

Ethical issues in scientific research

Ethical issues in scientific research

- Science: significant in social, political etc. processes
- Responsibility!
- Rules and requirements (legal and ethical) – existence and knowledge
- Scientific research – according to a system of rules
- Stages of scientific research, as well as research outcomes should be available for the public
- Results may determine the development and everyday practice of a profession
- Research – also a source for living, can be a source of power (due to information)
- Conflicting interests
- Temptation – deviate from rules
- Researchers' responsibility – keeping to the rules and make others keep them

Role of ethics in scientific research

- **Ethics:**
 - how our actions correspond to a moral code,
 - why is a deed considered „good” or „bad”
- **Morals:** behaviour, norms accepted by a community
- Research ethics:
 - Moral code, rules of research – accepted by each researcher
 - Does the current research project meet these norms?

Role of ethics in scientific research

- Each period of history: Expectations regarding science – always corresponding to the ideology of the given period, the moral views of society
- Possible danger related to research – in each period
- Development of media – negative events revealed
 - Medical experiments during wars
 - Experiments in prisons
 - Experiments carried out by criminal organisations
 - In order to make profit, not keeping even the minimal moral rules
- Public and the world of science: demand to expand morals to scientific research, too

Role of ethics in scientific research

- **Professional ethics:**

- Analysing the ethical issues of various professions

- **Research ethics:**

- Studies general ethical issues of the research process
- The focus is on the actual risks of a given research project
- As the number of research projects is rising, new ethical aspects – become part of the ethical codex of research

Tendencies strengthening the importance of research ethics

Triple Helix

- New concepts: knowledge production, knowledge transfer
- Science: connecting
 - (1) universities / research institutes,
 - (2) state / government and
 - (3) economic sphere
- **Triple Helix:**
 - Knowledge – transferred among the 3 spheres – basis of development
 - Inter-relatedness: almost no disadvantages; advantages: e.g. planning, motivation
 - Interest of state (government) and economic sphere can be different
 - can hinder research projects
 - lack of communication can be a problem

Research ethical issues

The image shows a screenshot of the UNESCO Social and Human Sciences website. The page features a navigation menu on the left with links to 'Ethics', 'Ethics of Science and Technology', 'Bioethics', and 'Global Ethics Observatory'. The main content area is titled 'World Commission on the Ethics of Scientific Knowledge and Technology (COMEST)'. It includes the COMEST logo, a description of the commission's role as an advisory body set up by UNESCO in 1998, and details about its composition of 18 leading scholars. A section titled 'Report of COMEST' is also visible. On the right side, there is a 'RELATED INFORMATION' sidebar with sections for 'PAGES', 'CLIMATE CHANGE', 'Recommendation on Science and Scientific Researchers', and 'PRIZE'. The page also features social media icons for YouTube, Facebook, and LinkedIn.

UNESCO
United Nations
Educational, Scientific and
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SOCIAL AND HUMAN SCIENCES

UNESCO » Social and Human Sciences

Ethics
Ethics of Science and Technology
Bioethics
Global Ethics Observatory

World Commission on the Ethics of Scientific Knowledge and Technology (COMEST)



The World Commission on the Ethics of Scientific Knowledge and Technology COMEST* is an advisory body and forum of reflection that was set up by UNESCO in 1998.

The Commission is composed of eighteen leading scholars from scientific, legal, philosophical, cultural and political disciplines from various regions of the world, appointed by the UNESCO Director-General in their individual capacity, along with eleven *ex officio* members representing UNESCO's international science programmes and global science communities.

The Commission is mandated to formulate ethical principles that could provide decision-makers with criteria that extend beyond purely economic considerations.

COMEST works in several areas: environmental ethics, with reference *inter alia* to climate change, biodiversity, water and disaster prevention; the ethics of nanotechnologies along with related new and emerging issues in converging technologies; ethical issues relating to the technologies of the information society; science ethics; and gender issues in ethics of science and technology.

Since its inception in 1998, the functioning of COMEST has been guided by its Statutes adopted by the UNESCO Executive Board at its 154th session.

* Acronym taken from the French name 'Commission mondiale d'éthique des connaissances scientifiques et des technologies'.

Report of COMEST

RELATED INFORMATION

PAGES

- ▶ COMEST - Home
- ▶ Background
- ▶ Bureau
- ▶ Members
- ▶ Statutes
- ▶ Rules of procedure [PDF, 152 KB]
- ▶ Work Programme for 2018-2019
- ▶ Sessions
- ▶ Reports

CLIMATE CHANGE

- ▶ Declaration of ethical principles in relation to climate change
- ▶ Questions and Answers

Recommendation on Science and Scientific Researchers

- ▶ More information ...

PRIZE

- ▶ Avicenna Prize for Ethics in Science

UNESCO Social and Human Sciences

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Ethical issues related to research stages

- Ethical norms to be considered during:
.....choosing a topic, data collection, -storage, -processing, data protection, drawing conclusions, dissemination of results
- **Professional competence of researchers:** is the research team prepared and well-equipped to conduct the research project? (knowledge, infrastructure, time, access to data etc.)
- **Safety:** can we choose a research topic, the outcome of which might be dangerous for human beings if in the wrong hands?
(e.g. finding a mutant virus – potential tool for biological weapon)

Ethical issues related to research stages

○ **Publication of results:**

- Manuscripts with multiple authors: order of authors, proportion of tasks
- **Plagiarism** – using other people's words as our own
- Publishing the same topic over and over again, citing only own previous works
- Publishing the same results in two different journals, at two different conferences etc.
- Interpreting others' results as our own, pushing other researchers into the background

○ **Specialties related to certain professions:**

- Biological research (genetic research, artificial reproduction, abortion, euthanasia)
- Medical research (organ transplants, artificial feeding)
- Informatics (data protection, personal field)
- Environmental ethics (animal protection)

Research ethical expectations in the course of scientific research

- Scientific research has to be independent, unbiased and autonomous
- General expectation: ethical rules should apply to each step of the research process (honour, reliability, objectivity, independence, care, responsibility)
- Research topic: should not harm other's human dignity and basic interests
- Data collection:
 - Reliable sources, critical view;
 - Screening and selecting data without selfish interest;
 - Authentic data;
 - Protection of data
 - Protection of data providers (e.g. persons filling in a questionnaire), participants should be informed about the aim of their involvement
 - Should not be harmful for health, ensure an option for leaving the experiment
 - Children under age – parental consent

Research ethical expectations in the course of scientific research

- Summarizing data:
 - tendencies, correlations etc. *MUST* be revealed
 - Data values *MUSTN'T* be changed
 - Data and thoughts taken from other persons *MUST* be cited precisely
- Drawing conclusions:
 - Ethical fraud: arriving at a different conclusion than suggested by data
 - Source of mistake: researcher cannot remain independent, tailors conclusions to expectations

Research ethical expectations in the course of scientific research

- Reviewing other people's manuscripts, applications etc.:
 - Should be objective, unbiased
 - Conflict of interest should be mentioned

- REWARD?

Hippocratic Oath for scientists

"I promise to work for a better world, where science and technology are used in socially responsible ways. I will not use my education for any purpose intended to harm human beings or the environment. Throughout my career, I will consider the ethical implications of my work before I take action. While the demands placed upon me may be great, I sign this declaration because I recognize that individual responsibility is the first step on the path to peace."

(Sir Joseph Rothblat – Nobel Peace Prize, 1995)