Scientific Journal of Latvia University of Life Sciences and Technologies
Landscape Architecture and Art
Volume 28, Number 28

DOI: 10.22616/j.landarchart.2026.28.10

THE HUMAN-NATURE RELATIONSHIP: COMPLEXITY OF THE PHENOMENON, HISTORICAL EVOLUTION AND ITS REFLECTION IN ARTISTIC WORKS

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Abstract. This study explores the connection between humans and nature, distinguishing childhood as the critical period of its formation. Based on these studies, it is argued that early experiences in nature determine not only the formation of an emotional connection with the environment, but also long-term human ecological awareness and psychological well-being. However, urbanization processes, loss of biodiversity and the reduction of natural spaces in cities weaken the opportunities to experience everyday connection with nature, which raises the need to study the cultural, historical and visual roots of this phenomenon.

In order to understand the cultural and historical context of this connection, a visual graphical analysis of historical works of art, revealing how nature, children and their interaction were depicted in various periods is conducted. European paintings and other visual sources created from prehistoric times to the 21st century are analyzed. The analysis aims to determine how representations of the relationship between people and nature have changed in various historical periods, what sociocultural meanings these images convey, and how they reflect broader societal changes. A literature analysis was also conducted to understand how the relationship between people and nature has changed over historical periods.

Artistic narratives reflect not only the change in the concept of nature, but also society's attitude towards the relationship with the environment. The analysis shows that from early images, in which nature is perceived as the source of human life, to urbanized modern images, the connection with nature is weakening. Based on the results of the study, it is concluded that the connection with nature experienced in childhood is the essential basis of the human-nature relationship, which has a long-term impact on emotional, cognitive, and social development. It is recommended to create more accessible natural spaces in cities, and apply urban strategies that help restore children's daily contact with the natural environment.

Keywords: connection to nature, children, forest, art, history

Introduction

The word nature comes from the Latin language word 'natura (n.), which means "birth, character, nature". The word birth is important here, because nature, according to Mackeviciute [32], is the beginning of everything, in our case, the start of the evolutionary process. Those places where nature grows without human intervention, forests, fields with trees, plants, animals, are natural places. Berry et al. [5] described nature as an environment dominated by ecosystem processes and urban nature is associated with human intervention [14]. The definition of nature, according to Bratman, Hamilton and Daily, changes over time, it is debated whether nature is a social structure, or it exists itself in a stable and independent form [6]. Despite these differences, nature always played a crucial role in human lives, and man also played an important role in nature. Human life has always been and is dependent on natural resources: food, water, energy, climate change [6]. There is a reciprocal relationship between nature and human, from a cultural ecology perspective, it is understood as an equal interaction, most clearly manifested in cultural landscapes and the landscape is defined as the place where nature and humans interact [27]. People constantly interact with the landscape, discussing what they see there, what they know, but it is often forgotten that the environment is defined more broadly than usual, authors claim that it includes both cosmic influences and microscopic biological organisms [46]. Nature provides not only material benefits - many studies emphasize the benefits of nature for people like physical and mental health, cognitive functions, job satisfaction, decrease of crime and aggression, etc. [1; 6; 11; 42; 38; 50]. The authors also claim that nature determines human happiness [50]. Urban trees are important not only aesthetically, but also as a means of reducing the urban heat island effect and the associated heat stress [35]. Nature provide benefits not only to people - forests are essential habitats for animals and birds, important for maintaining biodiversity and conserving species [25; 26]. Although there are countless studies showing the positive benefits of nature, the connection between man and nature is weakening, especially in the urban environment, there people are becoming more and more isolated from nature and wilder spaces [13]. The area of human - nature relationship is attracting growing attention because of urbanisation caused problems around the world. As Pietrzak claims, urbanization, decreasing number of forests are responsible for the urban population to become culturally distant from what is happening to the land, water, and endangered local wildlife, although people who still have a connection to nature also seek out natural places in urban environments [38]. Urbanisation, technical development, reduction of forest areas due to ongoing deforestation, loss of species and soil, food shortage, lack of experience with nature are claimed to increasingly distract people from natural environments [39; 43; 46]. Studies have found that the average American spends 90 % of his or her time indoors [6]. The decrease in connection with nature leads to the deterioration of a person's health [4], worsening of his emotional state, depression, and lower social activity of people [6]. This process, according to Basham et al., is called the gradual loss of direct nature experience.

Research shows that biophilic aspects are associated with positive emotions in urban environments [23]. Most construction in the cities consists of buildings and streets for cars to pass through, which are built regardless of the natural processes, that are decisive for the separation of man and nature [10]. The results presented by Samus, Freeman, Heezik, Krumme, and Dickinson show that the loss of this connection can have a negative impact on the environment

and human quality of life [43]. Due to the above-mentioned reasons, the importance and interest in the topic increases. More and more authors are raising questions about how to maintain a connection with nature, especially in an increasingly urbanized environment [4; 10]. As stated by Ritter and Dauksta, it is important to recognize the importance of forests for human identity [39]. A closer connection with nature indicates more significant environmental values and more active human behaviour related to nature conservation [10; 31], people who feel a connection with nature want to protect it [50]. According to Light, restoring the relationship between man and nature is one of the most important conditions for preserving nature [10], creating sustainable cities [4].

The aim of the study is to analyze the relationship between man and nature, its complexity and historical changes, as well as their reflection in works of art. This study also reveals the changing relationship between children and nature in different historical periods, since the relationship with the natural environment during childhood is the most important factor in a person's attitude towards nature in later life.

Methodology

This study used a mixed methodological approach, combining a systematic analysis of scientific literature and a visual content analysis of historical works of art, in order to assess the change in the concept of the human-nature connection and its representations in different historical periods.

