the FAO's food security narrative (Carlile et al. 2021).

According to the food security narrative, the main objective of the food industry is to satisfy the needs of each country irrespective of where, how and by whom food is produced (Balázs 2020; Martinez-Torres – Rosset 2014). Under this narrative, efficiency, productivity, an economy of scale, the liberalization of trade, and free markets are necessary for "feeding the world" and for achieving food security (Borlaug 2007). In contrast, the narrative of food sovereignty represented by small-scale farmers and members of the agricultural movement stresses the importance of ecologically sustainable and socially just, locally organized food production and consumption (Balázs 2020; Martinez-Torres – Rosset 2014).

With the expansion of the movement, the concept of food sovereignty also became more comprehensive and extended. The food sovereignty definition accepted at the International Forum of La Via Campesina in Nyéléni, Mali in 2007 is so-far the broadest in its scope. The Nyéléni declaration claims that people have the right to produce healthy food with ecologically sound and sustainable methods and to define their own food and agricultural systems (Nyéléni 2007).

This movement promotes a food system in which small-scale family farms and peasants grow food with agroecological methods for local consumption (Carlile et al. 2021). Food sovereignty is thus the broader framework in which agroecology and permaculture can be interpreted.

Agroecology

Agroecology is simultaneously (1) a social movement, (2) a set of practices seeking an alternative to industrial agriculture, and (3) a field of scholarship. Since the 1970s, agroecologists have been working on making agriculture more sustainable, focusing their research on smallholders' pragmatic agroecological knowledge (Altieri – Nicholls 2017).

This concept first appeared in the late 1920s and originally meant the application of ecological methods in agronomy (Wezel et al. 2009). When the unexpected health and ecological consequences of the Green Revolution became visible in the 1970s, the focus of agroecology was extended to the social sciences (anthropology, ethno-ecology, rural sociology, development studies, and ecological economics) (Altieri – Nicholls 2017). It was applied at first on the scale of plots of land and fields, then that of farms and later on that of the entire agro-ecosystem. Now, having left concrete spatial scales behind, it studies the entire food system across all scales (Wezel et al. 2009: 513). The interpretation of agroecology as a holistic, interdisciplinary field of scholarship is not widespread in Hungary (Balázs – Balogh – Réthy 2021). Its scope includes only the interactions within the agro-ecosystems without integrating social or cultural perspectives such as employment or food security (see e.g. Wezel et al. 2009).

In the 1980s and 90s, several farmers' organizations, researchers and civil bodies popularizing agroecology joined forces against neoliberalism and began combining agroecology with national and global political campaigns wishing to change policies of trade and agriculture (Carlile – Garnett 2021). In Hungary, the National Society of Conservationists, the Hungarian member of the international organization Friends of the Earth (Magyar Természetvédők Szövetsége és Föld Barátai Európa

2015) and "Védegylet" Association (F. Tóth – Réthy 2020) represents the activist side of the agroecology movement[2], but both organizations find it a great challenge to build a social basis that could promote a socially just, systemic transformation founded on local communities: "Nobody understands the term [agroecology] outside Gödöllő, and [there, too] it is used according to its academic interpretation. A complex understanding with active movements and a variety of practices, which was supported by the Friends of the Earth or the Nyéléni declaration of La Via Campesina, has not reached the general public in Hungary" (cited from a representative of the Hungarian Green movement in Balázs – Balogh – Réthy 2021: 257 – 258). Since policies aiming to transform the food-system at least at the level of narrative – also include agroecology as a practice worthy of support, a framing competition evolved between non-governmental movements and the actors of industrial agriculture for the definition of the term (see Balázs – Balogh – Réthy 2021). Global pesticide-producing and trading companies interested in mass production fight for an interpretation of agroecology which conforms to the system. Their interpretation has attracted policy support in Hungary: "the dominant position is not the development of [a system-critical definition of] agroecology but that of precision agriculture and improved irrigation. They are now the flagship programs of the National Chamber of Agriculture and promote efficiency and competitiveness. In agrarian communities, the strongest motivation is the fear of yield reduction. This makes them use excessive amounts of pesticides to avoid a decrease in volume" (Balázs – Balogh – Réthy 2021: 260). The actors interested in conformist interpretations of agroecology (representatives of industrial agriculture) possess considerable resources for asserting their interests and enjoy the support of policy makers. In comparison, NGOs, small-scale farmers and researchers fighting for an interpretation of agroecology which is critical of the system lack the necessary resources for building a social foundation and for advocating for their interests effectively.

The practical knowledge of agroecology is utilized in organic and biodynamic farming, permaculture, agro-forestry and regenerative agriculture (Balázs – Balogh – Réthy 2021). Of these, permaculture, a system-critical movement whose popularity is also growing in Hungary, is introduced below.

Permaculture

Permaculture is a movement which seeks an alternative to industrial agriculture mainly but not exclusively in the field of food production. It is associated with the names of two Australian men, biologist Bill Mollison (1928–2016) and environmental designer David Holmgren (1955 –).[3] Permaculture takes a specific

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[2]   There are efforts to establish a Hungarian Agroecological Network which wishes to provide a forum of dialogue between scholarship, social movements and policy-makers, in the hope of contributing to a just, healthy and regenerative food system under the umbrella of agroecology in Hungary (see Balázs – Balogh – Réthy 2021).

[3]   In Hungary, permaforum.hu, a platform for sharing knowledge, the Hungarian Permaculture Association, as the umbrella organization of permaculture (highlighting education and research and spreading information) and Életfa [Tree of Life] Permakultúra constitute the background for activism (chiefly in education).

stance on the ecological crisis. It doubts that systems based on renewable energy are capable of supplying sufficient energy for a globalized industrial culture. We are facing an energy descent which means that with the depletion of cheap fossil energy, globalized society will inevitably be transformed and localization will be strengthened. Preparation for the energy descent requires a shift to a more localized agriculture and energy supply (Leahy 2021: 195). Permaculture seeks innovative solutions for meeting demand locally, with different focuses for the different stages of the conceptual development of permaculture.

In the first phase of its conceptual development, permaculture focused primarily on agriculture, seeking environmentally sustainable alternatives to industrial agriculture, building on perennial plants instead of cereals (Mollison – Holmgren 1978) and placing forest gardens in the center of planning. In the second phase, the focus widened and thanks to organized education, the movement's sphere of influence was extended considerably. In addition to sustainable agriculture, permaculture is also defined as a tool of urban design based on the ethics of care (Mollison 1988). The ethics of permaculture (Earth care – People care – Fair share) echo the basic principles of several feminist and green movements (e.g. eco-socialism, eco-feminism). In the third phase, Holmgren (2002) further extended the concept of permaculture, defining it as a planning system which ensures a sustainable society. The conceptual focus of permaculture includes the principles of planning (see fig. 1) which rely on the studies of system ecology, a branch of systems theory.

Figure 1. The ethics and principles of permaculture.
Source: https://permacultureprinciples.com/resources/free-downloads/

Compared to the approaches of other green movements (Monbiot 2007; Daly 2007; Smith, R. 2016; Baer 2019), permaculture rejects the central state and regards political decentralization as one of the best social systems (Leahy 2021). Due to the energy descent, the decentralization of food and energy systems is inevitable; this creates an opportunity for political decentralization. Permaculture aims to achieve this through grassroots organization and bioregional networking, together with care for people (Leahy 2021: 195). One of the standard references of the permaculture movement, the Designer's Manual, aims to increase local autonomy, because the more people are capable of satisfying their food, energy, and housing needs locally, the more difficult it will be to impose economic and political control over them (ibid.). Supporters of permaculture include some anarchists and degrowth advocates who also propose rural self-sufficiency and political autarchy (Kropotkin 1975[1899]; Schneider – Nelson 2019; Leahy 2021).

Bioregionalism

A bioregion is a geographically and ecologically definable unit which is also culturally meaningful. From a geographical point of view, bioregions are usually designated in the academic literature based on rivers' catchment areas, but their characteristic features also include topography, soil types, climate characteristics, flora and fauna; in short, all the facets that hold an area together in an ecological sense. Bioregionalism also makes attempts to identify the cultural unity of a community living in a territory, including the political aspects. In this, it is driven by the intention to create sustainable practical and conceptual frameworks for the fabric of life around the planet.

Bioregionalism may contribute to scientific work aimed at the formation of local food systems and the organization of food sovereignty on the scale of the landscape in two ways. On the one hand, it assigns to the otherwise "empty" notion of locality, important substantive – and specifically political – elements, thus satisfying the strong requirements of sustainability. On the other hand, it also provides tangible help to actual regional planning, which, according to experience, often falls outside the purview of the academic literature.

Among ecolocalisms, bioregionalism represents a more radical form than usual, insofar as it is also strongly connected to anarchist traditions with the idea of a self-governing system of autonomous small communities. The principles of anarchism – especially of eco-anarchism – play an important role both in the formation of the community's internal relations and in its operation, as well as in the relations between bioregions.

What makes bioregionalism particularly important, in our view is its ability to provide a generally applicable but not universalistic framework for local efforts in which they can be combined in a form that can be interpreted politically in a mutually reinforcing way. The objective of political action is to create a world in which the principles of ecological sustainability, social justice and sovereignty organize relations within and between communities. The most important tool for this goal within the bioregion is what Peter Berg and Raymond Dasmann, in their article, "*Reinhabiting California*" (1977), called "reinhabitation". This term is the manifesto of the movement. According to the original definition, it means the

introduction of social behavior which achieves the goals of bioregionalism: bringing about decentralized and sovereignty-based forms of a social establishment and a culture based on biological integrity and public consensus and promoting the community's spiritual development – through the enrichment of the given place, the restoration of its life-support systems, and the creation of socially and ecologically sustainable modes of existence (Dodge 1981: 10).

Discussion – systemic alternatives in Central and Eastern Europe

The systemic alternatives presented above were initiated in countries of the Global South (e.g. food sovereignty, agroecology) or the Global North (bioregionalism, permaculture). As a result, they hardly reflect the everyday experiences of people living in the formerly state socialist countries of Central and Eastern Europe (CEE). In these countries, the household practices of localized food production (e.g. food self-provisioning through backyard farming) were far more extensive than in Western Europe (Jehlička et al. 2020; 2021). Western theories of civil society are not suitable for grasping the everyday practices of community self-organization connected to the livelihood characteristic of CEE (Jacobsson 2015; Foa – Ekiert 2017). Below, a few typical Central and Eastern European features are discussed, which have decisive importance in realizing food sovereignty.

In the region, diverse economic practices related to food provisioning were less integrated into the social movements fighting for sustainable food systems. In terms of food provisioning, the informal economy is still of great importance in Central and Eastern Europe. Several practices have survived (e.g., food self-provisioning through backyard farming, small-scale farming and local markets) that can be better interpreted outside a formal economic framework, through a diverse economic lens. The diverse economic framework has evolved from the feminist critique of economic geography (Gibson-Graham 2008; Gibson-Graham – Cameron – Healy 2013). It relies on the assumption that if we can begin to see non-capitalist activities as prevalent and viable, we may be encouraged here and now to actively build upon them to transform our local economies (Gibson-Graham 2008: 662). Instead of "waiting for the revolution" to re-create a global economy and governance system at the global scale, we can engage with others to transform local economies here and now in an everyday ethical and political practice of constructing "community economies" in the face of globalization (ibid.).

While the urban projects connected to alternative food systems (e.g. community gardens, CSAs, food box systems) are often interpreted as progressive in food-related movements, urban food production methods surviving from the period prior to the regime change in CEE (1989/'90) (e.g., dacha gardens in the Baltic states and Schrebergarten in Germany; see Pungas et al. 2022) and the surviving practices of backyard farming typical in rural areas are often stigmatized as backward or outdated. The question may arise as to how to redefine the food self-provisioning practices typical of CEE – and which survived the regime change – in such a way that those who practice them consider themselves as actors of the food sovereignty movement. Without this, the household practices of food self-provisioning which

characterize CEE will only contribute to the capitalist accumulation processes, as they make it possible to keep the price of wage labor low by having certain, usually female, members of the household perform this task as invisible work (Czirfusz et al. 2019; Smith, A. et al. 2008). A part of the food produced in the garden can significantly reduce the food costs of the household and the surplus can be sold on local markets or directly from the houses, generating additional income for the backyard farmer. Since they need less technology and land, it is easier to make small-scale food production solutions less dependent on the global market. In small gardens and small-scale farms it is possible to practice seed sovereignty (producing one's own seeds), to use organic manure instead of artificial fertilizers, and to grow more resistant species so as to avoid spraying or the use of other chemicals. To achieve seed sovereignty in Hungary, members of the Magház Network (small-scale, household gardeners and family farmers) collaborate to collect, maintain and exchange traditional and exotic seeds (Balázs – Balogh – Réthy 2021).

Although the current food system marginalizes them and they are under-researched in agrarian studies, the decreasing number of Central and Eastern European smallholders often flourish in informal networks of reciprocity and informal markets, which (Visser – Dorondel et al. 2019; Varga 2019) significantly contribute to overall food production (Visser – Kurakin – Nikulin 2019; Thiemann – Spoor 2019), to sustainability (Kiss – Bela – Bodorkós 2012; Jehlička et al. 2019), and to social cohesion (Jehlička et al. 2019; Varga 2019).

Summary and conclusion

This chapter explored food as a global challenge and its reformist and systemic alternatives. Since food as a global challenge affects all parts of the world, in order to understand and manage the challenge, it is necessary to think on a wide range of geographical scales – on a global, continental, macro-regional, state and local level.

The two most important attempts to reform the current food system are the solutions that emphasize the geographical proximity of the production and consumption of food and the efforts at making cultivation technology more environmentally friendly (and healthier). The dominant narratives of different "eat local" campaigns, short food supply chains, local farmers' markets, and shopping collectives do not aim to change the system dominated by market-relations or the commodification of food, hence their impact remains limited. Organic farming is the best-known, most widespread and most elaborately developed example of making cultivation technology more environmentally friendly. However, ecological farming often only means a technological alternative for cultivation (for instance, the use of synthetic chemical pesticides and herbicides, as well as fertilizers is absolutely, or largely avoided) without questioning the global food supply chains.

Food sovereignty is a political framework which points out the systemic challenges generated by the global food systems and seeks possibilities for resistance. It promotes a food system in which small-scale family farmers and peasants grow food suitable for local consumption using agroecological methods. Agroecology is simultaneously a social movement, a set of practices which seeks an alternative

to industrial agriculture, and a scientific discipline. Since current policy allocates resources for agroecological practices, a framing competition has emerged between social movements and industrial agricultural actors to define the term. Among the agricultural practices proposed by agroecology, permaculture can be considered one of the most radical in searching for systemic alternatives. Permaculture regards political decentralization as one of the best social systems, which it aims to achieve through networking and grassroots organization based on bioregional foundations, in line with the ethics of caring for people. Bioregionalism is a movement not directly related to food, but it can help the planning of local food systems and the organization of food sovereignty on a landscape scale both from a scientific perspective (developing a local food system that fits the landscape) and as a movement (an emancipatory approach).

The alternatives presented in this chapter are in dialogue with each other and can easily be combined. However, as shown by the above-mentioned challenge of agroecology, groups of civil organizations, small-scale farmers and researchers fighting for systemic alternatives struggle to build a social base due to a lack of resources. In the absence of a social base, asserting their interests becomes difficult. Advocacy through NGOs is particularly difficult in Central and Eastern Europe because of the scarcity of resources. Nonetheless, owing to the semi-peripheral position of CEE, several alternative practices of food provisioning have survived (e.g., food self-provisioning through backyard farming, preservation, etc.) which can be relied on in the search for systemic alternatives.

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ENVIRONMENTAL JUSTICE

Gyula Nagy

Introduction

The aim of the chapter is to outline the concept of environmental justice, which implies more than the term suggests. Environmental justice uses the approaches and methodologies of natural, social, legal and technological sciences in an interdisciplinary manner to develop a theoretical framework, which can address an actual problem from the angles of diverse academic fields. It is like a theoretical kaleidoscope which presents the complex natural and social problems and processes from varying perspectives.

In addition, environmental justice has also been a social movement from the start. It concentrates on the distribution of environmental advantages and burdens and on the social-political processes that determine the process of distribution. Activism connected to environmental justice centers on the concepts of fairness and equality. The struggle for environmental justice is valid in areas where certain communities bear an unfair amount of the negative impacts as a result of catastrophic natural events or subsequent decision-making concerning environmental issues or natural resources. All this generates social and spatial inequalities. In addition, studies have also been conducted on the networks and relations of local communities, organizations, and decision-makers , and the ideas these actors have about what is just, fair and acceptable in a given situation. The framework of environmental justice also examines the antecedents, present and future consequences of catastrophic events, to which end it also integrates geographical perspectives.

These studies give an overview of how the social and environmental networks which incorporate diverse geographical areas shape our environment and society at both local and trans-local levels,and how they redefine the systems of relations between nature and society and within society. Environmental injustice directly or indirectly influences our social-economic acts as well as our political decisions, through maintaining and reinforcing social and geographical processes such as exploitation, segregation or differentiation. As a result, spatial structures emerge that have an unequal share in the advantages and disadvantages of activities in different environments. This in turn results in the emergence of new geographic structures and categories of space. The environmental periphery (Kovács 2004) worst affected by environmental injustice is the outcome of the multiplying negative effects and repercussions of low social participation, a lack of workers' representation, everyday discriminative practices and a poor quality natural environment.

Even though research in environmental justice deals with environmental events, processes, and their short- and long-term impacts, it can also be interpreted as criticism of social and political processes. Along this line of thought, the present chapter aims to acquaint the reader with the conceptual elements of environmental justice and its evolution.

# A brief history of the emergence
# of environmental justice

Environmental justice as a research framework is being used increasingly broadly owing to its interdisciplinary approach. It is a narrative applied by environmentalist movements fighting for social justice and equal opportunities and by scientific research alike. This is because science-based environmental justice research is rooted in the environmental justice movement (Málovics 2012a; Martin et al. 2014). Environmental justice research therefore reflects the main ideas of the struggle and movement for civil rights, voluntariness, from grassroots organization, the basic tenets of activism for equal rights and movements against exclusion and segregation. This explains why initial research on environmental justice was tightly connected to the civil rights movements in the United States, the legacy of which is manifest in the commitment to activism.

One of the basic principles of environmental justice research is that minorities and the lower strata are absent from the decision-making, institutional system, and structures of mainstream environmentalism (Málovics 2012a). Hence, the interests of such groups are not represented in decisions. As a consequence, environmental decisions are one-sided and biased (Faber – Mc Carthy 2001; Walker 2006). This fails to adhere to the principle of broad bottom-up communal decision-making and focuses only on environmental problems relevant to certain social groups, thus bringing them into the spotlight.

The book *Silent Spring* (Carson 1962) can be viewed as a historical antecedent to the movement of environmental justice. It also marks the beginning of public and state environmentalism (Rakonczai 2003). The book received its title from the sad fact that pesticides in the described region had poisoned the birds and no birdsong could be heard that year. Carson's book contributed to the environmental awakening of the public and the minorities (Newton 2009). Scholars of environmental justice agree that the decisive moment of environmental justice can be traced to the act of resistance in Warren County, North Carolina, on 15 September 1982. Along the roads of North Carolina, nearly 120,000 liters of polychlorinated biphenyl (PBC) was poured out, producing some 150 m³ of contaminated soil (Newton 2009). The state decided to deposit the polluted soil removed in the procedure of remediation in a landfill near Shocco village, Warren district. The procedure, however, did not satisfy the regulations, as there was no aquitard for the landfill and the depth of burial was insufficient. The citizens of Warren county and Shocco village, one of the economically most underdeveloped areas, were mostly African Americans with a lack of resources and professional knowledge. They took to protesting with their bodies to prevent the implementation of the state decision. Over 500 protesters were arrested, and although the protest was unsuccessful and the polluted soil was buried, it marked the first time in history that a poor African American community joined forces and stood up for their equal environmental rights (Newton 2009). The case revealed that environmental threats do not affect everybody equally; poorer, low-status, minority groups are more exposed to risks from dangerous or toxic matter, inadequate working circumstances, polluted air and other environmental harms than the more affluent or majority groups (Wiles 1985). In response to continuously growing

resistance, on 11 February 1994, the United States government passed a decree on environmental justice stipulating that the idea of environmental justice be incorporated in the policy of all federal developments and environmental agencies. It also spelt out that efforts should be made to realize environmental justice not only in policy but also in action plans and programs.

The research of the past three decades has gradually shifted its focus from the minorities and distribution to the study of spatial, geographical evolution and the distribution of injustices. The emphasis of contemporary environmental justice research is not only on space and locality, but increasingly on the exploration of underlying – global or local – implications. In addition to the presentation of unjust events, the drivers and consequences of the problems are also researched. Walker (2012) claims there are three factors to be studied simultaneously when researching environmental injustices: the notion of justice; the evidence of the unjust processes; events, situations, and the process(es) that led to the given situation (fig. 1).
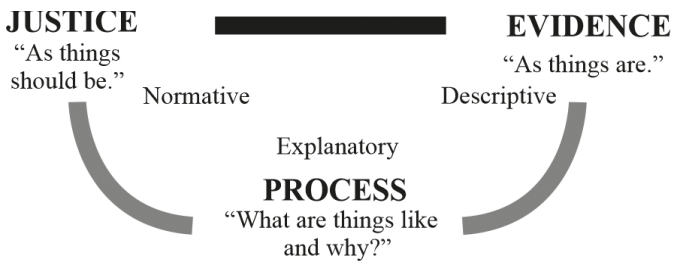
Figure 1. Elements of the study of environmental justice.
Source: author on the basis of Walker, G. (2022)

Conceptual frameworks of environmental justice

Environmental justice is a complex notion built of various components. Though it seemingly comprises two main elements: justice and the environment – its content and quality – it implies more than the two notions. It is therefore necessary to describe these one by one, as well as environmental justice as a whole.

Environmental justice, as first defined by the American Environmental Protection Agency (EPA),

> *"… is the fair treatment and meaning involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. This is to be ensured for individuals, national communities and the entire nation. This goal will be achieved when everyone enjoys the same degree of protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn and work."*

Thus, environmental justice can be defined as the universal right of human beings to an environment of identical conditions and quality in which they can live a full life (1), having an equal share of the risks and harms caused by social-economic activities or political decisions (2) or by natural processes taking place in nature (3).

