

MFT 1033: Humanity, Ethics and Culture

Topic 4: Ethics and integrity in Science and Technology

Assoc Prof Dr Norihan Abu Hassan

UTM Perdana School of Science, Technology and
Innovation Policy

norihass@ic.utm.y



Ethics and integrity in Science and Technology



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- the World Science Conference (Budapest, Hungary 26 June – 1 July 1999) arranged by UNESCO and International Council for Science (ICSU)
 - “Science Agenda –
 - A Framework for Action” states under 3.2 Ethical Issues, point 71:
 - *“The ethics and responsibility of science should be an integral part of the education and training of all scientists. It is important to instil in students a positive attitude towards reflection, alertness and awareness of the ethical dilemmas they may encounter in their professional life.*
 - *Young scientists should be appropriately encouraged to respect and adhere to the basic ethical principles and responsibilities of science. UNESCO’s World Commission on the Ethics of Scientific Knowledge and Technology (COMEST), in co-operation with ICSU’s Standing Committee on Responsibility and Ethics in Science (SCRES).....have a special responsibility to follow up on this issue.”*

History on ethics

- Ethical standards have been developed to protect science and society from misconduct in scientific research since World War 1 & 2, Cold War and military intervention
- Examples are;
 - Abusive experimentation
 - Fraudulent research reports
 - Professional jealousy or rivalry
 - Misuse of scientific funding

History on ethics in science

- Various scientific unions, associations, academies, universities and other science related institutions have adopted ethical standards revealing a wide variety in form and content

**Kathinka Evers (2001): Standards for Ethics and Responsibility in Science:
An analysis and evaluation of their content, background and function**

- The use of human and financial resources contribute to the attention on ethics in science tremendously

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Examples:

- abuses of power in scientific experimentation
 - experimentation carried out by the Nazi doctors
 - the sterilisation of retarded or otherwise unwanted citizens in Sweden
 - the fatal radiation experiments in the United States
 - various scandals involving disclosures of fraud, falsification of research material

Ethical standards to protect human and non human research subjects

- Codes
- Guidelines
- Oaths
- Declarations
- conventions,

Ethical standards (for individual)

- Is formulated to regulate scientific research (those that are supposed to obey them – scientist, scientific institutions, academies, unions, associations, universities etc)
- Articulate co-operative practice which relate to moral qualities such as honesty, conscientiousness and integrity)

Ethical standards (for a group)

- Relate to to the state, or to bodies providing or offering financial support
- may assert social duties, political neutrality and incorruptible academic freedom

Integrity of science

- Integrity of science is important to science to ensure societal support (public trust)

An ethical standard such as a code or a guideline understood as a convention between professionals and

- a solution to a co-ordination problem
- Dealing with conflict

Ethical standards (acceptance)

- Willingly accept the collective norm
- Respect for individual autonomy
- Token of strong moral integrity and courage
- Characterize morally conscious and responsible person.

Types of Ethical Argument

1. Argument of analyticity
2. Argument of inconsistency
3. Argument of autonomy
4. Argument of ethical awareness
5. Argument of hypocrisy
6. Argument of legalism
7. Argument of social responsibility
8. Argument of publicity
9. Argument of professional security
10. Argument of professional control

Conclusion

- Standards for ethics and responsibility in science
- Ethical standards for science must be formulated with great care and integrity
- Ethics in science must be pursued with academic rigour, integrity and courage

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End of Topic 4