Literature analysis: The search for the articles, by related topic, was conducted in Web of science database using the combination of keywords, based on eligibility and inclusion criteria: "connection with natur*" OR "relationship to forest" OR "natural spaces perception" OR "relation to green spaces" OR "relationship to natural environment" OR "make sense of natural" OR "connection with nature" OR "forest perception" OR "contact with natural" OR "connection to nature" AND human* OR people OR man OR woman* OR person OR society" (Web of Science Categories)". The search with exclusion has resulted in 372 documents, from the year 1995 to 2023. The number of articles increased in 2016, when 14 articles were published, to 2022 with 74. It is almost 20 percent of papers published during the entire period. Most of the papers were published by authors Fuller, Richard – 10, Gaston, Kevin J., who published 9 papers, and Richardson, Miles and Shanahan, Danielle, who published 7 papers on this topic. The categories vary from zoology to environmental studies, yet these studies are the widest, in this area 107 papers are submitted. Most of these publications were articles (319). 353 of these publications were published in English. These publications were analysed using open access software Cite space. Figure 1 shows the analysis of keywords by frequency. The 10 most used keywords were connectedness (count 57), health (count 47), benefit (count 44), scale (count 38), connection to nature (count 37), experience (count 36), green space (count 36), nature relatedness (count 34), conservation (count 31), biodiversity and environment (both count 27). The keyword analysis reveals, what aspects of relationship with nature are the most important and the main field of it is environmental sciences. After a quantitative analysis on the exclusion criteria (abstracts and titles of searched papers), 36 articles that investigate what does the relationship between human and nature means, why it is important, and how to maintain and preserve it were selected for qualitative analysis.

Analysis of historical paintings and visual material: To examine the historical development of human connection with the natural environment, a systematic visual content analysis of European artworks created between the Prehistoric times and 21st century was carried out. The material for the study was collected through an online search using Google, applying predefined keyword combinations ("landscape AND paintings" and "children AND city AND paintings") and searching in a historical books of art. In total, 117 artworks were selected for the analysis. The inclusion criterion required that each image depict at least one person in a natural setting or in proximity to identifiable natural elements. Following selection, the artworks were analysed in three stages: by prepared collage, focusing on how people, especially children, are visually represented in relation to their environment, what types of human–nature interactions are illustrated, and whether specific motifs reflect cultural attitudes toward childhood and nature during different historical periods. After preparing

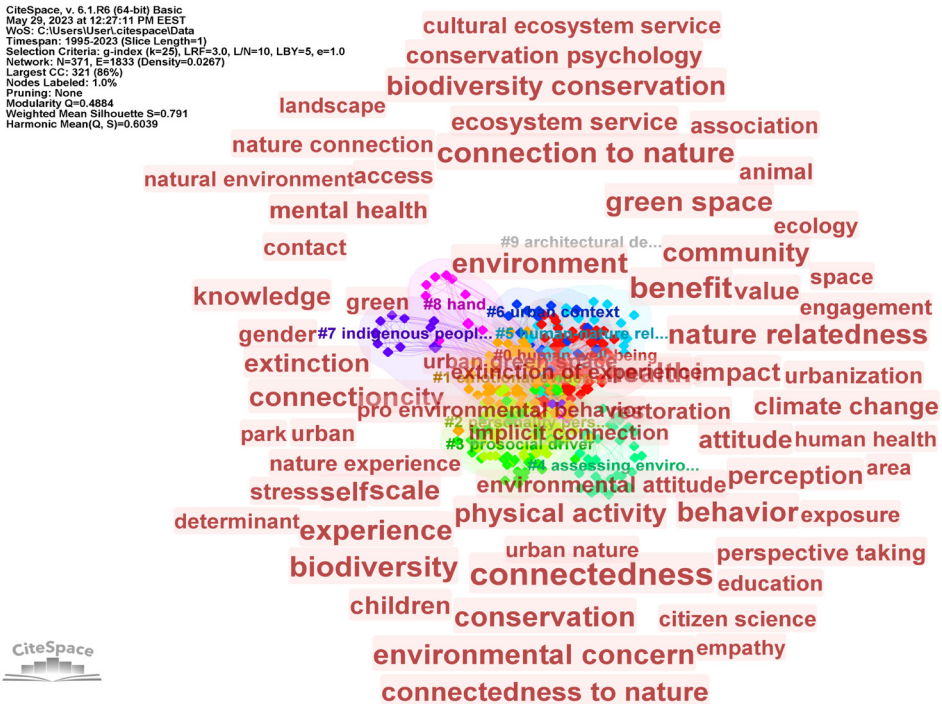


Fig. 1. Citespace analysis of bibliometric data from 353 publications provided by Web of science data search. The graph shows keywords by frequency, the threshold for the keyword's node is 10

the collage, an iconographic analysis was performed, during which:

- specific depicted objects were identified: people, plants, animals, landscape elements;
- the composition of the scene, the dominance of nature (e.g., dominant nature / nature as a background / urban nature) were determined;
- human activity was assessed: active play, exploration, passive presence, movement, observation;

Subsequently, a content category analysis was performed, in which a thematic category scheme was applied in order to assess the intensity of human-nature interaction.

Results. Literature analysis

The Concept of Connection to Nature

Many authors emphasize the importance of connection to nature [14]. Scientists have been increasingly interested in the relation to nature since the middle of the 20th century [18]. They define the connection with nature as the result of the process of biophilia, ecological development, when nature is perceived as a part of human being; a sense of belonging to a broad system of interactions between humans and the non-human world, in which human identity is revealed as a sense of unity with nature, that is, also, thoughts, experiences, behaviors, feelings of gratitude or states [17; 31].

Human connection with nature is a volatile feeling, it can change depending on various circumstances. A. Naess considers this connection to be a human ontological development process, when an individual regards nature as part of their own identity [17], is able to empathize with natural states. A. Leopold (1949) described this connection as person's perception as a participant in the broader biotic community. He considered the nonhuman part to be the earth, consisting of soil, waters, animals, and plants. He also encouraged fostering the relationship between man and nature, because then, according to him, people perceive themselves as a part of nature and take care of it more. Furness says that connecting with nature is returning to one's authentic self [17]. When describing the connection, people feel a sense of belonging to nature. Authors point out that the main definitions of connection with nature are integrating the natural environment into self-concept and experiencing oneself as belonging to nature. They distinguish dimensions of this connection with nature such as affective, cognitive and experiential. Other authors supplement these dimensions with philosophical, material, spiritual, well-being and cultural aspects [15]. Through these dimensions, according to the authors, the understanding of the relationship between man and nature is reflected.

