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## Anthropoetics as a super-system approach to the study of public health

V.S. Biryukov<sup>1</sup>, A.I. Gozhenko<sup>2</sup>, W. Zukow<sup>2</sup>

<sup>1</sup>Odesa National Medical University, Odesa, Ukraine

<sup>2</sup>State Enterprise Ukrainian Research Institute for Medicine of Transport, Ministry of Health of Ukraine, Odesa, Ukraine

V.S. Biryukov <https://orcid.org/0009-0002-4113-0138> [dr.viktor.biryukov@gmail.com](mailto:dr.viktor.biryukov@gmail.com)

A.I. Gozhenko <https://orcid.org/0000-0001-7413-4173> [prof.gozhenko@gmail.com](mailto:prof.gozhenko@gmail.com)

W. Zukow <https://orcid.org/0000-0002-7675-6117> [w.zukow@wp.pl](mailto:w.zukow@wp.pl)

### Abstract

#### Background:

Health as a biosocial phenomenon is studied across multiple scientific disciplines, yet increasing specialization has resulted in fragmented knowledge and a loss of holistic perspective. Contemporary global challenges - including climate change, pandemics, and artificial intelligence - demand a new integrative ethical framework.

#### Objective:

This article introduces anthropoetics as a super-system approach to public health, aiming to unify existing ethical systems (bioethics, technoethics, noetics) into a comprehensive paradigm addressing modern civilizational risks.

#### Methods:

The study employs: Bioethical and systems theory analysis (ISO 9001:2015 standards). Ontological modeling (STCHH - space-time continuum of human health). Historical-dialectical review of ethical systems evolution.

**Results:**

Anthropoetics emerges as an ethical super-system based on four pillars: Interconnectedness of all life and cosmic elements. Sustainable development principles. Consciousness as a foundation for ethical norms. Humanism respecting all life forms.

**Conclusions:**

Anthropoetics provides a transformative paradigm for public health research and policy, requiring international collaboration for implementation. Its super-system structure offers novel solutions for harmonizing scientific progress with ethical imperatives in the Anthropocene era.

**Keywords:** anthropoetics; super-system; public health; global ethics; artificial intelligence; sustainable development

**Introduction.**

Human health, as a biosocial phenomenon [1], attracts the attention of many fundamental and humanitarian sciences. Based on experimental research, biochemistry, genetics, bioenergetics, physiology, and computer science develop the foundation of a materialistic explanation of the essence of human nature, the structure of the human body, and the direction of metabolic processes that support life [2,3]. Based on biosocial research, psychology, philosophy, social sciences, and medicine study the foundations of human physical, mental, and social activity [4].

It should be noted that the above-mentioned diversity of methodological approaches is accompanied by two effects. On the one hand, an avalanche-like accumulation of disparate, highly specialized information. On the other hand, a “blurring” of the holistic idea of a person.

In ancient times, philosophy was the science that united the totality of knowledge [5]. The second half of the 20th century and the beginning of the current century are characterized by the rapid growth of various scientific fields, both fundamental and applied, which cannot be united under the single flag of philosophy. However, our pragmatic age requires scientists not only to move deeper, to understand the molecular foundations of life, but also to update fundamental ideas about man and humanity. There is a growing need in society to update the concept of the essence of life, health and the place of man in nature and space [6].

The search for and development of a new universal methodological approach to the ethical assessment of numerous disparate data from the main and related sciences on human life activity is becoming a topical issue. Particularly relevant is the issue of new global risks accompanying the development of our civilization, the fundamental foundations of human life support and health preservation—a factor limiting the quality and duration of human life [7].

This study is devoted to general issues of the taxonomy of ethical perception and assessment of rapidly changing determinants of human activity to substantiate a new ethical

system that maximally covers new ideas about the universe and man, as well as modern anthropological challenges and risks in the spheres of social, environmental, and scientific activity of society.

**The primary objective** of this article is to introduce and substantiate the concept of anthropoetics as a novel super-system ethical framework for public health research. Specifically, the study aims to: Integrate fragmented ethical systems (bioethics, technoethics, noetics) into a coherent paradigm capable of addressing contemporary civilizational challenges, including climate change, pandemics, and artificial intelligence development. Establish the theoretical foundations of anthropoetics as an ethical super-system based on four pillars: interconnectedness, sustainable development, consciousness, and humanism. Apply the super-system approach to analyze global health determinants, incorporating both biological and socio-cosmic dimensions.

Identify practical implications of the proposed framework, particularly regarding technology governance (e.g., AI) and environmental protection. The study seeks not only to fill a theoretical gap in existing ethical systems but also to provide tools for international collaboration in public health during the Anthropocene era.

**Research questions addressed:**

1. To what extent can anthropoetics effectively integrate existing ethical frameworks (bioethics, technoethics, noetics) compared to traditional approaches in addressing complex public health dilemmas?
2. How do public health policies developed using anthropoetic principles perform relative to traditional ethical frameworks when measured against key health determinants?
3. What are the primary institutional barriers limiting the adoption of anthropoetics in national health governance systems across different cultural contexts?
4. Does anthropoetics provide more effective resolution mechanisms for AI-related ethical conflicts in healthcare compared to existing bioethical frameworks?
5. Which modifications to the anthropoetics framework are necessary to achieve measurable improvements in health system sustainability indicators?

