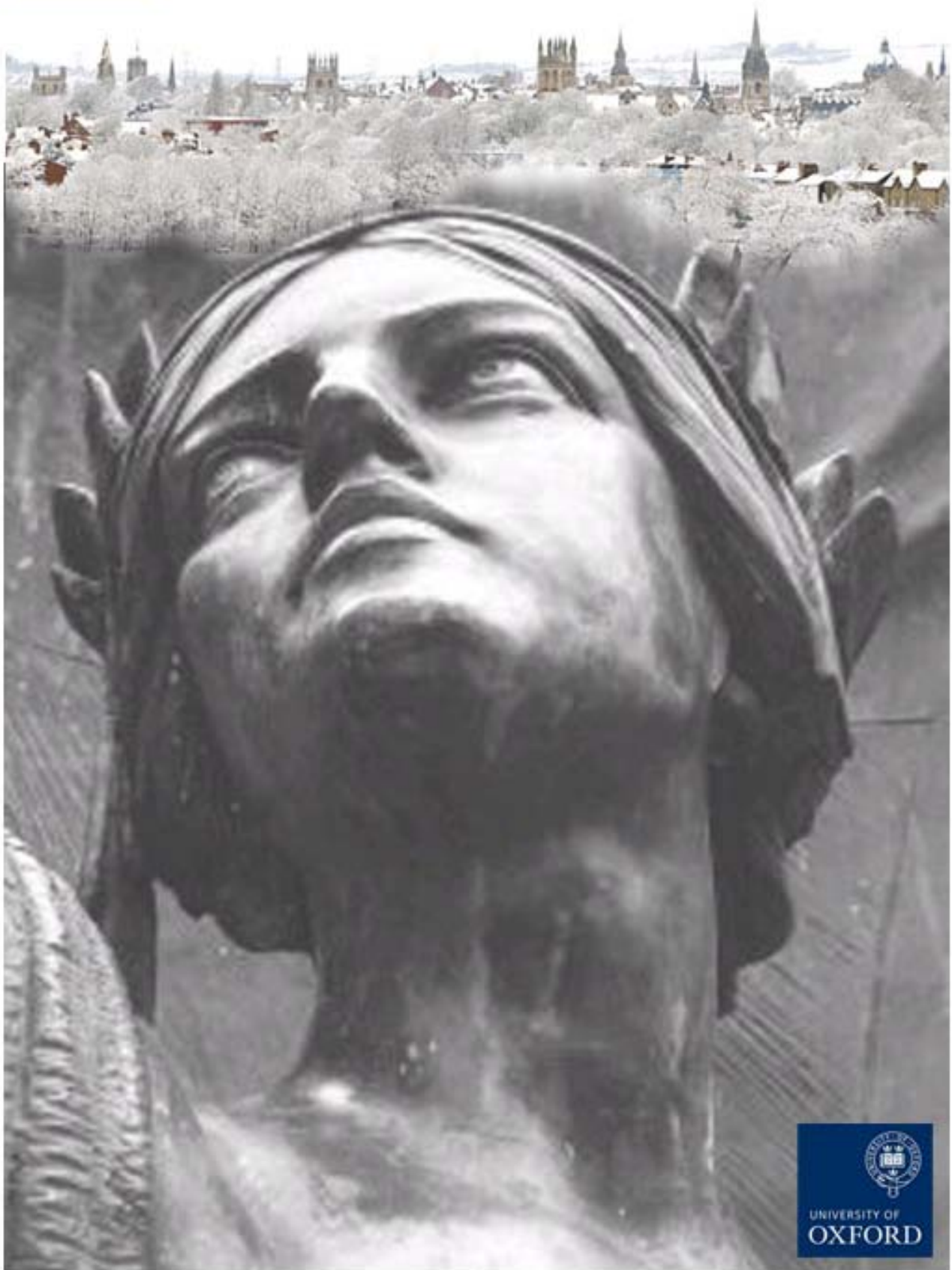


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The Oxford Centre
for Neuroethics

The Oxford Centre for Neuroethics
ANNUAL ACTIVITY REPORT:

1 January - 31 December 2009



Oxford skyline photo by Seth Lazar



The Oxford Centre for Neuroethics

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Director's Report of 2009 Centre Highlights

2009 has proved to be an exciting first year of extraordinary activity. The Oxford Centre for Neuroethics has been productive in terms of research, teaching and outreach, and has also attracted prestigious awards and significant external funding. We are confident that this is the beginning of an enduring and substantive world class centre for Neuroethics.

Below I have highlighted some of the major achievements and the report follows in full.

Notable Events

Below is a selection of key events organised by or connected with the Oxford Centre for Neuroethics.

Oxford Events: 2009 Wellcome Lectures in Neuroethics and Uehiro Lectures in Practical Ethics

- Professor Sinnott-Armstrong gave the 2009 *Wellcome Lectures in Neuroethics* in February and April on **'Does Neuroscience Undermine Responsibility?'** and **'Are Psychopaths Responsible?'** and will give a further lecture in 2010 on **'Neuroscience and the Criminal Responsibility of Addicts.'**
- Professor Allen Buchanan gave four successful Leverhulme lectures on **'What Conservatism and Liberalism have to say about the Biomedical Enhancement Project—and Vice Versa'** and was also the 2009 Uehiro Lecturer, giving three highly regarded, well attended public Uehiro Lectures on **'Beyond Humanity? The Ethics of Biomedical Enhancement.'**

First International Conference organised by the Centre and subsequent developments

- Dr Nicholas Shea co-organised and introduced a high-profile symposium on ***Consciousness in Vegetative State Patients*** at the annual conference of the European Society of Philosophy and Psychology, Budapest. Speakers included Dr. Adrian Owen (MRC Cognition and Brain Science Unit, Cambridge), Dr. Anil Seth (Informatics, Sussex) and Dr. Tim Bayne (Faculty of Philosophy, University of Oxford).

