

“Smart” implants: therapeutic solutions, security and human enhancement

Date: 20th October 2011
Duration: 09:45 – 16:30
Location: Wellcome Collection Conference Centre, Dale Room
183 Euston Road, London NW1 2BE

Programme of the meeting:

09:45 – 10:00 Welcome tea / coffee

Session 1 – ICT innovations: hype, hope and accountability

Introduction by the organisers

The **ICTethics** and **Gleube** projects.

Title: Aims and objectives of the day

Chris Evett and Jes Odedra

UK Ministry of Defence, Strategic Trends Programme

Title: Global Trends - Planning for the Future

10:00 – 11:00

Questions, discussion & debate

This session will provide an opportunity to explore the role of “horizon scanning” in preparing and planning for the future. It is an opportunity to ask, among other things, who the authors are, to what extent the envisioned developments are taken for granted, e.g., implant technology, human-machine interfacing, advanced bionics, and what can be learned from our expectations and attitudes.

11:00 – 11:15 Refreshment break

Session 2 – Brains and bodies: what does the future hold in store for us?

Simon Schultz
Imperial College, London

Title: Accessing the brain: a view from Imperial College

In this talk I will describe the Neurotechnology Initiative recently launched by Imperial College London. The main goal of the Initiative is to develop new approaches for interacting with the nervous system, both for understanding the brain and for therapeutic purposes. A key feature of our centre is the presence of engineers and neuroscientists working alongside each other in the laboratory, something unusual elsewhere. I will describe our recent successes, our current foci, and what we see as the brightest prospects for future neurotechnologies.

Ian Harrison
Reading University, UK

Title: Self-Experimentation, Implants and the Future

11:15 – 12:45

This talk is about self experimenters, various implants and future possibilities, whilst bearing in mind the hold-ups and challenges that researchers have to overcome. This talk will have a first person perspective on self-experimentation as well as providing the 3rd person perspective of the absentee, Professor Kevin Warwick.

Questions, discussion & debate

Session 2 will provide an opportunity to explore cutting edge developments in research and experimentation. It is an opportunity to ask, among other things, how experimenters and leading researchers see ethical, social and cultural relevance in the work they do, how they see the future, what promises and complications it may hold in store.

12:45 – 13:30 LUNCH

Session 3 – ICT implants: experimentation, therapy, security

James Giordano
Center for Neurotechnology
Studies, Potomac Institute of
Policy Studies, USA

Title: Implantable neurotechnologies and neurosecurity: Practical issues, neuroethical considerations

Implantable neurotechnologies offer unique potential to affect neuro-cognitive and behavioral functions, and are therefore promising approaches in mitigating the effects of certain neurological and psychiatric disorders. These technologies can also be used to augment or alter human cognitive, emotional, and motor performance. The nascence of such technology dictates address of possible technical/biological capabilities and limitations, and the scope of effect mandates neuroethical, legal and social considerations regarding the utility and potential misuse in national security and defense agendas. These factors are addressed relevant to the importance, directions, and governance of ongoing research.

13:30 – 15:00

Juliet Lodge
Leeds University, UK

Title: ICT implants : steering behaviour?

This discussion focuses on the therapeutic and tracking possibilities of ICT implants. It raises a number of issues regarding alternative use scenarios.

Questions, discussion & debate

Session 3 will provide an opportunity to explore medical-therapeutic purposes of implant technology as well as behaviour and security purposes. It is an opportunity to ask, among other things, what the tensions are between utility and misuse, management and unintended consequence, vision and reality.

15:00 – 15:15 Refreshment break

Session 4 – Panel discussion and debate

Daniela Cerqui, University of Lauzanne, Switzerland.
Ruth Chadwick (Panel Chair), Cesagen, Cardiff and Lancaster Universities, UK.
Martyn Bracewell, NICE – Medical Technologies Advisory Committee.
Anders Sandberg, Future of Humanity Institute, Oxford, UK.

15:15 – 16:30

This session will begin with each panel member taking 5-8 minutes to reflect on his/her observations over the course of previous sessions. Each member reserves the integrity of his/her respective expertise, interests, experiences, etc... to draw together what they see as the "key learnings" or the "hot topics" of the day. Thereafter, the floor is open to challenge panel members and engage in further discussion and debate.