

Appendix

**SCOTTISH COUNCIL ON HUMAN BIOETHICS
RECOMMENDATIONS ON CYBERNEUROETHICS**



The following recommendations were agreed by the Scottish Council on Human Bioethics and represent the first example of guidelines from a European ethics council on the topic of cyberneuroethics.

Because different council members had different views concerning the strengths and weaknesses of the arguments in this book, it is not possible to describe the manner in which the recommendations were decided. The recommendations do, however, represent the general consensus of council members.

Recommendations on Cyberneuroethics

Changing Cognition

- The freedom of persons with a limiting mental disability to increase their cognitive functions should be protected.

Free Will and Moral Responsibility

- Everyone should have the right to freedom of thought, conscience and religion; this right includes freedom to change his or her religion or belief.¹
- Freedom to manifest one's religion or beliefs should be subject only to such limitations as are prescribed by law and are necessary in a democratic

society in the interests of public safety, for the protection of public order, health or morals, or for the protection of the rights and freedoms of others.²

– Neuronal interfaces should not be able to affect a person's free will and responsibilities.

Changing Consciousness

– Neuronal interfaces used with the aim of controlling, coercing or dominating others should be prohibited.³

Escaping Reality

– Neuronal interfaces should not be used to enable a permanent escape from reality.

– Non-enhanced persons should not be subject to any discrimination of any kind.⁴

Changing Mood and Personality

– The freedom of persons to use neuronal interfaces to improve their moods or personality in a positive fashion should be protected.

Changing Dysfunctional Thoughts and Emotions

– The freedom of persons to use neuronal interfaces to address severe mental disorders in which thought and emotions are so impaired that contact is lost with external reality (psychosis) should be protected.

Changing Identity

– Neuronal interfaces should not be used without a person's consent if the primary aim is to change his or her identity, mental function, self-perception and perception of others.⁵

The Concept of Humanity

– The freedom of persons to enhance their human bodies (including their brains) through technology should be protected.

– Persons should never become something other than human.

– The dignity and identity of all human beings should be protected.⁶

– The physical and mental integrity of all human beings should be protected.⁷

- A partial combination of the human mind with cyberspace should always guarantee the integrity of the human being.
- The interests and welfare of the human being shall prevail over the sole interest of society or science.⁸

Uploading a Mind

- Human beings should not seek to create new persons by uploading their minds into cyberspace.
- A complete communion of minds in cyberspace should not be permitted.

Issues of Privacy

- Everyone should have the right to respect for his or her private and family life, his or her home and his or her correspondence.⁹
- There should be no interference by a public authority with the exercise of the right to privacy except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic wellbeing of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.¹⁰
- Reading the minds of other persons should only take place with their appropriate informed consent.
- The skull and all that it contains should be a controlled and protected privacy zone.
- The privacy and confidentiality of data obtained from neuronal interfaces should be guaranteed.¹¹
- Individuals should have a right to determine what data about themselves should be processed, by whom and for what purpose.¹²

New Cybercrimes

- A real person should be held responsible if he or she commits a crime in cyberspace that may have real consequences on other real persons or organisations.

Policy Concerns

- A broad social and political debate should be initiated to examine what kind of neuronal interfaces should be accepted and legally approved, particularly concerning surveillance and enhancement.¹³

- National and international ethics councils (or similar institutions) should create conditions for education and constructive, well-informed, debates in the areas of neuronal interfaces and the resulting interactions between the mind and cyberspace.¹⁴
- The precautionary principle should be invoked when serious risks exist relating to neuronal interfaces. In particular, it should be possible to distinguish between:¹⁵
 - Active and passive interfaces,
 - Reversible and irreversible interfaces,
 - Offline and online interfaces, and
 - Medical and non-medical applications.¹⁶
- Because of the principle of integrity and inviolability of the human body, a person's consent should not be sufficient for an interface to be used.¹⁷
- A person's consent to use neuronal interfaces should be able to be withdrawn at any time.

Notes

1. This reflects Article 9 of the Council of Europe Convention for the Protection of Human Rights and Fundamental Freedoms.
2. This reflects Article 9 of the Council of Europe Convention for the Protection of Human Rights and Fundamental Freedoms.
3. This corresponds to the regulations in Opinion No. 20 of the Secretariat of the EGE, *The Ethical Aspects of ICT Implants in the Human Body*, 32–35.
4. This statement does not presuppose that the specific behaviour of a person should always be accepted.
5. This corresponds to the regulations in Opinion No. 20 of the Secretariat of the EGE, *The Ethical Aspects of ICT Implants in the Human Body*, 32–35.
6. Based on Article 1 of the Council of Europe Convention on Human Right and Biomedicine.
7. Based on Article 3 of the EU Charter of Fundamental Rights.
8. Based on Article 2 of the Council of Europe Convention on Human Right and Biomedicine.
9. This corresponds to Article 8 of the Council of Europe Convention for the Protection of Human Rights and Fundamental Freedoms.
10. This corresponds to Article 8 of the Council of Europe Convention for the Protection of Human Rights and Fundamental Freedoms.
11. This corresponds to the regulations in Opinion No. 20 of the Secretariat of the EGE, *The Ethical Aspects of ICT Implants in the Human Body*, 32–33.
12. This corresponds to the regulations in Opinion No. 20 of the Secretariat of the EGE, *The Ethical Aspects of ICT Implants in the Human Body*, 32–33.
13. This corresponds to the regulations in Opinion No. 20 of the Secretariat of the EGE, *The Ethical Aspects of ICT Implants in the Human Body*, 33–35.
14. This corresponds to the regulations in Opinion No. 20 of the Secretariat of the EGE, *The Ethical Aspects of ICT Implants in the Human Body*, 33–35.

15. This corresponds to the regulations in Opinion No. 20 of the Secretariat of the EGE, *The Ethical Aspects of ICT Implants in the Human Body*, 20–21.
16. This corresponds to the regulations in Opinion No. 20 of the Secretariat of the EGE, *The Ethical Aspects of ICT Implants in the Human Body*, 20–21.
17. This corresponds to the regulations in Opinion No. 20 of the Secretariat of the EGE, *The Ethical Aspects of ICT Implants in the Human Body*, 20–21.

Bibliography

Secretariat of the EGE, European Group on Ethics in Science and New Technologies to the European Commission. 2005. *The Ethical Aspects of ICT Implants in the Human Body: Proceedings of the Roundtable Debate*, Amsterdam, 21 December.