

## Zijn hersenimplantaten een bedreiging voor onze beschaving ?

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Impressions on the "Ethical Aspects of ICT Implants in the Human Body" Roundtable organised by the European Group on Ethics in Science and New Technologies (EGE).

I was invited to attend, as a representative of COMECE, a Roundtable organised by the EGE, which is an advisory body of the European Commission on ethical issues of science and new technologies. Implants of Information and Communication Technology (ICT) in the human body, in particular in the brain, are emerging at the top of areas in which fundamental ethical questions are arising. New ways of influencing the human brain are likely to emerge in the next decades, with serious implications for healthcare and society.

### Prospects

The advances in psychopharmacology, neuro-imaging, brain surgery, nano-technology, informatics, agent-technology and genetics are immense. They will be developed to correct neural defects and make normal people 'better than well'. These advances could lead to growing stem cells in patients suffering from dementia or Parkinson's disease, but it will signify much more.

Already, high school children are swallowing Ritalin to get an edge when taking intelligence tests. It is also very likely that advances in the ability to 'read' the brain will be used to reveal brain states. As I write, lawyers are attempting to submit brain scans as evidence of their clients' innocence! The problem will become even bigger when more people will want to use remote controlled electrodes and TMS (transcranial magnetic stimulation) to improve mood, increase concentration, and deepen experiences. Ultimately they will want to enhance their brains in general.

### Ethical Concerns

All of these prospects are frightening indeed. Neuro-technologies have raced ahead of the ethical issues they raise. Along with all of this comes the nightmare of a 'perfect surveillancesociety.' Ultimately, the most challenging problem of all lurks in the shadow: *modulating cognition might change our understanding of what it means to be human.*

The EGE Roundtable was meant to formulate the beginning of a discussion about the legal and institutional answers to these complex and looming problems. Four speakers were invited to express their opinions on the ethical problems that are raised by ICT-implants in the brain: a surgeon, an ethicist, a representative of a patient group, and a physician with a speciality in researching ICT-implants.

### Many Questions: Limited Answers

The general discussion concentrated on four issues. The first raised questions in connection to what I call 'technical' aspects. Secondly a few questions were addressed about a general uneasiness in the face of the reality of brain implants, for example in relation to security. (What about involvement of the military via 'dual use'?) Thirdly, some respondents managed to converge their fears on the specific topic of the surveillance society. Finally, most other questions concerned 'classic' ethical concerns relating to the autonomy of the individual. Should patients' autonomy be guaranteed, now and forever? And in the case of remote-control: who is in charge?

In the present all pervading neo-liberalism, it comes as no surprise that the autonomy of the individual was hotly debated. Generally, in such cases one does not mean 'vertical autonomy', i.e.: the question of our relation to God. This problem, of course, was solved long ago. In today's secular societies, what people mean is 'horizontal autonomy' - the autonomy of the individual in relation to his doctor (or any other authority). Of course total autonomy does not exist. Society will always have the right - if necessary - to limit the claims of the individual. However, concerning these limits, the speakers and respondents of the Roundtable were strikingly mute.

In any case, the general discussion made one thing very clear: the questions far outnumber the answers. This being so, the most pressing need is to identify key ethical issues. The Roundtable unfortunately did not address the last subject.

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