

## Humanistic Perspectives of Biocultural Diversity

### Humanistyczne perspektywy różnorodności biokulturowej

Ryszard F. Sadowski

*Cardinal Stefan Wyszyński University in Warsaw, Institute of Ecology and Bioethics,  
Wóycickiego 1/3, building 23, 01-938 Warsaw, Poland  
E-mail: r.sadowski@uksw.edu.pl*

---

#### Abstract

It is widely recognised that biocultural diversity is an important element of world heritage. Until recently, the focus was mainly on biodiversity, but since the 1980s, attention has also been drawn to the importance of cultural and linguistic diversity. Konrad Lorenz suggests that civilisational processes are threatening not only the diversity of Earth's heritage, but also humanity itself. This study aims at showing the interrelationships between biocultural diversity and the biological and cultural *layers* of humans. This study draws on Luisa Maffi's concept of biocultural diversity and Lorenz's *layered* concept of humans. The research conducted confirms the existence of mutual dependencies between various forms of terrestrial heritage and human *layers*. It also suggests that strong biocultural diversity positively affects the human condition and, vice versa, the good condition of humans positively affects the quality of the Earth's diversity. The research leads to the conclusion that research teams analysing civilisational processes cannot be limited only to representatives of natural, technical, economic or legal sciences, but should also include humanists. This will allow a better understanding of the complexity characterising civilisational processes and find more adequate solutions.

**Key words:** biocultural diversity, biodiversity, cultural diversity, linguistic diversity, waning of humaneness, Konrad Lorenz

#### Streszczenie

Powszechnie zauważa się, że różnorodność biokulturowa jest ważnym elementem światowego dziedzictwa. Do niedawna koncentrowano się głównie na różnorodności biologicznej. Od lat 80 XX w. zwrócono także uwagę na znaczenie różnorodności kulturowej i językowej. Konrad Lorenz wskazał, że procesy cywilizacyjne zagrażają już nie tylko różnorodności ziemskiego dziedzictwa, ale nawet człowieczeństwu człowieka. Opracowanie to stawia sobie za cel pokazanie wzajemnych zależności pomiędzy różnorodnością biologiczną, kulturową i językową a biologiczną i kulturową *warstwą* człowieka. Podstawą tego opracowania była koncepcja różnorodności biokulturowej Luisy Maffi oraz warstwowa koncepcja człowieka wg Konrada Z. Lorenza. Przeprowadzone badania potwierdzają istnienie wzajemnych zależności między różnymi formami ziemskiego dziedzictwa a *warstwami* człowieka. Wskazują też, że dobra kondycja różnorodności biokulturowej wpływa pozytywnie na kondycję człowieka. Podobnie dobra kondycja człowieka pozytywnie wpływa na jakość ziemskiej różnorodności. Przeprowadzone badania prowadzą do wniosku, że zespoły badawcze, które dokonują analiz procesów cywilizacyjnych nie mogą ograniczać się do przedstawicieli nauk przyrodniczych, technicznych, ekonomicznych i prawnych. W zespołach tych powinni być także humaniści. Pozwoli to lepiej uchwycić złożoność zachodzących procesów cywilizacyjnych i odpowiedzieć na nie w sposób bardziej adekwatny.

**Słowa kluczowe:** różnorodność biokulturowa, różnorodność biologiczna, różnorodność kulturowa, różnorodność lingwistyczna, regres człowieczeństwa, Konrad Lorenz

---

## Introduction

The diversity of Earth's heritage is such an important good that it calls for responsible and foresighted care. While experiencing the contemporary ecological crisis, people have begun to realise the ongoing process which is depriving them of this heritage. It has been noticed that the advancing scientific and technical civilisation is accompanied by the simultaneous, constantly accelerating extinction of various flora and fauna species. Over time, people have also realised that, along with the loss of biodiversity, an analogous loss of cultural diversity is taking place and, what is more, that Earth's heritage in all its manifestations is interrelated. This heritage can thus only be preserved if every part of Earth's diversity is protected in an integral and collective way (Sadowski, 2017). Analyses of civilisational processes taking place today have also shown that it is the humanness of people itself that is at risk. Progressing civilisation processes often have a destructive effect not only on the world of nature or the world of culture, but also on humans themselves, and they thus lead to the loss of specifically human abilities. According to Lorenz, civilized humanity is characterized by a technocratic system, in which technology plays the role of a *tyrant*. This is due to the fact that technology, in the strive towards satisfying human needs, is increasingly besieging humanity, ultimately taking the form of a straitjacket, which, admittedly, provides a guarantee of humanity's safety, but at the same time hampers its freedom. Consequently, technology prevents actualization of specifically human predispositions (Lorenz, 1989).

An analysis of the civilisational challenges currently faced by biocultural diversity, as well as the civilisational challenges faced by humanity, makes it clear that the above-mentioned processes are interrelated and mutually interacting. The phenomenon of biocultural diversity has already been well recognised and described, the latest research indicates both the advantages of this concept and its drawbacks (Brosius, Hitchner, 2010; Caillon, Degeorges, 2007; Sterling, et al., 2017). Most often, it is defined as *the diversity of life in all its manifestations: biological, cultural, and linguistic – which are interrelated (and possibly coevolved) within a complex socio-ecological adaptive system* (Maffi, 2007, p. 269).