Connection to nature (and forests) can be understood as a multi-dimensional human bond with natural environments that extends beyond material use and includes recreational, aesthetic, spiritual, cultural, and identity-related meanings. In this perspective, forests and natural areas are valued not only for their material benefits but also for recreation, aesthetic experience, spiritual and cultural well-being [20; 37]. These meanings are reinforced through cultural memory shaped by traditions, spirituality, and philosophy, including beliefs that forests and trees are sacred and that such experiences are transmitted through mythology and folklore [41]. Authors also note that spiritual experiences in forests may occur even outside formal religious frameworks, and that attitudes toward forests can express identification with a cultural community or a nation [39]. As Haggstrom suggests, this relationship is reflected in the ways people act in forest environments [18].

The perception and valuation of natural landscapes and forests

Being in nature, in the forest, we perceive the environment through our senses: by seeing changes in light, seeing changing colours of nature in different seasons, smelling the forest's scent, hearing the wind, birds, feeling contact with the ground, and temperature [18; 39]. All these sensations, according to the authors, cause different emotions. Hirchbeck points out that the two most important senses to perceive the forest are sight and hearing [30]. It is said that people especially appreciate the silence in nature when you cannot hear the car noise caused by civilization.

The perception of nature also depends on sociocultural factors and the person's mindset. According to Johnson, a forest photographer, hunter, and forester will perceive the forest differently due to their different experiences and expectations, individual characteristics [33]. According to Hirschbeck, our experience, attitude, needs, memories, values are important for understanding the forest [30]. The environment, its seasonality, weather, and places from which the landscape is observed are also important. The author distinguishes three layers of landscape perception: perception, when only the physical properties of the object are perceived; symptomatic, when a historical hint is given to the object, and symbolic meaning, when the object evokes certain feelings, for example, a sense of freedom.

The way a person identifies himself with nature is also important for the connection with nature [15]. The natural environment can cause both positive and negative emotions. These emotions affect our aesthetic experiences and experiences in nature [23], which can also cause fear or disgust [42]. A sense of security is very important for connection with nature [47]. The collision of people and wild animals, the anxiety of getting lost, invisible obstacles, crime, radical changes in the landscape, are indicated by the author as reasons for the distance from nature [5]. It is recognized that often this gap is determined by social, political, ideological norms or relations that do not allow people to see them as part of nature. The authors suggest that this connection is not preserved when a person focusses on "I" [16]. However, it is believed that people who have a greater connection with nature also maintain a greater sense of security in it [5; 47].

People can also have a negative impression of the forest if it is too transformed or too natural [37]. People see a forest with a lot of dead trees abandoned and neglected, and visible logging reduces the spiritual value of the forest. Hirschbeck says that urban dwellers prefer well-maintained urban forests that are not protected and have little biodiversity [30]. It can be assumed that urban areas that are not properly organized or abandoned are associated with insecurity because where there is a city, there must be human intervention. According to the authors, the most desirable urban landscapes are parks, composed of trees and open grassland, with rivers and lakes, and cliffs and caves that provide shelter [30].

Determinants of Connection to Nature

People can use and manage forests for large profits [36], the human relationship with the natural environment also depends on social, institutional, psychological and political environment [9]. Such cases often involve municipal forests, which are not maintained by residents but by local politicians. Here, forests are often managed only for profit [28]. Although Johnson suggests that humans, like animals, are innate in their adaptation to plant environments: as foxes instinctively know about caves, or birds about trees, so humans pay attention to unsafe places, colors, yet, according to Chang and others,

contemporary lifestyles have reinforced psychological and spatial separation between human living environments and nature [23; 33]. Other authors claim that if the distance from nature continues to increase, emotional connection to nature may decrease [3]. As a solution, they recommend creating biophilic cities that promote opportunities for natural experiences and to use biophilic design principles that would increase people's connection with nature and biodiversity.

Although the connection with nature is significantly influenced by social, institutional, and political contexts, it is practically realized through concrete human experiences in the natural environment. People encounter nature both passively, for example, by observing nature and actively, for example, by walking or picking mushrooms [8; 10]. People who have had experiences in such natural places as the coasts, mountains, forests claim to have felt the strength of nature in them, these places are perceived to be free of human control, in contrast to urban natural environments, which are seen as shaped and controlled by people [14]. Research shows that people's visits to places with greater natural value led to a stronger connection with nature, for example, comparing a greener urban area with a less green one, comparing rural with urban, protected or nonprotected areas [3; 21; 25]. As stated by authors, a stronger connection with nature is characteristic of those individuals who describe nature through personal experience (e.g., activities in nature, positive emotions) [22].

Man's relationship with nature varies depending on cultural and religious traditions. The prevailing anthropocentric environmental ethics in the West has led to the fact that man is considered superior to nature, and an instrumental value is given to nature. Such a dominant attitude separates people from the natural environment: anthropocentrism also leads to decreasing opportunities to experience nature, which leads to the "disappearance of experience with nature" and loss of connection [2; 46]. In the East, the relationship between nature and people was influenced by philosophical concepts such as Taoism, Confucianism and Feng Shui [23]. It was established that in Japan the forest is considered as subjective entity, and in Europe it is considered as objective formation [29]. In many parts of the world, especially among indigenous peoples, many ontological concepts do not separate a person from his or her environment [5]. For example, the American Indian community "huu-ay-at" believes that everything is one - animals, plants, and people. Their approach also leads to sustainable forest management [2].

A stronger connection to nature is associated with experiences in more valuable natural places and more active forms of interaction, yet this association varies across individuals. The connection with nature is influenced by human gender and many other people's characteristics [7; 40]. It is believed that men visit forests more often than women and have more diverse activities in them. Research also shows that encountering and learning about nature plays a very important role in connecting with nature. A person who knows nature better has a stronger connection with it [34], the living environment, cultural differences, dependence on the landscape, frequent or rare visits to the forest become important here [29]. The authors point out that the connection with nature is strengthened by a better knowledge of nature and contact with it in childhood [43], as well as the type of natural environment.

Childhood experiences as a basis for values of connection with nature

Connection with nature is particularly important in childhood, as it is during the early years of life that human values and attitudes towards the environment are formed. Childhood is a critical period when long-term habits and emotional connections are formed, so experiences with nature are particularly important at this time. If cities do not provide children with opportunities to experience nature, society's ecological awareness may decrease in the future. Research shows that children's time spent in green spaces has a direct connection with cognitive development, such an environment helps to improve working memory, algebra development, and motivation to learn [12; 19].

