

S.SEIFULLIN KAZAKH AGRO TECHNICAL UNIVERSITY

DEPARTMENT OF PHILOSOPHY
(2708)

History and Philosophy of Science

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Theme 8. Science as a profession.

Ideals and norms of science

- **The purpose of the lecture:** revealing the features of science as a profession, the analysis of the ideals and standards of the scientific community, as well as state and prospects of development of science in Kazakhstan.

Plan:

1. Science as a profession and a particular type of activity.
2. The norms and values of the scientific community.
3. Priority areas of science in the Republic of Kazakhstan.

Basic concepts:

- Profession
- Type of activity
- Norms
- Values
- Scientific ethos
- Priorities in the development of science

Science as a profession and a particular type of activity

- *"Science as a Vocation" by Max Weber*
- <http://anthropos-lab.net/wp/wp-content/uploads/2011/12/Weber-Science-as-a-Vocation.pdf>

Science as a profession and a particular type of activity

- Scientists as a professional acts as a supplier of specialized knowledge and responsibility only for their reliability and validity. The scientist as a professional must be aware of the limits of their competence; moral, aesthetic, philosophical, religious preferences and assessment scientists believe it's a personal matter and the science today is not included.

Science as a profession and a particular type of activity

- Transformed into a profession, science has become a technique of mastering the external environment of peace and life. It answers the question: what should be done to the result was the most effective, but questions about the meaning of human activity and the world at large does not consider.

The norms and values of the scientific community

- Ethos is a set of norms and values, reproducing from generation to generation and is mandatory for a man of science. Ethos outlines the range of possible acceptable behavior within science as a social institution. The scientific ethos associated with the organization of relations in the scientific community, it constitutes, integrates and (importantly) provides autonomy to the scientific community.

The norms and values of the scientific community

- For the first time the scientific ethos described by ***Robert Merton*** in "Normative structure of science" (1942). Based on the fact that the truth is the main value of science, he has identified the following standards:

Features of the scientific ethos (by Robert Merton)

- universalism - the objective nature of scientific knowledge, the content of which does not depend on who and when it is received, the only important authenticity, confirms the acceptance of scientific procedure;

Features of the scientific ethos (by Robert Merton)

- collectivism - the universal nature of scientific work, involving publicity scientific results of the public domain;

Features of the scientific ethos (by Robert Merton)

- unselfishness, caused the overall objective science - the attainment of truth; unselfishness in science should prevail over any considerations of a prestigious order, personal benefit, mutual responsibility, competition, etc .;

Features of the scientific ethos (by Robert Merton)

- organized skepticism - a critical attitude to his work and his colleagues; in science nothing is taken for granted, and the time of the denial of the results is unavoidable element of scientific research.

Priority areas of science in the Republic of Kazakhstan

Priority areas of science in the Republic of Kazakhstan

1. Rational use of natural resources,
processing of raw materials and products
2. Energy and Mechanical Engineering
3. Information and communication
technologies
4. Life Sciences
5. The intellectual potential of the country

A Reasonable Skepticism

by Richard Lewontin

[https://www.andrew.cmu.edu/course/76-101A
A/readings/Lewontinfull.htm](https://www.andrew.cmu.edu/course/76-101A/A/readings/Lewontinfull.htm)