The indispensable prerequisite of ensuring a healthy environment is the definition of what is understood by a healthy environment. This has undergone great transformations in the past centuries. The environment is the part of nature with which humans are in constant interaction; the unity of natural and artificial components surrounding the human being which includes, in addition to natural elements, social and cultural components that influence individuals and the functioning of society (Davies 2009). Nature becomes the environment in response to the anthropogenic presence, to the mental and behavioral factors of the human being (Bárdos 2005). Our social-economic and natural environment is not merely a descriptive feature but rather actively shapes our lives (Soja 2010). The environment is perceived locally, and therefore environmental problems are often local, affecting local people. The aggregate of the local problems, in turn, generate and constitute regional and global processes. In addition, the number of existing, emerging and new environmental risks is steadily growing. In parallel, the risk perception of society also undergoes change (Beck 2003). Our behavior affects the processes in maintaining and reinforcing the environment that give rise to unequal, unjust situations. One of its most frequently mentioned examples is commodification, the privatization of the environment, its interpretation as a commodity (Eden 2009; Boros 2010). This approach ties the value of the environment to its profit-generating ability and says that it can be economically measured (Málovics 2012b) (see the chapter on *Economic responses to the challenges of environmental sustainability)*. Nature is considered as a tool, a commodity (Eden 2009), whose use varies by individuals and social groups. The utilization of the environment is often linked to the possession of power and practice of the influence of power. All this causes great inequalities in several fields of life, putting certain groups at an advantage and others at a disadvantage. The distribution of environmental risks and harms is uneven, which may further deepen the differences arising from the original social positions.

The environment is therefore important not only because of its natural values, but also because of its impact on humans. Therefore, environmental injustice is taken to mean not only negative states and processes caused by nature, but also the discrepancies ingrained within the socio-economic structures. The reinterpretation of the relationship between the environment and humanity reveals that the inequalities experienced in the environment give rise to certain structures that repeatedly influence our lives, social-economic acts, political decisions (Williams 1999), and the state of the environment – whether directly or indirectly. Inequalities perpetuate unequal situations and social differences. One of their most palpable features is that with the increase of health risks or the deterioration of the quality of life, our right to a healthy environment is curtailed (Pál – Boros 2010).

In connection with the right to a healthy environment, two opposite approaches need mentioning. The libertarian and liberal positions (Weston 2008) hold different definitions on human rights, including the right to the environment. The former emphasizes individual rights and limited government intervention; it also recognizes the importance of protecting the environment and believes that voluntary and market-driven mechanisms can effectively address environmental concerns while respecting individual liberties. Libertarians recognize the right to a clean and healthy environment and define it as a right to an environment free from environmental harms and damages (Feinberg 1999). Under this conception, people

have the right to a life exempt from environmental hazards. The liberal view spells out the rights of individuals and groups. This view holds that they have the right to an environment that ensures the basic conditions for a healthy life (Fig. 3). Both positions proclaim that it is indispensable to ensure an environment necessary for a healthy, quality life, so the goals of the two views are identical in terms of environmental justice. That said, they still differ in the interventions, actions, and modes of realization necessary for environmental justice, which may have varying efficiency in diverse social contexts, including ineffective intervention or even a fiasco. One thing is certain: under both views, the right to a healthy environment is based on reciprocity, that is, when someone causes damage to the environment, he/she is obliged to remedy it or bear the costs of rehabilitation.
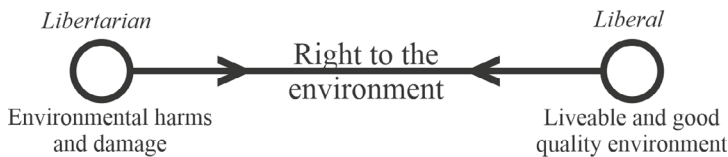
Figure 2. Approaches to environmental justice. Source: author

This opposition of approaches is apparent in decisions concerning the environment (Fig. 3). The liberal viewpoint accepts state intervention in the interest of social, economic and political welfare. It is, however, an important proviso that state intervention may not result in any restriction of the rights. However, it admits that owing to the vulnerability and uniqueness of nature, intervention or other activities in the present may generate unexpected effects in the future, in which case the responsibility is to be borne by the state. Consequently, interventions may not be taken for something permanent and generally valid (Weston 2008; Becchi 2012). One of the many reasons why the state's involvement is necessary is for guaranteeing the common good in a changing context and environment. However, there are various ideas as to what warrants adequate rights for everyone and what serves the common good. These depend on the local norms of law and justice, on the institutional system, and on the typical processes. Prior to the intervention, it is necessary to have a so-called social contract, which defines the ideological concept of justice in a legal and moral sense (Weston 2008). The libertarian position allows for the least possible state decision in the interest of eliminating inequality, because the market mechanisms are there to solve it. Whichever view one sides with, one must admit the subjectivity of justice and injustice and the process of perceiving the alleged or real environmental hazards and risks.
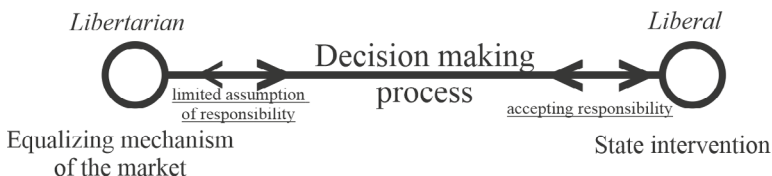

Figure 3. Attitudes to interventions affecting the environment; "orientation" of the decisions. Source: own construct

A deeper understanding of the decision-making mechanism may bring us closer to the mitigation or elimination of incidental injustices or inequalities. Generally, there are two main types of decision-making mechanisms: one starting from the grass roots, bottom-up; the other top down (Fig. 4). The emergence of environmental injustices can also be interpreted via this analogy. In the case of top-down, exogenous (of external origin) injustice, the unjust situation evolves as an outcome of a process controlled from above. As a result of a decision or series of decisions concerning the environment, differences between geographical units may emerge. This approach infers injustice from the given level of socio-economic developments and from the deliberate or unintentional differentiating practice of state legislation. In Bullard's view, this is an institutionalized form by which certain social groups use their prejudices and power to the detriment of other groups (Bullard 1990). This is an accidental or conscious outcome of the functioning legal, cultural, religious, educational, economic, environmental, military and social systems. There are currently several debates about the intentionally racist and discriminative instances of environmental injustice, but both environmental racism and environmental discrimination can prevail in the case of top-down decision-making. It is undeniable that environmental harms have a stronger effect on those unable to change their situation for lack of money or political advocacy. These social groups undoubtedly belong to the minorities or to basically marginalized social positions. An apt example of the top-down type of environmental injustice is the above-mentioned story of the burial of toxic waste in Warren county, where without any social consultation, the population was exposed to disproportionately large environmental and health risks (Fig. 4/A).

Environmental injustice may also be rooted in the other process which builds the decisions from the bottom up. In this case, the local factors, actors and events also exert an influence on a higher geographical level. In certain instances, affluent or well-connected local communities have the ability to shape not only their own development but also indirectly influence the development of surrounding regions in ways that serve their political interests. Their greater financial resources and lobbying capabilities can lead to decisions that favor their interests, potentially impacting the broader community's development trajectory. In this case, the greater ability to assert the interests of a locality might disadvantage another geographical unit. In spite of the fact that the process seemingly satisfies the grassroots organization of subsidiarity, the excessive influence of regional capital overrides actual partnership. The interests of the more influential, sometimes more affluent populations are satisfied ahead of the needs of the "weaker" ones. Harvey calls this process an urbanization of injustice(Harvey 1996). It may be defined as bottom-up, endogenous (internally rooted) environmental injustice. The issue of traffic organization may serve as an illustrative example. The growing motorization of the present age has boosted automobile stock, and road traffic in parallel. Those who have moved out into the urban area of Budapest tend to choose individual travel means rather than public transport, which burdens those who live along the commuting routes with disproportionately large noise-, vibration-, and air pollution. This is a source of conflicts involving the leaders of the settlements, the commuters and those residents who do not commute. A restriction on commuting would undoubtedly be a rational equitable decision for the disadvantaged , but at the time of writing, this decision appears unlikely. Exposure to traffic-generated harm is thus a typical example of environmental injustice (fig. 4/B).
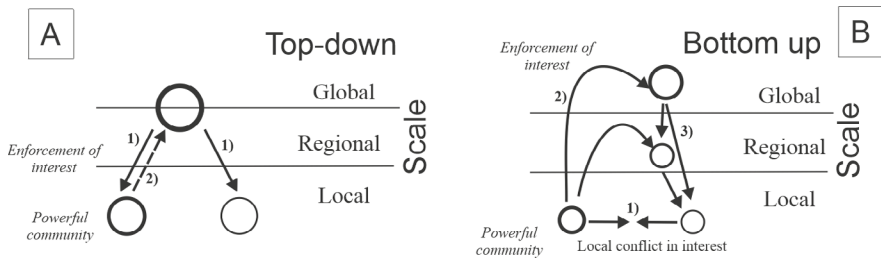
Figure 4. Environmental injustices generated by decision-making. Source: author

The evaluation of good and bad in the decision-making mechanism is the outcome of a social process, the imprint of the given social, power, and economic conditions – not generally valid truths. Justice as defined by the provisions of law may deviate from what is socially regarded as just (Blacksell et al. 1986; Blomley 1994; Butler 2009). It follows that the general rules laid down by environmental and social policies may often be interpreted differently on the environmental periphery (Kovács 2004). A specific sense of what is right, in accordance with the local environment, may have evolved there , as a local (re)interpretation of the "universally" accepted system of concepts. Studies have demonstrated (Blomley 1994; Blacksell et al. 1986) a correlation between legal setting and geographical inequalities. Moreover, the legal regime also takes part in the process of producing space. In other words, the legal provisions, the processes of legislation and jurisprudence actively shape our environment, places and public spaces (Lefebvre 1991; McAuslan 1980). It is therefore important to clarify what qualifies as necessarily or (also) expectedly just, the way it can be attained and how it can be used (Heffron – McCauley 2018). However, what justice actually is has been studied but not resolved since Antiquity.

Interpreting the concept of justice from a variety of perspectives may help environmental justice studies to explore a given theme critically, from various angles. The concept of justice is normative and context-specific in all possible approaches. The concepts of justice can be grouped around three themes when considering environmental justice.

One approach, mostly used in geographical science, studies the spatiality of factors which cause injustice, i.e., their frequency and distribution. It is presumed that the processes or factors that produce the unjust situation can be plotted along a spatial pattern, a noticeable design. Under this idea, distribution is truly just if the allocation of goods is fair for everyone and is the outcome of a rational social contract based on a common decision (Rawls 1971). Equity or fairness can be measured in terms of equality (equal welfare, resources and chances), importance (necessary rights ensured for all) and adequacy (rights ensured sufficiently for all) (Weston 2008). Most researchers of environmental justice put equity and fairness before the principle of equality (fig. 5). The minimum principle of justice also declares this: all activities have to be carried out in a fair manner that does not worsen the position of the most deprived groups (Sachs 2008). Equitable justice is the foundation of communal life in which people collectively accept the norms of cooperation, as stated by Rawls (1971).
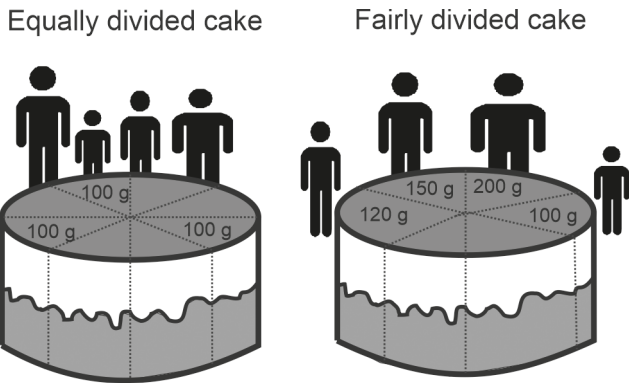
Fig. 5. Justice is not identical with equality or equity. Which is just? When everyone gets a piece of the pie, or everyone can have enough? (Source: author)

According to the second viewpoint, injustice is the outcome of one or more parallel procedures and processes originating in everyday practices and decisions. Procedural injustice is the aggregate of unjust, biased, and inequitable situations detected in procedures, processes, and in their participation. It shows to what extent and how the individual, group, state, economic actor, etc. plays a part in the process of geographic "exclusion". Procedural inequality or injustice is difficult to prove, and is debatable in several cases. Procedural justice can be complemented with restorative justice (Sharman – Strang 2007). This is actually the last phase of a process which causes the injustice: it may eliminate, conserve, or reinforce the injustices. During restoration, the number of certain actors and interested people might increase. New actors may appear who were not present in earlier phases (e.g. new aggrieved people entering the restoring process), making it even more complex and tough to reach justice. Moreover, the restorative intention may only be partly effective owing to the many participants (Sherman – Strang 2007). The restorative process depends on the context This is why even in similar cases, sanctions and compensation of differing weight and form may be agreed upon by the participants, depending on the actual situation (Győry 2009). This, however, can affect the deprived groups unfavorably. Hence, the outcome may be the conservation of the existing state, or the further marginalization and peripheralization of the handicapped groups instead of compensation, equity or equality.

The third interpretation of justice presents both the state and the process from the perspectives of perception and recognition on the part of those concerned. It occurs when individuals or groups evaluate the given situation of injustice differently, owing to their original position, whether influenced by their education, a mental or physical disability, deprivation, segregation, or the uncontrollable conditions of life. It may also have its root in the application of a local system of norms. The "threshold" that triggers acts or attention in a given case is in many cases defined by exogenous factors (Maguire – Sheriff 2011) in which the affected people have no say. It has been generally observed that the negative evaluation of certain groups puts the actual problem in a new light, or may even relativize it. Similar was the situation of the aggrieved Roma people in the red mud disaster at Devecser. General public discourse relativized the lost properties of the Roma, saying they were worthless anyway. The attitude of the population to certain

decisions, and even more so to their change, also depend on the local and central power practices, which may administer pressure or may at times employ deliberate manipulation.

> This can be illustrated with the case of Bátaapáti, where the geology of the area with an ancient granite rock made it possible to create subsurface waste storage for low- and medium-activity radioactive waste from the Paks Nuclear Power Plant in the area of the settlement. When the project was announced, only 80 settlements suitable for such a nuclear waste storage were found in Hungary and only a single one, Bátaapáti, volunteered to give room for the installation. As a small village, the municipality's financial means were limited and unemployment was relatively high. Both the aldermen and the inhabitants regarded the hazardous waste repository as a means of developing the settlement on the compensation they would get. Before the realization of the storing facility, TETT (the Association for Social Control and Information) was founded in 1997 to provide information and carry on supervision about the National Radio-active waste repository (NRHT). The eight members of TETT received 64 – 197 million HUF / village (the amount depended on their distance from the repository) for supervision and informative work. On 10 July 2005, a referendum was held about the investment; 75% of the population took part, 90% voted for it. The villagers themselves opted for the project, but the context, the socioeconomically helpless position of the settlement and its inhabitants, must not be overlooked.

To achieve environmental justice, it is necessary that the community living in the affected area should perceive and recognize the unjust, inequitable processes. Without the perception and recognition of the problems it is actually impossible to manage them, but both the perception and its recognition might be mistaken or misinterpreted. In Bourdieu's view, the terms misinterpretation and misrecognition allude to the acts, value judgments, discourses, and practices that we adopt in theory, in compliance with the system of norms held by the majority of society, but in actual fact we act – pass judgment – in another discourse (James 2014). It follows that injustice is not only the outcome. It may engender the process anew, unintentionally or intentionally. In the latter case, injustice receives a discriminative hue. The lack of recognition, participation and subsidiarity may often reinforce the conflicts between decision-makers and real stakeholders. The rise of the environmental justice movement in recent decades has brought to light numerous cases across the globe where polluting investments were approved by organizations and political decision-makers who showed little interest in considering the perspectives of the local population. In many instances, these decision-makers came from (upper) middle-class backgrounds and non-minority origins, setting them apart from the affected local communities. This lack of meaningful engagement with the impacted residents has led to situations where environmental injustices disproportionately burden marginalized and vulnerable communities. As a result, the local people often suffer disadvantages due to the degradation of the environment caused by diverse investments.

An exclusive or one-sided approach to environmental injustices oversimplifies the complexities involved. It becomes challenging to categorically declare whether environmental disadvantages are just or unjust solely based on their geographical distribution. Instead, it is crucial to first clarify the underlying concept of justice

in each case. To investigate environmental justice in a context-specific manner, we need to rely on concepts that are locally accepted, socially legitimate – not arbitrary – and aligned with the given context. This complexity arises from the diverse array of concepts applied jointly and their numerous interpretations. The identification of environmental injustices, whether it is in the form of environmental damage or the absence of justice, should not be seen as the final outcome but rather as the starting point for engaging in a broader social discourse. The approach to environmental justice explained so far needs to be complemented with further procedural elements. This is necessary because environmental events are not isolated from society but rather are in interaction with it. Environmental injustice is not only related to nature; it also depends on the social context. Researchers have taken two opposing perspectives in this regard. These hold different interpretations on the interaction between the environmental (non-human) factors and society (Murdoch 1997). Neo-Marxists argue that unjust situations unambiguously arise because of human society's influence on non-human factors (Murdoch 1997; Bosco 2014). Gender, age, ethnicity, the process of the perpetuation of social and power relations also influence the environment directly or indirectly. According to actor-network theory, the interactions between human beings and the environment are not determined solely by pre-existing social and economic structures. Rather, the dynamics of the natural world can also play a crucial role in shaping how individuals and groups respond and organize themselves in the face of environmental challenges. This theory highlights the interconnectedness and mutual influence between natural and social elements within the broader environmental context. For example, a natural disaster causes the social relations of settlements to change, which results in new contacts for the better assertion of interests. The comparison of the two views has an important message for environmental justice: space and environment are human-generated processes and products of society. Therefore, environmental injustice arises essentially in humans-influenced spaces and environments. In addition, space and its environmental factors are also capable of constructing society, hence the process of environmental injustice may be a force which forms social groups (Murdoch 1997; Bosco 2014).

In addition, the same environmental processes appear differently under different social conditions and if the geographical and temporal scale varies. In the exploration of environmental injustice, ex ante (preceding) and ex post (following) processes can be identified concerning the temporal aspect of injustices. Nevertheless these processes cannot be entirely differentiated; they become mingled. Ex ante injustices occur when an environmental event, such as a disaster, acts as a catalyst, revealing pre-existing underlying injustices. These injustices, which are rooted in complex social, economic, or power processes, may have already been present but were not readily evident until the environmental event brought them to the surface. The disaster serves as a trigger, exposing the deeper and more complex issues that were already at play. On the other hand, ex post injustices involve the degradation of the environment and social deprivation as a result of the environmental event. In this case, the environmental event leads to a downward spiral, where the degradation of the environment and social hardships mutually provoke and reinforce each other, exacerbating the overall injustice. Situations of injustice cannot be remedied without a geographical perspective, because, for one thing, the environmental

media – air, soil, water, etc. – have different characteristics, and the spreading of an injustice (contamination) is different, and the caused harm and damage differ accordingly. The spatial situation may mitigate, or conversely, reinforce the perceived negative processes. Therefore, a place-specific environmental study and the inferences drawn from it contribute to the formulation of the right responses. By exploring the current state, the presence or absence of justice can be defined on the basis of a momentary state of society, without considering the temporal dimension; that is, a moment torn from the process of evolution is described. It is therefore possible that what is momentarily regarded as just may appear more unjust in a historical or geographical context than found earlier (Capeheart – Milovanovic 2007). In other words, environmental justice and injustice also have a context in time and space. Interpreted statically, this provides answers to the questions of where and when, and interpreted structurally, it answers the questions of why and how, based on the underlying processes, power relations, and historical embeddedness, which in turn largely influence the spatiality of social relations.

In order to terminate a state and situation of injustice or to alleviate it in any way, the population needs to be involved in the pertinent legal, political, and special decision-making and implementation processes irrespective of gender, age, origin, identity, or income. Justice is in the interest of the whole of society; therefore, its realization requires the broadest possible involvement. Justice results when the concepts of what is environmentally safe and healthy, as well as just and equitable, can emerge from a common denominator. However, it is still necessary to use "objective" perspectives and tools and methods of measurement Environmental justice not only explores unequal, unjust or inequitable states, but also wishes to offer solutions to them, hence it is a method of intervention.

Summary

Environmental justice as a conceptual framework emerged in parallel with the civil rights movements of the 1960s. It then underwent several transformations and the expansion of the tools available to research. The academic literature reveals that in addition to the earlier injustice studies of one-sided and unifocal allocation and distribution (distributive justice), there is equal emphasis today on the exploration of the processes which cause the emergence of injustice (procedural justice) and on the individual's subjective perception and recognition of it (recognitional justice). Studies in environmental justice basically concentrate on three interrelated elements: justice as a concept, the process, and the set of evidence which reveals the injustice or the restoration of justice. The concept of environmental justice is thus complex, comprising more than just the composition of words of environment and justice.

The environment means the material world around us, the built and natural surroundings, the connected intangible world, and our own mental environment and that of our group, as well as the network of our social, economic and political relations. Some critics claim that inequalities arising from the exploitation of nature, the restricting of access to a quality environment are not the outcome of the limitedness and non-renewable character of the natural environment, but that they are caused by technological imperfections and by inadequate justice in society

incapable of adequately using the resources and distributing the advantages and disadvantages appropriately.

Justice is a normative and subjective concept which adapts to the given relations and is defined by the community within the frame of a social contract. Justice has geographical frequency and distribution, which depend on processes. The perception of injustice is influenced by the sociocultural and income factors of the individual and the community.

The processes leading to injustice can be examined in terms of decisions and temporality. Top-down processes often ignore the everyday practices, customs and local techniques of adaptation. This can be expressly detrimental, if the acting institutions regard certain formed systems (whether or not they are power relations, e.g. sub- and super-ordinations) as unalterable. Those affected by environmental injustices apply a peculiar decision-making mechanism, for each actor has a status-based value system, knowledge and written and unwritten rules, based on which they act. Conflict situations arise when the acting mechanisms of the actors result in different decisions. This explains why sometimes the reaction of the (presumably) altruistic decision-makers in their intent to help does not satisfy the population's expectations. Individuals and groups have various attitudes to environmental injustices which may change in time upon the influence of certain factors (e.g. an educational campaign). The changing of the subjective evaluation of a given process can also correlate with the injustice of perception and recognition.

Environmental injustices occur in multiscale geographical space in which the scales and diverse spatial units are in incessant interaction, continuously influencing one another.
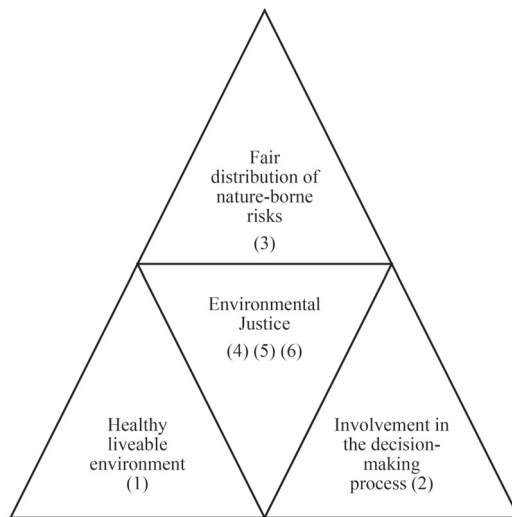
**Figure 6. Three pillars of environmental justice based on the EPA definition.
Source: author.**

To conclude: the study of environmental justice is concerned with the exploration of the impairment of the rights to a healthy environment (1) caused by certain decisions (2), and by processes (3). In the course of research, one must take into account that the applied concepts are subjective and hence the study must be based

on the context. Environmental injustices occur in the system of humans and non-humans who mutually influence and shape each other(4), in different spatial and temporal scales (5). Participation and involvement (6) is fundamentally important for the elimination of an injustice. Instances of environmental injustice are phenomena that are not separable from the geographical space, and therefore the duality and synthesizing approach of the geographical science serves as an excellent framework for their research.

