
The Pre-Modern, Modern, and Post-Modern Metaphors of Nature

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Abstract:

Purpose: The question in the title of this paper determines the paper's contents. It will be considered whether the numerous metaphors of nature can be ordered according to the scheme: pre-modern – modern – postmodern, *oeconomia naturae* and *natura lapsa*, colors of metaphors. Throughout the centuries these colors were used by philosophical and scientific schools (thinking collectives), according to their own mental rules, for painting different images of nature. Then it will be discussed two main thinking styles concerning the human-environment relationship: *oeconomia naturae* and *natura lapsa*. Subsequently, it will be showed that metaphors of nature which are used in research and scientific explanations (i.e., outside of the sphere of everyday life and common language) can on one hand be joined into families of metaphors around the root metaphors and living words, and on the other be referred to as colors (also a metaphor). Throughout the centuries these colors were used by philosophical and scientific schools (thinking collectives), according to their own mental rules, for painting different images of nature.

Design/methodology/approach: The article is theoretical. To achieve the research goal, five desktop studies were carried out. They involved a critical analysis of texts on metaphors created in various scientific disciplines, mainly connected with the man-nature studies.

Findings: The social and cultural context of the past or strange thinking styles cannot be fully recognized. Only the metaphors–colors enable the general understanding of these images, and as a result many metaphors of nature, irrespective of the time that they came into being. This is also the main, original result of the study guarantee the continuity of the cognitive process. That is, the main reason why we need and use in our postmodern times so.

Originality and value: The research approach presented in this article is one of the few attempts at a scientific approach to the metaphorical understanding of nature. It allows you to better understand research concepts, practical activities, as well as the reflection of nature in literature, art, and everyday life. Numerous ecological conflicts take place in the form of diametrically different metaphors and understandings of nature. Therefore, this article is also relevant to ecological policy.

Keywords: Normative metaphors, cognitive metaphors, nature, pre-modernity, modernity, postmodernity.

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1. Introduction

The question in the title of this paper determines the paper's contents. It will be considered whether the numerous metaphors of nature can be ordered according to the scheme: pre-modern – modern – postmodern, *oeconomia naturae* and *natura lapsa*, colors of metaphors. Throughout the centuries these colors were used by philosophical and scientific schools (thinking collectives), according to their own mental rules, for painting different images of nature.

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2. Literature Review

The critical analysis of literature concerned two basic concepts for this article: metaphor and nature. "Nature" is a complicated word and has different meanings. For instance, Gold (1984) enumerates the following meanings:

- (1) the essential quality or character of something (the corrosive nature of salt water);
- (2) the underlying force which directs the world (nature is taking her course);
- (3) the material world itself, often the world that is separate from people and human society (to re-discover the joys of nature at the weekend).

It will be considered the third reasoning in this paper. From this point of view the word 'nature' cannot be properly interpreted without contextual inclusion of some other ambiguous and living words, such as: humanity, environment, artificiality, culture, society or technology.

There are obvious relations between them. To explain this approach to 'nature' Dutkowski (2023) suggested a model of the human-environment relationship which is true not in a universal sense but rather in a scientific sense. In other words it is simple, useful and consistent with empirical experience (Van Quine, 1986).

This model is based on a distinction between the ‘natural order’ and the ‘artificial order’ as well as between ‘humans’ and their ‘environment’, and consists of four elements (Table 1):

- Nature, representing the natural environment.
- Technology, representing the artificial environment.
- Man, representing the natural aspects of human individuals and populations.
- Culture, which represents the artificial, social order present in individuals and groups.

Table 1. Nature in the humanity–environment and natural–artificial relationships

	Environment	Humanity
Natural	NATURE	MAN
Artificial	TECHNOLOGY	CULTURE

Source: Dutkowski (2023), modified.

A similar approach is proposed by the Polish philosopher Cackowski (1990), who distinguishes four strata of the ‘human body’, which is understood as “a material structure, in the frame of which human spirit and culture is born and continues to exist”. The strata are as follows: human body in the literal sense (organism), natural body (the natural environment), technical body (the artificial environment) and social body (society).