The civilisational challenges that people face today are much less known, however. Konrad Lorenz made an original attempt to identify these processes, noticing that they take place simultaneously in the world of nature and in the world of culture. The scientist also pointed to the incommensurable manner in which these processes occur and to the resulting threat to the human condition (Lorenz, 1989). In order to explain Lorenz's position, it is necessary to provide at least an outline of the concept of humans formulated by the scientist. Without this, it is impossible to understand the civilisational challenges, their

causes, and the mutual dependencies that he identified.

Inspired by Nicolai Hartmann's concept of the real world's *stratification* (Hartmann's theory of the *strata of existence*), Konrad Lorenz developed his own idea of the reality. Harking back to the concept of fulguration (*fulguratio* or the *creative flash*), he distinguished biological and cultural layers in humans (Lorenz, 1978, p. 37-39, 29-30). This division was based on the so-called fulguration of humanisation, within which the human mind emerged and which, according to Lorenz, marks the beginning of a new kind of life, namely, the life of the human mind (Lorenz, 1978, p. 172).

According to Lorenz, humans consist of the body, soul and mind. The first two elements constitute their biological component and develop in accordance with the rules of biological evolution. According to this approach, the soul is a component responsible for people's emotional life and one that they share with many representatives of the animal kingdom. The mind, on the other hand, is a specifically human disposition that manifests itself in various forms of culture and therefore develops in accordance with the rules of cultural evolution. The mind is the *layer* of a human, which makes them capable of conceptual thinking and verbal language. These abilities, in turn, condition a human's creativity and enable them to participate in the world of culture (Lorenz, 1989, p. 55-56).

Konrad Lorenz also points out that while the human body and soul have remained practically unchanged in their physiological aspect for thousands of years, the human mind has changed enormously over this time. According to Lorenz, this situation is a consequence of the difference in the pace of biological and cultural evolutions. The scientist notes that while biological evolution is proceeding extremely slowly, cultural evolution is constantly accelerating, reaching a dizzying pace. As a consequence, the biological layer of humans is unable to keep up with its cultural layer. This leads to a kind of *stratification* of humans, which results in the waning of humaneness (Lorenz, 1978: 180; Lorenz, 1989, p. 55).

The civilised human faces completely new, unprecedented challenges. They not only constitute a threat to the biological survival of individuals or local communities, but, by leading to the regression of specifically human abilities, they threaten humanity itself. Lorenz even claims that the deepening of our knowledge about the world of nature, which was supposed to lead to scientific and technological progress, paradoxically, instead of relieving human suffering, brought on a deadly danger to humanity: the destruction of mankind (Lorenz, 1974, p. 12).

The aim of this study is to show that contemporary civilisational processes not only may have a negative impact on the world of nature and culture, but also on human beings themselves. On the one hand, they may lead to the gradual disappearance of biological,

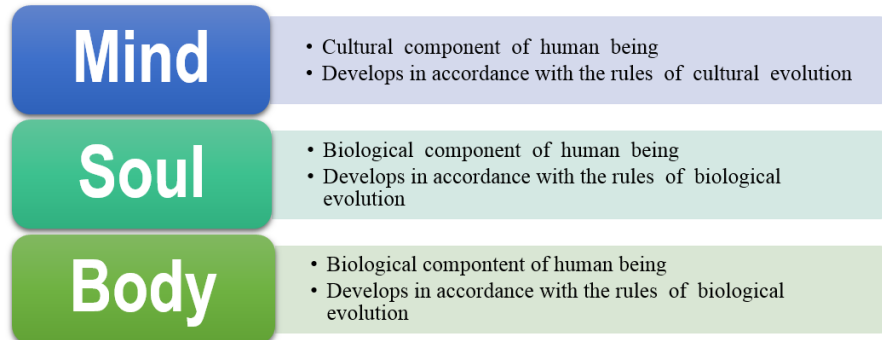


Figure 1. Konrad Lorenz's concept of human being (created by the author).

cultural and linguistic diversity and, on the other, they may result in the loss of specific human abilities. This, in turn, may lead to the destruction of humanity. The author's intention is, moreover, to demonstrate that biocultural diversity and the human condition are interrelated. This means that the loss of diversity in Earth's heritage implies a deterioration of the human condition, and vice versa, that an improvement in the human condition positively affects the condition of biocultural diversity.

### 1. Civilisational challenges to the world's diversity

The desire for development and progress inherent in human nature gave rise to the unprecedented success of humanity; at the same time however, it became a deadly threat (Sadowski, 2016, p. 195). Over the millennia, dangers resulting from such an expansive development of civilisation have been entirely overlooked. While struggling with nature, people were convinced that it was eternal and indestructible (McKibben, 1989, p. 3-5). Modern times, however, brought with them changes resulting in a radically different approach towards science which, in turn, made possible the development of technology allowing humans to interfere in nature on an unprecedented scale. The most important inspirers of these changes seem to have been Francis Bacon and René Descartes, who – each in his own way – contributed to the development of Western civilisation.