Research also shows that children who see more greenery relax more and experience less fatigue [29, 48]. Research confirms that the natural environment is an environment that is easier to process [45]. Children's attention focuses on natural elements such as trees, greens, flower beds and later on buildings, cars, and other urban buildings. Therefore, it is very important to create urban environments that encourage children's interaction with nature from an early age.

Childhood experiences in nature play a very important role in shaping children's long-term connection with nature [24]. Natural spaces — forests, meadows, rivers, various natural environments — provide a unique environment for free and creative play, which contributes to children's cognitive, emotional and social development. Natural spaces are suitable for children's play, which strengthens their connection with nature [43]. According to Haggstrom, forests have a more varied terrain, which leads to children's dynamic movements, the environment is more diverse in its forms, textures, and elements, which encourages exploring, touching, getting to know, encountering different biodiversity [18]. According to Klein, compared to other spaces, there are more opportunities for creative games in the forest environment, children gain more restorative experience here [44]. In the forest, unlike adults who run and walk more, children play cognitive, risky and imaginative games more. Collado and others argue that such positive and pleasant experiences in childhood promote interaction with nature in adulthood [40]. This leads to a greater desire to preserve biological diversity.

According to E. O. Wilson (1984), the biophilia hypothesis is characterized by an innate attraction to the natural environment, which is most active at an early age. The relationship with nature and forests in today's context is a complex matter, which determines many important moments, depending on the type of natural environment, the type of people, and access to the place. The fact that more people, especially children, spend most of their time in front of screens, perceiving information only by sight, without movement and other senses, could have major changes in our society, the natural environment, and its protection [3]. Children spend more time in schools, within the boundaries of the neighbourhood, and their perceived space changes drastically, from wide to narrow, limited by the gates of the school yard. However, the authors point out that it is important to have access to the forest, the natural environment, to maintain the connection [39].

It is still unclear what kind of natural environment in cities would encourage greater human-nature connection and human engagement and visitation [43]. This is a particularly important question because the connection between man, especially in his childhood, and nature can help create sustainable cities, which with increasing urbanisation these days is a guiding

principle for designers [4]. To prevent the connection with nature from being faded, it must be maintained constantly [17]. According to Fehnker, a 'connection to nature' involves 'knowledge about nature' [15]. This assumption indicates the need to study sociocultural factors as the need for nature education in children's lives. Knowledge and awareness of the benefits can contribute to greater willingness to conserve nature [50]. The nongovernmental organisation Outdoor Association, operating in Sweden since 1892, promotes life in nature and significantly shaped the outdoor educational experiences of many children [18].

Furness points out that childhood experiences can change and the connection with nature can be broken due to the characteristics of the environment in which one spends each day [17]. The authors claim that in a certain sense, biophilia is also a childish thing, because it can be lost when growing up, also children show a greater connection with non-humans [2]. Haggstrom points out that "connection to nature increases in childhood, dips in adolescence, and increases again in adulthood" [18].

Analysis of historical paintings and visual material

The relationship between man and nature over historical periods

The relationship with nature is said to have changed over historical periods. Based on this assumption, an analysis of art works - paintings, that focus on humans in a natural landscape - was carried out. After selecting paintings suitable for the topic, the purpose of the analysis was to prepare a collage from them (Fig. 2), and to determine how artists depicted man in nature and in the natural landscape, what was the relationship between man and nature, and how this relationship changed at different periods of time.

Haggstrom (2019) points out that there is an evolutionarily formed relationship between humans and the natural environment [18]. The authors indicate three main historical periods of forest use: the first period was dominated by hunting, gathering and shifting agriculture; in the second, the forest was used for agricultural purposes; in the third period, there was intensive use of the forest for industry [39]. In the early ages, the forest was an integral part of people's lives. The forest did not hinder society development and people did not have a significant impact on the forest ecosystem. Everything began to change, as people became farmers, and the forest became an obstacle to development - space was needed for cultivated fields, pastures, tools, buildings and structures, firewood. This led to a change in the relationship between man and nature.

This trend is also visible in works of art by the prepared collage. It was seen, that in prehistoric times, the focus of men was on animals and hunting scenes (Fig. 1.1). Plants and forests were not depicted. This changes in ancient history, when plants begin to be depicted fragmentarily, and man appears in the center of attention (Fig. 1.2). Plants occupy the lowest place in the hierarchy structure, but at the same time they are the basis of everything for survival. A connection with animals was also seen, especially in ancient times when God was depicted as an animal. It can be assumed that a connection with prehistoric times was still present, which shows an important connection with animals. The animal was uncontrollable, so it was deified. Later, man tamed animals and became superior to them.

The division of areas into different residential areas of people also has its own history. The opposition between settlements and nature is already found in the Latin and Greek traditions, especially in the Middle Ages. In the Middle Ages and Renaissance periods, man retains the main position and is the dominant figure (Fig. 1.3.). In the Middle Ages, man is above nature, nature is depicted as dependent elements. During the Renaissance, nature became a background, but here we can see the separation of civilization and separation from nature. This period is dominated by religious-themed works depicting a virgin with a baby in her arms.

In the Middle Ages, forests were intensively used for practical social needs – forests were cut down, wood was needed for construction, shipbuilding and other economic activities [14; 39]. With the development of industry, changing wood to iron, later to steel, concrete, the need for forest resources decreased, but as the authors point out, this development also distanced man from nature. This utilitarian approach to the forest and the increasingly pronounced separation of civilization from the natural environment are also reflected in the analyzed paintings: nature is usually depicted as a resource subordinate to man or a secondary background. The human figure and plot dominate the compositions, and the landscape (including the forest) becomes a stage where human activity takes place, thus visually emphasizing the supremacy of man and the increasing distance from nature.