According to Lakoff and Johnson (1980), “metaphor” is a category from the realms of language, thought, and action. In general, we use metaphors for identifying, describing, and establishing our attitudes to unknown, vague, and faint phenomena with the help of well-known and clear images of things. Cresswell (1997) adds that a metaphor can be thought of as a ‘substitution based on a certain kind of similarity’ (after Lodge) or an ‘association by substitution’ (after Barthes).

These authors emphasize the significance of metaphors in everyday life and common language, in the realm of practice and experience. I am trying, however, to focus on the role of metaphors in creating ‘scientifically’ justified images of nature, irrespective of the changing definitions of ‘science’.

Many authors prove that this role is crucial. Pepper (1961) maintains that *root metaphors* are the heart of *world theories*. Hesse (1963) argues that metaphorical analogies generate ideas which provide leaps in understanding, extending into scientific theorizing itself.

It should be said, however, that such an interpretation of metaphorical expressions is too poor, and not profound enough. The crucial significance of metaphors for creating the scientific images of the universe or nature results from using certain words. Words which have their origin in nature and the universe. Living words.

There were Danish philosophers and thinkers (for example Grundtvig, Kold, Kierkegaard, Logstrup) who introduced the notion of ‘living word’. According to this concept, as Nielsen (1997) writes, the sense of words expresses complex impressions. “They receive both ‘breadth and concise’. The breadth of a word is that what makes it possible to transfer its concrete sense to a distant realm of another character. It is thus the breadth of words that makes the creation of metaphors possible”.

The concept of “thinking collectives” and “thinking styles” has been proposed by Fleck (1935). The similar notion “paradigms” – has been proposed later by Kuhn (2012). In each cultural system with a given level of knowledge, a temporary social agreement considering the essence of the human–environment relationship emerges. In the contemporary postmodern world two such thinking styles can be observed, both connected with the pre-modern and modern interpretations.

Their roots lie in two images of nature which were developed in Europe between the 16th and the 18th century, but both also draw inspiration from the antique and medieval tradition. First there is the *oeconomia naturae* thinking style, that is an idea of the ‘harmonic nature’, dominant in pre-modern interpretations.

Second is an idea of *natura lapsa*, which embodies the image of the ‘fallen nature’, dominant in modern interpretations. The postmodern concepts that appear today use additionally an idea of the ‘sensitive and capricious nature’ (Sieferle, 1989).

Each thinking style incorporates a family of metaphors. These families, like a human family organized around the strong personalities, are organized around the most important root metaphors. They are so important because of the living words used to formulate them. In the pre-modern world, the living words are LIFE & ORGANISM, and the root metaphor is NATURE IS A LIVING BEING.

In the modern metaphors the living words are MATTER & ENERGY ($E=mc^2$), and the root metaphor is NATURE IS A MACHINE (Glacken, 1967; Gold, 1984; Lewis, 1964; Merchant, 1980; Pepper, 1984; 1996). Cosgrove (1990) speculates that modernist perspectives may be historically and culturally a sort of temporary aberrance.

Postmodernity does not cast aside the old metaphors but adds new ones: NATURE IS A GAME or NATURE IS CHAOS (Eigen and Rinkler, 1975; Radhakrishna and Rao, 1994; Stewart, 1990). The living words are LOVE & BEAUTY, because the aesthetic and emotional aspects of the human-environment relationships gain importance nowadays.

In a lecture held in Starbienino (Poland) in April 1997 the Polish-American eco-philosopher Henryk Skolimowski asked the audience: “How to think beautifully? To think with love was the answer”. The postmodern images of nature are painted

mainly with the pre-modern and modern colors. However, the way we see them has changed. As a result, we get a picture typical for postmodernism, full of ambivalence and ambiguity.