Recommended readings

Holifield, Ryan et al. 2017. *The Routledge Handbook of Environmental Justice.* London, Routledge.

This handbook presents the research results of the past decades in environmental justice. It critically reviews the quantitative, qualitative, and mixed methodological approaches and employs an interdisciplinary and transdisciplinary approach, rather than a narrow regional focus.

Nagy, Gyula 2021. Environmental justice and its geographical aspects in Hungary. *Tér és Társadalom,* 35/4: 76–103. doi: 10.17649/TET.35.4.3373.

This study discusses in English the spatiality of Hungarian environmental injustices and the factors that contributed to their evolution in a post-socialist context.

Carson, Rachel 1962. *Silent spring.* Houghton Mifflin.

This book constitutes the foundation of thought on environmental justice. It describes in a lucid and readable style the damages caused by pesticides to nature and its medium- and long-term consequences.

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NATURE, ART, ACTIVISM

Judit Farkas

Introduction

Regarded as the pioneer of environmental art, Agnes Denes, of Hungarian origin (Budapest, 1930,) created her work *Rice/Tree/Burial* in 1968: she sowed a field with rice, chained trees together, and buried a few haikus in Sullivan county, USA. In her interpretation, rice symbolized vitality, the chained trees stood for the human disruption of natural processes, and the buried haikus indicated that human creativity was inspired by the Earth (Denes 1993: 388). In *Wheatfield – A Confrontation*, perhaps her most famous work, she sowed wheat in a two-hectare area with the assistance of volunteers in 1982. Earlier, this area was a landfill just a block away from Wall Street, from where the Statue of Liberty could also be seen. Four months later the wheat was harvested, yielding 1000 pounds of grain, which the artist distributed among inhabitants of 28 cities during the exhibition titled *The International Art Show for the End of World Hunger*. In her wording, this work

> *"[…] represented food, energy, commerce, world trade, economics […] (and) referred to mismanagement and world hunger. It was an intrusion into the citadel, a confrontation of High Civilisation. Then again it was also Shangri-la, a small paradise, one's childhood, a hot summer afternoon in the country, peace"* (Denes, cited: Thornes 2008: 403)

In 1992, she planted 11,000 blue spruce trees with 11,000 people in Ylöjärvi, Finland, in a former gravel pit as part of an artistic project titled *Tree Mountain: A Living Time Capsule* (1992 -). The trees were planted according to mathematical principles, and for 400 years they will remain under the protection of the Finnish government (till the forest reaches maturity). "[…] the trees live on through the centuries – stable and majestic, outliving their owners or custodians who created the patterns and the philosophy but not the tree[s]" (Denes 1993: 391)

In her works, Agnes Denes wishes to connect a philosophical concept with ecological concerns; for several decades now, her works have concerned the dangers of neglecting nature and the urgency of restoring degraded places (Denes 1993). Her oeuvre is the epitome of all works of contemporary environmental art which are conceptual, open-ended, participatory, multimedia, socially committed and activist projects (Hubbell – Ryan 2022: 148).[1]

In their *Introduction to Environmental Humanities*, co-authors J. Andrew Hubbell and John C. Ryan formulate this question – apropos of Denes' work: Where is the line between art, agriculture, and activism? When does the planting of wheat or trees become art? (Hubbell – Ryan 2022: 147). The answer is approached from the direction of Environmental Humanities (hereafter EH), environmental issues, and activism.

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[1] Hungarian examples, works of the *xtro realm* group, will also be presented later.

Figure 1. Wheatfield–A Confrontation.
Source: http://www.agnesdenesstudio.com/works7_5_popup.html

In the age of rapid ecological decline known as the Anthropocene – in which science tends to be upheld as the authoritative voice – what is the role of painting, printmaking, photography, illustration, sculpture, performance, music, installation art, multimedia work, and other creative forms? Can a sculpture promote public awareness of the vulnerability of ecosystems? Can a photograph instil empathy for animals, plants, fungi, or rivers? Can a painting galvanize a global environmental movement? Can a theatre performance enable a community to grieve the loss of a local wetland? (Hubbell – Ryan 2022: 149)

These questions about nature and art are asked not only by Andrew Hubbell and John Ryan, but by the artists themselves, too. The answers are obviously in the affirmative, otherwise the kind of art and art groups that form the subject of this chapter would not exist. The artists and the creators of these artworks agree with the basic thesis of EH: contemporary environmental problems are not to be blamed simply on science progressing along a wrong track or on political indifference They have far more complex causes: the failure of culture. Although Aaron Allen as well as Hollis Taylor and Andrew Hurley spoke about this in relation to music. I believe the idea that they have such a great communicative and emotional power that they are capable of transforming, even radically, the recipients' value system applies to all branches of art (Allen 2011; Taylor – Hurley 2015: 9). Indian writer Amitav Ghosh thinks and writes in a similar vein: the climate crisis is the failure of imagination; our imagination has to be shaped and kneaded by a new environmental literature so that we can see anthropogenic climate change properly (Ghosh 2016; cited Hubbell – Ryan 2022: 168).
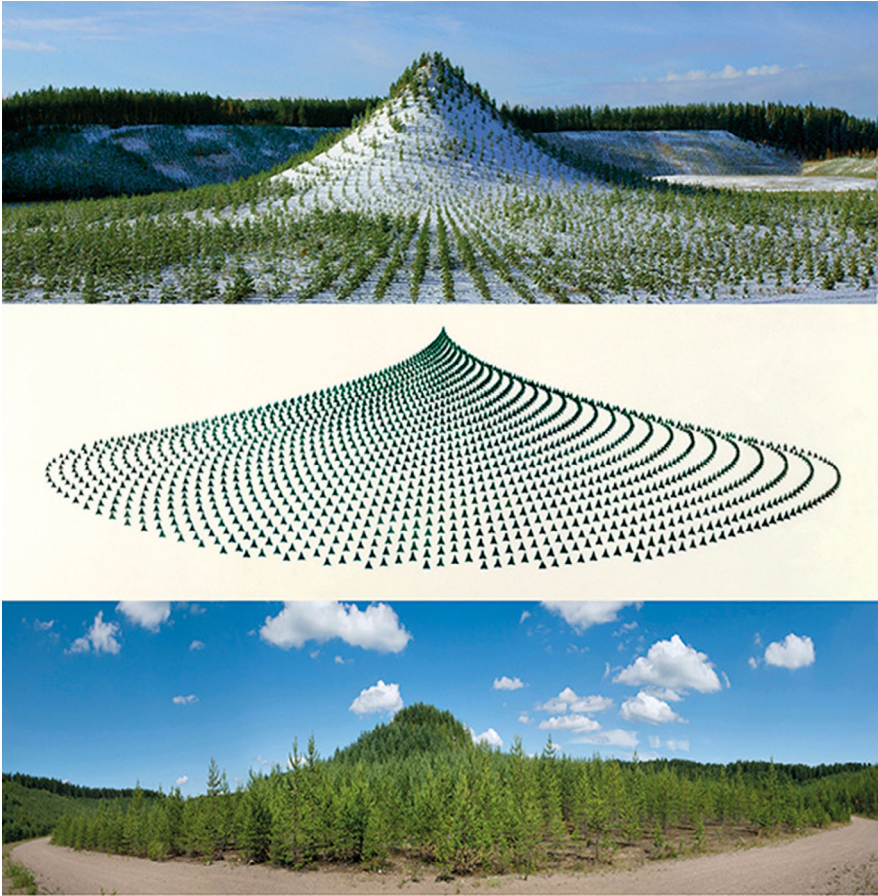
Figure 2. Source: http://www.agnesdenesstudio.com/works4.html

The aim of this chapter is to provide an insight into *environmental art* or *ecoart*. It will review the creative answers given by contemporary art to environmental problems, its role in exploring and understanding these problems, and how it may inspire solutions, and collective action.

The chapter highlights the fine arts, with an – extremely short – detour to literature. Music, film and theater, on the other hand, are not discussed here, as they are beyond the chapter's scope. For information about these media of art I recommend the respective chapters in the above mentioned co-authors' *Introduction to Environmental Humanities* (Hubbell – Ryan 2022).[2]

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[2]   *Ecological literary studies. Imagining nature* (Hubbell – Ryan 2022: 169–187); *Environmental theatre. Performing nature* (Hubbell – Ryan 2022: 188–207); *Environmental film. Projecting nature* (Hubbell – Ryan 2022: 208–227). To music see: Taylor – Hurley 2015.

**Figure 3. Emese Iványi: Seven-branch Tree Nature Trail Stop 5. Tree, 2020.
Photo: Helka Iványi**

Environmental art

In the academic literature, environmental art comprises all artworks concerned with the environment, whether created or exhibited in- or outdoors; for ephemeral works, this applies to the presentation of their documentation. Environmental art can be displayed in galleries in the form of canvases, photographs, sculptures, videos, films, and natural samples (e.g. driftwood, soil, leaves, mud, rocks), or viewed outdoors in situ (Thornes 2008: 393). In Nicolas Bullot's definition, environmental art contains "all works of art that address environmental topics, regardless of the medium, style, and position advocated by the artist" (Bullot 2014: 511). Nature, and more closely, its relationship with human beings, has always been the subject of art. In the history of environmental art, this theme has been specifically highlighted from the 1960s, from the turn started around that time, but its much earlier antecedents are also reviewed, to some extent (Thornes 2008; Hubbell – Ryan 2022).[3]

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[3] Researchers of the theme count among the antecedents such aboriginal creations as rock drawings, cave paintings, wood carvings, totem poles (Hubbell – Ryan 2022: 149–150), Stonehenge, the pyramids, Hadrian's villa in Tivoli, or the English Lancelot "Capability" Brown's landscape gardens. (*https://www.architecturaldigest.com/gallery/capability-brown-landscape-design-england*) (Lucie-Smith 2004). These creations are often endangered either because their significance is not recognized, or for economic interests, when, for instance, some important natural resource is found in their territory. The Sacred land project was founded to protect these sites -, see https://sacredland.org/international-efforts-to-protect-sacred-places/. News came exactly during the writing of this chapter (December 2022) that vandals had destroyed drawings estimated to be some 30,000 years old in the limestone wall of the Koonalda cave on the Nullarbor plain of the coast of the Great Australian Bight.

Ben Tufnell defines three periods in the history of environmental art from the 1960s:

1. The first, from 1967 to 1977, was highly innovative; the artists thoroughly rethought the earlier views and ideas about nature and art, and ventured into new domains of creativity. Typical works of the period are Richard Long's *A Line Made by Walking*,[4] and Walter De Maria's *The Lightning Field*.[5]

2. Tufnell dated the second period from the late 1970s to the late 1980s and characterized it with Agnes Denes's *Wheatfield: A Confrontation* (1982)[6] and Joseph Beuys's *7000 Oaks* (1982)[7], as well as Robert Morris' untitled work composed for the *Land Reclamation as Sculpture* symposium (King County, 1979)[8].

3. The third period began in the early 1990s and was ongoing at the time of publication (2008). It was/is concerned with a more direct and active relationship with environmental questions and with re-examining the connections between art, society and the environment. In the author's view, the period has been characterized by the dominance of performativity and an active contribution to discourses on environmental questions, including warnings and testimonies (Tufnell 206: 94; cited Thornes 2008: 404).

From the 1960s and 70s, environmental artists have increasingly thematised the grave ecological problems in their works together with the rights of indigenous peoples, the disappearance of the bio-cultural heritage, the rights of animals and plants, and the long-term impact of the Anthropocene on nature and culture. The trend was not independent of the counterculture gaining momentum in that period, nor of the social, cultural and environmental movements, which directly inspired the activism of environmental art. Changes in the academic and educational scenes and the spread of environmental education, environmental history, and philosophy likewise provided motivation. The overall intellectual atmosphere (Zeitgeist) also urged artists to ponder the question cited above: what is the place of art in the Anthropocene era and among the possible responses to the climate catastrophe? Their attempts to answer the question inevitably took them beyond the artistic aspect into areas of ethics and politics as well.

Although these artists have been motivated by contemporary environmental or social problems, their artistic styles have been inspired by earlier, 20th century trends and schools of art. These include the avant-garde, with its radical experimentalism and its effort to eliminate the differences between the artistic and the everyday. They were also influenced by minimalism, which looks for the essence of forms and conceptualism, which focuses on concepts and ideas (Hubbell – Ryan 2022: 156–158).

Considering the function of environmental art, Nicolas Bullot raises disquieting questions as to whether these works are able to bring about a social transformation that would buttress environmental values and how they can avoid becoming empty propaganda. Here the basic functions of art play a certain role and have a task: following up, manipulating emotion, acting cooperatively, reflecting on the environment, plus collaborating with science (Bullot 2014: 511). Environmental art and the related environmental ethics involve all our senses and emotions. This

[4]   https://www.tate.org.uk/art/artworks/long-a-line-made-by-walking-p07149
[5]   https://www.diaart.org/visit/visit-our-locations-sites/walter-de-maria-the-lightning-field
[6]   https://www.architecturaldigest.com/story/agnes-denes-prophetic-wheatfield-remains-as-relevant-as-ever
[7]   https://www.tate.org.uk/art/artworks/beuys-7000-oak-trees-ar00745
[8]   https://www.4culture.org/public_art/earthwork/

question is examined by Nathalie Blanc and Barbara L. Benish, who firmly state that environmental art is capable of profoundly transforming our relationship with nature and our environment (Blanc – Benish 2017: 204).

The inquiries into the function and effect of environmental art suggest that this kind of approach calls for going beyond the aesthetic value and representativity. Within a genre, differentiation is most understandable when works are ranged into representative and non-representative/performative/participatory categories. This distinction is clarified by the academic literature (summarized by Thornes 2008) with the help of the concepts of landscape and the environment. In this interpretive framework, the subject of representative art is the landscape, "a cultural image, pictorial rendering or symbolization of the environment" (Cosgrove – Daniels 1988: 1; cited Thornes 2009: 393), the best known artists of which are Constable and Turner in the 19th century. We only "look at" a landscape – states Tim Ingold, in whose opinion this glance separates culture and nature (Ingold 2000: 191). Researchers claim that it is exactly the term environment that eradicates this separation. Therefore, they suggest using the term environment – instead of landscape – in describing artworks concerned with the environment (Thornes 2008: 392).

Malcolm Andrews, who proposes seeing landscape as a curtain which keeps out of sight the life and struggles of those living in it, traces this change of attitude from the ecological and social phenomena of our age and from the reactions to them:

> *"The stance of the outsider is not challenged by science but by the environmental movement […] We are now all 'insiders'. The landscape as a distant glance is incompatible with the enhanced emotion of our relationship with nature as a living (or dying) 'environment'"* (Andrews 1999: 22).

This is not to say that landscape disappears from art. It remains as a channel for expressing the irreversible problems of wars, industrialization, globalization and the fear and anxiety elicited by them, on the one hand, and the longed-for timelessness and harmony, on the other (Langdon 1996). Environmental artists do not discard representation lock, stock and barrel. Several works trespass the boundaries between representative and non-representative art, see Olafur Eliasson: *The Weather Project*, 2003; Anthony Gormley: *Blind Light*; Yann Arthus-Bertrand: *Earth from Above*, 2005 (Thornes 2008: 406).[9]

That said, in recent decades there has been a massive trend away from representation toward performative art in environmental artistic efforts: *land art* (short for *landscape art*), *process art, eco-art, earth-art, earthworks,* and *total art* have all walked this path since the 1960s.[10]

The first major exhibition of environmental art registered by art history was the *Earthworks* outdoors show in New York in October 1968, with the participation of 14 artists who put on display works that could not be confined to collections. They

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[9]   https://olafureliasson.net/artwork/the-weather-project-2003/ https://www.antonygormley.com/works/making/blind-light
      https://www.yannarthusbertrandphoto.com/categorie-produit/from-above/

[10] Special literature registers the following artists among the founders of land art: Michael Heizer, Walter De Maria, Richard Serra, Robert Morris, Carl Andr´e, Nancy Holt, and Robert Smithson (Kastner – Wallis 1998: 12).

could not be handled, except in the form of photo documentation. The action was a direct protest against the commodification of the art market. The title also implied this, with its reference to a sci-fi novel titled *Earthworks,* which takes place in a future America where earth is also a valuable commodity. Another novel aspect of the exhibition was its inquiry into the essence of art (Pepper 1996; Thorsen 2008: 400). The early land-art projects followed the path of radically rethinking the concept of art. They aimed to liberate land art from galleries and museums – and from confined and controlled settings in general – and to take artistic practice outdoors – into "natural" or relatively untouched spaces, or also into marginal or neglected areas such as freeways or despoiled and polluted sites, such as landfills and rustbelts. Their choice of outdoor sites signaled a conscious rejection of the commercialism of the mainstream art world and a growing awareness of environmental problems (Wylie 2007).

Land art often typically appeared in monumental works, or site-specific sculpture projects, in the course of which the artists used the matter of the environment to create new forms and reshape the landscape (Agnes Denes's works), or they introduced external materials or objects to nature to the same end (that of new forms and a changed landscape). See, e.g. Walter de Maria's *The Lightning Field* (1977).

**Figure 4. Source: https://gagosian.com/quarterly/2021/07/12/
essay-light-lightning-wonder-reactions-walter-de-marias-lightning-field/**

Several of the latter have incurred severe criticism – for the way they were created. For the construction of Robert Smithson's work *Spiral Jetty* (1970)[11] in the Great Salt Lake, 6783 tons of rock, earth and salt crystal were moved and a lot of machines

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[11] https://www.google.com/url?sa=i&url=https%3A%2F%2Fphys.org%2Fnews%2F2022-02-great-salt-lake.html&psig=AOvVaw1PzGNjKHtpjUWi0m16ruoU&ust=1670425851581000&source=images&cd=vfe&ved=0CBAQjRxqFwoTCPjUpq6j5fsCFQAAAAAdAAAAABAE

**Figure 5. Plant mandalas. Seven-Branch Tree Association, 2017, 2020.
Photos: Emese Iványi, Seven-Branch Tree Association**

– hence fuel – were used. The spiral disappears or reappears, depending on the water level of the lake, and is constantly being eroded. Michael Heizer had three large elongated gaps dug in the clay foot of the desert in Nevada for his *Displaced/ Replaced Mass* (1969)[12]. He had them lined with concrete and had three huge granite boulders blown off the Sierra Mountains three kilometers away to place them in the holes. By his intention, his work – the polar opposite of landscape art – focussed on the depths instead of the surface of the earth, and hence on the past, on history. Such works are criticized for the enormous effort and especially for the enormous amount of money they require, which turns them into capitalist art – a goal that runs counter to the original aim of land art to liberate art from commercialism. Not to mention the great environmental damage they cause (Gálosi 2021).[13]

Richard Long and Andy Goldsworthy were also active in the same period, but with entirely different tools and on a very different scale. Long's most famous work, Line Made by Walking (1967) is one of the pioneering works of performative environmental art. Long simply walked in a field up and down until he left a visible footpath which he photographed, before allowing it to disappear.[14] His aim was to show the need for a simple harmony between nature on the one hand and humans and human society on the other. Andy Goldsworthy also works in nature with natural materials, collaborating with nature and using traditional techniques (woodwork and basket weaving).[15]

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[12]   https://equatorjournal.com/post/637047632258301952/michael-heizer-displacedreplaced-mass-n-1.

[13]   Similar critiques are often leveled at contemporary actionist eco-artists. Olafur Eliasson transports huge ice blocks from the North Sea for the venues of his project Ice Watch (2014 Copenhagen, 2015 Paris, 2018 London), where they melt. Adrienne Gálosi remarked, with no small amount of sarcasm: „The magnitude of the ecological footprint of the ice transportation, which presumably required an enormous apparatus, is in all probability negligible, isn't it, compared to the impact of the work on people's minds" (Gálosi 2021).

[14]   https://www.tate.org.uk/art/artworks/long-a-line-made-by-walking-ar00142. http://www.richardlong.org/

[15]   https://www.architecturaldigest.com/gallery/andy-goldsworthy-book-ephemeral-works

Reflection, participation, regeneration

In researching questions of art and sustainability, Sasha Kagan discerns six characteristic features of eco-art (Kagan 2012):

1. an emphasis on ecological relationships,
2. dialogue with scientific concepts, principles, and methods,
3. connections to the natural elements of water, air, rock, and soil,
4. the restoration of degraded habitats,
5. a commitment to educating the public on ecological issues through art,
6. the formulation of new possibilities for interspecies ethics, community transformation, urban sustainability and personal healing.

In contemporary environmental art, nature is both a partner and an entity in need of protection. Nature used to be immense and strong, open to us to be tamed and cultivated; it was Mother Earth, on whose strength and fertility the fate of human communities depended. By the present day, she has become fragile, in need of protection and treatment, of help (Andrews 1999: 213). Environmental art has the task of reflecting on contemporary environmental problems and supporting the process of regeneration.

Environmental art is first and foremost a process of reflection: the artist queries and criticizes the unreflective social thoughts and acts underlying the ecological questions and invites the viewers to do likewise. It urges us to think about our moral responsibility and to enter into partnership with the non-human world. (Furthermore, this partnership ought to be extended to the future generations, too, for life today is not at all being lived in a responsible way concerning the life and future of our offspring.) The art critic Ruth Wallen describes eco-art as art "grounded in an ecological ethic and systems theory, addressing the web of interrelationships between the physical, biological, cultural, political, and historical aspects of the ecosystems" (Wallen 2012: 235). In her view, eco-art has brought environmental awareness into artistic practices by also addressing the socio-political forces which influence the natural world.

In the creative process, environmental artists regard nature as their collaborator and interpret their works as living organisms which come to life, grow, and perish. It is perfectly exemplified by Agnes Denes's above-mentioned *Wheatfield – A Confrontation*. Another early work is Barry Thomas's *Vacant Lot of Cabbages* (1978)[16,] In an environmentally degraded site in Wellington, New Zealand, he planted 180 heads of cabbage in a pattern that traced the word Cabbage. Later, the local council planted the lot with trees: the art project has completed its mission.