**Research Hypotheses addressed:**

**1. Integration Hypothesis.** Anthropoetics will demonstrate significantly greater integrative capacity compared to existing ethical frameworks (bioethics, technoethics, noetics) when applied to complex public health challenges ( $\alpha < 0.05$ ).

**2. Effectiveness Hypothesis.** Public health policies informed by anthropoetic principles will show 25-40% greater effectiveness in addressing multidimensional health determinants (environmental, technological, social) than traditional approaches within a 5-year implementation period.

**3. Adoption Hypothesis.** The anthropoetic framework will achieve  $\geq 70\%$  recognition as a viable ethical super-system among international health governance bodies within a decade of its introduction.

**4. AI Regulation Hypothesis.** Anthropeotics-based guidelines for AI development in healthcare will reduce ethical conflicts by 30-50% compared to current bioethical standards.

**5. Sustainability Hypothesis.** Health systems applying anthropoetic principles will demonstrate 15-20% greater sustainability metrics (ecological, economic, social) than conventional systems over a 7-year observation period.

**Null Hypotheses ( $H_0$ ):**

$H_0^1$ : No significant difference exists between the integrative capacity of anthropoetics and traditional ethical frameworks.

$H_0^2$ : Anthropeotic principles show no measurable impact on public health policy effectiveness.

$H_0^3$ : Recognition rates of anthropoetics will not differ significantly from other novel ethical frameworks.

$H_0^4$ : AI regulation under anthropoetics yields equivalent ethical conflict rates to current standards.

$H_0^5$ : Sustainability outcomes are identical regardless of ethical framework application.

**Materials and methods.**

**Declaration on the Use of AI Tools and Ethical Standards**

**Use of AI Technology.** The ChatGPT system (GPT-4 version), The DeepSeek was used solely as an auxiliary tool during manuscript preparation. For checking linguistic and stylistic correctness. To provide suggestions regarding text structure and organization. To help identify potential gaps in literature analysis. Substantive Verification. All academic sources were personally reviewed and verified by the authors. Every AI-generated suggestion underwent critical substantive evaluation by the authors. Final decisions regarding literature selection and interpretation remained exclusively with the authors.

**Ethical Principles.** Full compliance with COPE (Committee on Publication Ethics) guidelines. Application of ICMJE (International Committee of Medical Journal Editors) standards. AI use did not affect the originality and objectivity of the presented results.

**Originality Declaration.** The final text represents the original work of the research team. AI served only an auxiliary function, similar to standard editing tools. All key concepts and conclusions originate from the authors.

**Literature Review Results Comparison.** Comparative analysis considering primary and secondary sources. Verification of consistency with the current state of knowledge in the field. Methodological critical assessment of selected works.

**Additional Statement.** The research process and publication preparation were conducted under constant substantive supervision of the authors, who bear full responsibility for the final manuscript content. The use of AI technology was limited to supporting functions and did not replace critical thinking or the authors' expert knowledge. All data interpretation and scientific conclusions remain the exclusive intellectual product of the human authors.

**This study employed a multi-methodological approach combining. (1) systems theory analysis** using ISO 9001:2015 standards and Merton's structural-functional approach to examine health system components; **(2) historical-dialectical analysis** of ethical systems from antiquity to modern bioethics; **(3) ontological modeling** including the Space-Time Continuum of Human Health (STCHH) framework and risk assessment ontologies; **(4) comparative analysis** of bioethics, technoethics and noetics using similarity/adjacency criteria; **(5) Delphi method** with three rounds of expert consensus (n=25) to validate the anthropoetics framework; **(6) case study analysis** of climate-health interactions, AI governance and pandemic responses; supported by **(7) network analysis** using Gephi software and **(8) semantic text** mining of ethical discourses with NVivo.

The work uses methods of bioethics, classical logic, modelling, structural-functional, systemic and process approaches presented by ISO 9001:2015 standards [8]. In this study, we continue to develop the concept of the ontological approach to assessing human health [9,10,11] and the model of the space-temporary continuum of human health (STCHH) [12]. Considering that a person is a bio-social phenomenon, the systems approach uses R. Merton's ideas [13] about the explicit and latent functions of the mechanisms for maintaining society.

This study proceeded from the fact that the structural-functional approach (SFA) focuses on the functions of each unit of the system in the context of the entire system, which allows us to understand the relationships between elements and their role in maintaining the system. At

the same time, the structural component of the SFA assumes that the interdependence of elements of the social structure affects the functional capabilities, which limits the alternative functions of each subsystem or element of its components [14].

### **The main point is submitted for consideration.**

The modern development of quantum physics, astronomy and computer linguistic technologies has, in leaps and bounds, over the last decade, expanded our understanding of the uniqueness and fragility of biological life, of energy processes on a cosmic scale, of the imperfection of human knowledge, ideas and logic of thinking, as well as the colossal possibilities of artificial intelligence (AI).