It was in the development of science rather than in the spiritual improvement of an individual as postulated in the Middle Ages, that Bacon saw hope for human happiness and a chance to take control of the world. The philosopher conceived a project aimed at eradicating diseases and poverty with the help of knowledge. He encapsulated this thought in the statement *human knowledge and human power meet in one* (Bacon, 1989: book 1, aphorism 3).

Bacon understood human power as the ability to control nature acquired by people in the process of learning the laws governing it, and that these laws could be discovered by means of the empirical method and technique. The contribution of Descartes to the creation of modern science consisted, in turn, primarily

in rejecting the classical division of reality into animate and inanimate matter, as well as in the statement that this reality is divided into the thinking thing (*res cogitans*) and the extended thing (*res extensa*) (Descartes, 2015; Descartes, 2008, part 1, no 53). Descartes' proposal laid a foundation for a division between natural sciences and the humanities, as well as for the mathematical description of the world. As a result, nature, which began to be studied only with respect to its measurable features, became an excellent object of exact sciences. This, consequently, led to an unprecedented development of these sciences, advanced technology, and ultimately influenced the dynamic development of Western civilisation.

Modern thinkers were convinced that the progress of science and technology would enable people to emancipate themselves from nature and to build in it an autonomous *kingdom of man* (*imperium homini*) (Bacon, 2009, book 1, aphorism 68) where people will gradually move from the position of servant and nature's translator to that of its absolute ruler (Bacon, 2009, book 1, aphorism 1 and 129). There are many indications that such a reckless realisation of this modern dream, however, instead of leading to the ultimate eradication of diseases and poverty, gave rise to new threats which brought unprecedented dangers to both current and future generations.

The dynamic development of civilisation caused danger to the entire planet, posing a threat to Earth's heritage in all its dimensions. An analysis of the effects of the ecological crisis allows us to perceive the threats faced by the natural environment today. This is especially clearly reflected in the ongoing loss of biodiversity. Culture, which in all its complexity and diversity is undergoing globalisation processes, is in a similarly difficult situation, or perhaps even more difficult due to the fact that it is less recognised. Globalisation, which affects culture, may result in its impoverishing unification, manifested, among other things, in the loss of cultural and linguistic diversity. Paradoxically, the success of Bacon's program, instead of ensuring a stable, safe and successful existence for humanity, brought about uncertainty, threats and tragedies that both people and the surrounding

world had never experienced before. Humans fell victim to their own success and, consequently, had to face completely new challenges (Horkheimer, Adorno, 2002, p. 34). Earth's heritage is today becoming subject to difficulties which threaten not only its use, but also its survival. This is clearly visible in the example of the threats endangering Earth's diversity in both its natural and cultural spheres.

The civilisational challenges faced by our planet's natural heritage are now well identified and described. A loss of biodiversity has been taking place for millions of years, but its pace accelerated considerably with increased human activity (Kolbert, 2014). This pace is proportional to the technological potential, which enables an ever-increasing human interference in the environment. This is why, along with the development of technical civilisation, the depletion of biodiversity is constantly accelerating. Despite numerous measures undertaken with the aim of protecting the endangered species, it is estimated that, depending on the adopted research methodology and baseline data, in the year 2100 it will be possible to preserve only 80-98% of the flora and fauna species that lived on Earth in 2000 (Skutnabb-Kangas, 2002, p. 13).

Loss of biodiversity poses a real threat to human civilisation, for which biodiversity was a prerequisite of emergence. It is to the wealth of species that we owe food, water, air, clothing, medicines, fuel and other resources. Nature is an important element of human aesthetic and moral experience. It has a significant impact on human well-being (Diaz, et al., 2006; Cardinale, et al., 2012). This issue is of such vital importance that it was raised by Pope Francis, who noted that the protection of biodiversity cannot be motivated only by utilitarian purposes. Initiatives aimed at preserving our planet's biological heritage should arise from our noticing the intrinsic values of creatures and their significance for cultures and poor people (Pope Francis, 2015, no 190).

Civilisational challenges facing the cultural heritage of our planet seem to be even more serious than those threatening the natural heritage (Pope Francis, 2015, no 145). This is due to the fact that challenges to cultural diversity are more difficult to identify and less understood since their effects are usually distant in time. Important factors affecting the loss of cultural diversity are contemporary globalisation processes and communication technologies which, on the one hand, facilitate communication among people and help promote indigenous traditions but, on the other, often lead to rejection of those traditions, popularisation of global mass culture, and consequently, to the unification of culture. The UN, recognising these challenges, declared 1988-1997 the World Decade for Cultural Development (UN, 1986).

UNESCO is actively engaged in activities associated with preserving cultural diversity. This organisation undertook a number of initiatives, which led to the

adoption of the *UNESCO Universal Declaration on Cultural Diversity, the Convention on the Protection and Promotion of the Diversity* (2005) and two reports – *UNESCO and the Question of Cultural Diversity 1946-2007: Review and Strategies* (2007) and *Investing in Cultural Diversity and Intercultural Dialogue* (2009) (Sadowski, 2017, p. 39). The European Union, which declared 2008 as the European Year of Intercultural Dialogue, also attaches great importance to the protection of cultural diversity, and the European Parliament presented a report on the role of intercultural dialogue, cultural diversity and education in promoting EU fundamental values. Cultural diversity and intercultural dialogue are naturally combined with linguistic diversity. This manifestation of the diversity of Earth's heritage currently seems to be facing the greatest challenges. An analysis of the state of linguistic diversity reveals its natural geographical imbalance. Europe, where only 287 languages have been noted, is the poorest continent in this respect. The total number of languages in both Americas comes to 1062, in the Pacific to 1313, and in Africa to 2139, while in Asia there are as many as 2296 languages (Lewis, et al., 2016).