The analysis of selected paintings from the 17th–18th centuries show that during this period, the landscape in Western art established itself as an independent genre, closely related to broader historical changes. In the 17th century, the landscape was increasingly depicted as the main subject of the plot, and the human figure in the composition was reduced. The 17th century is also the time of man's return to nature. In the 18th century, during the Enlightenment, with the strengthening of the tradition of landscape formation of estates and parks [33], nature began to be idealized in paintings: the forest and landscape were constructed as an aesthetic, recreational and emotional space. Man is

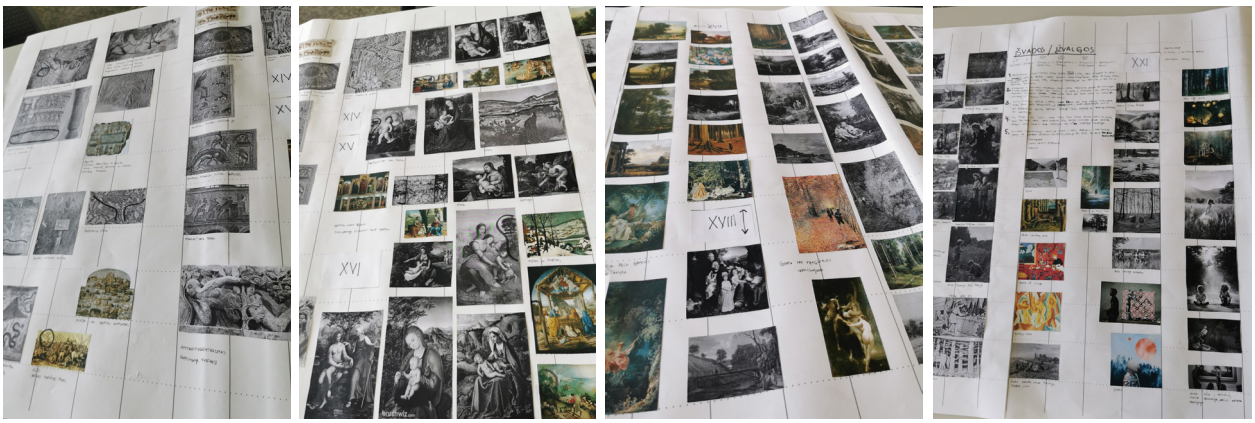
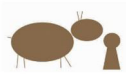


Fig. 2. Collage from paintings [created by the authors]

Table 1. The chronological change in the relationship between man and nature and its reflection in the works of art (paintings) [created by the authors]

No.	Period	The number of paintings	Predominant human activity	Characteristic composition	The pictorial diagram representing the relationship between man and nature
1.1	*Prehistoric times*	4	Hunting, tracking animals, survival. Man acts as part of nature	The focus is on animals and hunting scenes, the connection between man and nature is direct and functional. The human figure is very small, next to the animal; man is not dominant, he is dependent on nature.	
1.2	*Ancient times*	10	Religious rituals, mythological stories, daily work, early forms of agriculture. Man begins to dominate, but maintains a connection with the living environment.	Man becomes the central figure, while nature is depicted fragmentarily – plants, trees, hills perform a hierarchically lower, decorative or symbolic function. Man often has mythological significance, thus becoming the most important part of nature.	
1.3	*Middle Ages and Renaissance*	23	Religious contemplation, images of family and motherhood (Madonna with Child), agriculture.	Nature becomes the backdrop for the religious narrative, playing a secondary role in the paintings. Man dominates, nature envelops him as a backdrop.	
1.4	*XVII-XVIIII c.*	29	Rest, children's games, exploration in nature, walking.	Nature (green form) becomes larger than man, man decreases, a "return" of man to nature occurs. During this period, nature becomes a unique aesthetic and emotional space. Man no longer dominates the composition - he is reduced in scale or completely recedes into the background. The forest and the landscape are idealized, depicted as a refuge and a place of rest.	
1.5	*XIX-XX c.*	35	Observation, wandering, reflection.	Nature remains important, but it takes on a psychological and symbolic function. The forest becomes a reflection of an emotional state. Man and nature become on a similar scale, but clearly separated. Nature is no longer dominant.	
1.6	*XXI c.*	16	Being in nature as an exception, not an everyday occurrence. A clear shift of human life into urban and digital space.	Nature often finds itself in the background or becomes fragmented, functioning as a memory, nostalgia, or symbolic backdrop, often conveyed through photography or virtual environments.	

no longer in the foreground - nature, the forest becomes a refuge, a place for recreation, it is idealized. This is reflected in compositions dominated by natural massifs, changes in light and atmosphere, and perspectives of depth, and man often became only an observer, traveler or vacationer, an experiencer of nature.

At the same time, the historically changed attitude towards childhood becomes evident in the paintings of the 18th century: the ideal of the family is taking shape, childhood is increasingly perceived as a separate stage of development, associated with education, the formation of morality and the idea of "naturalness". These cultural changes are also visible in the analyzed images: children begin to be depicted as independent participants in the natural space – playing, exploring, moving in the landscape, and their activities highlight a different, more direct and less socially constrained relationship with the environment than that of adults. In this way, against the background of the historical transformations of the 17th–18th centuries, the landscape in the paintings becomes not just a background, but a significant space of experience, and the figure of the child – an indicator of the intensity and nature of the connection with nature.

Although childhood as one of the stages of a child's development appeared only in the 18th century, it can also be seen in the analysis of paintings, many authors in their works indicate the importance of childhood in creating a connection with nature [14; 18; 39; 43; 44; 49]. The authors suggest that exposure to nature in childhood leads to greater connectedness in adulthood. It is claimed that the connection between man and nature does not reflect the present, but the past. Research also shows that children who grew up in a rural environment had a greater connection to nature as adults [3]. Children are organically inclined to explore the environment, be interested in animals, plants, natural phenomena, therefore early interaction with nature helps to develop an emotional connection based on curiosity, a sense of security and dependent experience.

In the twentieth century, people again come to the fore, but a close connection with nature and the forest remains. During this period, art becomes symbolic, so natural elements often reflect the inner world of a human. Children are depicted as forest observers, researchers. The 21st century is the age of digitization when a person moves from the city to the digital world. Here you can feel the distance from nature, the forest. It becomes the background again. The industrial revolution shifted more and more people to the cities, which also affected the rhythm of people's lives. In the past, man had to follow the rhythm of nature, now he can survive without it. His daily life is limited to his workplace and home.

Conclusions

The depiction of humans in natural landscapes in Western painting reflects the historically changing relationship between humans and nature – from the early bond of unity and dependence, through the anthropocentric domination and instrumentalization of nature, to the modern psychological detachment and symbolic perception of nature, in which the forest becomes an indicator of these changes. In early periods, nature was perceived as an integral and often sacrificed part of human life, while in later historical periods, under the influence of the anthropocentric worldview, the development of agriculture, industrialization, and technologization nature gradually became subordinated, aestheticized or instrumentally used. This sequence of change is clearly revealed not only in the themes of paintings, but also in the compositional structure: the scale of the human figure, its position in the landscape, and in the change of the role of nature.

