

CiS conference: “Technologies of the future”, The Impact of Technology on Science, Society and Medicine.

This year the annual London meeting was held jointly with the Christian Medical Fellowship (CMF), with about 130 people participating. The talks and discussion focussed on the enormous potential for good that these technologies promise, balanced by the ethical issues that arise. Other issues that emerged as a source of concern for all the speakers were the unrealistic and unhelpful “spin” often used in the media, and the need for equal distribution of resources on a global scale.



130 CiS and CMF members gather in St Paul's Church, London.

Putting the Quantum into Nanotechnology

Andrew Briggs is Professor of Nanomaterials, Oxford University.

Ross McKenzie is Professor in the Department of Physics, University of Queensland.

Andrew Briggs described the development of faster and smaller computers, which has given rise to the development of quantum computers that operate on a truly microscopic scale. Ross McKenzie described the how ideas rooted in science fiction, in films like “Fantastic Voyage”, have caused confusion about the potential uses of nanotechnology. The somewhat unhelpful concept of dangerous self-replicating nanobots comes from Eric Drexler’s book “Engines of creation, the coming era of nanotechnology”, and has been with us in films and books ever since. Ross presented a biblical view on false hope, making the point that we often arrogantly assume that we can replicate natural processes. A more appropriate response to discovering ever-increasing levels of complexity would be one of humility and awe. In conclusion, they addressed the increasing evidence that information, and cognitive function, has a physical basis, and suggested that we revisit the idea of the relationship between a physical message and it’s meaning. These ideas gave rise to plenty of discussion.



Andrew Briggs

Find more information on nanotechnology, and the Royal Society's report, "Nanoscience and nanotechnologies: opportunities and uncertainties" at: <http://www.royalsoc.ac.uk/nanotechnology/>

Cybernetics: From Fiction to Fact

Philippa Taylor is the associate director of the Centre for Bioethics and Public policy.

Cybernetics is the integration of mechanical components into the human physique. We already use cybernetic-type technology in pacemakers and hearing aid implants. Philippa Taylor impressed us developments that have already enabled patients with "locked-in syndrome" to communicate, and the potential to people suffering from blindness, hearing loss and paralysis. The idea of using mechanical implants to improve the quality of life for people with disabilities is viewed by most as a very good use of this technology. On the other hand, how do we feel about using this technology to enhance the performance of "normal" people. She discussed people like Kevin Warnick and Ray Kurzweil, who would like to take this to its most extreme form, and see a science-fiction type future where everyone is part man, part machine, or cyborg. Also, the US government is funding research into using this technology to enhance human abilities. Do we as Christians draw the line between treatment and enhancement?



Philippa Taylor

The Centre for Bioethics and Public Policy: <http://www.bioethics.ac.uk/>

Read Philippa Taylor's article on cybernetics for the CMF student journal at:
<http://www.bioethics.ac.uk/nucleus-article-april-2004.html>

Stem Cells – Dreams and Dilemmas

Dr Phil Jones is a researcher at the Hutchison/MRC Research Centre, Cambridge University.

In his summary of stem cell technology, Phil Jones described the different types of stem cells and where they have real potential for treatment of conditions like Parkinson's disease. He also addressed the fact that scientists have allowed the public to believe that the use of stem cells will allow the treatment of many other completely different conditions, like Alzheimer's disease, and so given them false hope. The controversy surrounding the use of human stem cells and therapeutic cloning comes from concerns over the status of very early human embryos. He outlined the various viewpoints held by Christians on the status of early embryos. Some people believe that as a very early embryo has no nervous system, it cannot be viewed as a person. On the other end of the scale, some believe that a person is formed at the moment of fertilisation, which must not be destroyed. He urged us to consider the gift of the likeness of God represented in humanity. Can we determine when that gift is given, and should we protect these embryos whose humanity is unknowable?



Phil Jones

Find more information on stem cells at: <http://stemcells.nih.gov/index.asp>

Which Direction for the New Genetics?

John Bryant is Professor of Cell and Molecular Biology at the University of Exeter, and Chairman of CiS.

John Bryant started by challenging the “gene for...” idea that we are so often presented with. He painted a broad picture of the history of genetics, culminating in the Human Genome Project, and described the immense benefit that the “new genetics” brings to our understanding of human disease. The use of genetic testing, at any stage of life, brings out many different ethical debates, as do the selection of tissue-typed donor siblings, gene therapy, and the possible treatment of “non-medical” traits. He also highlighted the dangers of reducing humanity to “bags of genes”, and children to commodities. On the other hand, the potential to understand and treat disease is a

challenge that must not be ignored. Christians have an important role therefore, in using this technology with care, compassion and respect.



John Bryant

The Human Fertilisation and Embryology Authority regulates some uses of the “new genetics” in the uk: <http://www.hfea.gov.uk/Home>

Intensive Care Technologies

Tim Maughan is Professor of Cancer Studies and the University of Cardiff.

The issues in intensive care technologies were addressed by cancer physician Tim Maughan. He described the challenges and decisions that face doctors in the treatment of terminally ill patients. This leads to the question of a patient’s right for assisted suicide, championed by the Voluntary Euthanasia Society. He highlighted the unique Christian perspective on the value of suffering, the sanctity of life, and the importance of compassion. There are serious hazards that would inevitably arise if euthanasia became legal in this country. This is a highly topical issue, as he and CMF Chairman Alan Johnson have recently presented evidence to the House of Lords select committee, currently reviewing Lord Joffe’s Assisted Dying for the Terminally Ill Bill.



Tim Maughan

Find out more about CMF's involvement in discussing Lord Joffe's Assisted Dying for the Terminally Ill Bill on the CMF web page: <http://www.cmf.org.uk/>

A Theological Contribution

Robert Song is a Professor in the Department of Theology at Durham University, and author of *Human Genetics – Fabricating the Future* (reviewed in the April 2004 edition of *Science and Christian Belief*).

Robert Song questioned whether ethics is a good way to approach the application of new techniques, as technology is often driven by factors out of our control. He suggested that a “surrogate theology” is used by the secular world that views technology as a way of “salvation” to escape death. This may explain why life-extension technologies are so popular! Christians desire to use new technologies for good (although we cannot claim exclusive rights to this goal...). However our primary role, rather than attempting to control what goes on in the world, should be to witness to a different way of being.



Links: <http://www.counterbalance.net/bio/rsong-body.html>

Epilogue

In his epilogue Peter Saunders highlighted the fact that the contemporary ethical way of dealing with these issues is inadequate, as we no longer have a moral consensus. The key issue addressed today was that of personhood. He encouraged us to keep the cross in the centre of our thinking. We must take risks in declaring the truth, and use our gifts to care for the world in Gods way, keeping our ends and the means by which we achieve them in balance.