Recently conducted research indicates that the loss of linguistic diversity proceeds at a much faster pace than the loss of biological or cultural diversity. In the years 1970-2005 alone, 20% of the languages known at that time became extinct. The estimated rate of linguistic diversity depletion in this period was 0.3% per year, and the current rate is approximately 1% per year (Harmon, Loh, 2010, p. 110). The latest forecasts predict that only 10-50% of languages used in 2000 will still be used in 2100, (Skutnabb-Kangas, 2002, p. 13).

The languages most vulnerable to extinction are those used by relatively few human communities. This specifically involves communities in developing countries and occupying areas that are attractive to large international investors. Any changes in the management practices employed in such areas result in the migration of these communities to cities, or the arrival of a large number of migrant populations (Pope Francis, 2015, no 146). This is confirmed by studies presenting data from Latin American countries, according to which as many as 49% of indigenous people live in urban settings, while 51% live in rural settings (World Bank, 2015, p. 31). In these cases, both language vitality and the culture of the indigenous community may be adversely affected. This is particularly evident in the case of local communities migrating to cities, where they are most often dispersed, and where their language and traditions are at risk.

This is well illustrated by research, according to which in recent decades 20% of South American residents who identify themselves as indigenous people have lost the ability to speak their language. This applies mainly to the younger generation, which mainly uses only Spanish or Portuguese. According

to research from 2012, only 41% of Bolivia's residents identify themselves as indigenous people, and only 29% still use indigenous language. Similar processes are observed in Mexico, where the percentage is, respectively, 15% and 7%, and in Ecuador, where it reaches 7% and 5% respectively (World Bank, 2015, p. 27).

Another civilisational challenge that affects linguistic diversity are globalisation processes and the ever-stronger position of the English language, which is becoming the dominant tongue of the modern world. This, on the one hand, results in the diminishing importance of *niche* languages, discontinuation of creative activity in these languages and in their potential extinction. On the other hand, modern communication techniques provide the means of easy and cheap communication among people thousands of kilometers away, which helps in the preservation of rare languages and stimulates creativity in these languages. Carolyn Stephens emphasizes that the process of indigenous peoples migration into cities has both positive and negative effects on their culture. Research shows, however, that these migrations mostly induce negative effects. Positive effects usually occur when the urban indigenous communities have become stronger and more organized (Stephens, 2015, p. 60).

Our planet in all its manifestations is currently facing many civilisational challenges which pose a real threat to the quality of life and even to life itself as regards both people and other living beings. These threats manifestly affect the natural world, but their negative effects are also becoming increasingly noticeable in the world of culture.

## 2. Civilisational challenges to humaneness

It seems that despite the passage of time, the civilisational challenges facing humanity noted by Konrad Lorenz in 1973, when he presented them upon receiving the Nobel Prize, are still relevant today. Lorenz expanded his ideas a year later in a book published in English entitled *Civilized Man's Eight Deadly Sins*. According to the scientist, these challenges constitute a real threat to both the natural and human world. While the threats facing the natural world are quite obvious, the threats to the human world are less conspicuous, and therefore require broader explanation.

Konrad Lorenz was convinced that contemporary civilisational processes threaten humanity *by a progressive decline of all those attributes and attainments that constitute humanity* (Lorenz, 1989, p. 3). In his opinion, the main source of the civilisational challenges facing humanity is the growing dissonance between the biological and cultural layer of humanity. The first of these consists of the human body and soul, and the other constitutes the human mind. Lorenz noticed that we are now dealing with opposition between the soul and the mind. The con-

stantly accelerating pace of cultural development, resulting from the activity of the mind, has changed the human environment so much that a human's biological layer (body and soul) is incapable of adapting to the changing living conditions. This is due to the fact that, while the biological layer of humans (the somatic and emotional sphere) has not in fact undergone any significant changes since the time of human creation, the human mind is subject to dynamic and constant changes. As a consequence, the biological layer of humans faces new, unknown challenges generated by the mind and it is unable to meet them (Lorenz, 1989, p. 121-123).

Lorenz defined the most dangerous challenges faced by civilised humans today as deadly sins. He borrowed this term from the language of religion. In the spiritual context, a deadly sin is an offense against the commandments that brings spiritual death. In the context of civilisation, Lorenz interpreted deadly sins as offenses against humanity and its integrity, leading to the waning of humaneness (Lorenz, 1974). In Lorenz's view, the civilisational changes experienced by modern humans threaten the integrity of the human structure, which rests on harmonious cooperation of the body, soul and mind. This integrity is threatened by processes triggered by the difference in the pace of cultural and biological evolutions (Lorenz, 1974, p. 12).