In the prehistoric period, man was depicted as an integral part of nature – images of hunting and animals dominate in paintings, while nature is not separated from human activity. In the period of antiquity, man becomes the central figure of images, while nature takes on a structured but hierarchically subordinate position. Plants and landscape elements usually perform a symbolic or decorative function. In the Middle Ages and the Renaissance, human dominance became even more established. Nature becomes the background of religious and social narratives. Civilization is separated from the wild environment. This period reflects the instrumentalization of nature. An important turning point occurs in the 17th–18th centuries – nature begins to function as an independent aesthetic and emotional space. The landscape and forest are idealized, the human figure in compositions is reduced or recedes into the background. In the 19th to 20th centuries, nature takes on an increasingly psychological and symbolic significance, and in the images of the 21st century, a clear technological and urban separation from nature is revealed. Nature is often reduced to a background, fragment, or symbolic image, and the direct relationship with it disappears. Contemporary works reveal the fragmentation of the natural environment and the dominance of the city.

Conducted analysis of works of art helps us to understand that the human connection with nature is not a modern discourse, but a long-term part of human culture, which has changed along with social, religious, and urban changes. Artistic narratives reflect the values of society; therefore, their analysis provides an opportunity to understand how over time people's experiences in nature changed and what cultural factors have led to strengthening or weakening of this connection and substantiate the importance of childhood for creating a connection with nature. Artistic narratives reflect and reinforce broader social trends: from nature as a natural environment to nature as a deficient experience. However, to understand the weakening of the human-nature connection in modern urbanized societies, it is necessary to pay attention to the fact that this connection is not a random or late-emerging phenomenon.

Results suggest that a positive relationship with nature is directly related to childhood, it is a critical period in which an emotional connection with nature is formed. It is formed in early childhood, when the first direct sensations and contact with the external environment determine how a person will later understand nature and their place in it. The impact of nature experienced in childhood has a long-term significance for emotional and cognitive development, and early experiences often establish value attitudes that persist in adulthood. In modern urbanization, children's everyday lives are increasingly moving away from natural environments, so the connection that used to form spontaneously now requires targeted support. It is this early connection that determines how a person will interpret nature in cultural and social systems, as well as how they will later behave in environmental contexts. The weakening of this connection may have consequences for the ecological future of society; therefore, its further study remains relevant and important. It is necessary to strengthen children's daily contact with various natural elements and ensure that this contact is not only visual, but also experienced through movement, play, and exploration.

Acknowledgements

The authors thank dr. Indre Gražulevičiūtė-Vileniškė for valuable comments and guidance during the preparation of the collage.

References

1. **Bailey A. W., Kang H.-K.** Walking and Sitting Outdoors: Which Is Better for Cognitive Performance and Mental States? *International Journal of Environmental Research and Public Health*, 2022, no. 19(24), p. 16638. https://doi.org/10.3390/ijerph192416638.
2. **Barragan-Jason G., Loreau M., De Mazancourt C., Singer M. C., Parmesan C.** Psychological and Physical Connections with Nature Improve Both Human Well-Being and Nature Conservation: A Systematic Review of Meta-Analyses. *Biological Conservation*, 2023, no. 277, p. 109842. https://doi.org/10.1016/j.biocon.2022.109842.
3. **Bashan D., Colléony A., Shwartz A.** Urban versus Rural? The Effects of Residential Status on Species Identification Skills and Connection to Nature. *People and Nature*, 2021, no. 3(2), p. 347–358. https://doi.org/10.1002/pan3.10176.
4. **Baur J. W. R., Ries P., Rosenberger R. S.** A Relationship between Emotional Connection to Nature and Attitudes about Urban Forest Management. *Urban Ecosystems*, 2020, no. 23(1), p. 187–197. https://doi.org/10.1007/s11252-019-00905-2.
5. **Beery T., Olafsson A. S., Gentin S., Maurer M., Stålhammar S., Albert C., Bieling C., et al.** Disconnection from Nature: Expanding Our Understanding of Human–Nature Relations. *People and Nature*, 2023, no. 5(2), p. 470–488. https://doi.org/10.1002/pan3.10451.
6. **Bratman G. N., Hamilton J. P., Daily G. C.** The Impacts of Nature Experience on Human Cognitive Function and Mental Health: Nature Experience, Cognitive Function, and Mental Health. *Annals of the New York Academy of Sciences*, 2012, no. 1249(1), p. 118–136. https://doi.org/10.1111/j.1749-6632.2011.06400.x.
7. **Carignano Torres P., Morsello C., Parry L., Pardini R.** Who Cares about Forests and Why? Individual Values Attributed to Forests in a Post-Frontier Region in Amazonia. *PLOS ONE*, 2016, no. 11(12), p. e0167691. https://doi.org/10.1371/journal.pone.0167691.
8. **Carman J.** Elders' Lifelong Connection with the Natural Environment. *Educational Gerontology*, 2011, no. 37(6), p. 488–498. https://doi.org/10.1080/03601277.2011.570203.
9. **Carrus G., Panno A., Aragones J. I., Marchetti M., Motta R., Tonon G., Sanesi G.** Public Perceptions of Forests across Italy: An Exploratory National Survey. i*Forest – Biogeosciences and Forestry*, 2020, no. 13(1), p. 323–328. https://doi.org/10.3832/ifor3394-013.
10. **Church S. P.** From Street Trees to Natural Areas: Retrofitting Cities for Human Connectedness to Nature. *Journal of Environmental Planning and Management*, 2018, no. 61(5–6), p. 878–903. https://doi.org/10.1080/09640568.2018.1428182.
11. **Congying A., Liu J., Liu Q., Liu Y., Fan X., Hu Y.** How Perceived Sensory Dimensions of Forest Park Are Associated with Stress Restoration in Beijing? *International Journal of Environmental Research and Public Health*, 2022, no. 19(2), p. 2–17. https://doi.org/10.3390/ijerph19020883.