Metaphors of nature can also be ordered according to at least two other criteria. The first is the character of the construction of nature immanent in the metaphors. Eder (1988) distinguishes between cognitive and normative constructions of nature. This distinction can be used in classifying of metaphors of nature as well. The cognitive metaphors say what the essence of nature is. The normative metaphors establish the rules of human attitudes and behavior towards the natural environment.

The second criterion is based on a duality of the images of nature (colors), which can be observed during epochs. In the pre-modern approaches, there is 'the order of nature' on one hand and 'the disorder of nature' on the other (Merchant, 1980). In the modern times two images of nature competed – the 'mechanistic' and the 'romantic' (Janion, 1994; Woźniakowski, 1995). Postmodernism also uses two images: 'nature as an open dynamic system' – sensitive or even fragile (Laszlo, 1972) and capricious 'nature as dicing' (Eigen, Winkler, 1975; Stewart, 1990).

3. Methodology

The article is theoretical. To achieve the research goal, five desktop studies were carried out. They involved a critical analysis of texts on metaphors created in various scientific disciplines: 1. Analysis of the vast philosophical literature and the achievements of the natural, social, humanistic, technical, medical sciences and others 2. Adoption of a historical methodology assuming distinguishing periods of times of pre-modernity, modernity, and postmodernity. 3. Formulation of partial conclusions in the form of identification of different metaphors of nature used in the premodern, modern, and postmodern times, which have their own colors. 4. Division of identified metaphors into normative and cognitive. 5. Hypothesizing the currently dominant metaphor of nature as a female.

4. Results

The research conducted in accordance with the method described above enabled the identification of nature metaphors specific to the thinking styles (colors) dominant in the pre-modernity, modernity, and postmodernity eras: *oeconomia naturae* or *natura lapsa*. They are divided into cognitive and normative metaphors.

4.1 The Pre-Modern Color and Metaphors of Nature

The *oeconomia naturae* thinking style, accepted in the pre-modern interpretation, originated from the antique conception of nature being stable and constant, although exposed to natural cyclical changes. This easily observed cyclicality (movements of

planets, water circulation, vegetation) gives evidence in support of the inner order and harmony of nature, and moreover is interpreted as God's intention.

On one hand such thinking enabled the development of modern science, which became a process of discovering God's laws and not negating them. On the other hand, it is close to the later romantic vision of nature and the human–environment relation.

Table 2. *The pre-modern metaphors of nature*

Cognitive metaphors	Normative metaphors
order of nature	nature as the Garden of Eden
balance of nature	nature as a nurture
nature as a living being	nature as a vegetable
nature as an organism	nature as a book
The Great Chain of Being	human=cosmos
web of life	human as a part of nature
equilibrium in nature	
good nature	
bad nature	
sensitive nature	
nature as disorder	

Source: Own study.

The metaphors connected with the pre-modern image of nature are shown in the Table 2. They have cognitive and normative character. Most of them emphasize the organic and living character of nature, what enables both order and disorder in it.

4.2 The Modern Color and Metaphors of Nature

The *natura lapsa* thinking style, accepted by the modern interpretation, descends from the Christian belief in the original harmony of God's creation, embodied in the vision of Paradise. The fall of nature is the result of the original sin, God's anathema, and the disability of humanity.

According to this image nature does not possess a mechanism of inner equilibrium but demands constant control and intervention from outside. Humans therefore have not only the right but also a moral obligation to regulate and influence natural processes, accordingly to their needs. Some authors search for the reasons for today's environmental crises in the Judeo–Christian rule of making nature subordinate to humans.

A wide discussion on this issue was evoked by the article by White (1967). In the *natura lapsa* image the regulation of rivers, cutting down of forests, fighting of pests and other endeavors meant to protect humans from the disastrous effects of the

decay of nature, are not reprehensible. Such an interpretation justifies the need of an intensive exploitation of natural resources.

The philosophy of the necessity of correcting nature was taken over by modern economy, technology, and science. It is symbolized by artificial substitutes of natural items, e.g., artificial satellites, artificial lakes, artificial fertilizers, artificial silk, artificial caoutchouc, artificial flowers et al.