Lorenz distinguishes eight processes which, in his opinion, lead to the waning of humaneness, and calls them the deadly sins of the civilised humans. Among these sins he includes: 1) overpopulation, 2) devastation of the environment, 3) humanity's race against itself, 4) entropy of feelings, 5) genetic decay, 6) break in tradition, 7) increased indoctrinability of humankind and 8) nuclear weapons (Lorenz, 1974, p. 101-103).

Lorenz, rather than viewing the issue of overpopulation in the context of natural and economic challenges related to the size of the human population, perceives it from the perspective of the psychological consequences ensuing from living in a crowd. An excessive concentration of people not only fails to improve the relationships between them, but also makes it difficult to establish deep and mature ties. As Lorenz contends, this results from the fact that people are phylogenetically adapted to living in small communities, which allow for the natural development of deep interpersonal relationships. Failing to take this biological human trait into account and placing people in conditions that they are not prepared for, often leads to aggression or indifference towards others (Lorenz, 1974, p. 11-14).

Raising the issue of environmental degradation, Lorenz focuses on the consequences of this phenomenon for the human mind, because he considers them a more serious threat than the natural and economic consequences of the ecological crisis. In Lorenz's opinion, contact with nature is a necessary condition for full human development. As a result of experie-

encing nature's beauty and harmony, people can shape their aesthetic sensitivity, which in turn has an impact on their ethical sensitivity (Lorenz, 1974, p. 20). Otherwise, having no stable ethical beliefs due to the aesthetic underdevelopment which follows, the lack of contact with the beauty of nature, people gives priority to economic calculation over the state of the natural environment.

The third deadly sin of the civilised human pointed out by Lorenz, is humanity's race against itself. In the philosopher's opinion, in their pursuit of success many inhabitants of developed countries begin to live at a pace that distances them from the purpose of their activities and from reflection on the sense of undertaken actions. Lorenz also highlights the fact that the human body and soul are not adapted to such a pace of life, and that this often affects people's health. As the scientist contends, however, it is the resignation from the inherently human ability of self-reflection that poses the greatest threat to humanity. This is clearly confirmed by people's efforts to suppress the fear of failure in the constant race for success. The life of modern humans is thus almost deprived of the silence that would allow them to reflect on the purpose and meaning of their actions (Lorenz, 1974, p. 24-30).

The next civilisational challenge described by Konrad Lorenz is the entropy of feelings, which he interprets as the waning of all strong feelings and emotions, caused by overindulgence. Lorenz traces the origin of this phenomenon to the widespread, excessive use of painkillers. On the one hand, this causes a lack of resistance to pain and on the other, results in an indifference to pleasure. As a consequence, people lose the ability to make any substantial sacrifices or undertake painstaking work to accomplish tasks that do not offer hope of immediate gratification. Humans, stupefied with anaesthetics, becomes increasingly bored, blasé and soft, unable to face life's challenges. Another consequence of the unnatural satisfying of the need for pleasure is the phenomenon referred to by Lorenz as *neophilia*. This is based on a constant striving to replace the things used so far with new ones, since everything quickly loses its attractiveness for someone who is so easily bored. Lorenz emphasises that this phenomenon relates not only to objects, but also to pets, friends and even spouses (Lorenz, 1974, p. 31-42).

The fifth civilisational challenge pointed out by Lorenz is genetic decay. As in the case of the previous challenges, he focuses on the negative consequences related to the cultural layer of humans. Lorenz draws attention to the disappearance of the healthy norms of social behaviour, and to the unification of cultures. He points to the disturbing phenomenon of infantilism among adults who fail to carry out their duties and resort to social parasitism. *If the progressive infantilism and the increasing juvenile delinquency are, as I fear, signs of genetic decay, humanity as*

*such is in grave danger. In all probability, our instinctive high valuation of goodness and decency is the only factor today exerting a fairly effective selection pressure against defects of social behavior* (Lorenz, 1974, p. 58).

Another civilisational challenge facing humans today is the break with tradition. This challenge undermines the very foundations of culture. Although tension between generations is not a novel phenomenon, nowadays, instead of tension, we are rather dealing with a radical break in intergenerational bonds. Lorenz remarks that *today's rebellious youth react to the older generation in the same way that a culture group or 'ethnic' group reacts to a foreign, hostile one* (Lorenz, 1974, p. 64). It seems that this phenomenon is caused by disturbed family relationships experienced in adolescence. In this period of life, young people most often reject their parents' system of values and look for a peer group with whom they can identify. Lorenz defines this phenomenon as *physiological neophilia* (Lorenz, 1974, p. 68).

The seventh deadly sin of civilised humans is the increased indoctrinability of humankind. Lorenz notes that our trust in the information passed down by tradition is a prerequisite for the existence and development of culture. Never before in human history have humans possessed such a vast scope of information and means of communication. This increases the risk of widespread manipulation and indoctrination even more. *We ostensibly free, Western, civilised people are no longer conscious of the extent to which we are being manipulated by the commercial decisions of the mass producers* (Lorenz, 1974, p. 88). According to Lorenz, indoctrination is a real threat to humanity as it leads to the unification of culture and distorts the natural interplay of the diverse elements which constitute its foundation. Differences in views and independent thinking precondition culture's development.