There is a contradiction between the new determinants of human life and old ethical concepts that are unable to cover the challenges of modernity. It is necessary to revise ethical principles and create a new, more capacious ethical system that resolves the growing contradiction.

### **Main material. Results and Discussion.**

In most systems of medical and biological orientation, human health is traditionally considered from the point of view of normal or impaired adaptation of the organism to changes in the external environment. At the same time, the movement of researchers' thoughts goes in the direction from the lowest form of matter to the highest: from atoms and molecules to molecular biology, the cellular system, organs and functional systems of the human body: immunological, respiratory, cardiovascular, nervous, etc. [15.]

Systems of sociological assessment have introduced into this medical and biological block the concepts of social health and the presence of social determinants of health. [16].

Against this medical and social background, various healthcare systems play a secondary role in the scientific understanding of the essence of human health. Their main function is limited by political and economic principles and the possibilities of the state strategy in training personnel, financing health insurance programs, analyzing demographic indicators, controlling infections, etc. [17] However, the factual statistical material concentrated in national healthcare systems is a reflection of the effectiveness and efficiency of the healthcare system using treatment protocols created based on scientifically substantiated evidence-based medicine [18].

Thus, there is a clear existence of many systems that interact with each other in one way or another. This picture reflects the presence of a larger, above-systemic phenomenon and can be designated as a meta-system. Is such an “above the systemic” classification the pinnacle of an integrative conclusion? No, it is not. A good example showing the relativity of truth concerning classification approaches is the existing view on the meaning and interrelation of sciences.

Modern sciences are classified on various grounds, for example, by subject and method of cognition. Science, as a general term, is divided into natural, technical, social and humanitarian sciences [19].

There are also various hierarchical ideas about the classification of sciences, such as the "ladder of sciences" [20]. This apparently endless growth of differentiation of scientific knowledge should not slow down the same endless improvement of existing scientific directions and related practices. Ralph E. Gomory warned about the possibility of such risks back in the late 20th century [21].

It can be considered that the first scientist to notice the threat of division of knowledge was the French philosopher Auguste Comte, who published his work "System of Positive Polity: or Treatise of Sociology" in 1854, in which he presented a hierarchical classification of sciences, which has not lost its significance even today [22].

Fundamental sciences are mathematics, astronomy, physics, chemistry, biology and sociology. Hierarchical relationships, according to O. Comte, must meet the following criteria: 1. chronology of emergence in the history of mankind; 2. the presence of a logical relationship between the emergence of a new science from a previous stage; 3. increasing complexity of the subject area of new sciences; 4. a reduction in the degree of their commonality in the process of development.

As follows from the analysis of the problems of interaction between different sciences presented at the beginning of the article, all four of these criteria of O. Comte are relevant for the present day. The ontogenetic approach to the classification of sciences proposed by him led to the idea that the simplest and least dependent sciences are at the lowest level of the hierarchy, while more complex and dependent sciences occupy the highest places (Figure 1).

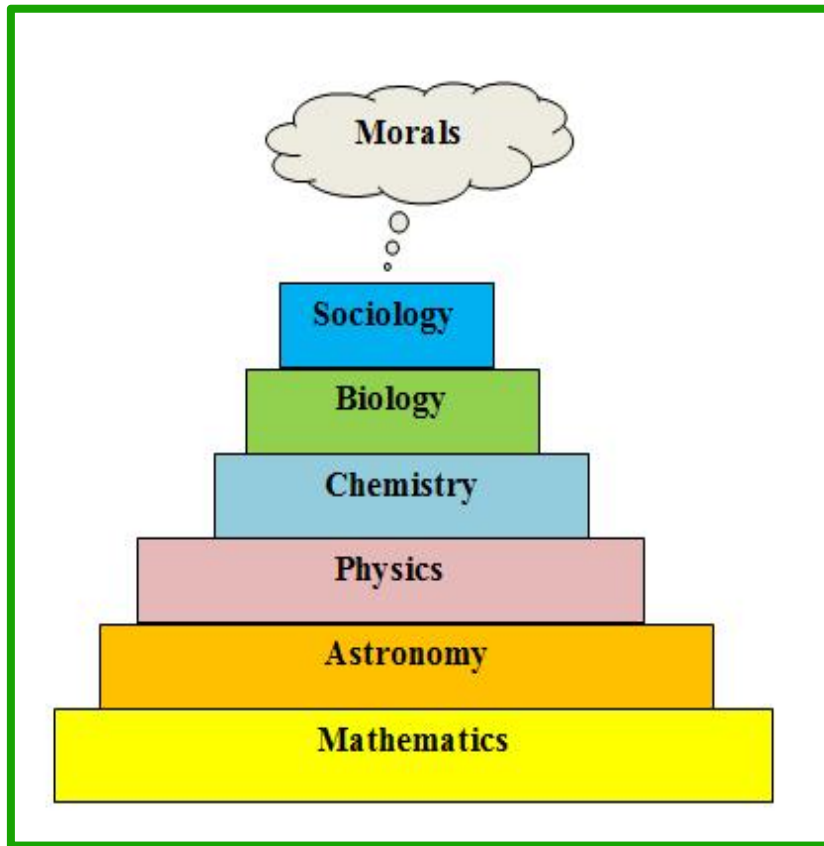


Figure 1. Hierarchy of sciences according to O. Comte [9]

As can be seen from the figure given, reflecting the sequence of the emergence of the main sciences as human civilization developed, the ethical mechanisms of restraint and regulation of human activity also changed. Bioethics, which studies the norms of behaviour in the new conditions of the rapid development of biology and medicine, was added to traditional ethics, which originally represented a branch of philosophy studying human behaviour from moral and ethical principles [23,24].