12. **Dadvand P., Nieuwenhuijsen M. J., Esnaola M., Forns J., Basagaña X., Alvarez-Pedrerol M., et al.** Green Spaces and Cognitive Development in Primary Schoolchildren. *Proceedings of the National Academy of Sciences of the United States of America*, 2015, no. 112(26), p. 7937–7942. https://doi.org/10.1073/pnas.1503402112.
13. **De Bell S., Graham H., White P. C. L.** The Role of Managed Natural Spaces in Connecting People with Urban Nature: A Comparison of Local User, Researcher, and Provider Views. *Urban Ecosystems*, 2018, no. 21(5), p. 875–886. https://doi.org/10.1007/s11252-018-0762-x.
14. **Duvernoy I., Gambino M.** Where to Find Nature? Connecting with Nature in Urban and Non-Urban Areas in Southwestern France. *GeoJournal*, 2022, no. 87(4), p. 2771–2786. https://doi.org/10.1007/s10708-021-10392-8.
15. **Fehnker L., Pearson D., Howland P. J.** Exploring Conceptualisations of "Connections to Nature" from an Environmental Management Perspective: A Case Study in Tāmaki Makaurau Auckland, Aotearoa New Zealand. *Australasian Journal of Environmental Management*, 2022, no. 29(1), p. 46–63. https://doi.org/10.1080/14486563.2022.2035834.
16. **Frantz C., Mayer F. S., Norton C., Rock M.** There Is No "I" in Nature: The Influence of Self-Awareness on Connectedness to Nature. *Journal of Environmental Psychology*, 2005, no. 25(4), p. 427–436. https://doi.org/10.1016/j.jenvp.2005.10.002.
17. **Furness E.** Understanding the Lived Experience of Connection to Nature. *Conservation Science and Practice*, 2021, no. 3(7). https://doi.org/10.1111/csp2.440.
18. **Häggström M.** Lived Experiences of Being-in-the-Forest as Experiential Sharing with the More-than-Human World. *Environmental Education Research*, 2019, no. 25(9), p. 1334–1346. https://doi.org/10.1080/13504622.2019.1633275.
19. **Harper A., Hespos S., Gray T.** Nature Play in Primary School: Supporting Holistic Development Through Outdoor Learning. *Education Sciences*, 2025, no. 15(11), p. 1487. https://doi.org/10.3390/educsci15111487.
20. **Harshaw H. W., Tindall D. B.** Social Structure, Identities, and Values: A Network Approach to Understanding People's Relationships to Forests. *Journal of Leisure Research*, 2005, no. 37(4), p. 426–449. https://doi.org/10.1080/00222216.2005.11950061.
21. **Hatty M. A., Mavondo F. T., Goodwin D., Smith L. D. G.** Nurturing Connection with Nature: The Role of Spending Time in Different Types of Nature. *Ecosystems and People*, 2022, no. 18(1), p. 630–642. https://doi.org/10.1080/26395916.2022.2143570.
22. **Hatty M., Goodwin D., Smith L., Mavondo F.** Speaking of Nature: Relationships between How People Think about, Connect with, and Act to Protect Nature. *Ecology and Society*, 2022, no. 27(3), p. art17. https://doi.org/10.5751/ES-13369-270317.
23. **Hung S.-H., Chang C.-Y.** How Do Humans Value Urban Nature? Developing the Perceived Biophilic Design Scale (PBDs) for Preference and Emotion. *Urban Forestry & Urban Greening*, 2022, no. 76, p. 127730. https://doi.org/10.1016/j.ufug.2022.127730.
24. **Kiewra C., Veselack E.** Playing with Nature: Supporting Preschoolers' Creativity in Natural Outdoor Classrooms. *International Journal of Early Childhood Environmental Education*, 2016, no. 4(1), p. 70–95.
25. **Krejčí H., Stárová M., Hrbek I., Navrátilová M., Beranová M.** The Perception of Forests by the Czech Republic General Public. *Journal of Forest Science*, 2019, no. 65(6), p. 226–233. https://doi.org/10.17221/138/2018-JFS.
26. **Lande U. S., Herfindal I., Willebrand T., Moa P. F., Storaas T.** Landscape Characteristics Explain Large-Scale Variation in Demographic Traits in Forest Grouse. *Landscape Ecology*, 2014, no. 29(1), p. 127–139. https://doi.org/10.1007/s10980-013-9960-3.
27. **Lapka M., Vávra J., Sokolíčková Z.** Cultural Ecology: Contemporary Understanding of the Relationship between Humans and the Environment. *Journal of Landscape Ecology*, 2012, no. 5(2).
28. **Lawrence A., Gatto P., Bogataj N., Lidestav G.** Forests in Common: Learning from Diversity of Community Forest Arrangements in Europe. *Ambio*, 2021, no. 50(2), p. 448–464. https://doi.org/10.1007/s13280-020-01377-x.
29. **Luo F., Wang C., Lei H., Xiao Z.** Young Adults' Perception of Forests Using Landscape-Image-Sketching Technique: A Case Study of Changsha, Central China. *International Journal of Environmental Research and Public Health*, 2023, no. 20(4), p. 2986. https://doi.org/10.3390/ijerph20042986.
30. **Lupp G., Kantelberg V., Fäth J., Hirschbeck T., Käsbauer C., Ritter A., Schisslbauer J., Pauleit S.** Through the Eyes of Forest Visitors—Perception and Scenic Preferences of Munich's Urban Proximate Woodlands. *Forests*, 2022, no. 13(10), p. 1584. https://doi.org/10.3390/f13101584.
31. **Mackay C. M.** *Do People Who Feel More Connected to Nature Do More to Protect It? A Meta-Analysis*, n.d.
32. **Mackevičiūtė J.** Žmogaus Ir Gamtos Santykių Problemos Raida Filosofijoje. *Problemos*, 2000, no. 58. ISSN 1392-1126.
33. **Nelson T. M., Strong M. J., Johnson T.** Aesthetic and Biological Perceptions of Successional Forest. *Forests, Trees and Livelihoods*, 2006, no. 16(3), p. 247–267. https://doi.org/10.1080/14728028.2006.9752563.
34. **Oh R. R. Y., Zhang Y., Nghiem L. T. P., Chang C.-C., Tan C. L. Y., Quazi S. A., Shanahan D. F., et al.** Connection to Nature and Time Spent in Gardens Predicts Social Cohesion. *Urban Forestry & Urban Greening*, 2022, no. 74, p. 127655. https://doi.org/10.1016/j.ufug.2022.127655.
35. **Petri A. C., Koeser A. K., Lovell S. T., Ingram D.** How Green Are Trees? — Using Life Cycle Assessment Methods to Assess Net Environmental Benefits. *Journal of Environmental Horticulture*, 2016, no. 34(4), p. 101–110. https://doi.org/10.24266/0738-2898-34.4.101.
36. **Plieninger T., Shamohamadi S., García-Martín M., Quintas-Soriano C., Shakeri Z., Valipour A.** Community, Pastoralism, Landscape: Eliciting Values and Human-Nature Connectedness of Forest-Related People. *Landscape and Urban Planning*, 2023, no. 233, p. 104706. https://doi.org/10.1016/j.landurbplan.2023.104706.
37. **Referowska-Chodak.** Management and Social Problems Linked to the Human Use of European Urban and Suburban Forests. *Forests*, 2019, no. 10(11), p. 964. https://doi.org/10.3390/f10110964.
38. **Richardson M., Maspero M., Golightly D., Sheffield D., Staples V., Lumber R.** Nature: A New Paradigm for Well-Being and Ergonomics. *Ergonomics*, 2017, no. 60(2), p. 292–305. https://doi.org/10.1080/00140139.2016.1157213.
39. **Ritter E., Dauksta D.** Human–Forest Relationships: Ancient Values in Modern Perspectives. *Environment, Development and Sustainability*, 2013, no. 15(3), p. 645–662. https://doi.org/10.1007/s10668-012-9398-9.
40. **Rosa C. D., Profice C. C., Collado S.** Nature Experiences and Adults' Self-Reported Pro-Environmental Behaviors: The Role of Connectedness to Nature and Childhood Nature Experiences. *Frontiers in Psychology*, 2018, no. 9, p. 1055. https://doi.org/10.3389/fpsyg.2018.01055.
41. **Roux J.-L., Konczal A., Bernasconi A., Bhagwat S., De Vreese R., Doimo I., Marini Govigli V., et al.** Exploring Evolving Spiritual Values of Forests in Europe and Asia: A Transition Hypothesis toward Re-Spiritualizing Forests. *Ecology and Society*, 2022, no. 27(4), p. art20. https://doi.org/10.5751/ES-13509-270420.
42. **Salazar G., Monroe M. C., Jordan C., Ardoin N. M., Beery T. H.** Improving Assessments of Connection to Nature: A Participatory Approach. *Frontiers in Ecology and Evolution*, 2021, no. 8, p. 609104. https://doi.org/10.3389/fevo.2020.609104.
43. **Samus A., Freeman C., Van Heezik Y., Krumme K., Dickinson K. J. M.** How Do Urban Green Spaces Increase Well-Being? The Role of Perceived Wildness and Nature Connectedness. *Journal of Environmental Psychology*, 2022, no. 82, p. 101850. https://doi.org/10.1016/j.jenvp.2022.101850.
44. **Snell T. L., Simmonds J. G., Klein L. M.** Exploring the Impact of Contact with Nature in Childhood on Adult Personality. *Urban Forestry & Urban Greening*, 2020, no. 55, p. 126864. https://doi.org/10.1016/j.ufug.2020.126864.