Lorenz devotes the least space to the last civilisational challenge. In his opinion, this threat is so obvious that it does not require a detailed analysis. Nuclear weapons constitute a deadly sin of civilised humans which, by being the most evident of all, is the easiest to counteract. The juxtaposition of nuclear weapons with other threats is supposed to bring people to the realisation of the dramatic situation in which they face a real danger of losing their greatest wealth, namely their humaneness (Lorenz, 1974: 99-100).

### 3. Civilisational interrelationship between the world's diversity and humaneness

While analysing the dependencies between humaneness and various manifestations of world heritage, it should be noted that these interrelationships have a mutual character. On the one hand, the deadly sins



Figure 2. Diagram illustrating the dependence between civilisational sins and biocultural diversity (created by the author).

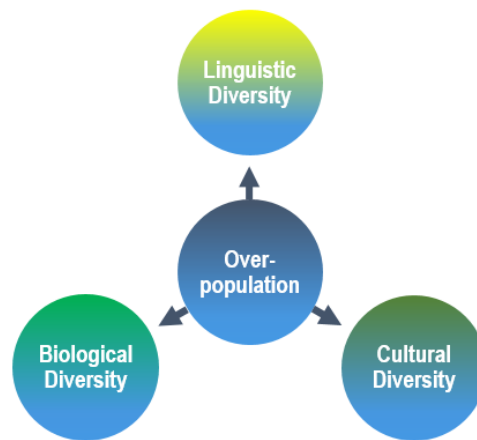


Figure 3. Diagram illustrating the impact of the first sin, i.e. overpopulation, on biocultural diversity. In the same way, the other sins of civilised humanity influence biocultural diversity (created by the author).

of civilised humans affect the state of biological, cultural and linguistic diversity, and on the other hand, all manifestations of Earth's diversity affect the state of humaneness, in both its biological and cultural layer.

All the deadly sins mentioned by Konrad Lorenz affect the diversity of the world's heritage in all its manifestations. Overpopulation, described as the first civilisational sin, adversely affects linguistic and cultural diversity, leading to its decline. The fast-paced urbanisation processes induce a global change in the structure of our planet's inhabitancy. In 2008, for the first time in the history of the world, more than half of the human population lived in a city. It

is estimated that in 2030, in developing countries, the percentage of inhabitants in urban agglomerations will amount to 80% (UNFPA, 2007). We are thus seeing a dynamic influx of the representatives of local cultures to large cities. At best, this phenomenon may lead to the weakening of these cultures and at worst, to their irreversible extinction. Modern research on anthropogenic stress confirms that big cities have a much more detrimental effect on the environment than small urban agglomerations. This undoubtedly influences the decline of biodiversity (Schumacher, 2014).

Environmental degradation, described by Lorenz as the second deadly sin, obviously affects biodiversity,

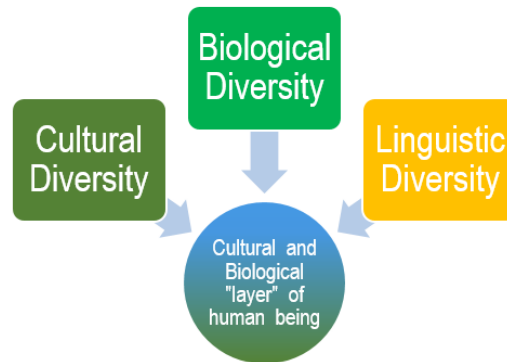


Figure 4. Diagram illustrating the impact of biological, cultural and linguistic diversity on the cultural and biological *layers* of a human being (created by the author).

however, by obstructing people's contact with nature, it also indirectly prevents them from developing aesthetic human sensibility, which entails the weakening of their ethical sensitivity. A weakened aesthetic sensitivity, in turn, undoubtedly influences human attitudes to culture, while the weakening of ethical standards means that the attitudes of humans towards nature and other people begin to be determined by utilitarian-economic arguments. As a consequence, care for biological, cultural and linguistic diversity is marginalised.

Humanity's race against itself is another contemporary civilisational sin, which affects the condition of Earth's heritage in all its manifestations. The civilised human is so engrossed in a neurotic drive for success and career that they begin to limit or even completely renounce contact with nature and culture. Short and rare moments of respite are more and more often filled with noise, which suppresses questions about the meaning and purpose of human activity. This sin constricts people's contact with nature and culture in a different way than does the previous sin, but in a similar way it results in a lack of concern for the natural and cultural heritage of the Earth.

Entropy of feelings is a sin that, as Lorenz puts it, undermines people's ability to take on ambitious challenges requiring greater effort and sacrifice. This is particularly the case when the intended goal is remote and its achievement uncertain. It seems that this type of offense against humaneness also induces the weakening of cultural, linguistic and biological diversity. The creative process that underlies cultural development provides a good example here. This process requires great commitment and enormous sacrifice from artists without offering any guarantee of success. Similarly, an in-depth knowledge of a new culture, and even more of a new language, also entails systematic and long-lasting effort. The contemporary environmental crisis is, in turn, a kind of challenge that requires radical sacrifices and actions on the part of the current generation for the benefit of future generations. People, weakened with respect to their own humaneness, will not be able to provide proper care for the Earth they inherit.