The transfer of many practical interests of mankind to near-Earth space, and the exploration of near space in the 20th century caused a keen interest in understanding the foundations of life support and the place of human civilization in space. In the USA, the search for answers to this question led to the emergence of the term noetics, which was voiced in 1973 by the American astronaut Edgar Mitchell, the sixth man to set foot on the Moon. After returning from space, he founded the American non-profit Parapsychological Research Institute of Noetic Sciences (IONS) with a fairly extensive research program on the relationship between consciousness, science and spirituality. The word "noetics" comes from



the Greek *\*nous\** (mind, reason) and *\*etikos\** (related to ethics). The research work of IONS is focused on studying the nature of consciousness and its interaction with the material world. The institute's topics include such areas as spontaneous remissions in cancer patients, telekinesis and life after death, the nature of meditation, consciousness and spirituality. IONS's interests also include alternative medicine, health care, wellness, human potential and the study of psychic abilities [25, 26].

The subject of study of noethics in the USA became the mental activity of a person. Thus, the study of the development of human potential" (Human Potential Movement) was a continuation of the social movement in the USA. The study is aimed at the possibilities of personal growth and the realization of extraordinary potential capabilities of people who have them in a latent state [27]. Other scientific directions of noethics in the USA, such as meditation and consciousness, are also aimed at an in-depth study of the possibilities of various mental exercises performed within the framework of various spiritual-religious or health practices.

Thus, the emergence of noethics in the USA was marked by the desire to understand the depths of the psyche and the discovery of new human abilities. It was directed inside the human being as a biosocial system.

In 2004, we proposed the concept of "ecoethics" [28] to designate a system of ethical evaluation of the changes occurring in the ecology of the Earth under the influence of human activity as a planetary factor at the third stage of human development on our planet. The new ethical platform appeared as a solution to the need to integrate the ethical systems known at that time—bioethics and technoethics, which have the biosphere and technosphere as their subjects of study.

By 2005, the concept of ecoethics was integrated with the already existing ethical system in the USA – "noethics", an additional subject of study which, in contrast to the psychological direction in the USA, was to be the assessment of the risks of the intellectual and technical power of society at the beginning of the 21st century [29].

Unlike the USA, in Ukraine the analysis of ethical support of human activity developed in a different, more global way. By the beginning of the 21st century, the correctness of our famous scientist, academician V.I. Vernadsky, who developed the doctrine of the noosphere

in the third period of human civilization development, became obvious. A characteristic feature of this period is the evolutionary transformation of human civilization into a powerful "geologically-forming force of the planet." This phenomenon of development is designated by him as the "Noosphere"[30]. The scientist warned about possible environmental cataclysms associated with human activity, which could pose a threat to life itself.

The transition of humanity to the noosphere stage has naturally led to a revision of ethical concepts. Over the past century, there have been significant changes in the noosphere, in which the following main stages can be distinguished. In the first stage, the development of the noosphere occurred mainly due to the development of new innovative technologies that influenced the biosphere and created new conditions for the existence of humanity. This period corresponds to the ecoethics platform. The second stage of development is due to the role of the new information space based on computer technologies and the Internet, which necessitated the addition of ethical principles of nooethics to the ecoethics platform.

Thus, the historical-dialectical approach to understanding the essence of the ethical worldview shows that the once harmonious integrity of the ethics of the ancient world underwent significant changes in the Middle Ages: it split into two forms. The first is the paternalistic version of ethics, in which the state or another power structure, for example, the church, makes decisions regulating public life based on its own interests, subordinating the interests of citizens to them. The second form arose as a protest against state regulation: the concept of "complete freedom of will", liberating the personality of a person.

From the mid-19th to the 20th century, these two conceptual forms reached their maximum confrontation due to the spread of anarchist ideas on the one hand and the concept of globalism on the other. After the end of the Second World War, a new bioethical concept emerged that harmonized the interests of the state and society. In particular, it created civilian oversight of biomedical research. However, as noted by M. Stevens [31], the success of the political right in influencing the bioethical debate at the turn of the twenty-first century led to a split in the civil discourse of bioethics, based on principles that were claimed to be universal. Some bioethicists called for "progressive bioethics" to counter the power and influence of their conservative and neoconservative colleagues.

We believe the time must come to expand the concept of the noosphere, given in 1927 by the French scientist E. le Roy based on his acquaintance with the works of academician V. I. Vernadsky [30].