There is a certain contradiction in the *natura lapsa* thinking style which weakens the hope for a total control over nature by humans. Since theoretically there are no regularities present in nature, no science is possible, and what follows is that not scientifically justified forming of the environment is possible. Therefore, the program of classic science is based upon the pre-modern *oeconomia naturae* thinking style, which didn't become popular till the 18th century.

Table 3. *The modern metaphors of nature*

Cognitive metaphors	Normative metaphors
Mechanistic	
the natural order	dominion over nature
nature as a machine	control of nature
resistant nature	power over nature
mathematics as the language of nature	nature bound into service
	nature as a slave
	humans as modifiers of nature
Romantic	
the spirit of nature	the writing of nature
wild nature	a thought, imagined, dreamed nature

Source: Own study.

The modern metaphors of nature are presented in Table 3. As Merchant (1980) wrote, “two new ideas, those of mechanism, and of the domination and mastery of nature, became core concepts of the modern world”.

4.3 The Post-Modern Color and Metaphors of Nature

Both above-mentioned thinking styles (colors) are certain ideal types and are not present in today's discussions in a pure form. Rather use is made of elements of them, often in a way that is inconsequent and full of contradictions. This inconsequence and the inner contradictions of some methods of interpreting environmental problems make us call them postmodern. The supporters of the pre-modern interpretation often call for a 'return to nature', as did the romantics (Thoreau, 1854).

Industrial civilization is, according to them, the main reason for environmental problems, and its rejection a solution to these problems. The romantic roots of

contemporary environmental movements are unquestionable, although they aren't always immediate or undergoing unambiguous interpretation (Pepper, 1984). The above-mentioned conflicts are not the only ones about nature in our approaching postmodern times. Even in science there is no clear idea about the essence of nature.

As a result, the classical scientific image of nature is slowly losing its dominant position in culture. The inhabitants of the postmodern world discover the beauty of nature not only in picturesque landscapes, but also in fractals and pictures of distant stars (Porteous, 1996; Skolimowski, 1992). They learn to love it and to be partners with it, even in a game, not just to understand or influence it. The metaphors in Table 4 show this trend very clearly.

Table 4. *The postmodern metaphors of nature*

Cognitive metaphors	Normative metaphors
nature as a system	love to nature
nature as chaos	lust for nature
nature as dicing	natural products
Gaia – a living planet	limits of growth
capricious nature	carrying capacity
sensitive nature	game with nature
beauty of nature	human as partners of nature
natural beauty	

Source: Own study.

5. Discussion

The above discussed cognitive and normative constructions of nature, belonging to different time-varying colors, must be completed by symbolic ones (Eder, 1988; Janion, 1994). The most common, known, and inspiring symbolic image of nature is that it is feminine. “Nature as a female” is the topic and root metaphor in the widely discussed book of Merchant (1980).

This metaphor is present during the whole history of human culture – from the ancient world to postmodern contemporary life. In the pre-modern – antique and medieval – images the nature–woman is a source, a carrier, and a donor of life. She is a **mother**.

In the modern world dominated by men she is an object to be conquered, and then – a servant or even a slave, simply a **wife**. At the present postmodern day we see the beauty of a female, and we admire her for it, like a **lover**. Have a beautiful, fit body, be sexy, and all the time be ready for love (Melosik, 1996). This is the main cultural command for women Anno Domini 2020. You may not believe that these metaphors, and their sequence are of any importance.

6. Conclusion

The social and cultural context of the past or strange thinking styles (colors) cannot be fully recognized. Only the metaphors enable the general understanding of these colors, and as a result guarantee the continuity of the cognitive process.

That is the main reason why we need and use in our postmodern times so many metaphors of nature, irrespective of the time that they came into being. The contemporary postmodern understanding of the essence of nature is multicolored. This is also the main, original result of the study.