The genetic decay mentioned by Lorenz is another civilisational sin against humaneness, which undermines biocultural diversity. Lorenz claims that genetic factors, up to a certain degree, determine human behaviour. In specific instances, genetic defects lead to pathological behaviours which can affect human life and health, the safety of works of art, and the state of the natural environment. The genetic decay observed today is leading to the widespread disappearance of sound social norms. This is particularly evident in the progressive infantilism of many adult inhabitants of developed countries, which is manifested in people's inability to take responsibility for their own lives or for the world around them. Consequently, it has a negative impact on the wealth of Earth's heritage in all its manifestations.

The sixth sin of civilised humanity is the break with tradition. It seems that radical questioning and even rejection of tradition is particularly dangerous for cultural and linguistic diversity, as it may lead to the threat of cultural unification and the abandonment of native languages by local communities. The rebellion of the young generation in questioning the old order may also turn against the environment. It seems, however, that it often finds its manifestation in young people's radical and uncompromising defence of the environment, often with the help of illegal methods. In most such cases, however, such actions turn out to be counter-effective and they ultimately have a harmful effect on nature.

A serious challenge facing civilised humanity is people's increased indoctrinability. This civilisational sin seems particularly threatening in the era of globalisation processes and the internationalisation of large corporations. Having huge financial resources and access to global mass media, such corporations have the necessary tools to shape global public opinion in a way that allows them to achieve defined economic goals, usually at the expense of the natural and social environment. Global indoctrination can also shape consumer mentality, with a simultaneous weakening of sensitivity to social, cultural and ecological problems. This danger is even more serious as the interests of large corporations seem to stand in



opposition to, at least in the short term, concern for the natural environment and support for local cultures. Another serious threat to cultural and linguistic diversity is the fact that growing susceptibility to indoctrination leads to the unification of culture and disturbs the natural interplay of the diverse elements which provide its foundation.

The last sin of civilised humanity listed by Konrad Lorenz is the existence of nuclear weapons. This type of civilisational challenge constitutes an evident threat to Earth's heritage in all its manifestations. Nuclear war could lead to the destruction of all forms of life, and even to Earth's annihilation and the resulting loss of all its wealth.

Just as we can discern the influence of civilisational sins on biological, cultural and linguistic diversity, we can also observe the influence of all manifestations of Earth's heritage on both the biological and cultural layers of humans.

The protection of biodiversity and a concern for the good state of the natural environment undoubtedly translate into the good condition of the biological layer of humans, including both somatic and emotional aspects. While the link between the good condition of the human body and a good state of the environment is quite clear, the influence of the environment on the emotional sphere of humans may require some clarification. This issue was addressed by Lorenz, when he referred to the devastation of the environment and humanity's race against itself. Both sins, although each in its own way prevent or at least obstruct, direct human contact with nature, which, as postulated by Lorenz, disturbs people's full and harmonious emotional development.

It seems that the natural environment in its richness and mystery also affects the cultural layer of humans. Nature has always inspired artistic creation. This is particularly evident in painting and literature. In painting, the subject of nature is especially popular among representatives of trends referred to as landscape painting and animalistic painting. A literary genre known as nature writing is similarly of special note here. This trend focuses on the subject of people in nature and people's attitude towards it. The positive influence of natural heritage on the cultural development of humans is thus beyond question (Elder, Finch, 2002).

Linguistic and cultural diversity have a direct, and thus obvious influence on the cultural layer of humans. It seems, however, that both kinds of diversity also affect human biological layers. Contact with cultural heritage means that people become more sensitive and empathetic, with respect to both their attitude towards others and nature. As a result, people begin to take more care of the natural environment, which in turn positively affects the condition of their biological layer. The phenomenon of an indirect impact on the biological layer of humans can be seen even more clearly in the case of linguistic diversity. It is the endangered languages that pre-

serve the traditional knowledge about the environment which has been acquired by local communities sometimes over thousands of years. This knowledge now helps in the better understanding and protection of nature in all its diversity. This, doubtless, also has an impact on improving nature's condition and at the same time affects the biological layer of humans.

## Conclusions

Humans are the only creatures inhabiting the Earth that are capable of a rational analysis of changes taking place in the world, the identification of emerging threats and of undertaking actions aimed at dealing with these threats. The deepening ecological crisis, together with the development of scientific and technical civilisation, has revealed the dangers facing the world of nature today. An in-depth analysis of civilisational phenomena has shown, however, that the world of culture is equally endangered. The civilisational threats faced by humanity itself have also been acknowledged. It seems that humanity is becoming increasingly aware of the risks associated with the development of civilisation as well as with the threats pointed out by Konrad Lorenz. Many people actively counteract these threats and thus strive to protect human condition and earthly heritage in all its dimensions.

There are many indications that only the integral protection of biological, cultural and linguistic diversity with simultaneous care for the condition of humans with all the wealth of their body, soul and mind may give hope of preserving the diverse and unique heritage of Earth. The protection of biocultural diversity leads to an improvement of the human condition, and at the same time, people, fortified in their humanness, may guarantee the effective protection of our planet's diversity in all its manifestations.

