

**ETHICAL DIFFERENCES BETWEEN SCIENCE AND PSEUDOSCIENCE**

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**Abstract**

This article explores the interaction of science and ethics in modern society. The author examines the role of ethics in the scientific process and the problem of the moral justification of knowledge. Differences between scientific and non-linear knowledge are discussed from the point of view of ethical considerations. The article also highlights the external and internal types of relationships between science and ethics, as well as the impact of scientific knowledge on society and their social consequences. The author notes that modern science causes controversy and doubts, and at the same time it should serve the benefit of mankind. In conclusion, the article emphasizes the need for scientists to participate in resolving ethical issues related to scientific development, and calls for a conscious awareness of the relationship between truth and error.

**Keywords:** science, ethics, society, social consequences, moral norms, responsibility, criteria of good and evil, distrust.

**Introduction**

Trends in the development of scientific knowledge are characterized by the desire for objectivity, the search for truth and the creation of new technologies. This is especially true in science, which has become relevant in the era of post-industrial society. In most modern countries of the world, the scientific model of social progress prevails, but philosophers such as M. Heidegger, A. Bergson noted the inconsistency of scientific knowledge in society. Thus, the role of scientific knowledge, the problem of testing scientific theories remains the focus of attention of many scientists today. At this point a question arises. How do science and ethics interact today? How is the problem of the moral justification of knowledge solved? These questions require consideration of differences in scientific and non-linear knowledge from the point of view of ethical considerations.

Ethics is a philosophical discipline, the object of its study is morality, and the central problem is the criterion of good and evil. In a broad sense, morality can be understood as a universal law, a moral and normative system that regulates relations within a particular social group.

It turns out that in the scientific process, relations are subject to a certain system of moral norms that arose and changed in the process of the development of science. The norms of this system reflect not only universal moral requirements and taboos, but also prohibitions on theft and falsification of information, lies. The ethics of science is directly aimed at protecting the specific values inherent in science. Here we are talking about the noble service of reality. But the result of scientific research is not always accurately assessed as true or false. Based on the ethical

system of science, knowledge must claim to be new, have a logically substantiated and experimentally confirmed basis.

### **Literature Review**

In the modern cultural space, the dialectic of science and ethics is an obvious reality. B.G. Kuznetsov said that "modern science has influenced the fate of people, and even more so after that. How to distinguish this from morality? Science brings with it not only good, but also evil," he reasoned. [1] In response, H. Poincaré predicts that "ethics and science are perfectly coordinated with each other as they develop" [2].

Traditionally, the relationship between science and ethics is divided into external and internal types. The first type of communication should include the moral responsibility of the scientist to society, an assessment of the social consequences of the use of scientific knowledge, as well as professional obligations to the scientific community. The second type of connection is always associated with the following dilemma: do ethical norms influence the emergence and development of scientific knowledge, in particular scientific programs, paradigms, research traditions, or should they be morally neutral.

In connection with the devaluation of the moral foundations of civilization as a result of the active penetration of science and technology into the life of every person, the tendency to bring the moral problems of science to the fore in the 20th century began to accelerate. So, in the ideological sense, the norms of ethics are judgments of a higher order than the judgments of science, which are based on the fact that the existence of science can only be justified by a position of service to the benefit of mankind.

### **Research Methodology**

It should also be noted that the relationship between truth and error corresponds to the problem of the criteria of good and evil and therefore should be perceived by scientists as a social task that cannot be ignored due to their lack of "professional" participation. This shift in the consciousness of modern man towards science is associated with a growing distrust of scientific development in our time, especially in relation to science.

Morality, the most important part of scientific knowledge, occupies a special place in modern culture. This is connected, on the one hand, with the increased requirements for a person as a subject of a technetronic "civilization of knowledge", and on the other hand, with an anthropological crisis, expressed in a crisis of selfhood, in the physical and spiritual degradation of a person. In addition, the increasing complexity of social change requires increased levels of responsibility and professionalism, and the high level of technological progress creates an unprecedented situation in which the fate of many may depend on the moral choice of one person. The relevance of morality is associated not only with the increased requirements for a person in a high-tech society, but also with crisis phenomena in culture, science and education. The methodological crisis of science is connected with the tasks of its humanization, the acquisition of a truly human dimension. The problem of knowledge humanization is facing all science, including all its fields. In the context of the methodological crisis, the paradigm of scientific

knowledge is ethics. The growing interest in ethics around the world is expressed in the development of practical ethics and the emergence of its new directions.

Accordingly, in such conditions, morality cannot remain within the framework of the concept of traditional responsibility. It should focus on a new, deeply rooted concept of responsibility, without neglecting the traditional approach to this problem. Therefore, the main problem of morality is the problem of responsibility.

### **Analysis and Results**

Modern techno civilization is increasingly feeling the burden of technological power. Man exists in a completely new, unique moral situation, when he has a powerful force capable of destroying all life on the planet. Man today has become the object of many technical, biotechnical and sociotechnical manipulations. Under such conditions, the problem of responsibility for technical and informational development becomes relevant.

A real scientist must know everything that has been achieved and is being done in the field of his scientific research, and when publishing the results of his research, he must clearly show which works of his colleagues and predecessors he trusted. Based on this, he should indicate the novelty of his work or the discovery he developed. In addition, in the publication, the scientist must give arguments and justifications in order to argue about the results he has obtained. At the same time, it is obliged to provide complete and reliable information that allows for an independent verification of its results. Pseudology does not accept such algorithms and does not impose such requirements on its "creators".