References:

- Cackowski, Z. 1990. Cztery warstwy ciała ludzkiego [Four layers of the human body]. In: J. Kopczyński, A. Siciński (red.), *Człowiek-Środowisko-Zdrowie*, 23-24, Ossolineum.
- Cresswell, T. 1997. Weeds, Plagues, and Bodily Secretions: A Geographical Interpretation of Metaphors of Displacement. *Annals of the Association of American Geographers*, 87(2), 330-345.
- Cosgrove, D. 1990. Environmental thought and action: pre-modern and post-modern, *Transactions of the Institute of British Geographers*, 15(3), 344-358.
- Dutkowski, M. 2021. Konflikty ekologiczne [Ecological conflicts]. Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin.
- Dutkowski, M. 2023. Model of and integrated ecological system Nature – Man – Technology – Culture. *European Research Studies Journal*, Volume XXVI, Issue 2, 176-189.
- Eder, K. 1988. *Die Vergesellschaftung der Natur*, Suhrkamp Verlag, Frankfurt am Main.
- Eigen, M., Winkler, R. 1975. *Das Spiel*, R. Piper Co. Verlag, München.
- Fleck, L. 1935. *Entstehung und Entwicklung einer wissenschaftlichen Tatsache*, Benno Schwabe und Co. Verlagbuchhandlung, Basel; reprint 1980.
- Glacken, C.J. 1967. *Traces on the Rhodian Shore. Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century*. University of California Press, Berkeley.
- Gold, M. 1984. A history of nature. In: D. Massey, J. Allen, et al., (ed.) *Geography matters! A reader*. Cambridge University Press, Cambridge, 12-33.
- Hesse, M.B. 1963. *Models and Analogies in Science*. Sheed and Word, London.
- Janion, M. 1994. *Kuźnia natury [Nature's forge]*, słowo/obraz, Kraków.
- Kuhn, T. 2012. (first edition 1962). *The structure if scientific revolution*. University of Chicago Press, Chicago.
- Maturana, H., Varela, F. 1987. *Der Baum der Erkenntnis. Die biologischen Wurzeln des menschlichen Erkennens*, Scherz, Bern - München.
- Merchant, C. 1980. *The Death of Nature. Women, ecology and the scientific revolution*. Harper and Row, San Francisco.
- Laszlo, E. 1972. *The Systems View of the World*. G. Braziller, New York.
- Lewis, C.S. 1964. *The Discarded Image. An Introduction to Medieval and Renaissance Literature*. Cambridge University Press, Cambridge.
- Melosik, Z. 1996. *Tożsamość, ciało i władza [Identity, body and power]*, Wydawnictwo Edytor, Poznań-Toruń.
- Pepper, D. 1984. *The Roots of Modern Environmentalism*. Croom Helm, London Sydney.

- Pepper, D. 1996. *Modern Environmentalism. An introduction.* Routledge, London and New York.
- Pepper, S. 1961. *World Hypotheses.* University of California Press, Berkeley.
- Porteous, J.D. 1996. *Environmental Aesthetics. Ideas, Politics and Planning.* Routledge, London-New York.
- Radhakrishna Rao C. 1994. *Statistics and Truth.* Council of Scientific and Industrial Research, New Delhi.
- Sieferle, R.P. 1989. *Die Krise der menschlichen Natur. Zur Geschichte eines Konzeptes.* Suhrkamp Verlag, Frankfurt am Main.
- Stewart, I. 1990. *Does God Play Dice? The New Mathematics of Chaos.* Penguin Books.
- Thoreau, H.D. 1854. *Walden, or life in the woods,* Polish edition: 1991. *Walden, czyli życie w lesie,* PIW, Warszawa.
- Van Quine, W.O. 1986. *Granice wiedzy i inne eseje filozoficzne [The Limits of Knowledge and Other Philosophical Essays].* PIW, Warszawa.
- White, L. 1967. The historical roots of our ecological crisis. *Science*, 155, 1203-7.
- Woźniakowski, J. 1995. *Góry niewzruszone. O różnych wyobrażeniach przyrody w dziejach nowożytnej kultury europejskiej [The mountains are immovable. About various images of nature in the history of modern European culture].* Znak, Kraków.