It seems that the tendency to separate humans from nature and treat them independent of it, results in contemporary analyses that rarely take into account the full relationship between humans and nature. Those analyses are usually limited to fairly obvious relationships between the state of the natural environment and the biological and psychological condition of human beings. The world's complexity and the complicated mixture of the mutual dependencies of all its elements forces us to undertake more and more refined analyses, which should aim at discovering the complex mechanisms governing the processes taking place in the world.

The present situation therefore calls for interdisciplinary teams that will investigate the current civilisational processes and their consequences for the Earth's ecosystem and humaneness in all its richness. It is important that these teams should include representatives of the humanities, who will add their own perspective to the analyses proposed by the representatives of the exact and social sciences. This is especially important since there are tendencies to

combine technologies with economics, which together aspire to create a monopoly on finding solutions to the problems of the modern world. In fact, they are not able to see the full complexity of the Earth's reality, and therefore they propose actions that, while solving some problems, most often give rise to new challenges, often much more dangerous than the previous ones.

## References

1. BACON F., 2009, *The New Organon: or True Directions Concerning the Interpretation of Nature*, Dodo Press, Gloucestershire 2009.
2. BROSIUS J.P.; HITCHNER S.L., 2010, Reconceptualising the link between cultural diversity and biodiversity: beyond the biocultural perspective, in: *International Social Science Journal*, 61(199), p. 141-168.
3. CAILLON S., DEGEORGES P., 2007, Biodiversity: negotiating the border between nature and culture, in: *Biodiversity and Conservation*, 16(10), p. 2919-2931.
4. CARDINALE B.J., et al., 2012, Biodiversity loss and its impact on humanity, in: *Nature*, 486(7401), p. 59-67.
5. DESCARTES R., 2015, *Meditations on First Philosophy*, Cambridge University Press, Cambridge.
6. DESCARTES R., 2008, *Principles of Philosophy*, Barnes & Noble, New York.
7. DÍAZ S., et al., 2006, Biodiversity Loss Threatens Human Well-Being, in: *PLOS Biology*, 4(8), DOI: <https://doi.org/10.1371/journal.pbio.0040277>.
8. ELDER J.; FINCH R., 2002, *Nature Writing: the Tradition in English*, W W Norton & Company, New York.
9. FRANCIS (pope), 2015, *Praise be to You - Laudato Si: On Care for our Common Home*, Ignatius Press, San Francisco.
10. HARMON D., LOH J., 2010, The Index of Linguistic Diversity: A New Quantitative Measure of Trends in the Status of the World's Languages, in: *Language Documentation & Conservation*, 4, p. 97-151.
11. HORKHEIMER M., ADORNO Th.W., 2002, *Dialectic of Enlightenment. Philosophical Fragments*, Stanford University Press, Stanford.
12. KOLBERT E., 2014, *The Sixth Extinction: An Unnatural History*, Henry Holt and Company, New York.
13. LEWIS M.P., et al., 2016, *Ethnologue: Languages of the World*, SIL International, Dalla.
14. LORENZ K., 1978, *Behind the Mirror. A Search for a Natural History of Human Knowledge*, Harcourt Brace Jovanovich, New York.
15. LORENZ K., 1974, *Civilized Man's Eight Deadly Sins*, Harcourt Brace Jovanovich, New York.
16. LORENZ K., 1989, *The Waning of Humaneness*, UNIWIN Paperbacks, London.
17. MAFFI L., 2007, Biocultural Diversity and Sustainability, in: *The SAGE Handbook of Environment and Society*; ed. Pretty J., et. al., SAGE, London, p. 267-277.
18. MCKIBBEN B., 1989, *The End of Nature*, Random House, New York.
19. SADOWSKI R., 2016, Genetic Engineering in the Light of Dialectic of Enlightenment, in: *Return to the Oikos. Ways to Recover our Common Home*, ed. Kurethadam J.I., et. al., LAS, Rome, p. 194-212.
20. SADOWSKI R.F., 2017, Call for Integral Protection of Biocultural Diversity, in: *ProblemyEkorozwoju/Problems of Sustainable Development*, 12(2), p. 37-45.
21. SCHUMACHER E.F., 2014, *Small is Beautiful. Economics as if People Mattered*, Harper Perennial, New York.
22. SKUTNABB-KANGAS T., 2002, *Why Should Linguistic Diversity be Maintained and Supported in Europe? Some Arguments*, Council of Europe, Strasbourg.
23. STEPHENS C., 2015, The indigenous experience of urbanization, in: *State of the World's Minorities and Indigenous Peoples 2015*, ed. Grant P., Minority Rights Group, London, p. 54-61.
24. STERLING E.J., et al., 2017, Biocultural approaches to well-being and sustainability indicators across scales, in: *Nature ecology & evolution*, 1(1), p. 1798-1806.
25. UNFPA, 2007, *State of the World Population 2007. Unleashing the Potential of Urban Growth*, UNFPA, New York.
26. UNITED NATIONS, 1986, *Proclamation of the World Decade for Cultural Development*, UN, New York.
27. WORLD BANK, 2015, *Indigenous Latin America in the Twenty-First Century. The First Decade*, World Bank Group, Washington.