Ecological art typically demands that detached viewers become active participants, which not only means interpretation, but also actual physical participation. Let us think of Agnes Denes' example of *Tree Mountain: A Living Time Capsule in Finland*, which meant 11 thousand people planting 11 thousand trees. Art critics also see eco-art as creative practice, but participation also means involvement in reflecting on the work and its ethical principles and sharing its social critical attitude.

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[16]   https://digitalnz.org/stories/5d6844458a86ae2cb0a02059

There are works that go even a step further and become self-regenerating ecosystems: the American artist Betsy Damon's *Living Water Garden*[17] was completed in Chengdu, China in 1998. It is a fish-shaped 5.9-hectare public park, whose design as a natural wetland cleaning system cleans 50 000 gallons of polluted water from the Funan river per day, within the artistic project. The Living Water Garden was also repeated in Beijing for the 2008 Olympics and it inspired several other environment-revitalizing projects (Hubbell – Ryan 2022: 155).

One of the above-listed key features of eco-art is establishing a dialogue with scientific concepts, principles, and methods. Both art and science rely on observation and interpretation, which may bring the two closer to each other. Ruth Wallen's definition (eco-art is "grounded in an ecological ethic and systems theory, addressing the web of interrelationships between the physical, biological, cultural, political, and historical aspects of the ecosystems", Wallen 2012: 235) suggests that environmental art relies on scientific results. Bullot expressly declares that cooperation between the sciences and the arts, and a sincere dialogue between diverse fields of scholarship are necessary. They especially stress its importance because this cooperation might enhance the viewers' interest and awareness, making them want to possess the social and natural scientific knowledge required for understanding the artworks and participating in them (Bullot 2014). At this juncture, we return to the question of the role art can play in mediating scientific knowledge and in understanding environmental questions, problems, and possible solutions: science appears in these works as the authentic source which can be mediated most effectively through artistic means. This is why art is so important for the study of EH. On the other hand, EH's approach aids translation between the two – scientific and artistic – languages.

In the past two decades in eco-art, several new trends and methods have appeared in response to the challenges of the Anthropocene, the increasingly more severe ecological crisis (summed up: Hubbell – Ryan 2022: 160–165). These have all been greatly inspired by the essay *What the Warming World Needs Now Is Art* by the activist Bill McKibben (2005).[18]

Climate change art (cli-art)
Its aim is to impart cultural, social, emotional, and spiritual meaning to scientific results. For example, artists use climate change data to render them understandable and to exert an emotional influence on the audience. See, for instance, Eve Mosher's project *HighWaterLine: Visualizing Climate Change* (2007), in the course of which she designates with a painted line the areas all over the world that – owing to climate change – will be underwater in the not too distant future.[19]

Multispecies art
It involves diverse species, forms of life, and organisms in the artistic process, regarding them as active participants and co-creators. The most rapidly growing branch is plant art, art working with plants. An early example is Laurent Mignonneau and Christa

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[17]   https://www.keepersofthewaters.org/living-water-garden
[18]   https://grist.org/article/mckibben-imagine/
[19]   https://highwaterline.org/

Sommerer's project Interactive *Plant Growing*.[20] A Hungarian example is *Slow animals,* exhibited in the Szombathely Gallery.[21]

Environmental activism
Initiated by artists in Los Angeles and Chiapas in the 1990s, its aim is to fuse art and activism toward the realization of anti-capitalist and anti-globalist goals. Activism and ecology are integrated in this subcategory of environmental activist art.

Environmental arts therapy, EAT
It is based on the hypothesis of biophilia which means that human beings have a deeply ingrained love of nature and that human mental development and health need to have a profound and balanced relationship with other species and with nature (Wilson 1984). Blending aspects of eco-art and eco-psychology, environmental arts therapy aims to enhance human health and well-being through (re)connection with the natural world. It employs countless methods: dramatic performances, drama paedagogy, storytelling, sculpting with natural materials, etc. Certain therapeutic methods have been elaborated to handle traumas, for instance war trauma or therapy for (climate change) refugees, etc.

Contemporary indigenous art
It is a branch of environmental art that reaches back to the modes of "artistic" expression in traditional cultures (aboriginal "dreamtime stories" of Australian culture, rock drawings, etc.) Often the artists are also members of indigenous communities.

Examples of environmental art in Hungary

Hungarian examples of artists' ecological activism include the groups *xtro realm* and Artists for *Climate Consciousness*.

The group *xtro realm* (https://xtrorealm.hu/) has existed since 2017 as a union of three artists: Gideon Horváth, Rita Süveges and Anna Zilahi. The name xtro realm was inspired by French philosopher Quentin Meillassoux's text *Science Fiction and Extro-Science Fiction*. They debuted with the following words: "Xtro realm have been organizing programs (reading circles, exhibitions, field exercises) for knowledge sharing and transdisciplinarity which provide access to climate change and the Anthropocene, the decisive facts of our present, based on neo-realist and ecological theories criticizing the anthropocentrism of contemporary thought."[22]

Accordingly, the activity of the group has widespread ramifications: in addition to exhibitions (see, for example, *Unstable State of Things*, 2020, Glassyard Gallery, Budapest)[23], they organize reading sessions (*Climate imaginary reader: Interdisciplinary Voices on Ecology and the Climate Crisis*) and field trips with the name *Imagination*

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20   http://www.interface.ufg.ac.at/christa-laurent/WORKS/CONCEPTS/PlantsConcept.html
21   https://magyarmuzeumok.hu/cikk/slow-animals-szokatlanul-izgalmas-kiallitas-a-szombathelyi-keptarban
22   https://xtrorealm.hu/.
23   The exhibited works reflected upon the irreversible consequences of the ecological crisis, which permeate all fields of life.
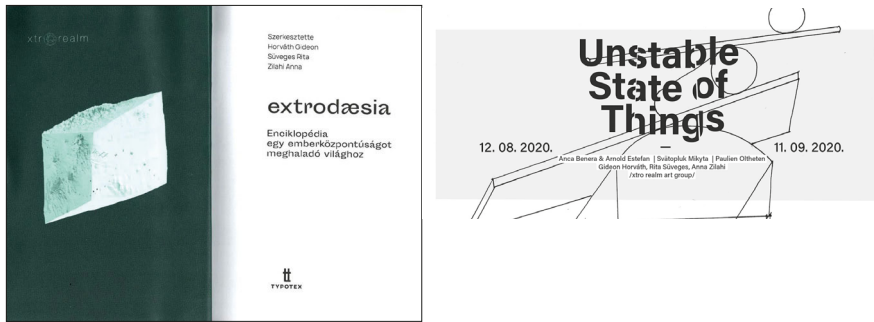
**Figure 6. The inside of the book Extrodaesia and the poster of the exhibition
Unstable State of Things. Source: http://xtrorealm.hu**

and climate crisis (to an ecological fam, former bauxite mine, forest reserve, the migrating dunes of the Great Plain)[24]. They published a bilingual (Hungarian, English) book (2019), *Extrodaesia. Encyclopedia for a World Superseding Anthropocentrism.*

The aim of the book is to present the knowledge gathered during the earlier projects, to provide philosophical-theoretical texts, literary and artistic works for an all-round interpretation of the Anthropocene. It is not a customary encyclopedia but rather an attempt to interpret basic concepts of the discourse on climate change with theoretical definitions, poems and graphic works. The authors take Extrodaesia to mean "a transmedial work in which various layers of knowledge enter into dialogue with each other."[25]

Together with other artists (András Cséfalvay, Tamás Kaszás, Kata Dóra Kiss, Csilla Nagy, Ádám Ulbert), the group xtro realm composed a project for the Off Biennial Budapest 2021, *the ACLIM! Climate Imagination Agency* (https://aclim.hu/) and its exhibition at the Atelier Pro Arts Gallery.[26] They described their project as follows:

"Can we grasp the ecological crisis via local phenomena? What knowledge can an ecological network researcher, an environmental psychologist and an artist represent together? How can this help us to comprehend our present and the possible future? Answers to such and similar questions are the objective of ACLIM! Climate Imagination Agency founded by the artistic group xtro realm. The research-based works and transdisciplinary theoretical materials in the institution elaborate on the most pressing ecological issues.

It is more and more urgent to seek local perspectives and alternative images of the future to reinterpret our situation under the threat of the climate crisis. Whether humankind survives is only one of the questions; the social frames in which we will survive is also questionable. The economic and political interests causing the exploitation of the ecosystem are not only responsible for the ruination of our habitat, but they also constrain the faculty of social imagination

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[24]   On this, see: Süveges Rita 2020: *Beyond the Postcard: an Ecocritical Inquiry on Images of Nature.* http://mezosfera.org/beyond-the-postcard:-an-ecocritical-inquiry-on-images-of-nature/

[25]   https://dunszt.sk/2020/08/08/extrodaesia-enciklopedia-eligazodni-egy-emberkozpontusagot-meghaladni-vagyo-vilagban/?fbclid=IwAR0oyUMMa4Hx-AWcLEOX5MPl1IRWtyw76xCi-5mFK9kxSl4rEsxRCP5m0-U

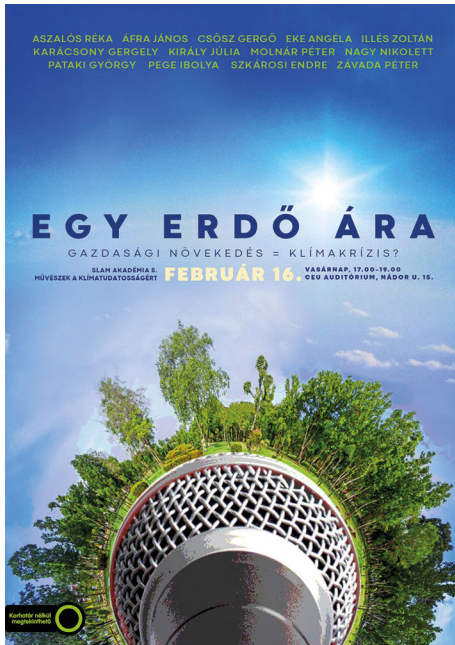[26]   https://archive.offbiennale.hu/2021/projects/aclim.html.

that could find a way out of the impasse. The ACLIM! agents profess that we have to discard the petrified schemes of thinking in order to liberate the climate imagination. That, in turn, is dependent on a new ideal of knowledge in which scholarship is paired with intuition, emotional intelligence, bodily experiences, artistic knowledge and dialogue. What is at stake is the survival of our home."[27]

This endeavor, the fusion of scientific results with artistic tools and their communication, is one of the main ambitions of environmental art.

Artists for Climate Consciousness was started by two Hungarian poets, Péter Závada and János Áfra. Both were shocked by the climate reports for 2019, followed the activity of the *Fridays For Future* and *Extinction Rebellion* ecological movements, and their translation work also inspired them to do something with the means of art. Their aim was to launch an all-round artistic movement, so in August 2019 they created the Artists for Climate Consciousness Facebook group and announced a call for artists 1) to post a work, 2) to make a pledge to be environmentally conscious, 3) to call on three other people to do the same. They did not want to form a group of their own, but rather to weave a web: everyone complying with the three points of the call becomes part of the network. Their aim is: "to contribute with their own tools to spreading information, so that people won't sweep the issue aside. Let us take our stand *for* something, not *against* something. We must encourage people to ponder, to assume responsibility, because only our individual decisions will force larger powers (companies, politicians) to act."[28]

Their activity moved beyond the online space as well. In September 2019, they organized a poetry reading and roundtable discussion night in Trafó (Trafó Per-

forming Arts Theatre, Budapest), where environmentalists, philosophers and poets discussed questions of climate and sustainability and the tasks of artists. In February 2020, they staged a discussion on the climate issue and the artistic representation of the theme with the title *Price of a Forest. Economic growth = Climate crisis?* during the Budapest Slam poetry nights, with the participation of climate experts, politicians and artists. The poster read: "Attendance is free. Attendance is demonstration"

Figure 7. The poster of the slam poetry evening. Source: https://www.facebook.com/photo/?fbid=3297117020304228&set=gm.477902369757414&idorvanity=464276491120002

27   https://archive.offbiennale.hu/2021/projects/aclim.html.
28   https://www.facebook.com/profile.php?id=100066714901803

– they thereby consciously placed their group and activity within the field of ecological activism. On March 15, 2020, they presented eco poetry and a thematic slam poetry competition with the title *The Sea Has Risen*.

In October 2020, during the online conference of the Hungarian Society for Literary History with the title *The Climate Policy of Literature,* they staged a session in which contemporary Hungarian poets discussed the definition of eco-poetry and the possibilities and tasks of poets and poetry. A well-known Hungarian literary periodical (Forrás) devoted its summer 2020 thematic issue to climate questions. From autumn 2020, well-known Hungarian artists were asked about the issues of climate consciousness and the changes it had brought to their lives, within the Greenterview series.[29] Their joint project with the Csiky Gergely Theatre of Kaposvár, a video series of poems by contemporary poets andauthors related to environmental questions, was elaborated by actors and actresses.[30]

An innovative event of the Hungarian art scene was the exhibition titled *Strength of Plants* (MANK – Hungarian Artists' Public Benefit Co., Szentendre, 2021), the closing event of which also involved the members of the group *Artists for Climate Consciousness*. In addition to art, they also do scholarly work. They took part in organizing the major conference titled *Anthropocene* prospects: examining the age of humans from post-anthropocentric perspectives (Debrecen University, 2022), where questions of eco-art (film, literature, performance, eco-fiction, etc.) were also present.

Figure 8. Poster of the exhibition of Power of Plants.
Source: https://www.facebook.com/alkotomuveszet.hu/photos/gm.33677150159296
1/2164725333667140.

Below, three young Hungarian artists will introduce themselves and their environment-related works. Fanni Sall is a member of the Eco-community of Nyim, Magdolna Tóth is a doctoral candidate at Pécs University's Faculty of Art, and Hajnal Gyeviki is a student at MOME. They were asked to pick two of their relevant works and describe them. The quotations preceding their texts are taken from conversations or correspondence with them.

29 https://www.facebook.com/profile.php?id=100066714901803
30 https://www.youtube.com/channel/UCFK2-zAMsor7TyVaps8xK2Q

Magdolna Tóth

"I guess my works are not really attention-grabbing; they respond to the problem more subtly, not ostentatiously."

As a result of my research project, *Once there was a village*, I composed two works: *Cabbage garden* and *Poultry yard*. Both call attention to the problem raised in the title: where has the rural peasant culture gone and which decisive motifs of it are still with us? Both works highlight a disappearing form of household farming and at the same time reflect on ecological questions in their discourse on the possibilities of sustainability and self-subsistence. I have shown several of my works at exhibitions and conferences, so that in line with their purpose, they could call attention to the pertinent problems and initiate dialogues.

Cabbage garden is an indoors installation, a genre scene as it were: it shows my mother's figure in the garden gathering slugs in a plastic bag at night with a headlamp on her head, to protect the vegetables from the harm they cause. Though it might be absurd, startling or surrealistic at first sight, the scene is an ordinary event of everyday life for those with a kitchen garden. This scene reports on the upsetting of our delicate relationship with our environment and with nature caused by the recent invasive newcomers in Hungary, the Spanish slugs, which – for lack of natural predators – can proliferate without limits. Beyond the ecological and ethical issues raised, the work is also about my relationship with my mother: as the protector of vegetables, she also protects me, as I've had an aversion to slugs from my early childhood. Her work is almost invisible; it surrounds us like air, protecting and building on the family. The slugs also mainly work invisibly, at night, only for the damage to be revealed by the morning light.

My work *Poultry yard* is an outdoors installation consisting of twelve cast concrete hens. The work also retrieves a decisive memory of the village with hens scratching the ground on the side of the ditch, an ordinary sight in my childhood. The work offers its message with the setting, maybe generating an absurd or, for that matter, harmonious effect, by calling attention to the under-utilization of green surfaces and public spaces, the pertinent restrictions, as well as the perversities of industrial-scale poultry breeding. The sight of hens fills the insipid or indifferent spaces with life – it was the sight of pigeons pecking at scraps on the unused grass outside the polyclinic in Lánc street, Pécs, that gave me the first inspiration for making this work. Besides, I like hens for their natural social and curious nature. In earlier times, all green surfaces were used in the villages for grazing. I think it is a promising tendency that people gradually realize the significance of these areas and create bee pastures in some places.

Magdolna Tóth, Pécs, 2022.[31]

Figure 9. Magdolna Tóth: Cabbage garden. Photo: Magdolna Tóth

Figure 10. Magdolna Tóth: Hen yard. Pécs, Hungary, 2022. Photo: Gábor Horváth

Hajnal Gyeviki

> *"I'm constantly working on creating objects of use and artworks, all serving the same goal… Anything that brings us alienated people closer to nature or at least to a more natural, simpler way of living."*

In this luckier half of the Earth, we are living in an age when our food-related thoughts are normally satisfying. We are fond of food, of its taste; we like to eat. We don't eat just to avoid death, but eating as a sociocultural activity has an important role in our lives. What we eat tells a lot about us. Our meals also indicate our culture, our social position – without most of us taking any role anywhere in the long process of food production, apart from consumption. Why should we take any? We can thank the food industry for such civilizational achievements as tomatoes in the winter, kitchen-ready "meat" from the other side of the planet – without suffering, too – or immediately available limitless fast-food, whether handed in through the car window, or getting it from the delivery guy at the door of your home. This unprecedented comfort appears to be good as long as you can remain insensitive to all the drawbacks of the system.

Beyond the environmental, ethical, legal (human and animal rights) anxieties, we are unaware of the gravity of the health-damaging effects of most chemically treated foodstuffs fed with antibiotics and produced on an industrial scale. We may easily be headed for doom via the materials we hope to ensure our long life with.

But this is not the only option. Even in this, allegedly luckier, part of the world, here and now, alienation is not the only alternative. Some may search their memories, others browse the internet; some may have the possibility to contribute to the long process of food production, others may not. One thing is certain: we are all consumers. We are unable to produce, or decompose our own food without the activity of organisms living together with us. We are one of the most helpless actors in the food chain. Can we be responsible partakers of the ecosystem in spite of – or, conversely, because of – this?

This is my credo; this is why I create works.

In my current research, I started examining the complex phenomenon of the path of our food from three directions. The first series in time is titled *Wild_ining* and addresses the connection between foraging and contemporary consumer culture. The second is *Soil setting*, which questions our feelings, thoughts, and ideas of cleanliness. I gave the title *Food in situ* to the third collection, in which root vegetables are the starting point for taking a close look at the trinity of food, soil and human beings.

In *Wild_ining*, I focussed on the perishing of modern humans' knowledge about wild plants. What is the value of berries collected with our hands in the age of ultra-processed and ready-to-eat food? Could we look upon edible wild plants growing in cities as food, if we knew them? How does our attitude to consumption change when we collect the edibles? I meditated on these questions in making *Reward*, an item of the series. The form of the chewing-gum machine many of us remember from childhood was translated into noble materials, glass and ceramic with the twist that in the glass ball, instead of colorful balls and marbles, we see thorny twigs with rosehips. The idea of instant access must be revised.

Soil setting is an attempt to lessen the cognitive distance between the arable land and meals, to increase the two-way tie-in during everyday meals. The collection comprises dustpan-shaped ceramic platters and various dishes carrying footprints, all to be used to serve a fruit or snack. A dustpan as a tool of key importance of civilized living – if you like, a possible symbol of dirt – looks strange on a dining table. Similarly, we normally find footprints on the ground

(pavement, floor), as far away from eating in our minds as possible, for one is clean and the other is "filthy". True enough, but the transforming potential of the noble material may help the "transfiguration of dirt" take place in the viewer, in other words, it may help him/her to accept that what he/she sees is a suitable – and clean – object for food. Why is this important? If it does not take place and the viewer sticks to her/her "philosophy of dirt", he/she can still experience the moment of the discovery of a real connection – the obliteration of the concepts of clean and dirty.

**Figure 11. Reward, 2021
(Photo Richard Usher)
Figure 12. Dustpan-shaped platter,
2022 (photo Hajnal Gyeviki)**

Food in situ is also a collection for serving food, the conceptual background of which implies the customary aversion people have to the leaves of root vegetables. Thanks to Kati Réthy, the founder and horticulturist of the Season garden, I used freshly picked root vegetables to make imprints on the dishes which customers of supermarkets have never seen in this form. Not only are the size of the leaves of carrots, beetroots and radishes strange (though in small organic gardens, roots do not "grow" as large as their over-fertilized counterparts); the shapes of the roots are also intriguing. Then I cut the dishes into two or three parts like puzzles; I cut the imprints at the points where the – otherwise edible – parts are cut off in the shops before selling them. Thus, parts of a plant can be put together again and again to complete a dish, thereby further reinforcing the recognition that the parts earlier regarded as waste are not only important for our lives as humans but also for the entire ecosystem.

Finally, let me stress that none of the series could have been born without the experience I usually call "my second childhood", because the intense one and a half years, rich in interactions, which I spent during the Covid lockdowns in a region of farmsteads, had an indelible influence on me, born in a city.

Hajnal Gyeviki, 1 February 2023[32]

Fanni Sall

> *"Fanni Sall's communal art project is the documentation of the landscape regenerating work of the members of the Nyim Eco Community and of volunteers, as she realized that a more extensive action of planting trees and some other processes such as protecting the trees and applying mulch, leave a trace in the landscape and can be interpreted as creativity, owing to the extent of the trace thus left behind, and to the character of the process allowing for absorbed meditation."*

When the 26-hectare area of the Nyim Eco Community was bought, it was an eroded plow-land, and now it's a meadow planted with saplings. Over the past ten years, we have planted over 4000 trees in the area. The protection of the trees was always a problem. There was wildlife damage and despite the efforts of the community, most trees – though still alive – simply vegetated at a height of 10–20 cm in the grass. For years, the community failed to find the right answer. All small-scale and ecological solutions would have required an irrational amount of time. In our desolation, a moment arrived when we simply shook off the immense pressure of caring for the enormous area. We realized that whatever step we took, we could only improve the situation. Experimentally, we began building heaps of twigs around the saplings against wildlife. The first were made in 2019 and we keep building new ones, so that several hundred young trees are now guarded in this way.

Surrounding the saplings with twig fences has several advantages: it gives shade to the saplings and other living creatures in the field, its decomposition

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enriches the soil, and it protects against roe deer and rabbits. Further, we found a new function to the heaps of scrap from the spring clearing which the village meant to burn.

Yet for me, the whole process was about my relationship with the trees. I experienced the planting as a meditative process from the beginning. After the relatively long time spent with the saplings to protect them, I could recognize them individually, partially because of the characteristic forms of the twig and branch stacks visible from a distance. I became more motivated to return and visit the given tree or group of trees and I could assume greater responsibility for a certain area.

I visited the installations several times, perfecting them, shaping them and I realized that building the piles was a creative process for me.

After the first bundles, we began building collectively, with community members and volun-

Figure 13–14. Nyim, 2022. Photos: Judit Ruprech

teers, which resulted in joint creations that also echoed the different characters of the members.