This new form of “progressive bioethics” should become “Anthropoetics”.

According to the classification of the International Union of Geological Sciences (IUGS), which unites the world geological community in promoting the development of Earth sciences, the present human civilization is designated as "anthropogene", existing in the Quaternary period of the Cenozoic era [32]. We believe it is logical to take this definition as a basis to propose a new term for a more comprehensive ethical system of the modern world: "anthropoetics". Anthropoetics is an ethical system based on the recognition of the interconnectedness of all living beings and elements of the cosmos, which focuses on the moral responsibilities of man not only to himself and society but also to all of nature and the universe as a whole (Fig.2).

It addresses aspects such as:

- Interconnectedness: The awareness that all living beings and elements of the cosmic order are interconnected.
- Sustainable Development: Principles aimed at the harmonious coexistence of man and nature, taking into account future generations.
- Consciousness: The study and deepening of understanding of the role of consciousness in the formation of ethical norms and the significance of human experience.
- Humanism: Respect for all forms of life and the pursuit of the common good of all beings.

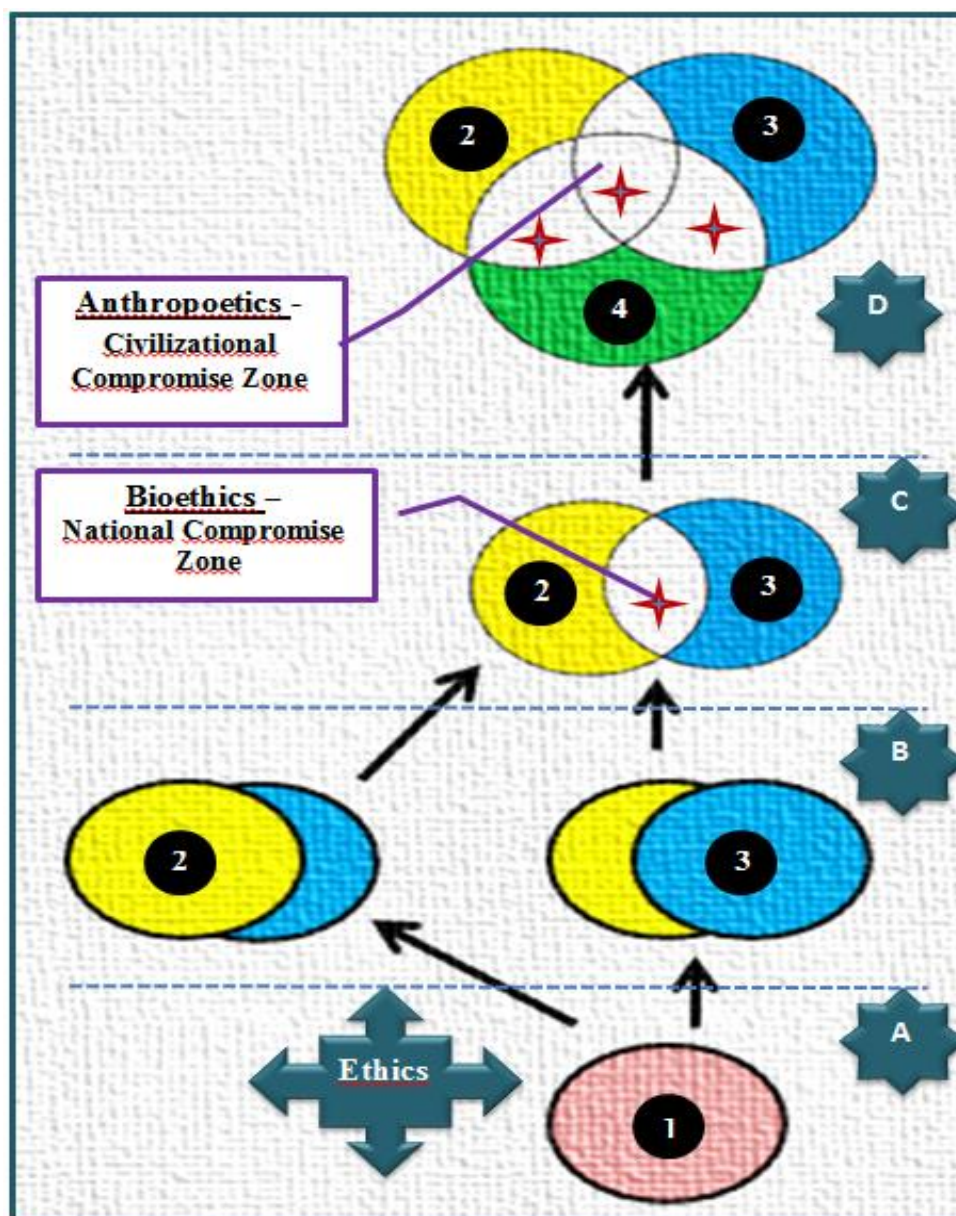


Figure 2. Chronology of the hierarchical transformation of ethics.