Knowledge does not have to be true, but it must objectively strive for it. In scientific research, error may arise from the inaccuracies of experience or theoretical conclusions, but it should never arise from a deliberate attempt to overturn or subvert scientifically proven propositions inherent in pseudology. Thus, scientific errors may not be detected immediately. Errors are identified and corrected in the course of work, in the process of discussing the results obtained. For a true scientist, debugging is a matter of honour.

In pseudology, there is a very wide range of psychological types, from the fan who is sure of the truth of his ideas, to the conscious fraudster and forger. Realizing that he is cheating, Fanatic continues to believe that he is doing the right thing. Fanaticism carries the same risk for science as dishonesty [3].

Pseudo-scientists grossly undermine ethics by resorting to extensive publicity in the press, falsifying themselves and unfairly presenting the results of others. There is no doubt that pseudology is closely related to moral disorders. Faraday described his life principles as follows: "The external signs of events should not bind the judgments of a scientist, he should not have a favorite hypothesis, he should be outside of schools and not have authority. He should pay tribute to objects, and not to individuals" [4].

### **Conclusion**

Thus, it is clear that moral problems are eternal. The dialogical nature of moral knowledge is connected with the absence of Absolute moral knowledge in the world. Moral norms are the result of human intelligence, because to be rational is to foresee the consequences of one's own

achievements. Since each person lives in society, moral standards are designed to predict the consequences for society and must ensure the preservation and improvement of the life of all mankind. The rational justification of morality expresses morality as a kind of logic. Logic is a system of rules of rational thinking, and ethics is a system of rational rules of behaviour. In this context, the absence of morality can be seen as the absence of reason.

Thus, the ethics of science is based on three pillars: humanity, responsibility and loyalty to science.

#### Адабиётлар:

1. Кузнецов Б.Г. Путешествия через эпохи. Мемуары графа Калиостро и записи его бесед с Аристотелем, Данте, Пушкиным, Эйнштейном и многими другими современниками. М.: Мол. гвардия, 1975. С. 166.
2. Пуанкаре А. Последние мысли // Пуанкаре А. О науке. М.: Наука, 1983. С. 517.
3. Мардонов Р. С., Ризаев И. И. Проблемы в инновационном развитии (на примере Узбекистана) // Географические и экономические исследования в контексте устойчивого развития государства и региона. – 2022. – С. 244-246.
4. Волькенштейн М.В. Трактат о лженауке // Химия и жизнь. 1975. № 10. С. 72-79.
5. Usmonov F. Problems of modern computer ethics // American Journal of Research in Humanities and Social Sciences. – 2022. – Т. 6. – С. 26-32.
6. Olmasjonovich S. H. et al. At-Termiziyning yoshlar tarbiyasiga oid to'plagan hadislari haqida // Talqin va tadqiqotlar ilmiy-uslubiy jurnali. – 2022. – Т. 2. – №. 14. – С. 19-24.
7. Mardonov R. The role and place of universities in the "knowledge society" // Galaxy International Interdisciplinary Research Journal. – 2022. – Т. 10. – №. 9. – С. 317-325.
8. Muhammadiev K. Potentiality and virtuality in the philosophy of modern times // Theoretical & Applied Science Учредители: Теоретическая и прикладная наука. – 2022. – №. 3. – С. 1000-1004.
9. Charfi A., Namatov N. A., Turaev B. O. The rise of islam // International Journal of Intellectual Cultural Heritage. – 2022. – Т. 2. – №. 2. – С. 121-132.
10. Qahramonovich H. N. Worthy descendants of the Samarkandians: enlighteners Jadids // World Bulletin of Social Sciences. – 2022. – Т. 13. – С. 37-40.
11. Ergashev I. I. Features of evaluation of investment attractiveness of service enterprises // The Fourteenth International Conference on Economic Sciences. – 2017. – С. 102-105.
12. Alikulov S. A., Rizaev I. I. Methodological problems of research of social systems // Theoretical & Applied Science. – 2020. – №. 2. – С. 717-720.
13. Samatov K. Issues Naqshbandi teaching peace and harmony in society // Theoretical & Applied Science. – 2016. – №. 2. – С. 175-179.
14. Husan M. Dialectics of Potentiality and Virtuality in Space and TIME // European Scholar Journal. – 2022. – Т. 3. – №. 1. – С. 40-42.
15. Mardonov R. Philosophy of education in modern conditions of society development // Asian Journal of Research in Social Sciences and Humanities. – 2021. – Т. 11. – №. 10. – С. 103-114.

16. Muminova Z. O. Objective and subjective factors that forms human being's moral being //Theoretical & Applied Science. – 2016. – №. 2. – С. 72-74.
17. Эргашева М. The importance of education in the process of self-organization //Давлат харид тизимини ташкил қилишнинг хусусиятлари ва шарт-шароитлари. – 2019. – Т. 2020.
18. Ризаев И. И., Хаккулов Н. К. Влияние цифровой культуры на неприкосновенность жизни человека в обществе //Оргкомитет. – 2023. – С. 342.
19. Usmonov F. N. The place of rational and creative thought in turning the virtuality into reality //Paradigmata poznani. – 2014. – №. 2. – С. 31-33.
20. Ismoilovich E. I. The mechanism of evaluation of innovative investment processes effectiveness in the service sector //SAARJ Journal on Banking & Insurance Research. – 2016. – Т. 5. – №. 3. – С. 60-71.