In 2021, in cooperation with the Ten Million Trees Foundation, we fenced off a 2-hectare area of our precincts where wildlife damage is no longer a threat. Here, tall installations against game were no longer necessary, but mulching the trees thickly with twigs was very useful. We transformed the former wildlife defenses one by one for the new purpose.

Relying on my earlier experience, I encouraged some of the tree planting volunteers to regard themselves as co-creators and to try to construct the protective mulch so that the time spent on it would appear precious. Several volunteers were favorably disposed to my proposal and built interestingly shaped mulch variations.

These instances of tree mulching are collective works, which I have documented. Several volunteers have returned to the area and could recognize the trees they mulched around.

This kind of dedicated work with trees is a sort of meditation, part of a regenerative natural art programme which we will continue to develop in the future.

Fanni Sall, 5 April 2023.

Recommended readings

Davis, Heather – Turpin, Etienne (eds.) 2015. *Art in the Anthropocene: Encounters among Aesthetics, Politics, Environments and Epistemologies*. London: Open Humanities Press.
A collection of essays, conversations and studies, a comprehensive source on contemporary environmental art.
Downloaded free: http://openhumanitiespress.org/books/download/Davis-Turpin_2015_Art-in-the-Anthropocene.pdf

Figure 15. Work of Fanni Sall in the wall of Green Spot Community Garden, Pécs, Hungary. Photo: Judit Ruprech, 2023

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COMMUNITY ANSWERS

PREFACE TO THE COMMUNITY ANSWERS

Judit Farkas

The next chapters will discuss some communal examples in Hungary. These initiatives have the same attitude to contemporary environmental, social, economic and ethical problems as that of the Environmental Humanities. They also try to answer the challenges in a complex way. It holds true for all of them that superseding technological optimism, which is convinced that science and technology can solve every problem hand in hand, they see the solution for the problem in collective responses based on cooperation. They share the recognition that there is a considerably large gap between present and desired reality and that the social sphere has dysfunctions which have an impact on environmental aspects as well. All of them have elaborated and live some social innovation that tries to provide conditions for the more ideal functioning of each actor (on social innovation see: Paunescu 2014).

Cooperation is interpreted by several authors as something unavoidable, rather than an option. Andrew Hubbell and John Ryan explicitly declare that individualism and the pursuit of self-interest are the motors of the Anthropocene and the industrial-capitalist system, while earlier they were regarded as anti-social values and behavior.[1] Individualism is the opposite of what evolutionary biology and ecology teach about the advantages of cooperation if we humans want to be successful in the long run. "The Anthropocene shows us that we must cooperate or die" (Hubbell – Ryan 2022: 50). They add that we have to learn to give other species a "say" in the future of the Earth, too, because everyone is equally important for sustaining life on this planet (Hubbell – Ryan 2022: 50). Cooperation applies to all living beings, not only humans. In Anna Tsing's similarly radical phrasing: "staying alive – for every species – requires liveable collaborations. Collaboration means working across differences … Without collaborations, we all die" (Tsing 2015: 28). An excellent example for bringing home this truth is the – now widely known – importance of bees: their disappearance jeopardizes our food production, not to speak of the health of ecosystems (Oppermann – Iovino 2017: 12).

The communities introduced below all have some ties to contemporary worldwide environmentalism. They create local and global networks: they are groups organized from the grassroots, which apply the DIY methods typical of such groups. They offer an alternative to the apocalyptic vision of the Anthropocene, striving to create and spread a new worldview, a new social vision (Emmett – Nye 2017: 117–118).

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[1] This is why several contemporary (ecological) communities turn towards earlier cultures. The academic literature terms them re-traditionalist communities.

Figure 1. Nyim Eco Community. Nyim, Hungary. 2022. Photo: Judit Ruprech

A key concept of these movements and communities is *localization*. Instead of the energy-devouring, nature-destroying, economic and political power-centralizing processes of the global economy fuelled by the ideal of incessant growth, they promote a localization which decentralizes power and places it in the hands of local communities and uses local natural resources sustainably, in short, which helps the economy to serve the good of the community and the natural environment at the same time. In addition to the process of localization, it keeps an eye on the complexity of the world, on ecological, geographical and cultural differences, realizing that what is feasible in one place may not work in another. Such movements include the Transition Movements, permaculture, communal gardens, ecovillages, and agrarian movements (e.g. Via Campesina, Agroecological Movement). Since they all agree on the basic principle, they are very similar movements, with a great overlap at the local level (Emmett – Nye 2017: 117–123).

The other key concept of the communities described below is the idea of *de-growth*. De-growth is a central principle of the alternative economic paradigm, which criticizes the goal of continuous economic growth, the expectation of growth above all; this is where it sees the root of contemporary ecological-social problems. Supporters of no-growth have elaborated several methods for developing sustainable economic functioning: decreasing consumption, minimizing garbage, achieving carbon neutrality, decreasing waste, etc., and of course their combination. Researchers agree that the most fundamental change must be achieved in the area of consumption habits and the organization of society (Emmett – Nye 2017: 123–128).

The communities in Hungary to be presented below reflect upon these basic challenges.

Recommended readings

Barton, Hugh ed. 2000. *Sustainable Communities. The Potential for Eco-Neighbourhoods*. London, Earthscan.
This book explores the concept of neighborhood, and its different interpretations and then outlines the possibilities of functional, sustainable communities. It examines areas such as the community and subsidiarity, managing resources locally, and so on. It brings all this closer to the reader with numerous examples and case studies.

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THE KÓSPALLAG OLD HOUSE PROJECT AS PARTICIPATORY ACTION RESEARCH AND ECOLOGICAL LOCAL DEVELOPMENT

Pál Géza Balogh – Luca Kaszás – Rebeka Márta Kiss

Preface, definitions of our work

Perhaps the simplest definition of our work carried out in Kóspallag within the Kóspallag Old House project is participatory action research. It differs entirely from ethnographic research with traditional methods in several regards, though undoubtedly that is also one of its aspects; we make interviews, take photos, digitize archive photos, collect and inventory objects, and try to process and archive the accumulated material continuously to make them ready for a future museum collection. On the other hand, many of our activities belong to community development: we organize events, recruit volunteers, collect donations, restore, and perform other physical chores collectively. Seen from this angle, our project is like a locality development process with an anthropological emphasis, because it centers on the re-adoption of sets of knowledge closely tied to the locality (on local knowledge, see Brosius 2006). It highlights the desires and intentions of the local community by discovering and re-activating its capabilities (on the capability approach, see Sen 1999; Málovics 2020: 103–107; Bajmóczy – Gébert – Málovics 2017). The central aim is to enhance local self-government and at the same time decrease external dependence; to aid the emergence of a new, more community-centered way of functioning with tighter interpersonal relations for the bridging of differences; and to contribute to the creation of a community living in harmony with the endowments of the local natural environment.

At the same time, we regard all these elements of our presence in Kóspallag besides the ethnographic research as part of a major process of cognition and try to document as many moments of this process as possible. This is the motivation behind producing documents on local adobe-making knowledge, dietary knowledge, or, for that matter, on our experiences of the tender system and our collective actions pointing beyond the locality. In addition, in processes like this, every participant gains new knowledge about themselves and changes constantly, acquiring new capabilities and recognizing their weaknesses (all this will be discussed in more detail at the end of the paper). These elements all bring it close to the concept of participatory action research, which is also characterized by being engendered by local, grassroots needs that themselves determine the questions and the whole process, just as in this case (on participatory action research, see Udvarhelyi – Dósa 2019; Pataki – Vári 2011; Málovics 202: 75–108).

The ecological aspect is manifest in our work in several ways. An important goal is to get to know the ecological elements of the peasantry's former traditional way of life and to restore it to contemporary practice. The creation of a local country house is also typical of the eco-localist world view in general (on eco-

localism, see Norberg-Hodges 1999; Curtis 2003). Getting to know the past of the settlement also serves the attachment to the place and the strengthening of local identity, and may provide the bases for a self-governing community of people characterized by tight and deep interpersonal relationships. Real attachment to one another and to the natural environment is the foundation of ecological behavior and the basis of ecological philosophy. A considerable part of our case study also discusses the dimension of community development as an essential part of the ecolocalist approach.

About the village

The venue of research, Kóspallag, is situated in a picturesque landscape at the gate of the higher Börzsöny mountains. Up to the mid-20th century, the inhabitants of the relatively isolated settlement commuted to Vác or Budapest, or foraged for mushrooms and forest fruits to sell at the market. The village was fairly poor because of limited fields and soil that was hard to till. During the socialist period, an upswing in raspberry growing owing to organized buying-up and processing brought considerable income to the villagers. Another source of living was and still is forestry and many inhabitants work in Márianosztra's mine and prison. Providing accommodation for hikers and tourists is also part of life, and the wellness hotel close by employs several inhabitants. These days, more people commute to the Danube bend and Budapest for work, as public transport makes them increasingly accessible.

Monument conservation, building camps

The starting point for our local work is the renovation of a house in the heart of the village. The oldest building material dates from around 1860, when part of it was certainly already standing. The owner has consciously made only minor alterations to the building, preserving its inter-war appearance and much of its former furnishings. Over the decades, the building has not only been home to its owners, the Czapák family and their relatives, but our interviews suggest that its size and central location have also meant that it has often been used as a venue for community events in the past. Because of this, we often feel that our work is not adding a new function to the building, but rather restoring an old one that once existed. The more recent building on the site has served as a pub, so a significant proportion of the village population have a story of the Old House building.

The building is currently undergoing a phase of renovation. It has been the team's strong stance from the outset that we want to do everything we can on a voluntary basis, as a hands-on job, and only use grant funding for what is absolutely necessary. We have done so: since 2019, we have been running several construction camps every summer. From the architectural side, this was led by Otília Gyüre, and from 2022 onwards by Barnabás Ferdics, with Balázs Vajas also contributing on several occasions. On two occasions, we successfully competed in the Folk Architecture Programme, which helped us carry out the renovation plans, as well as the wood preservation work and the renovation of the windows and doors.

**Figure 1. Group photo of the participants of the construction camp
and the children's camp, 2020**

The construction itself is a learning process about vernacular architecture as a local form of ecological architectural practice. Several of our local members have subsequently started to renovate their own houses using adobe techniques, drawing on the experience they gained during their time volunteering in the country cottage. But renovation also has other important functions, which we discovered in the meantime. We made them a conscious practice through practical action. It has become one of the most important and visible manifestations of the team in the wider village community. The renovations always take place with the gates open. Anyone can come in and have a look around, and we always make a conscious effort to designate someone to talk to visitors. On the other hand, it is also the main place for recruiting external volunteers. It is the best time to get to know the style and dynamics of our team and decide whether someone wants to work with us on a permanent basis. Many team members have already joined our community in this way. Thirdly, physical work together is a community development tool with an underestimated impact. The sense of physical creation brings people together, but it also inevitably raises differences and conflicts, which are a challenge to resolve, but also foster a sense of belonging when successful.

Ethnographic research

Research using classical ethnographic methods has been a central part of our work since the beginning in 2017. We have organized research camps lasting several days, and we have been conducting interviews with villagers, mostly elderly people, with varying intensity.

The concept of "local knowledge" has become a central element of our work over the years. We approach the concept in a rather extended sense. Part of it is what research calls "traditional ecological knowledge" (Berkes 2018), but more than that, we also consider part of it the personal and historical memory of the local population. A very significant part of it is closely linked to the local ecological environment. Many aspects of life were once strongly linked to the natural environment – not only ecological and agricultural knowledge in the strict sense (such as extensive knowledge of medicinal plants and mushrooms, orchards, livestock, and crops), but also folk industry and craft knowledge and even areas such as architecture and costume (see Bali 2005). In local knowledge, however, the knowledge of the peasant past is not sharply separated from elements of later times; our interlocutors also refer to the agricultural knowledge learned during or since the cooperative period. When we asked for local experts on growing fruit, native residents often recommended our young, second-generation settler friend. Knowledge forms a unity in the minds of its bearers. Only when viewed from the outside does it have 'ecological' elements, those which, when separated, carry the idea of existing in harmony with nature, but often these also exist in a hybrid form with other elements. In Kóspallag, for example, many of the later built 'cube' houses were also constructed of adobe and the boundaries drawn in local knowledge are artificial research constructions, not separated into such categories in the minds of its bearers.

In the course of our work in the village, we strongly experienced that the indigenous inhabitants of the village speak of their own knowledge with a kind of minority complex, not seeing it as knowledge: *'oh, I don't know anything'*. But we are curious about everything and everyone, according to the anthropological approach, so we listen to the knowledge of all local people and we convey this approach in our events. Local knowledge is also fundamentally linked to community building. We have often noticed, and feedback has shown, that the discovery, sharing and dialogue of local knowledge has triggered human connections across social groups. When our volunteers from Budapest spent hours with local elderly people foraging for mushrooms in the forest behind the country house and then listened to their guide's life story until midnight, this is exactly what happened.

But local knowledge is also important for us because of its practical application. Here too, we were guided by the needs of the local community. The research team was invited to create a village museum where elements of local knowledge could be acquired by those interested. Over the years, it became ever clearer that one of the main motivations for the active local core of the country house is to learn to apply elements of local knowledge appropriate to an ecological lifestyle in their own daily lives, for example to expand their knowledge of farming and mycology. While elements of local knowledge are also put back into practice, different layers of knowledge also come together. Sometimes, of course, they clash, with elements of permaculture farming being referred to as 'scraping', while in other cases the agricultural knowledge of the newcomers is taken seriously as useful knowledge.

Figure 2. Interview about fruit growing, summer 2021. Photo: Brigi Vidák

Our team's largest research project to date was an INTERREG fruit research project that ran from February to November 2021. The first step of our work was to map the old fruit trees of the village, then to collect grafts and budwood for breeding, which were propagated in the nurseries of Márton Drimmer in Sopronkövesd and Ferenc Miskó in Kondoros. The core of our research was our summer fieldwork. During these sessions, we conducted semi-structured interviews with elderly residents of Kóspallag about their memories and experiences of fruit growing and consumption. Our interviews were guided by Zsolt Szani's questionnaire on a similar topic (Szani 2014), which our team supplemented beforehand with additional site-specific questions and other ideas that emerged. The 'fruit' of our research was a publication titled ' *"I have the love of the earth..."* Fruit cultivation in Kóspallag' (Balogh-Kiss-Gonda-Werlein 2021). At the end of October, we organized the Kóspallag Fruit Growers' Day, where, in addition to presenting of the book, we held several lectures on fruit-growing, round-table discussions, and, in addition to professional programmes, we also offered quizzes, children's programmes, a dancehouse with csángó dances and a lunch cooked in a cauldron over an open fire.

One of the most rewarding aspects of pomological research was sharing enthusiasm for the subject. The topic of fruit proved to be truly diverse in its simplicity, as everyone has a connection with fruit; beyond the traditional knowledge of agriculture, the topic offered a wealth of life stories, anecdotes, individual experiences, habits and even individual and communal traumas.

Community development

Community development was not originally a priority. However, it soon became clear that to achieve our goals, we needed to build a community of people who would take ownership of the Old House, commit to maintaining it and fill it with activities. So the core team was formed of 'do-it-yourself' community developers who began to learn the skills of the trade. It soon became clear to us that the anthropological perspective and community development are related fields. The developments that result from such a process tend to have an explicit community-developing dimension, or, in the case of physical investments, necessarily involve the creation of the community that fills them.

This was made possible by the particular circumstance that we were invited to participate in the research, as we are known locally, by the 'ethnographic', 'old cottage' team (now consisting of a large number of young professionals, not only ethnographers but also sociologists, human ecologists, biologists, rural development experts and people with many other qualifications). The three NGOs in the village also had the aim of setting up a country house in their statutes, but lacked the requisite ethnographic expertise. Thus, a fortunate meeting, a brainstorming session and a mutual friendship between the professional leader of the research and two leading local NGOs was our ticket to the village. Their invitation is what makes our effective work possible. We often feel that without their role as a permanent bridge, we would have no place in the village, but that at the very least, our work would be much less successful and embedded. It is primarily through them that we began to understand the village's past, present and complex human relations; their role, although it has changed (since they have become part of the municipal board), is still crucial.

Figure 3. 'Story-telling' photos – community event with archive photos, February 2019

Over the years, we have also increasingly found ourselves in a mediating role. As the number of people moving into the municipality has increased, more and more situations have arisen where it has fallen to us to help resolve conflicts arising from cultural differences. This was not a conscious part of the mission of our evolving institution from the outset, but was rather rooted in everyday situations, such as explaining the local perspective to newcomers or the perspective of newcomers to our indigenous friends. Here again, the anthropological approach was an important guide, which is why we consciously avoided taking sides in the conflicts that arose, but rather focused on mediation. As such situations multiplied, we realized that this had to be a conscious mission.

In the previous section, we have already emphasized the merging of action research and community development. The interconnection of personal stories forms a community at a new level: through memory. It is this memory, and the power of memory, that we want to harness in the rebuilding of the Old Cottage. A very tangible and understandable example of this idea is the collection and donation of objects to be exhibited. Initially, we put out calls to collect surplus objects in and from Kóspallag for the exhibition of the new village museum and we also tried to be vigilant when vacant old houses were emptied and things considered as rubbish were put out to be cleared away, looking for typical objects that would enrich the exhibition. But the initial calls were increasingly replaced by requests and donations from members of the community: "Do you need an old chest of drawers?", "And do you have one like this in the country house?". The number of requests and donated artifacts kept growing and almost caused a storage problem; it shows that the people of Kóspallag are increasingly taking ownership of the Old House and want to contribute to the exhibition of the history of the community and the village with their personal objects, each one with a story to tell. Although the renovation work is making it difficult to store the objects, and our team is still lacking someone who could take over the management of the museological branch, the institution, which is still in its infancy, already has a growing collection of museological objects.

Not only in the multitude of material donations, but also in the success of our one-off, more direct community development events, the intertwining of the people of Kóspallag and the Old Cottage team is a testament to the success of the project. One of these was the 'Storytelling Photos' event in the winter of 2019, where we interviewed the elderly about the photos taken 60 years ago by ethnographer Lajos Takács. The photos started the process of remembering, the elderly started telling stories and explaining the pictures, and the young people were eager to ask them about the topics that interested them. It was a breakthrough for the two groups: the older members of the population became aware that the 'young people in the country cottage' were genuinely interested in the past and present of Kóspallag. It is a good example of how sharing local knowledge is the perfect basis for a range of events that can effectively serve to bring generations together.

The village meeting organized by the "old house team", via a facilitator, was equally successful and forward-looking. It strengthened communication and links within the village. Its aim was to reflect together on the concept of the Old House, based on the population's opinions, perceptions and needs. It also gave a chance for those participants to voice their opinions who were unable to volunteer, due to their circumstances, but for whom the programmes mean a lot.

Events, dance-houses

We have been organizing events since the beginning. Our big annual event is the 'Old House Day', but we are also becoming increasingly involved in other events in the village. In addition to family handicraft programs and programs focusing on local knowledge, the team has decided to offer a program of folk and world music at the 'Old House Days', which is constantly monitored for local demand and reaction. This is how the Rimóc Brass Band came to visit us. They were received with great enthusiasm by the elderly people who still remember the local brass band or the bagpiper Botond Bese, who also played the bagpipes to the songs sung by the locals. And the world music line-up appealed to young people from the local area and beyond. And we have seen close, lasting human relationships, friendships and loves develop out of the chance encounters that take place at these events.

Figure 4. Dance-house at the Old Cottage day 2022. Photo: Zoltán Györei

Reflecting on the needs of the local and surrounding area has also given rise to folk dance-houses in Kóspallag. In our camps, the ad-hoc csángó dance-houses and joint singing sessions in the evenings were always a great success, bringing together enthusiastic local musicians, local dancers and lovers of folk music – both experienced and amateur. With the monthly dance houses, we want not only to make similar, good-humored evenings a regular feature, but also to make them more enjoyable for many more people. Our aim is to create an event that gives everyone the opportunity to experience a dance. This series of events is also a tribute to the founders of the dance-house movement, a return to its roots. The organizers' ambition is to make folk dance a real community experience. In addition, the singing lessons that precede the dance houses provide a multi-generational opportunity for fun, with older locals and young people alike enjoying singing folk songs together.

Personal dimensions, impact on the participants

Involuntarily or not, in the course of working with the local community – the research – we have become connected to the project and to each other at many points, and to a greater or lesser extent we 'old cottage people' have become part of the community of Kóspallag, too. During the research camps, we started from the past, but at the same time, by listening to personal life stories and exploring the history of the Old House, we have become shapers of the present of Kóspallag. An essential part of the learning and community development process also takes place alongside the activities in the village community, within the 'Old House team', which is also a close-knit group of friends. All the methods and structures that have been discussed in the community development section are also applied to ourselves. There is also a constant change of dynamic within this core team, as we evolve with the project.

When presenting our work in Kóspallag, it is a constant difficulty to avoid writing in a deeply subjective tone, and to adhere to the standards of objective scientific rigor. For this reason, although we have been working together for 6 years, we have not attempted to summarize our work in many writings. Typically, ours is one of those examples of action research in which the primary product is not the published academic writing. The personal dimension of such a process must be mentioned in the conclusion of this paper, as it is transformative for the "researcher" as well. From this point of view, too, our whole story is a process of learning and cognition: it is also one of learning about ourselves and of growing self-awareness. In the course of our work, our own need for community is also an important motivation and the capability approach is also true of the researchers themselves, who are also constantly discovering and taking possession of new capabilities. Action research is also a transformative process for the researcher. For us, this is what the creation of the Kóspallag Old House as a new local institution represents.

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ECOVILLAGES

Judit Farkas

Ecovillages are local communities created as a conscious effort by a group of people of diverse sizes. Their inhabitants aim to create settlements that fit into their natural environment as efficiently as possible and without harming it. They believe that a means of counteracting undesirable ecological, economic, and social processes is through small-scale, self-reliant, long-term sustainable and community-based settlements and lifestyles that offer the opportunity to protect the natural environment and provide a meaningful human life and well-being.

It can be seen that ecovillages are at the intersection of ecological thinking and community living. According to their inhabitants, one of the best responses to the ecological crisis is community living, because the crisis of the contemporary world is also a crisis of society and community. As theories of human relationship with nature have argued, our treatment of nature is a reflection of the state of society, and individualization and alienation equally determine our relationship with nature and with other human beings.