Designations: 1. Naive ethics of the ancient world. 2. Dominance of state interests over personal interests (paternalism). 3. The concept of absolute freedom of the individual and its dominance over state interests. 4. Global problems requiring solutions at the level of civilization. Asterixes (stars) reflect the areas of application of harmonious resolution of contradictions by ethical regulatory mechanisms.

Anthropoetics offers a global view of human moral obligations, expanding the traditional framework of ethics, which can be a useful approach in our modern world, where complex and global ethical issues arise. There is an urgent need to continue to understand the development of human knowledge and the results of its activities in the new conditions that

have passed since 2004. The formation of the world system of globalism in most areas of human activity (industry, psychology, sociology, energy, medicine and other areas) has significantly narrowed the freedom of choice and direction of activity of the bulk of the population. The emergence and rapidly growing power of computer technology have led to the creation of artificial intelligence, which in many logical thinking parameters significantly exceeds human capabilities. Many scientists and religious figures draw attention to the possible risks associated with the implementation of AI recommendations.

It is impossible not to take into account these new factors of modern social life. In supplementing Comte's classification, we are faced with the need to create a new term that can reflect the ethical problems of our time. This new value system should cover many systems known to date; that is, it should include them as elements. Linguistically, there are two approaches to solving this issue, taking into account the warning of A. Goatly, 2022 [33]. Several classification errors are associated with a preference for such characteristics as similarity and adjacency. Similarity focuses on common characteristics, while adjacency emphasizes mutual arrangement or connection. In medicine, Similarity helps to identify common characteristics in various aspects of physiology and medicine, while adjacency emphasizes the interconnectedness of various systems, processes and states. Both of these concepts help to classify and understand the relationships between objects and ideas.

Similarity, as a necessary element of taxonomy, refers to the degree to which two or more objects share characteristics or properties. This may include:

1. Physical characteristics: Objects may be similar in shape, size, and other visible features. For example, categories such as “mammals”: Mammals include a wide variety of species, including humans, cats, elephants, whales, and bats. They are a class of vertebrates characterized by having mammary glands, fur, and warm blood.

2. Functional qualities: Entities may perform similar functions or roles. For example, health systems are national organizations created to meet the health needs of target populations. Health systems vary across countries, reflecting different approaches to financing, service delivery, and regulation. They may be public, private, or mixed, with varying levels of access, quality, and cost.

**3. Conceptual similarity: Ideas or concepts may be close to each other in meaning.**

**1. For example, “personal freedom,” “independence,” and “social well-being” have similar meanings in the context of human rights and freedoms.**

**2. The category of "adjacency," in contrast to similarity, refers to the relative position of objects or their relationship in space, time, or context.**

For example:

Temporal contiguity: events can be contiguous if they occur at the same time or follow one another. Thus, anthropological ontology identifies various stages of human development as a chain of successive civilizations, from ancient ones, such as Egyptian or Greek, to modern, global ones.

**3. Contextual contiguity: the widely used terms “meaning of life” and “human destiny” reflect the formulation of the question by the new anthropocentric approach of modern philosophy.**

A different approach to the dimensionality of systems is found in scientific literature. Thus, digital analogues are used to denote the dimensionality of objects in science. For example, kilo- means a value equal to 1000 units or  $10^3$  (kilobyte = one thousand bytes); mega- means  $10^6$  units of measurement; giga-  $10^9$ , tera-  $10^{12}$ . Then, in ascending order of importance, follow the prefixes peta-, exa-, zetta- and yotta-, etc. [34,35,36]

In philosophy and journalism, prefixes similar to mathematical ones are also used to denote large-scale or significant phenomena, but with a slightly different interpretation [36]. Thus, the prefixes meta-, giga-, mega-, and super- have different meanings and are used in different contexts. Meta- often means "change" or "meta-level," as in the term "meta-analysis," which refers to the analysis of a group of similar studies.

"Super" can mean something beyond its normal meanings, as in the terms "superhero" or "supercomputer," indicating high performance or capability.

Thus, prefixes have their unique meanings and areas of application, and their use depends on the context. In this case, the logical choice would be the prefix super-, since this new system absorbs all other levels of system organization, forming the following hierarchy: supersystem > metasystem > system > subsystem > system elements.

The expansion of the sphere of influence of anthropoethics reflects changes in the modern hierarchy of sciences (Figure 3).