45. **Stevenson M. P., Dewhurst R., Schilhab T., Bentsen P.** Cognitive Restoration in Children Following Exposure to Nature: Evidence From the Attention Network Task and Mobile Eye Tracking. *Frontiers in Psychology*, 2019, no. 10, p. 42. https://doi.org/10.3389/fpsyg.2019.00042.
46. **Sutton M. Q., Anderson E. N.** *Introduction to Cultural Ecology*. 3rd ed. Lanham, Maryland: AltaMira Press (Rowman & Littlefield), 2014.
47. **Tang I.-Ch., Sullivan W. C., Chang C.-Y.** Perceptual Evaluation of Natural Landscapes: The Role of the Individual Connection to Nature. *Environment and Behavior*, 2015, no. 47(6), p. 595–617. https://doi.org/10.1177/0013916513520604.
48. **Wells N. M., Evans G. W.** Nearby Nature: A Buffer of Life Stress Among Rural Children. *Environment and Behavior*, 2003, no. 35(3), p. 311–330. https://doi.org/10.1177/0013916503035003001.
49. **Wood C. J., Smyth N.** The Health Impact of Nature Exposure and Green Exercise across the Life Course: A Pilot Study. *International Journal of Environmental Health Research*, 2020, no. 30(2), p. 226–235. https://doi.org/10.1080/09603123.2019.1593327.
50. **Zelenski J. M., Nisbet E. K.** Happiness and Feeling Connected: The Distinct Role of Nature Relatedness. *Environment and Behavior*, 2014, no. 46(1), p. 3–23. https://doi.org/10.1177/0013916512451901.

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Kopsavilkums

Šajā pētījumā aplūkota cilvēka un dabas savstarpējā saikne, īpašu uzmanību pievēršot bērnībai kā būtiskam tās veidošanās periodam. Balstoties uz līdzšinējo pētījumu atziņām, tiek uzsvērts, ka agrīnā bērnībā gūtā pieredze dabā nosaka ne tikai emocionālās saiknes veidošanos ar apkārtējo vidi, bet arī ilgtermiņā ietekmē cilvēka ekoloģisko apziņu un psiholoģisko labbūtību. Tomēr urbanizācijas procesi, bioloģiskās daudzveidības samazināšanās un dabisku teritoriju sarukšana pilsētvidē ierobežo iespējas ikdienā veidot un uzturēt saikni ar dabu. Tas aktualizē nepieciešamību izzināt šīs saiknes kultūrvēsturiskos un vizuālos pamatus. Lai izprastu cilvēka un dabas saiknes kultūrvēsturisko kontekstu, pētījumā veikta vēsturisko mākslas darbu vizuāli grafiskā analīze, pievēršoties tam, kā dažādos vēstures periodos attēlota daba, bērni un to savstarpējā mijiedarbība. Analizēti Eiropas mākslas darbi un citi vizuālie avoti, aptverot laikposmu no aizvēstures līdz 21. gadsimtam. Analīzes mērķis ir noteikt, kā dažādos vēstures periodos mainījies cilvēka un dabas attiecību vizuālais atspoguļojums, kādas sociokulturālās nozīmes šie attēlojumi ietver un kā tie atspoguļo plašākas pārmaiņas sabiedrībā. Papildus veikta zinātniskās literatūras analīze, lai izprastu cilvēka un dabas attiecību transformāciju dažādos vēsturiskajos periodos.