Figure 1. Nagyszékely, Hungary, 2022. Photo: Judit Ruprech

The history of the international and Hungarian ecovillage movement[1]

The history of green movements and the communities they have created goes back a long way (for a summary, see Farkas 2017a; 2017b). From the 1960s onwards, communities started to multiply, following their religious teachings and spiritual beliefs and later became models for eco-communities, including the international ecovillage movement – as ecovillages themselves. These include Findhorn in Scotland, Auroville in southern India and The Farm in the United States. These communities were established in the countercultural-spiritual upswing of the 1960s and 1970s,[2] with a strong emphasis on harmonious coexistence with nature from the very beginning, and the concept of ecovillage, even the name ecovillage, has 'caught up' with them.[3] The 1970s saw both a renewal and strengthening of environmental movements and new attempts at community building. Among them, the first ecovillage initiatives emerged. The concept itself had already appeared in the 1970s: according to one of the historians of the ecovillage movement (Bates 2003), *Mother Earth News* magazine (Hendersonville, Northern California) began to create organic gardens and energy-saving houses next to its office in 1975. These also served as educational centers. They began to be called ecovillages in 1979. Around the same time, a protest was launched in the German town of Gorleben against the planned nuclear waste repository there. The activists created a small settlement on ecological foundations and called it *ökodorf*. Though the camp was cleared away by the police, the idea got stuck and *Ökodörfer* began to crop up all over the country. It was also at this time, in the 1970s, that the cohousing movement began to flourish in Denmark and played an important role in the creation of ecovillages. Robert and Diane Gilman began to report on these and similar initiatives in the 1980s and 1990s in their journal *In Context* (Seattle). They believed that these initiatives could serve as a model for sustainable living. The magazine was soon discovered by Ross and Hildur Jackson, who run the *Gaia Trust*, and a collaboration between the magazine, the organization and the ecovillage projects began. The 1990s were the heyday of the ecovillage movement, with the first meetings that marked a major step forward in the history of the movement. The first meeting was held in Denmark in 1991, with the aim of formulating the concept of ecovillages and developing a strategy for their dissemination. In 1993, the Danish Ecovillage Network, the first of its kind, was established. It served as a model for the international ecovillage movement that

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[1]   On the basis of Bates 2003; Borsos 2016, and personal communication from Hungarian ecovillage founders.

[2]   The Scottish village of Findhorn was started by the first inhabitants of the emerging community in 1962. Auroville (City of Dawn) was founded in 1968 by French-born Mira Alfassa (or, as her disciples call her, The Mother). Auroville was founded on the teachings of the Hindu philosopher Sri Aurobindo, and was an early adopter of ecological principles. The Farm was founded in 1971 by San Francisco hippies with a focus on non-violence and respect for the earth in the state of Tennessee (Meijeering 2006).

[3]   In Hungary, the story of Krishna Valley is similar: the community created its living space according to the teachings of its religion, which fitted perfectly with the idea of the ecovillage, and so in the late 1990s they joined the ecovillage movement and started to consciously strengthen the ecovillage character of the settlement.

was to be launched later. In 1994, the international network, the Global Ecovillage Network (GEN) was established,[4] of which the Hungarian ecovillage Gyűrűfű was already a founding member. The spread of the ecovillage idea, and thus the creation of many ecovillages, was greatly helped by the rise of the internet: this was a period when computers and the web were becoming increasingly accessible, which in turn made the GEN website widely available and helped the movement and the ecovillage model to spread. The first international ecovillage gathering organized and sponsored by the Gaia Trust and the Findhorn Foundation took place in Findhorn in 1995. Its title – Ecovillages and Sustainable Communities. Models for the 21st Century – precisely articulated and mapped out the path that ecovillages wanted to follow. Today, there are ecovillages all over the world. This gives them their diversity, as they operate under very different climate conditions and social arrangements. They are also differentiated by a host of ideologies, religions and other characteristics[5].

Figure 2. Auroville, India, 2013. Photo: Judit Farkas

The first ecovillages in Hungary were founded after the regime change in the early 1990s. Most of them – through their founders – have links with the underground green and alternative social movements of the late socialist era (for more on this, see Farkas 2017b): the idea of ecovillages was already conceived in these circles, and after the regime change, the conditions (the possibility of establishing formal organizations, funding through tenders, cheap land purchase, etc.) emerged that made planning and constructing the first ecovillages possible. The first initiatives were put in practice in Galgahévíz (Galgafarm), Gyűrűfű, Visnyeszéplak, and Drávafok. In the second half of the 1990s, newer ecovillages were established, first Krisna Valley, the Gömörszőlős initiative, and Agostyán Eco-Village, and then, in the 2000s, Máriahalom BioVillage, the community of Nagyszékely, Magfalva, the Association of Organic Farms of Szeri and the Nyim Eco-Community. They are linked by the informal Hungarian Living Village Network (MÉH), see www.elofaluhalozat.hu.[6] Their population ranges from 10-15 to 150-160 people per community, with a total of about 500 people currently living in such settlements.

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[4] https://ecovillage.org/

[5] They include art colonies, eco high-tech groups, re-primitivizing communities, open education centers, close reclusive collectives, etc.

[6] The reason why the word „eco-village" is not used in the name is due to the degradation of the word 'eco' on the one hand and the existence of several different definitions of eco-village/living village within the movement, on the other. The name 'living village' was chosen after lengthy

The diversity of ecovillages is also characteristic of Hungarian ecovillages: these communities share common points and goals, but the way in which they are implemented and the extent of their success varies greatly (for more details, see Farkas 2017a). The diversity of the Hungarian ecovillage scene means that it is very difficult to form generalizations about them, at least at the micro level. Those who move to Hungarian ecovillages are mainly urban intellectuals, whose motivation for moving out is not economic, but rather the aim of creating a better life in a moral, cultural or ideological sense.

Figure 3. Network of Hungarian ecovillages. Graphic figure: Zsuzsanna Farkas

ABOUT SUNNY HILLS OF ISTRIA ECO-COMMUNITY

Founded in 2014, the community is located in Hrvoji, Slovenia, near the Slovenian-Croatian border. In the village of Hrvoji, which had been almost completely depopulated after the Second World War, the founding members of the community bought a building together for cohousing. Sunny Hills can therefore be seen as both an eco-village and a cohousing (cohousing is a place where people voluntarily form a community and organize their own community life). They create shared spaces as previously agreed upon and share tasks and activities to the extent they choose.)

The community strives for sustainable solutions, such as: partial food self-sufficiency, car and tool sharing, repair and reuse of objects, ecological wastewater treatment, gray water use, composting, chemical-free living, waste reduction. Food self-sufficiency includes vegetables, rearing goats and hens and, to a lesser extent, foraging (mushrooms and wild fruit). Two hectares are farmed on permaculture principles and the land is rented. Vegetable production is the most successful; this aspect of food self-sufficiency

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discussions and negotiations, but several members of the movement continue to use the term 'ecovillage' for themselves.

is practically fully achieved. They do not produce for sale, only for themselves and for the programmes and events they organize. What they cannot produce themselves (e.g. cereals, oils) they also try to acquire from sustainable sources.

The initiative is a member of the Global Ecovillage Network (GEN). The Sunny Hills Association, established by the founding members of the community, organizes workshops, conferences, youth camps, retreats and other such events in a natural environment, and generates part of its income from these activities. In addition, all members of the community have part-time or full-time jobs in Koper, Ljubljana or in a home office (e.g. as a writer, a psychologist, an organizer at GEN or a railway employee). Several members of the community admit that the increased home office opportunities since Covid have made their lives easier.

The community is made up of six core members, several more loosely connected members and a number of even more loosely connected interested people (the latter are, for example, sympathizers and regular volunteers of Slovenian and other nationalities who are also involved in the life of the community to some extent). The community has determined to operate on a grassroots democratic basis. There is no formal leader, but there are people responsible for specific activities. Their activities include, for example, a weekly one-hour meeting where they decide on their own affairs on the basis of proposals and discussions. There are no strict rules for entering (except for professing similar values) or leaving the community. Those who quit receive a pro-rata return of the money they put into the community building.

The community admits that their problems include low membership and the high turnover of members. The presumed causes of these problems, which affect many eco-communities, are: lack of proper leadership, unclear structures and boundaries, unresolved interpersonal conflicts, and ‚consumer behavior' in the choice of eco-community: many people who want to live in an eco-community visit many eco-communities as volunteers before making a decision, and leave the chosen community relatively easily if they experience problems.

Gabriella Szenderák, 2023

Figure 4. Community place and outdoor kitchen, Sunny Hills of Istria, Slovenia. Photos: Gabriella Szenderák, 2023

Crisis and ecovillages

The creation of ecovillages was from the outset a reaction to an anticipated (or, according to others, ongoing) crisis: their inhabitants believe that current ecological, economic, social and moral processes are leading the Earth and human society towards disaster. The concept of the eco-village is a critique of processes that are seen as negative (the global economy, global power elite, consumer culture, ecological crisis, depressed countryside, urbanization, modern slavery, etc.), to which they respond with a radical attempt at reforming their lives. Thus, one of the motivations for organizing ecovillages is the interpretation of current world processes as unsustainable and self-destructive, hence the vision of a complex collapse. It is therefore worth reviewing the broader context of their concept of crisis (for the concept of crisis, see Farkas 2022).

Figure 4. Nagyszékely, Hungary. Photo: Judit Farkas, 2010

Some writings on natural science and environmental history describe the second half of the 20th century, more precisely the period following the Second World War, as an era of technological optimism and, at the same time, ecological ignorance (see Carson 1962; Lovelock 1979.) This is understood to mean that the rapid scientific and technological progress that occurred after the war offered solutions to many problems (disease, food, energy, mechanization, etc.) and established and further increased a boundless faith in progress and science. Moreover, the voices that drew attention to the environmental problems behind this development seemed to be superfluous concerns. It was the book *Silent Spring*, published in 1962 by one such author, Rachel Carson, that was able to make many people understand the problem and, as a result, to trigger the great green movements of

the 1970s and a wider social activism. The aforementioned precursors of the ecovillage movement are part of this process.

The change was also reflected in the changing contemporary perception of risk, which in a nutshell is as follows: modernity was characterized by confidence in science and technology, the above-mentioned technological optimism and the security based on it were the main value of welfare societies. A fundamental turn in this view was caused by problems such as nuclear power, chemicals and ecological hazards becoming increasingly visible. Postmodernity has brought with it new risks and it is science and technology, among other things, that are the cause of these new risks: the opaque risks and consequences of new technologies and the development of science, which has also become non-transparent and uncontrollable (Szijártó 2008: 37-38; Castells 2009: 227-228). These processes, in the view of those involved in the movement, are leading the world, in combination with the global capitalist economic system, to the destruction of the natural environment and resources, unequal distribution and social injustice, and thereby to eventual collapse. (For the culturally determined nature of risk, see Beck 2003; Douglas – Wildavsky 1982; Douglas 1986. We can see, then, that the ecovillage movement was not alone in its thinking about the world even in its early stages, but instead formed part of a broader set of views (which, however, still did not form a significant part of society's worldview on the whole; that was to come with the crises of the 2020s).

The cause and most important characteristic of the crises of the 20th and 21st centuries is therefore the highly complex risk systems that have developed, with an increasingly wide impact, covering all aspects of human and social life. Many contemporary scholars agree that in the 21st century, we need to rethink the scale of crises and increasingly think in global terms, i.e. to understand that we increasingly have to deal with global crises rather than local ones (see O'Brien – Lousley 2017). Joseph Masco adds that: "all of this raises fundamental questions about human perception, memory and the conditions of vision for a planetary-scale problem" (Masco 2017: S70). That is, are we able to understand our world in its larger (global) context and – by shifting scale – prepare for the future?

Ecovillages are working to realize such a radically new vision. The response of ecovillagers to this sense of uncertainty and risk is a new experiment in lifestyle – an alternative to managing risk through the concept of the ecovillage, its lifestyle elements, and its community concept.

Although so far ecovillages have been interpreted here as a preparation for a complex crisis, we must not forget that the people who move here want to live a healthy life in harmony with nature, not only for themselves but also for future generations. An orientation towards the future is therefore an important feature of the ecovillage concept.

Characteristics of eco-farms

As we have seen in the introductory part of this chapter, an ecovillage is an established, intentional community created as a conscious effort of a group (for intentional communities, see Manzella 2010; Meijering 2006; Miller 2010; Shenker 1986; Todd 2013). The members of the group are not primarily related to each

other by kinship; they meet and organize themselves into a community along ideological lines. They want to create a settlement that fits into its natural environment as efficiently as possible and without harming it. To this end, they use nature-friendly techniques and adopt an ecological lifestyle in all aspects of their lives (architecture, waste management, wastewater treatment, farming, housekeeping, transport, low consumption, voluntary simplicity, recycling). They consider all this to be locally feasible, based on the idea of localisation – a local, self-sufficient, autonomous community. This is a reflection on the so-called new opacity of modern societies: the aim of simplifying the system is to increase security. They believe that the means of counteracting undesirable ecological, economic, and social processes are small-scale, autonomous, and community-based settlement and living which are sustainable in the long term, with the potential to protect the natural environment and provide meaningful human life and well-being. It also provides independence from the dominant systems and survival in the event of collapse. As the ecovillagers put it, the goal is to 'cut the umbilical cord', i.e. the infrastructural and social networks that create dependency. A key element of their way of life is the quest for self-sufficiency, which has several motives, all of which are closely linked to the issue of security and risk: In the case of food, producing one's own food is seen as a way of becoming independent from industrial agriculture, the food industry and trade, which, if they were to collapse, would make it impossible to feed people, besides ensuring a 'clean', risk-free supply of food that is considered safe from a health point of view.

In addition to loving, protecting and living in harmony with nature, living in a community is at least as important a motivation for them; the movement has a strong emphasis on community, a strong desire for community, a kind of community-based vision of everyday life (Halfacree 2007: 132).

The concept of the ecovillage is based on scientific findings such as theories of sustainability, systems theory, applied ecology, human ecology, etc.[7] In addition, the ecovillage movement draws on a variety of ideological and spiritual worldviews (environmental philosophy, eco-spirituality, green religion, etc.)[8], all of which have an important role in redefining the relationship between humans and nature, and emphasizing human responsibility.

There is probably no single ecovillage that fully corresponds to these definitions, so most definitions are not a synthesis of existing ecovillages, but rather a set of objectives and directions. They themselves are aware that their current way of life cannot yet be considered self-sufficient or independent, so it is more accurate to say they are experimenting with self-sufficiency, independence and autonomy. They are well aware (especially those who have tried or are trying it) that this idea and aspiration is rather utopian. They therefore emphasize its experimental nature and also the importance of this experiment.[9]

Hungarian ecovillages have been created in a variety of ways and places. The ecovillage Gyűrűfű was built on the site of an extinct settlement and the Visnyeszéplak

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[7]   In ecovillages, one can also find several residents engaged in scientific work, who themselves contribute to the scientific discourse on agricultural science, ecology, sustainability, etc. through lectures and writings.

[8]   See the chapters on Environmental Philosophy, Religion and Ecology.

[9]   That is what the title of a study by an ecovillage founder, Imre Kilián, alludes to: *Sustainability locked in a test-tube* (Kilián 2007).

ecovillage was built on the site of a dying settlement. Krishna Valley, Magfalva and the ecovillage Galgahévíz were created as greenfield investments. The Natural Lifestyle Foundation's site in Tata-Agostyán, the Ormánság Foundation in Drávafok, the Gömörszőlős training center and the Biovillage in Máriahalom are not so much settlements as training centers. The Nagyszékely Community and the Nyim Eco-Community were not established as a separate settlement, but as part of an existing village. The Association of Organic Farms of Szer represents the Hungarian type of solitary ecofarm.

Figure 5. Krishna Valley, Hungary, 2013. Photo: Judit Farkas

Administratively, one cannot speak of a separate ecovillage in Hungary. Even those communities that have been created independently, as greenfield projects (Krishna Valley, Galgahévíz Ecovillage, Magfalva) or on the site of an extinct village (Gyűrűfű), belong administratively to a nearby municipality.

It is also true of the Hungarian ecovillages that some details of the ideal ecovillage concept have been realized to varying degrees. Here, too, the vision of self-sufficiency is one of the main priorities in community building, but it is also well known that local self-sufficiency is extremely difficult and time-consuming (for the issue of self-sufficiency and community, see Christian 2004). Among the Hungarian communities, Krishna Valley and Visnyeszéplak are the closest to full food and energy self-sufficiency, while the ecovillages in Gyűrűfű and Galgahévíz are also prominent in energy self-sufficiency. An important element of self-sufficiency is local livelihoods, which is the biggest challenge for Hungarian ecovillages and eco-communities.[10] At present, relatively few have found a way of making a living locally, and they mostly make a living from their agricultural products, tourism and educational activities. Some are making their livelihoods through grant funding. Those who do not commute every day, but do not rely on

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[10]   Similarly to the inhabitants in tiny, dead-end settlements.

local resources either, such as IT specialists, but also psychologists, trainers and translators working online, are borderline cases. Some commuters work in nearby towns and cities on a daily commute, others in cities further afield on a weekly commute. Many rely on social benefits, supplemented by casual work. Home-produced food is an important staple for most households.

At present, only Krishna Valley has its own school (where there are currently 50 children out of a population of around 130), but here the full spectrum (kindergarten, primary school, secondary school, college) is available. In terms of the number of children, it is also worth mentioning Visnyeszéplak, where half of the population (around 100) are children. For a long time, the municipality had its own school, until it was closed down a few years ago. The children of the other communities (3-10 children per community) either attend educational institutions in nearby municipalities and go to secondary school in more distant towns, or study privately.

Although ecovillagers (and indeed all those who move to the countryside on ideological principles) are most often seen by mainstream society as outcasts and the move as an escape, ecovillagers protest against these definitions and see themselves as deeply embedded participants in the world's socio-ecological system, seeking viable alternatives to everyday life that lead to the wider social good. Most of them want to lead by example: they see themselves as models for a more liveable, humane and, above all, sustainable life in the long term. They seek to pass on their knowledge in a variety of ways: through courses, training, volunteer programmes, practical methods, and academic work. At the same time, most of them have no illusions about the ecovillage concept's chances of becoming widely adopted. As one long-standing participant in the Hungarian ecovillage movement put it:

> *"I think we have a lot of results, but they are only useful for those who move from one dimension to another. In the consumer dimension that people live in, nothing that we do is useful. We have a marketable product, which is knowledge, for which there is no demand. We are simply not competitive with our way of thinking in the marketplace of culture. … The fact that there are some deviant people, including myself among the deviants, who are trying to do something, it's not going to change the course of the world"* (L.T. 1998).[11]

A similar finding was made by Karen Bubna-Litic in a 2008 paper on an Australian ecovillage: she argued that ecovillages remain peripheral to mainstream debates on sustainability, generally seen as good and proper practices, but difficult to implement (Bubna-Litic 2008: 93). The potential and limitations of ecovillages have been discussed by Takis Fotopoulos and Ted Trainer (Fotopoulos 2000, Trainer 2002). In 2011, Karen Litfin defined the place of ecovillages as follows: "The ecovillage is not the only answer to the sustainability crisis, it is just one of many – and we need all the answers" (Litfin 2011: 139).

What, then, could be the significance of ecovillages? The fact that they have been practicing and living for decades what others may just be beginning to do. As one of my interlocutors, who knows these communities well, put it: "it is worth looking at the problems that these communities, their inhabitants, have been struggling with over the years" (M.K. 2021). These include: the quality, or rather the lack

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[11]   The abbreviation indicates the initials of the speaker and the date.

Figure 6. Eco-community of Nyim, Hungary, 2022. Photo: Judit Ruprech

of schools in or near the community; the early separation of children from the family for lack of schools; what happens when someone is physically weakened, whether through illness, accident or simply old age; what happens when parents who live far away need care; how to deal with situations when an individual becomes disillusioned with the community or lifestyle; what happens in the event of divorce; or if they cannot find a suitable mate in the community? How can one find a balance in their lives between ideology and principles on the one hand and feasibility and reality on the other, without breaking down physically and spiritually?[12] "We didn't start this life to be broken, to be physically and spiritually crippled and end up hating it all. We want to live happily" (K.E. 2010). Ecovillagers and ecocommunity members have many experiences of all this. In many cases they have found balance in their lives and can help newcomers avoid making the same mistakes.

Afterword

When I started researching and talking about ecovillages in Hungary around 2007[13], I had to explain in detail each time what an ecovillage was, what environmental, economic and social problems their existence reflected, and what an ecological lifestyle meant. Companion planting, composting toilets, mulching or the shopping community were mostly unfamiliar concepts. This worldview and way of life aroused interest and curiosity in some people, but also puzzlement in others. Many, as the American political scientist Karen Litfin put it, saw the

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[12]   Fluctuation is high in the communities, for the reasons listed above, among other things.

[13]   I have been carrying out cultural anthropological research in – primarily Hungarian – ecovillages since 2007. The methods I use are customary in anthropology: participating in observation, making interviews, collecting and elaborating written sources, doing online fieldwork.

**Figure 7. Nagyszékely, Hungary, 2009. Source http://elofaluhalozat.hu/
elofalvak/24-a-nagyszekelyi-elofalu-kezdemenyezes**

ecovillagers as utopian fugitives (Litfin 2011: 136) and their lives as a faddish extremity. The apocalyptic vision of the future often found in environmental discourse, including the ecovillagers' narrative, did not help their acceptance and the prophetic discourse of scourging the world discouraged many people. The knowledge and experience they accumulated was only relevant to a narrow group of people.

This was the case for many years, until the late 2010s and early 2020s, when the situation changed almost overnight: sustainable, local, and ecological terms and methods entered the public mind and concerns that were previously voiced only by a narrow group of people – such as ecovillagers – are now heard everywhere. Discourses on the ecological crisis, which are becoming more and more evident, have entered everyday life and, together with first the pandemic and then the Ukrainian-Russian war, have created a situation that is causing the image of security and the future to be reassessed in mainstream society. As environmental and – in close connection – economic and social problems have become increasingly evident, and the existence of these problems has been accepted, the methods of resolution proposed, practiced and lived by the green movements and ecological life reform movements, including ecovillages, have been eulogized. This was seen as a very important confirmation: "We have been preparing for 30 years for what we have now" (Farkas 2022); their predictions about environmental problems have come true, and the way of life they have been practicing has in many respects fulfilled their expectations (no food supply problems, no particular quarantine, no heating problems, etc.).[14]

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[14] But they are well aware that they cannot escape the „end of the world", since they are far from being perfectly self-sufficient. Moreover, the drought of recent years has made things particularly difficult for an off-the-grid lifestyle.

Although we can see that there is now a strong interest in these forms of living, the extent to which this interest is translated into action will only become clear later. Some Western ecovillages are already reporting a sudden surge of newcomers, with a number of difficulties: infrastructure capacity, integration of newcomers into the community, the emergence of new ideologies (e.g. alt-right) alien to the ideal of the pacifist ecovillage, and so on.

So, at the moment, researchers can register changes, reactions to change, and needs, but it will take a few years before we can evaluate the consequences of these changes.

Recommended readings

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  The editors collected writings by anthropologists on the possible collaboration among ecological and social movements, including ecovillages. The authors discuss the history and future of ecovillages, the relationship between capitalism and ecovillages, questions of political ecology, and ecovillages as campuses of sustainability education.