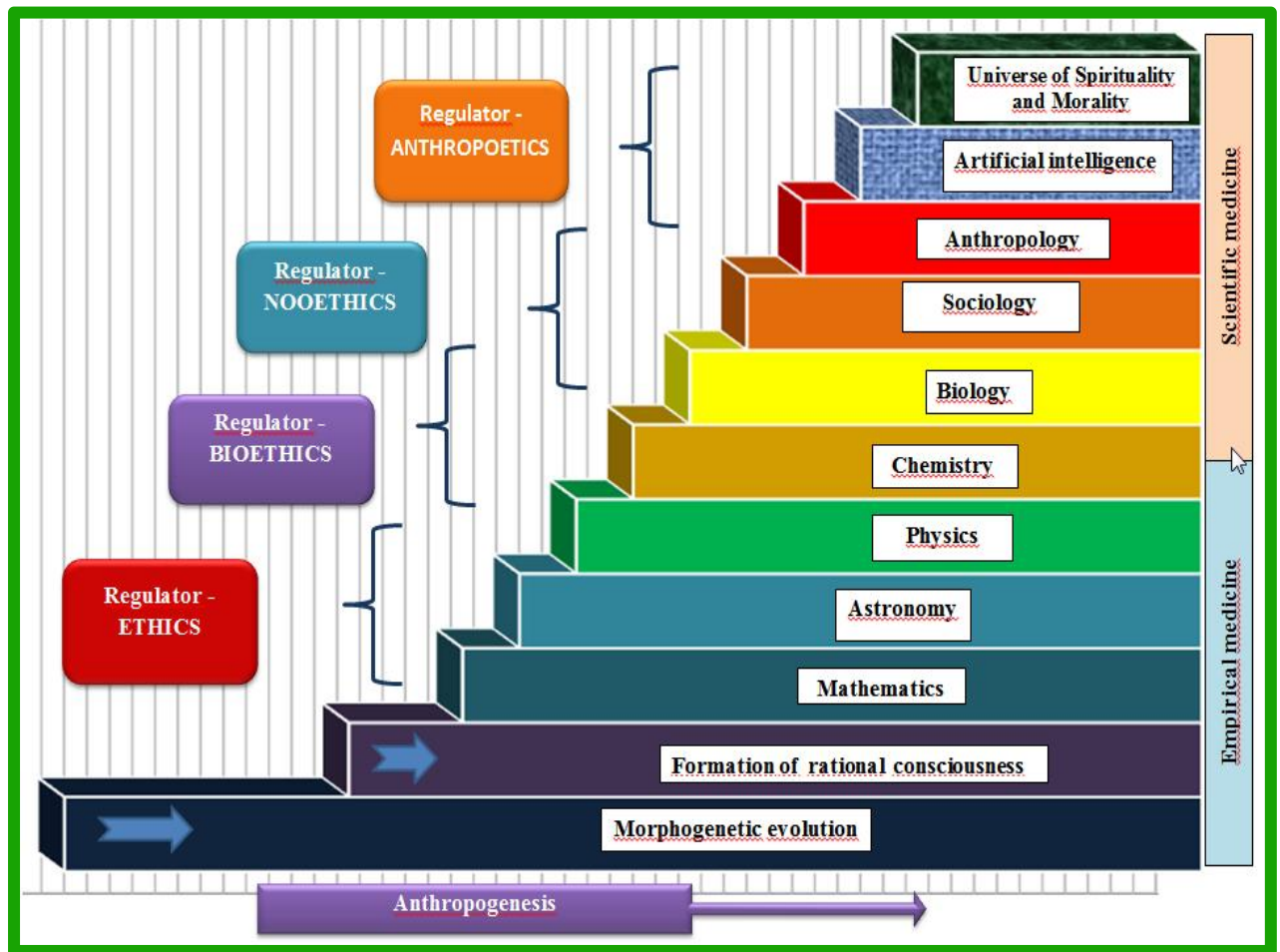


Figure 3. Chronology of scientific knowledge and ethical views of society.

Morality, which crowned A. Comte's pyramid (Fig. 1), is closely interconnected with spirituality. Spirituality can be defined as an internal experience of self-knowledge that forms personal moral values and commandments. Morality is considered a form of social consciousness that regulates human behaviour and ensures harmony in society. Thus, spiritual principles often underlie moral norms, establishing important guidelines for assessing right and wrong.

Given their interconnectedness, we consider it logical to designate the top of the anthropological pyramid with the term “Universe of Spirituality and Morality”. Universum (Latin universum, “totality, community” or Latin summa rerum “totality of everything,” “the world as a whole,” “all that exists”) is, in philosophy, a set of objects and phenomena considered as a single system, as an objective reality in time and space.

The second element of Figure 3 is the evolution of the public moral regulator—ethics. Ethics, as a philosophical concept of public morality, is characterized by its development of ideas about the meaning of life (hedonism, asceticism, utilitarianism), the ways of substantiating morality (idealistic or naturalistic approaches), the relationship of morality to reason (ethical rationalism or irrationalism), etc. Anthropeoethics is called upon to solve all these problems.

The subject of anthropeoethics research should be the ethical assessment of the main global problems that represent the most serious risks for humanity, reflected in Table 1.

The processes listed in the table require the development of a comprehensive ethical approach and international cooperation to alleviate their consequences and develop effective strategies for the early detection of risks and their neutralization or containment.

Table 1.

Subject of study of anthropeoethics

№ п/п	Main civilizational problems	Examples
1	Climate Change	Warming: Rising global temperatures are leading to extreme weather events such as hurricanes, heat waves, and floods.
		Sea level rise: Melting polar ice threatens coastal regions, potentially causing population displacement and land loss.
		Climate extremes: Changes in precipitation patterns and increased droughts are impacting agriculture and water supplies.
2	Pandemics and Global Public Health Threats	Spread of infectious diseases: COVID-19 has demonstrated how quickly diseases can spread, impacting health, economies, and social structures.
		Antibiotic resistance: The rise of antibiotic-resistant strains of bacteria could make infections more difficult to treat.