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"NOT EVERYONE CAN MOVE TO THE COUNTRYSIDE" URBAN COMMUNITY RESPONSES

Judit Farkas

A considerable part – 56 % – of the human population of the Earth live in cities today[1]; cities are the world's economic, social and power centers, exerting decisive influence on the environment. Consequently, they cannot be ignored by Environmental Humanities (hereafter EH).

The city

Cities are beset with several resource-related problems (food, water, energy, transformation, garbage, etc.). With their enormous demand, they play a serious role not only in their immediate environment but also in the whole world's ecological concerns (for one thing, they are responsible for 75 % of global carbon emissions and for remote monocultures, not to mention innumerable examples of environmental injustice. In their Introduction to Environmental Humanities, Robert S. Emett and David E. Nye (2017) sum up the questions related to cities in the chapter *Energy, Consumption, and Sustainable Cities* (Emett – Nye 2017) as follows:

The fundamental issue in cities is the question of energy use. A radical change in thinking about energy occurred in the 1970s: in the Western world, the amount of energy consumed was the standard measure of progress, of the advancement of civilization from the 19th century and it was evaluated mainly in terms of its role in economic and social development (on this, see also the chapter on ecological anthropology), whereas today high energy consumption is not seen as progress but conversely, as a problem. This not only means the problem of decreasing and ever more expensive energy, but also the inevitable fact that energy consumption is inseparable from environmental problems. In the 1960s, pollution caused by the extraction and use of non-renewable resources and the damage done by the infrastructure became ever more apparent. In the 1970s, the energy crisis (peak oil) and later the worries about nuclear energy (nuclear waste, disasters at Chernobyl and Fukuyama) generated ever more serious dilemmas around the issue of energy. Re-traditionalist movements opt for the radical cutback of energy consumption and reject not only non-renewable energy sources but also modern green technology as well. In cities, however, this position does not appear workable; the question to be tackled should rather be how to make energy consumption "greener", more

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efficient and sustainable.[2] Adequate modern technology is available to a large extent; more and more effective equipment and appliances are developed. What remains to be done is to replace the earlier, unsustainable energy sources and technologies with them. In the view of Emett and Nye, the reduction of energy consumption is primarily no longer a technical, but a cultural and political issue, and it is one of the tasks of EH to explore and understand the potential cultural motives behind this inevitable process. It is self-evident that EH rejects the thesis of the greater the energy consumption, the more advanced the culture, that it regards high energy consumption as a problem, and that it declares a smaller carbon footprint as its goal.

The authors take a close look at the food issue as well. They point out that before the Industrial Revolution, cities were smaller and city-dwellers were provided with the necessary fresh food by the surrounding villages. Townhouses also generally had gardens and backyards for small livestock (poultry). Fresh food was available nearby. Industrialization changed all this radically: the fridge, deep-freezer, canned food, and long-distance transport possibilities (railways and steam ships) made it possible to transport food from faraway places and store it longer.[3] All this entailed larger energy consumption. Monocultures evolved and specializations took off. This resulted in economically more efficient production. Today we know how all this affected the landscape, the species, and the natural environment, as well as human health. EH also joins the critique of contemporary consumption and offers useful approaches and interpretations. Moderate consumption, the use of locally produced food, and short supply chains are among the possible options (on this topic, see the chapter, Food Supply as a Global Challenge). Emett and Nye also emphasize that eating locally produced food is not only about the economy or energy, but also about the restoration of the sense of responsibility for one's own place. A manifestation of this will be that inhabitants will look upon their city as an ecosystem and will frequent restaurants that rely on nearby food producers. (Emett – Nye 2017: 64).

Treating a city as an ecosystem is of special importance – as Emett and Nye (among many others) are convinced – for their transformation into liveable and sustainable settlements (Emett – Nye 2017).

Cities offer several possibilities, even in their current state: ecological studies and experiments are carried out there and they are the starting points of environmental activism. Some cities have entered the course of step-by-step or major, systematic changes (Ljubljana, Vienna, Frankfurt, Energy Cities), other cities are venues for grassroots initiatives (inner city ecovillages, community gardens, urban permaculture, climate-friendly settlements, Transition Towns, etc.). EH

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[2] The tenet, "more energy consumption = more advanced society" has been disproven with examples such as East and West Germany: East Germany consumed more energy than West Germany, yet still the West German standard of living was higher; what is more, far more contamination was found in the Eastern part (Emett – Nye 2017: 48). Owing to forced industrialization, this was typical of the entire former socialist region (for Hungarian examples, see, among others, Borvendég – Palasik 2015; Pál 2017; Szirmai 1999).

[3] It must be added that all this had a significant social impact. Thanks to the fridge and kitchen-ready food, women could take on jobs, which entailed a growing demand for creches and kindergartens, not to speak of the changes in social roles and dietary habits. (On this, see Schadt 2003; Zimmermann 2012)

posits that the success of all these efforts depends on the profound comprehension that humans are not separated from nature; rather, they are biological beings and their cultural institutions are tightly connected to the natural cycle and the landscape in which they live.

The complex urban development efforts that look on cities as ecosystems are becoming increasingly dominant in today's discourses on sustainability. The theme has a large literature and numberless methods and examples (see, e.g., Tang 2013) devoted to it; these will be developed in the – planned – new volume of this EH Reader. In this paper, the focus is on grassroots urban communities, specifically two of the initiatives, *community gardens* and the movement of the *Transition Towns*.

Transition Towns Movement (TM, TTM, TTN)[4]

The Transition Towns Movement was initiated in England by Rob Hopkins. The first Transition Town was founded in England – under the leadership of Hopkins – in the town of Totnes. The movement's site showed that in January 2023, 1121 groups belonged to the movements (https://transitiongroups.org). The members are fairly well-off, educated people who accept the scholarly consensus on anthropogenic climate change and the energy crisis (Boudinot – LeVasseur 2016: 386).

The movement is based on the postulate that the dual threat of the depletion of non-renewable energy sources and anthropogenic climate change urge people to rethink and redesign their ways of living and bring about more resilient and sustainable communities. Their objective is to contribute to a world of low carbon-emitting resilient communities based on social justice, active participation and the culture of care. The instruments for achieving this are the resilient and adaptive local communities which can cope with the above-mentioned challenges. The movement's aim is to assist such communities' founding and development. Hopkins based his idea on the theory of resilience and adopted Brian Walker's and his colleagues' definition: "Resilience is the capacity of a system to absorb shocks and avoid a shift to an alternate state (regime) so that it still preserves the same function, structure, identity and feedback" (cited in Scott Cato – Hillier 2011: 6). In addition to resilience, the movement also lays great stress on developing adaptive skills.[5]

Transition may affect all aspects of local life: searching for, or creating, local food and energy resources; strengthening the local economy, local producers and small enterprises; trading or exchanging second-hand goods; economizing with energy resources; environment-friendly transportation options; introducing local currencies, and so on. The Transitioners (as they refer to themselves) try to find alternative modes for running the economy and elaborating the vision of a non-

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[4] The names used in activist and academic literature include Transition Movement, TM, Transition Towns Movement, TTM and Transition Towns Network, TTN. In short, they are often called Transition Towns.

[5] Hopkins was an instructor of permaculture, which knowledge he used to elaborate the concept of Transition Towns: he reinterpreted the 12 basic principles of permaculture (see the chapter on Food Supply as a Global Challenge) for the scale of the community.

capitalist economy. In short, they reflect on everything that was identified above as the main problems of cities (energy, transportation, food supply, etc.).[6]

The movement believes that local innovative solutions can trigger systemic change. They have realized that today's industrial society has too many shackles hindering its transformation into a sustainable future, so individuals must take steps and develop the necessary skills at the level of the community. It is no accident that in both their narrative and activity, relocation holds a significant role in every aspect of life.

In their 2014 study in Totnes, Garrett Boudinot and Todd LeVasseur inquired into the value order and ethics of the movement's members , and the changes they effected in their ways of life. They used qualitative methods to examine the members' affective, normative and ethical motivations. The results have revealed that the participants are driven by ecocentric norms and ethics, on the one hand. On the other, a deep-rooted anthropocentrism could also be exposed, insomuch as the need for change was motivated by the self-interest of subsistence (Anderson 2012: 342; cited by Boudinot – LeVasseur 2016: 385). The economic functioning of the community is determined by energy-effective activity and short supply chains along the basic principle of the fair share of permaculture. As for their political views, the individuals do not adopt official political ideologies. They display a wide spectrum of diverse political views from idealistic socialism to "simply just green", but a sort of common – critical – stance toward the current political establishment is evident. They also have a wide variety of spiritual faiths and practices, from Tibetan Buddhism through neo-paganism to Quakerism.[7] The co-researchers have concluded that these identity elements, feelings, and views bolster and reinforce the values of the movement in the individuals and serve as important inspiration for action (Boudnot – LeVasseur 2016).

The message of the Transition Towns movement is not new. Many argue that it is just a new name and that it does not differ one bit from similar, previously existing endeavors such as ecovillages, co-housing, bioregionalism, etc. Others hold that there are aspects which differentiate it, namely the style and "mode of presentation": the openly positive vision of the Transitionists, which does not resort to a dark vision of the future or the prophetic tone often adopted by green and ecological life reformist movements (on this, see the chapter on ecovillages). To use Hopkins' simile: it is far more inspiring to invite one's friends to an exciting vacation than to a weekend full of vicissitudes (Hopkins 2008). The message of the movement is about a positive post-capitalist future and a commitment to a political process full of joy (cited in Scott Cato – Hillier 2011: 6);[8] it is based on

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[6]   Molly Scott Cato and Jean Hillier emphasize that the manual of the movement, *Transition Handbook*, published by Hopkins in 2008, carries the subtitle *From oil dependency to local resilience*, which accurately defines the essence and objective of Transition Towns: to reduce fossil energy use and to strengthen local communities (Scott Cato – Hillier 2011: 6).

[7]   They found the countercultural attitude clearly present in the Totnes group, or Hippie town, as some called it. The designation Hippie was also heard in connection with Transition Wekerle in Hungary, plainly with negative connotations (see Longhurst – Pataki 2015).

[8]   Molly Scott Cato and Jean Hillier illustrated with an example the positive and joyful attitude of the Transitionists: In the Lancaster group of the Transitionists, only two basic rules were laid down: one stipulates that they always have to be kind to each other; the other is that cakes must be provided for every meeting (Scott Cato – Hillier 2011: 6).

the optimism so often emphasized by Hopkins and a can-do attitude. Another special trait of the Transition Towns movement is its focus on building coalitions with other similar grassroots movements and groups and also tries to cooperate with local governments and political actors (Aiken 2012: 92; cited in Boudinot and LeVasseur 2016: 382).

The Transition Towns Movement fits into the theories of *terrapolitan citizenry* and *biocultural evolution* also appearing in contemporary ecological discourse.

The vision of the *terrapolitan citizenry* has its roots, among other sources, in religious studies scholar Bron Taylor's Gaian Earth Religion category and in his assumption that a terrapolitan earth religion could evolve (Taylor 2010: 195 – 199) and spread worldwide. This theory displays close contacts with Manuel Castells' identity concept of the global green self. In Castells' view, the environmentalist movements engender the birth of a new socio-biological identity – the culture of the human species of biological identity as the components of nature – which also acknowledges the cultural authenticity fed by diverse traditions. "This is the only global identity that is formulated on behalf of every human being irrespective of their concrete social, historical or gender identities, or of their religious faith" (Castells 2006: 232).

The notion of *biocultural evolution* is linked by F. Garrett Boudinot and Todd LeVasseur to the Transition Towns Movements. They claim that the movement could be an excellent example of the tendency that "in the course of organizing their communities and forming the surrounding natural environment, people increasingly rely on the theory of biocultural evolution, and as a result, the functioning of the communities become more resilient, adaptive and ecologically just" (Boudinot – LeVasseur 2004: 380). The notion of biocultural evolution comes from biological anthropology and means the mutual, interactive evolution of human biology and culture. The core of the theory is that our biological existence influences our culture, while the development of culture influences the direction of biological evolution (Jurmain et al. 2012: 7). A researcher of biocultural evolution, the paleoanthropologist Aaron Jonas Stutz, contends that this theory helps us understand and re-interpret our place in the world: "it captures the tension and the intimate proximity between our

Figure 1. Source: Transition Wekerle facebook page. https://www.facebook.com/atalakulo. wekerle

biological evolutionary origins and inheritance, on the one hand, and our symbolically structured, socially entangled and technologically shaped lives, on the other" (Stutz 2015). On biocultural evolution, see also Rozzi 2015; Winkelman – Baker 2010.

A Hungarian example: Transition Wekerle

There is a Hungarian community that also joined the Transition Towns Movements, called Transition Wekerle (Hung. Átalakuló Wekerle). The group is active in the Wekerle Estate in Budapest (19th district) and comprises private persons and civil organizations engaged in diverse activities.

In Transition Wekerle, the locality has a specific role, rooted in the history of the estate (summarized by Longhurst – Pataki 2015: 48). It probably applies to every Transition Town that no concrete initiative can be understood without a knowledge of the specificities of the local context. In the case of Transition Wekerle, the historical background holds special significance: the Wekerle Estate came about between 1909 and 1926 as part of a suburban movement (See Ebenezer Howard 1902; Skiera 2004; Nagy 1994; Nagy – Szelényi 2008; Verő-Valló 2022,) registered as one of the earliest, most unified and original suburban neighborhoods in Europe. It was named after Sándor Wekerle,the prime minister at the time, who wished to solve the housing problem of local workers and office clerks in the settlement.

Adopting the basic principles of the garden city movement of the time, Wekerle Estate was also designed in a way that would promote community life.

> "*One of the main conclusions from the historical overview is the significance of an existing, strongly interlaced community, a village in the middle of Budapest where everybody knows everybody, and newcomers can hardly avoid becoming members of the community*" (Langhurst – Pataki 2015: 48).

The estate housed 20,000 residents, 50,000 trees, and many fruit bushes. Four fruit trees per flat (a total of 16 ,000) were planted in the back gardens, hence food production was a natural part of life in the community. Another significant aspect of the Wekerle was a vivid social life: the Wekerle Club was founded in 1910. One of Hungary's oldest civil organizations, this Club is still active today, and is in charge of preserving the cultural heritage of the estate.

Over the decades, Wekerle Estate succeeded in preserving its garden-city character and can set an example for modern urban developments aiming at sustainability (Miller 2002; cited by Longhurst – Pataki 2015: 49). It is therefore not accidental that the idea of Transition Wekerle found fertile soil there. Of course, the whole thing would not have worked without local residents who knew and practiced grassroots organizations as active citizens with a background of environmental activism. They organized earlier green projects as well – their slogan was "Climate-friendly Wekerle, Human-friendly Wekerle". Through these, they got in touch with the Transition Towns Movement.

Transition Wekerle grew out of the *Green Sprout* group within the Wekerle Club. Their paths later diverged, – as revealed by György Pataki's examination – in culture, dynamism, age, and worldview: the gap between the value systems of the

more conservative, traditional, formal Wekerle Club and the Green Sprout Club of more flexible, middle-class radical (Hippie) members adopting post-materialist values became increasingly obvious (Longhurst – Pataki 2015: 53). At present both groups, Wekerle Club and Transition Wekerle, play an active part in the civil life of the estate.

The preparatory phase of Transition Wekerle began in 2007, the organization became official (but not registered) in 2011, and they announced the project and the essence of "Transition identity" at a local public forum in 2012.

Their self-presentation on the webpage of transitional communities says:[9]

> *"The Organizing Circle of Transition Wekerle is a civil group registered by the local council but not registered officially. Its main aim is to cherish the Transition Wekerle idea and promote the transformation. Transition Wekerle (TW) is the first official 'Transition' community in Hungary, a member of the international Transition (Towns) Network since 2011. TW is the local alliance of private persons, civil organizations and institutions. The alliance tries to bring about possibilities for the collective of residents that strengthen the community and enrich their lives but do not damage the environment."*

The topics they address themselves to – quoted from the homepage – are collective food production, community-supported agriculture, local farmers' markets, community gardens, energy-effectiveness, social enterprise, and communal recycling. They worked out a local economic development strategy, the Strategy of Energy-efficient Wekerle, they make compost, actively support and use the farmers' market, and joined a bio veggie box system. The team Kispest Civilians for Canteen Meals tried to solve the problem of public catering (2011–2013) and they are now planning a community garden.

Two formal organizations have grown out of the Transition Wekerle group. One is the Kiserdő [Little Forest] Society which emerged for the protection of the forest in 2021 from the local group and campaign, *Another way – Union for the Little Forest* (2017). They are involved in a lawsuit with the state on this issue. Their activity also goes beyond the Little Forest and they try to speak up for all green spaces in Budapest. The other formal group is called *Transition Wekerle Communal Cooperative* and comprises old TW members and newcomers alike. Its main activities include running the local "green canteen", *KÖZÖS* [joint], and a café and kitchen at the Wekerle Kispiac [farmers' market].[10]

The goals of the TT movement include collaboration with local self-governments. TW has also taken steps in this area and worked on two formal cooperative projects with the local council: one was a year-long project called *Municipalities and Transition*, to map and elaborate the possibilities and patterns of collaboration between local governments and civil groups. The other project was the local food strategy in which they surveyed the possibilities and worked out an action plan under the mentorship and financial support of Védegylet.[11]

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[9]   Átalakuló Wekerle | Átalakulás... (atalakulo.hu)
[10] Owing to radically increased overhead costs, KÖZÖS had to be closed down – just as this chapter was being written (3 February 2023).
[11] http://xn--vdegylet-b1a.hu/kiskozossegek/

One of the founders and motors of Transition Wekerle, Tracey Wheatley asserts that TW is not so much a movement as a cultural milieu determined by the common locality, a community with a milieu of learning and a common identity, value order, and collective activities (T.W. 2023), which then grows in diverse directions. It is part of this process that the civil sphere can be superseded and activity for the local community pursued in another way. This is exemplified by one of the founders and pillars of TW, who now also works for Wekerle Estate as a representative in the municipal government in addition to his civil activities.

Figure 3. Green Spot community garden Pécs, HUngary. Photo: Judit Ruprech, 2021

Community gardens

The homepage http://kozossegikertek.hu defines a community garden as follows:

> *"Briefly and simply put, it is any piece of land collectively cared for by a community. Urban gardening unites people of diverse ages and backgrounds, who then practice the attitude they learn during collective gardening in other fields of life as well: they are environment-conscious residents of the city who respect one another's work. Apart from their community creating and educational functions, the gardens also supply fresh vegetables, fruits, and herbs for the urban residents who look after them."*

Some of the antecedents include the community gardens created with municipal support on vacant urban lots during the recession in the 1890s, where jobless, mainly immigrant industrial laborers could grow food for themselves. The similar initiatives in the first half of the 20th century were motivated by further economic recessions and the world wars; see, for instance, the so-called Victory gardens during WW2. Also among the forerunners were the gardens and garden zones which emerged in the large cities brought to life by the Industrial Revolution. In

addition to self-supply, they also contributed to a pleasant-looking residential area. The garden cities movement initiated by Ebenezer Howard was one of its manifestations (see Howard: *Garden Cities of To-morrow*, 1902). The above-mentioned Wekerle Estate is another fine example. It is specifically known about Wekerle Estate, that besides creating a harmonious environment, the planners were also motivated by the intention to ease the life and adaptation of urban workers, who were often newcomers from the villages to the city (Nagy – Szelényi 2008).[12]

The history of the contemporary community gardens discussed below began in the early 1970s, when a group called *Green Guerillas* created a community garden in New York with the name *Bowery Houston Farm and Garden*. It already exemplified a main characteristic of community gardens, notably that in addition to farming, great stress was laid on creating an active community with the ambition of improving not only the natural but also the social quality of the city. Their example influenced several others in the United States and in 1978, the *American Community Gardening Association* was founded, which has inspired the establishment of countless community gardens the world over (on the history of community gardens, see Fáczányi – Balogh 2015; Lawson 2005; Schmelzkopf 1995).

The appearance of the movement in Hungary is linked, on the one hand, to the Hungarian member of the international movement *Reclaim the Fields!*, the group *Földkelte* [EarthRise], began to form a community garden in a privately owned garden in 2010. The teething problems of the venture put an end to the initiative within a year. The next step in Hungarian urban agricultural movements is associated with Gábor Rosta and his partners, who launched the First Kis-Pest Garden in 2012 on a municipal plot and with municipal support. Then, in the same year, the Lecsós [ratatouille] Garden and Leonardo Garden followed.[13] Rosta wrote a book about his experiences with the title *Community Gardens. Neighborhood communities, urban agriculture* (2013), which has become an important reference book for practicing gardeners (as well as writers of studies and dissertations).

Gergő Hajba's summary reveals that community gardens can vary widely, depending on where they are established (Hajba 2017): you can find them downtown, in suburbs, elite neighborhoods and housing estates alike; there are prison gardens, school gardens, community gardens on former churchyards; in the backyards of neighboring one-family houses or in the green areas around apartment blocks, or even roof gardens (Japan, USA). The land can be owned by the municipality, a firm or a natural person. In Hungary, there are also community gardens expressly supported by the municipal government (First Kis-Pest Garden). Community gardens on the property of an institution are also present in Hungary, for example, the DE Community Garden of Debrecen University.

The age distribution of garden members represents a broad spectrum, from teenagers to the elderly (aged 80). Creating and running a community garden requires more than tilling the land and working with the plants, as there are several different chores to perform. This calls for and encourages diversity within the membership: some have a role in negotiations (with proprietors and public utilities firms), others write tenders, a member with good communication skills talks to

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[12] On the further history of urban agriculture, see Fáczányi – Balogh 2015.
[13] Source: https://www.varosikertek.hu/konyvek/kozossegi-kertek/

the media, others arbitrate in possible conflicts, and people well-versed in botany and gardening are, obviously, indispensable with their knowledge.

One often hears that community gardens are "90% community and 10% garden". In addition to growing plants and community reinforcement, the therapeutic and rehabilitating roles of the gardens are also very important. They may offset or reverse the alienation of urban society and its separation from the natural environment,[14] while in some metropolises, community gardens are aimed at helping marginal groups to catch up (such an attempt in Hungary is the social garden program of the Budapest Bike Maffia),[15] or integrating immigrants (see the framed passage on intercultural gardens). They also build upon their locality, as does the TT movement: the gardens play a great role in strengthening neighborhood relations and preserving local identity.

INTERCULTURAL GARDENS

A special form of community gardens is the intercultural garden.

It was initiated in Göttingen, Germany, in 1995. The Bosnian refugees of the immigration center wanted to grow vegetables the way they were accustomed to. They joined forces with an Ethiopian agricultural engineer – also an immigrant – and looked for a plot for their purpose. The plan was such a success that soon the International Göttingen Gardens movement evolved, followed by the Intercultural Gardens Network. The foundation maintained nearly 400 gardens in the country in 2015, about half of them intercultural. The movement began spreading across Europe.