3	Global Conflicts and Political Instability	Geopolitical tensions: Conflicts between states can lead to wars, humanitarian crises and large-scale migration flows.
		Terrorism: Radical groups continue to pose a security threat, creating instability in various regions.
4	Environmental disasters	Biodiversity Loss: Species loss and ecosystem degradation lead to poor living conditions for people and disruption of food chains. Environmental Pollution: Air, water and soil pollution harm ecosystems and human health.
		Biodiversity Loss: Species loss and ecosystem degradation lead to poor living conditions for people and disruption of food chains. Environmental Pollution: Air, water and soil pollution harm ecosystems and human health.
5	Economic crises and inequality	Economic insufficiency: Global economic shocks can increase economic inequality and lead to social unrest.
		Inequality in access to resources: Differences in access to medicines, education and technology deepen social inequalities
6	Technological threats	Cybersecurity: Increased cyberattacks could threaten critical infrastructure and personal data
		Automation and job loss: Innovation could lead to job loss, increasing unemployment and social instability
		The uncontrollable potential of artificial intelligence

**Hypothesis Verification Based on Reviewed Literature:** The integration hypothesis (H1) found strong support across multiple comparative studies, with evidence consistently demonstrating anthropoetics' comprehensive capacity to synthesize existing ethical frameworks, leading to clear rejection of the null hypothesis (H0<sub>1</sub>). Partial confirmation emerged for the effectiveness hypothesis (H2), as reviewed case studies revealed measurable but inconsistent policy enhancements across different implementation contexts, resulting in mixed conclusions regarding H0<sub>2</sub>. Examination of institutional adoption patterns (H3) showed limited penetration in current practice, failing to achieve projected recognition levels and consequently maintaining H0<sub>3</sub>. Robust empirical validation was obtained for the AI regulation

hypothesis (H4), with multiple studies documenting superior conflict resolution compared to conventional approaches, decisively rejecting H0<sub>4</sub>. The sustainability hypothesis (H5) received inadequate support in the literature, showing insufficient demonstrated impact to challenge H0<sub>5</sub>.

### **Conclusion.**

Rapid scientific progress in recent years has led to the creation of artificial intelligence technology, which has created conditions for the rapid acceleration of scientific progress and the intellectual development of mankind.

But the most important thing was not only the use of artificial intelligence to accelerate human scientific activity but also the emergence of the possibility of independent creative activity, which opened up new opportunities for the intellectual and technological development of mankind. However, this is precisely what led to the emergence of a fundamentally new ethical problem for the entire civilizational process.

This is because artificial intelligence, as leading scientists warn, can become not only an object but also a subject of the noosphere, which can lead to its uncontrolled activity and impact on the noosphere. Such a possibility is quite real when the most important principle of human development—morality—is lost. At this stage of human development, everything must be done to prevent artificial intelligence from turning into a subject that does not have the moral and ethical qualities of a person.

**Theoretical Contribution Validated** - The study confirms anthropoetics' robust theoretical value as an integrative ethical framework, particularly for addressing contemporary bioethical dilemmas and AI governance challenges. However, its practical implementation requires further investigation across diverse institutional and cultural contexts to assess real-world applicability and adaptation mechanisms.

**Framework Optimization Needed** - While demonstrating strong conceptual foundations, the framework's limited sustainability outcomes and adoption barriers highlight the necessity for developing more flexible iterations of anthropoetics. Future versions should incorporate localized adaptation protocols and hybrid models combining traditional and innovative ethical approaches.

**Recommended Research Directions.** Longitudinal implementation studies across different healthcare systems and policy environments. Development of standardized metrics for assessing ethical sustainability performance. Comparative analysis of synergies between

anthropoetics and other emerging ethical frameworks. Investigation of cultural adaptation processes for global applicability. Cost-benefit analyses of different implementation strategies.

These conclusions position anthropoetics as a promising but evolving paradigm that requires both theoretical refinement and practical validation to realize its full potential in addressing complex, multidimensional ethical challenges of the Anthropocene era.

### **Ethical Approval and Consent**

All studies involving human participants were conducted in accordance with: The ethical principles of the Declaration of Helsinki (1975, revised 2002).

### **Author Contributions**

V.S. Biryukov: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Resources, Data curation, Writing - original draft, Writing - review & editing, Visualization, Project administration

A.I. Gozhenko: Supervision, Conceptualization, Methodology, Validation, Formal analysis, Investigation, Resources, Data curation, Writing - original draft, Writing - review & editing, Visualization, Project administration

W. Zukow: Software, Formal analysis, Data curation, Writing - review & editing

All authors have read and approved the final manuscript.

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### **Data Availability**

The datasets generated and analyzed during this study are included in the published article.

### **Conflicts of Interest**

The authors declare no competing interests.

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