The aim of intercultural gardens is not only to produce food but also to create contacts between immigrants of diverse cultural backgrounds and native inhabitants. Jointly building and running gardens, the exchange of experiences, and diverse communal occasions appear to be conducive to attaining this goal.

It helps refugees to integrate through language learning and collective work. At the same time, it is an opportunity for fostering cultural traditions. It also offers a chance for the handicapped to participate actively, to create, to fulfill themselves to the benefit of the collective, and to gradually commit themselves to sustainable urban development (Müller 2007).

On intercultural gardens in Hungarian, see: Fáczányi – Balogh 2015.

The knowledge gained in a community garden is not negligible, as it can be utilized in one's own garden or in a potential crisis. An excellent example is the growth of balcony gardening during the Covid lockdown or farming the small gardens which – as several accounts prove – maintained people's mental health in addition to producing food for the kitchen.

Several community gardens lay great stress on promoting and giving guidance to environmentally friendly thought and healthy living (for a summary, see Hajba 2017). Providing the venue for a variety of programs, a community garden can

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[14] „Just as the goal of the garden city movement was 'healing' the city, this aim also enjoys high priority in community gardens, but in addition to healing the city, another aim – healing society – is also strengthening." (Fáczányi – Balogh 2015: 18)

[15] https://bikemaffia.com/projektek/bbm-kertek/?fbclid=IwAR2fijdU_3nASfAz99zzuK9L1bo9Xf HbknA6RVsPcATwIAn9NntHvZSrRD8

become the "green cultural" center of a town or neighborhood, as proved by the case of the Green Spot Community Garden in Pécs.

GREEN SPOT COMMUNITY GARDEN, PÉCS

The Green Spot community garden was founded in September 2018 by an informal group of young people associated with the University of Pécs. The inhabitants' vision of a gardening community and the foundation of the garden had earlier roots, but that year several favorable factors aligned, e.g. the agreement between the founders and municipal property utilization management and OFFI about the location and a positive response to the competitive tender for the necessary financial resources.

The community garden is at no. 7, Király street in Pécs, on a property of undivided joint ownership, precisely on its northern plot bordered by the walls of public institutions (a secondary school and a library) and a time-honored inner city hotel. The oblong vacant plot of 370 m2 is enclosed by buildings and has a single access from Király street, which reinforces its isolated oasis-like character.

The majority owner of the plot is the municipal property managing firm PVH. In return for performing the necessary renovating and maintenance jobs, the council lets the inner plot of the property to the garden community rent free, together with a building section of two rooms used for communal purposes. One can find individual patches of land for hardy plants on the terraced part of the garden and, in the area along the entrance, a collectively cultivated spice and herb spiral, flower beds and raised garden beds. The majority of the produce are vegetables and herbs, including considerable amounts of tomatoes and peppers, spinach, sorrel, Swiss chard, strawberries, lavender, mint, and sage. The group cultivates several special heat-tolerant plants no longer deemed exotic.

There is composting, utilization of coffee-grounds, and collection of rainwater, although the summer water needs of the garden are met by the mains through an irrigation system.

The community is 39 strong. Most of them are interested urban residents who have no gardens to produce their own food and are open to becoming acquainted and working together via gardening. As for social composition, ideological conviction, and social position, the membership is diverse; their age ranges from the very young to pensioners. The garden community is a loose leisure-time network of people for whom responsible and chemical-free food production, the strengthening and manifestation of communal existence, and in general the protection of the pattern of trust inside the community and outside it are important values. There are frequent collective events (a composting workshop and general assemblies every half year, collective wall decoration, creative workshops, garden birthdays, ad hoc gatherings, etc.), and also organized events for outsiders: concerts, electronic music nights, slam poetry club, community garden nights, foundation events, etc.

1 February 2023. Gergő Hajba, one of the founders of the Green Spot Community Garden

**Figure 3. Back wall of the Green Spot Community Garden, Pécs, Hungary.
Photo: Gergő Hajba, 2021**

Recommended readings

Emett, Robert S. – Nye, David E. 2017. Energy, Consumption, and Sustainable Cities. In Emett, Robert S. – Nye, David E.: *The Environmental Humanities. A critical Introduction.* Cambridge: MIT Press, 47–70.
An excellent summary of the major environmental problems affecting, and caused by, contemporary cities. In addition to the problems, several good practices are also described. An outstanding starting point for acquiring further information for those interested in the issues of cities and the environment .

Tang, Zhenghong (ed.) 2013. *Eco-City and Green Community: The Evolution of Planning Theory and Practice.* Hauppauge, NY, Nova Science.
The book is an introduction into the bases and history of the ecocity concept and the main issues of urban sustainability. Through international examples and good practices, it demonstrates the main aspects of forming ecocities. A chapter is devoted to each of the two highlighted examples, Hong Kong and Puri in India, through which the implementation of the concept and experiences are presented in detail.

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PROPHETS AND LOCAL ECO-COMMUNITIES. THE MICRO-COMMUNITY PROGRAM AND THE NEW KOMA NETWORK[1]

András Takács-Sánta

In colloquial language, a prophet is a future-teller, one who sees into the future. Nevertheless, the original meaning of the word was very different. In Old Testament times, those people were termed prophets who could find ways out of critical times; who tried to guide a society straying in the wrong direction to the right – the divine – path; who strove to facilitate the evolution of a new social order and new mentality, that is, a new culture, by criticizing the dominant social establishment and the prevalent way of thought. In the age of the ever deeper crisis of our culture, there is dire need for prophets.

The gravest consequences of this crisis include, for example, extremely unjust inequalities in wealth, or masses of people being forced by the global capitalist market economy into soul-killing drudgery for most of their lives, through a combination of reward and coercion. Still, the most menacing consequences of the crisis are ecological. About half a century has passed since it dawned upon us that we were rapidly destroying the ecological bases of our lives (McNeill 2000). For decades now we have been faced with the ecological crisis, which alone should be enough to force us to profoundly change the direction of our culture. So far, however, all we have managed to achieve are minor corrections. Market-based, consumerist culture is still predominant practically all over the world. We have managed to cope with environmental problems that could be remedied by relatively simple technological responses, the mitigation of which harmed few power interests, and in the meantime the dominant culture did not need to be questioned – for example, the thinning of the ozone layers or the lead pollution in the air of large cities. However, global climate change, the mass extinction of species, soil degradation or the toxic effects of several synthetic compounds cause severe anxiety throughout the world. A new culture would be needed to stop the decay: the radical transformation of our thinking and of the social and economic institutional system. Although such a change does stand a chance (for one thing, lots and lots of people have realized its necessity all over the world), for the time being this is only visible at the subcultural level.

Instead of the everyday meaning of the word "institution", it is used in this paper in the sociological sense: an institution is what becomes systemic (institutionalized), a system in a society. Social institutions are those constituents of a society that can reproduce themselves and exist across generations. There are economic, political, legal,

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[1]   Based on Takács-Sánta 2019 and 2020, modified at several places.

etc. institutions (Miller 2019). Institutions make certain acts possible for people or organizations and prevent (or hinder) others.

One often ponders which social actors would be able to provide the spark for the emergence of a new culture and hence, for the Great Ecological Turn. The most promising chance is for ecologically committed but individually weak people to join forces and form *(micro)communities*, practically groups of friends, which may become nuclei of the crystallization of a new culture by creating new institutions and spreading a new mentality. One of the most hopeful expedients from the ecological crisis is therefore the supersession of the atomization of society!

Why does the re-discovery of small communities appear a realistic option? In the overwhelming majority of the some 200,000-year history of *Homo sapiens* (Marean 2015), people lived in small hunting-gathering communities, and when agriculture began to appear, a good ten thousand years ago, more and more people began to live in village communities. As late as in the early 19th century, 97–98 % of the global population lived in villages or pursued a nomadic way of life as animal herders and hunter-gatherers (Ponting 1991), i.e., they existed in communities. The prevalence of the spectacular social atomization of "one-person groups" (Csányi 2002) is the outcome of the mass urbanization which began in the 19th century and came to the fore in the late 20th and 21st centuries. In a historical perspective, current atomized societies must be seen as anomalies, and therefore it would not be alien to human nature to find a way back to communities. What is more, in the decisive majority of us human beings there is a distinct desire for communal life, and we sorely feel the more or less universal absence of communities today.

What sort of communities are meant here?

It must be clarified what is currently understood by community. This concept has been given widely different interpretations by many, even in the social sciences (for a good overview, see Légmán 2012), not to mention its connotations in colloquial usage.

Communities are currently taken to possess all of the following features. Firstly, the members of the community are in regular and frequent personal contact with each other and at regular intervals communicate in a common space. Thus, virtual communities do not belong here. Also, regular and frequent personal interactions are mostly possible when the members of the community live in the same settlement, or in settlements very near to each other. It is partly in this sense that we can speak of local communities. However, "local" means more in the present case: a sort of localism or local patriotism, the love of the place, attachment to the place, and a preference of locality over a larger spatial unit.

Secondly, the members of a community are tied by a similar order of values and worldviews, that is, their mentality is fundamentally similar. The communities at issue here are generally linked by an ecological awareness, which also differentiates them – often in the same settlement – from majority society. There are, however, examples – in Hungary, too – that a religion-based or traditionalist mentality cements a community and (at least primarily) differentiates it. The latter approaches

are in harmony with ecologically conscious thinking and lead logically to environment-conscious behavior (Takács-Sánta 2016a; 2017).

Thirdly, the communities in question have common practical goals and they try to attain them together.

Fourthly, only those groups can currently be termed communities that have at least three (sometimes several hundred) adult members that represent at least two different kinship lines. (A single family in today's sense does not constitute a community.)

As follows from the above, we are speaking about *ecological local* communities. They can be divided into two large groups: some strive to realize a complex alternative way of life, while others only focus on a single issue. The latter include, among others, communal gardens (Rosta 2014) or local exchange services (LETS, Jacsó 2013), most of which are urban communities. Hereafter, only the eco-communities aimed at realizing a complex alternative mode of living are discussed, with the reservation that – in theory – they may also develop from "single-focus" communities.

Under one typology, the local communities that realize an alternative ecological way of life can belong to one of three main groups (Takács-Sánta 2016a; 2017). One group comprises *ecovillages*. Ecovillages are separate settlements or parts of settlements, the dwelling places of communities living an ecological way of life.[2]

The second group contains *co-housing* communities. A co-housing is a place of residence where people decide to launch a residential community, take part in planning the building and organize the life of the community. They share out the burdens – as well as the tasks and activities – among the members collectively (Takács-Sánta et al. 2017: chap. 10). Co-housings can predominantly be found in cities, but there are some in the countryside as well. Though only a smaller part of them were initiated for ecological purposes, it applies to them in general that their inhabitants exert less pressure on the environment than the surrounding majority society, due to their communal way of living (Meltzer 2005).

The third group comprises the *"scattered" eco-communities*. Unlike the other two categories, here the members of the community are not close to each other but live scattered in the settlement (or in several nearby settlements), in a minority, compared to the population of the area. Such communities can be found in cities and rural settlements alike.

The tightness of the relationship between the members may vary considerably among ecological local communities. In "scattered" communities, the connection between the members is typically looser than in ecovillages or co-housing communities, owing to greater physical distance. This implies that departing from an atomized community (where people are not socialized for communal existence), it is easier to found and run a "scattered" community than either of the other two types. Moreover, the initiation of a "scattered" community does not necessarily require extra capital for the purchase of land or construction, or people do not need to move, so in such communities potentially far more people could take part than in eco-villages or co-housing.

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[2] A manysided overview of ecovillages – mainly those in Hungary with an international outlook – is provided by Farkas 2017.

What can ecological local communities do?

These communities try to realize their goals at three levels. On the level of the *community*, there are several kinds of ecological communities living alternative ways of life, e.g. some who share commodities (car, tools, books), or farm collectively.

Then there is the level of the *individual* or *household*: members of the community help each other to make their households more environmentally friendly. They exchange information, and experiences to promote ecologically positive solutions or try to make others behave in an environmentally friendly way. Consolidating these norms is easier in a community where people mutually help each other than alone.

At the level of the *settlement*, there is a possibility to act, too. The community may pursue political activity (in the classical sense of the term, not the party-political sense of the world): they may take an active part in the discourse, debates and decision-making about public matters of the settlement (or neighborhood or area). In the course of this effort, they may try to usher the local government(s) or locally active companies toward exercising greater care for the environment (they may also establish an undertaking[3]), and they can also shape the mentality and behavior of the local population.[4]

The first and third levels are particularly important, because the ecological community can play a key role in the emergence of new institutions and in carving new building blocks for the construction of a new social-economic establishment. In this way, the community can exert a disproportionately large influence: the new institutions will most probably also be used by people who are not consciously environmentalist but their behavior will eventually become environmentally friendly in this way. (For example, not everyone who shops at a local farmers' market is motivated by their deep awareness of the need to protect the environment.)

It is worth noting that the newly formed communities are not only useful in terms of ecological sustainability. Many aspects of individual and social problems from depression to homelessness can be traced to the atomization of society. Forming new communities would not only lessen the pressure on the environment (and the adaptation to the environmental changes) but would entail a lot of other gains. Communal institutions formed to alleviate environmental problems may facilitate the solution of other social problems which require cooperation as well, and which are also meant to restrain egoism and promote the common good.

Evidently, the radius of influence of a local eco community is small. But put before your mind's eye the map of Hungary and imagine that a few hundred settlements already include such communities. That would already mean an enormous strength. And if such local communities rallied into a nationwide network, they would exert a powerful influence at the national level.

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[3] http://kozossegivallakozas.hu
[4] On how local eco-communities can make democracy more local and participatory, see Takács-Sánta 2017: chapter 6.

The Microcommunity Program

The germ of the above ideas about the importance of rediscovering communities dates from the beginning of 2008 and they were so animating that I immediately organized a team to launch a social change of this kind already in that very year. We named our initiative the Microcommunity Program.[5]

Our major objective was to help the establishment and running of as many ecological local communities all over the Carpathian Basin as possible – in all settlement sizes from microvillages to large cities. We defined our activity as a research and activist program, indicating that while we were conducting research in the traditional sense, we were also intent on promoting social transformation.

Despite the ambitious goals, the Microcommunity Program was fairly introverted in its first nine years, exposing very little of its activity to the external world. The aim was to create firm theoretical bases for the program and to collect broad field knowledge, and we felt we had much to learn in order to consolidate the foundations. The introverted period could not have been much shorter, for the program – with a few sporadic short periods – worked with volunteers (and this is more or less the situation today as well).

To build solid foundations, we set out along two main tracks. On the one hand, we started fieldwork, mapping the country for about three years, to get to know as many kinds of ecological local initiatives in Hungary as possible, first of all communal initiatives. In each, we conducted in-depth interviews, primarily with the leaders.[6] Sometimes the interviews were complemented by observations of the participants. In 2012, we were asked to contribute to the National Council for Sustainable Development's collection of good practices. Eventually, the publication included 14 case studies (Kajner et al. 2013) based on the findings of our nationwide field research. We continue to tour the country, but with less intensity, since we receive word of fewer and fewer initiatives that are new to us, the likes of which we have not yet examined. As of early 2023, we have examined some 75 local ecological initiatives, and visited some of the most intriguing ones two or three times.

Our fieldwork was expanded in a new direction from 2012. We launched the first study of this kind in two neighboring Pest County settlements, Nagybörzsöny (from 2012) and Kóspallag (from 2014). While in the former, no ecological community evolved (though we helped the local people found a short-lived producers' market), the latter was founded in 2016 and was the first community to emerge due to our inspiration.[7]

The other main track of the first nine years of the Microcommunity Program was writing books and processing the relevant academic literature. We set ourselves a very ambitious goal: to publish a manual and a webpage that contains a critical overview of the situation in the diverse fields of our life in Hungary today and also presents many alternative communal activities. A chapter of the book with

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[5] See www.kiskozossegek.hu

[6] This fieldwork was supported by the Office of the Parliamentary Commissioner for Future Generations in the first two years – up until the massive curtailing of the ombudsman's licenses and budget.

[7] The summary of the first years of the action and research at Nagybörzsöny and Kóspallag, see Takács-Sánta 2017: chapter 8.

the working title Wayout was pre-published online within a short period of time (Takács-Sánta et al. 2012), but as the years passed, we realized that despite all efforts, such an extensive book can hardly be completed with volunteers alone within a reasonable period of time.

In the meantime, a publisher offered to publish another book at short notice. We seized the chance and decided to collect a small group of case studies of good practices based primarily on our field research. In parallel, I undertook to write a book of the theoretical foundations of the Microcommunity Program and the results of our community research.

Both books came out in 2017 (Takács-Sánta 2017; Takács-Sánta et al. 2017), which marks the beginning of the second, far more extroverted period of the Microcommunity Program. We felt that we had already achieved something, at least as much as was enough for a good start – not only did we have the two books behind us, but an eco-community had been established upon our inspiration, and we were already supporting a few others. We began advertising our intention to help any local groups intent on becoming ecological communities.[8] By spring 2018, we had been collaborating with four of five such communities. We thought the time had come to connect these initiatives with one other and began to weave the large nationwide network we had hoped for.

The New *Koma* Network

We invited the most important people of the communities to a meeting on 22 August 2018. By the end of the high-spirited and extremely fertile discussions, we had established the network of participating initiatives and named it New *Koma* Network.

The "*koma*ship" was an institution in the traditional peasant communities of the Pannonian Basin which strengthened the coherence of the community beyond the ties of kinship. The members of a local eco-community are one another's *koma*s and quasi "*koma*ship" may evolve between communities as well. The adjective "new" is meant to indicate that instead of reveries on the past, we deem it important to revive the traditional institution in a way that is adapted to the contemporary situation.

The aim is, on the one hand, to facilitate mutual help among the initiatives via the Network and to assure them that they are not alone. The other aim is that we, those involved in the Micro-community Program, should support them effectively with our knowledge, experience and encouraging words. We also decided we would meet in person every half year, and in the interim time we would correspond (or consult personally with representatives of occasional initiatives).

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[8]   In addition, in recent years we (particularly myself) have popularized the Microcommunity Program's main ideas in more public events, radio programs, podcasts, printed interviews and articles than previously, often in the mainstream media. These can be viewed on the page, www. kiskozossegek.hu, under the News heading. In addition, we published a manifesto for the local eco-communities on our own channels in summer 2021, which has reached a large number of people.

The establishment of the New *Koma* Network is to be attributed at least as much to the changed social context, as to the systematic activity within the Microcommunity Program. Fairly unexpectedly, the discourse about the ecological crisis gained great momentum among the Hungarian public as well. In the past five years, it has remained on the agenda as a relatively weighty concern, though with varying intensity. Together with the – comparatively – active communication of the Microcommunity Program, this has inspired more and more communities (and nascent communities) to join the New *Koma* Network. The news bulletin of the Network, active as of the end of 2021, also tries to promote this expansion.

Members of the Network

The communities we primarily await in the New *Koma* Network are those which strive to live a complex ecological way of life, possibly acting at each of the three levels mentioned, instead of focusing on a single matter.

Beyond that, the membership of the Network displays a fascinating diversity. There are scattered and eco-village communities, though the former are predominant. There are rural and urban members, more or less in equal proportion. Though the majority of the members were initiated in the second half of the 2010s, a few previously existing communities have also joined. The experiences of the latter are of great help for those who have recently entered this area. At the same time, our study tours and mapping efforts throughout the country have made it clear that there are hardly any local eco communities established prior to the mid-2010s that would fit the New *Koma* Network. Finally, the diversity is also manifest in religiosity as well. Though the majority of the New *Koma* initiatives are not organized on religious grounds, they include an ecumenical (though mainly Catholic) Christian and two Krishna-conscious communities.[9]

The great majority of the New *Koma* Network communities are characterized by a firm core that includes the leaders (typically women) and two or three people who have assumed – this is no exaggeration – a prophetic role and who try to gather partners around them. This puts them to the test, as it is hard to find further committed and active people. However, not only functioning communities can join the Network but even individuals as well, those who are firmly determined to bring about a community and are already taking steps to this end. We try to help them with enhanced attention, because we have found that most eco-communal initiatives die at the embryonic stage. To decrease this mortality rate, we initiated the Germinating program within the New *Koma* Network in 2022, to help inchoate communal undertakings.

Our earlier community research also revealed (Takács-Sánta 2016a; 2017: chapter 7) that ecological local communities are usually initiated by graduates of universities or high-schools who are "outsiders" in a rural community. Such people mainly live around Budapest, in the agglomeration. Accordingly, the greater part of the current communities of the New *Koma* Network are situated around that area. At the same time, the poorest regions of the country are not represented in

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[9]   On the role of religion in the functioning of local eco-communities, see Takács-Sánta 2017: chapter 7.

the Network and we have no knowledge of any community trying to establish an alternative complex ecological way of life in these regions. There is little hope for leveling out these geographical inequalities as long as the initiating intellectuals cannot break away from the (capital)city.

The foundations of a new world

The number of communities and rudimentary communities participating in the New *Koma* Network grew sevenfold over the course of four and a half years. This pace of growth is not guaranteed in the future, of course, but should it remain unchanged, there could be several hundred mutually collaborating local eco communities in the country within a few years. That would be a level at which these communities might begin to coalesce into a country-transforming force. Naturally, it is not enough just to have such communities. They must become influential actors who can effect changes in the settlements and households. The signs are good, but it is still early days. The communities of the New *Koma* Network have already laid a few smaller building blocks for the foundations of the new world; some operate a shopping community; others have persuaded the local government to ban burning leaf litter and taught many people how to compost; still others cleared some room for community events.

We in the Microcommunity Program continue to make efforts to see more and more local eco-communities founded and to support their effective work all over the Carpathian Basin – while, as researchers of an activist trend, we also examine the process theoretically. We restarted the portal *Wayout.hu* in early 2019, especially for those who are already, or are determined to become, members of eco-communities.

**Figure 1. New *Koma* Network meeting, Nyim, Hungary, 2022.
Photo: Judit Ruprech**

We offer materials about all aspects of our life that may lend help for developing an alternative complex ecological way of living. Since spring 2020, we have been posting dozens of concrete pointers for collective action. The Wayout manual will be built partly from these concrete recommendations for action – hopefully to be published in the near future with a narrower focus than originally intended.

Age of prophets

It is in everyone's interest to transition as smoothly as possible from consumerist culture to a new ecological culture (Takács-Sánta 2016b). At present, we are living in a transitional period and a period of transition is always an age of prophets. It is the historical situation that calls prophets to life. When the sense of responsibility is awakened in a person by the crisis, he/she cannot help becoming a prophet, as he/she has no other choice (Fromm 1986). But at the same time, prophets must not be over-mystified: their job is not to change the world alone; it is enough for most of them to concentrate on their own context, their own settlement. They must spread values such as ecological sustainability, moderate living, love of the place, importance of the community, solidarity and civilian courage in their narrow environment. In the spirit of these values and of a new ecological worldview, they have to join forces with others to build a new social and economic establishment that is more ecological and just than what exists today.

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