The research discussed at the workshop was published in a high-profile article in the *New England Journal of Medicine* (Monti, M.M., Vanhaudenhuyse, A., Coleman, M.R., Boly, M., Pickard, J.D., Tshibanda, L., Owen, A.M., Laureys, S. (2010), 'Willful Modulation of Brain Activity in Disorders of Consciousness,' *N Engl J Med*, 362: 579-589) and was linked to a lecture given by Steven Laureys, Adrian Owen and Adam Zeman in Oxford in 2008 on



Consciousness in the Persistent Vegetative State: Philosophical and Methodological Issues. The article generated much media attention, for example in the BBC (<http://news.bbc.co.uk/1/hi/health/8497148.stm>) and the topic was blogged on by Neil Levy and Dominic Wilkinson. Several Centre researchers have been at the forefront of discussion of the ethical, clinical, legal and philosophical significance of this groundbreaking research. Our publications in this area include

- Shea, N. and Bayne, T. (2010), 'The Vegetative State and the Science of Consciousness', *British Journal for the Philosophy of Science*, 1-26;
- Kahane, G. and Savulescu, J. (2009), 'Brain-Damaged Patients and the Moral Significance of Consciousness', *The Journal of Medicine and Philosophy*, 33: 1-21;
- Levy, N. & Savulescu, J. (2009), 'The Moral Significance of Phenomenal Consciousness,' *Progress in Brain Research* 117: 361-370;
- Wilkinson, D., Kahane, G., Savulescu, J. (2009), 'Functional neuroimaging and withdrawal of life- sustaining treatment from vegetative patients', *Journal of Medical Ethics* 35, 508-511;
- Skene, L., Wilkinson, D., Kahane, G. and Savulescu, J. (2009), 'Neuroimaging and the withdrawal of life-sustaining treatment from patients in vegetative state,' *Medical Law Review* 17, 245-261.

Distinguished Neuroethics Talks organised by the Centre

- Professor Jeff McMahan (Rutgers University) on '**Cognitive Disability and Cognitive Enhancement.**'
- Professor Chris Frith (Wellcome Trust Centre for Neuroimaging, University College London): '**Neuroscience, free will and responsibility.**'
- Professor Geoffrey Miller, MD (Clinical Director of Pediatric Neurology, Yale University, New Haven Hospital, and Professor of Pediatrics and Neurology, Yale University):
- '**Extreme Prematurity – Truth, Justice and the Tyranny of Language.**'

Prestigious lectures given by Centre researchers

- Professor Savulescu, 2009 *Tanner Lecture* on '**Enhancement as a Human Right**'.
- Professor Savulescu, the 2009 *Fulvio Guerrini Lecture* on '**Biology and Freedom: Bioliberation or Biothreat**', at the Centro di Ricerca e Documentazione 'Luigi Einaudi', Torino, Italy.
- Professor Savulescu, '**Unfit for Life: Genetically Enhance Humanity or Face Extinction**' at the *Sydney Festival of Dangerous Ideas*.
- Professor Savulescu was invited to give a highly-prestigious Lecture Series at Universidade Federal do Rio de Janeiro, Brazil, with ten lectures on '**Topics in Applied Ethics.**' The award



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which supported these lectures was funded by Coordenacao de Aperfeicoamento de Pessoal de Nivel Superior (CAPES)

Forthcoming Centre for Neuroethics Conferences:

- **'The Mechanisms of Self-Control: Lessons from Addiction,'** Christ Church College, University of Oxford, 13-14 May, will bring together leading thinkers in neuroscience, psychology, psychiatry and philosophy to explore and advance our understanding of the mechanisms of self-control and the way in which they are weakened in addiction. Speakers include Steven Hyman, Richard Holton, Nomy Arpaly, Walter Sinnott-Armstrong, Gideon Yaffe, Mark Muraven, and George Ainslie.
- **'BioPrediction,'** Washington DC, 8-9 May. Can biological information aid predictions of misconduct? That is the question of BioPrediction. The idea is not to replace psychological and sociological studies but to supplement them with new information from structural and functional brain scans, genetics, hormone analyses, and other biological sources. Contemporary statistical engines can use all of this information together to generate predictions of future delinquency and crime. In educational and other social contexts, biomarkers might aid in identification of 'high risk' children - perhaps at a pre-symptomatic stage -- who will benefit from early interventions. In forensic contexts, biomarkers could inform predictions of criminal behaviour -- including violence and sex crimes -- to be taken into account in sentencing, parole, probation, and detention decisions. Biomarkers could also be used in addiction treatment programs to guide treatment and predict relapse, and in psychiatric contexts to predict risk of harm to self and others as prerequisites for release from a mental institution. These possibilities clearly raise a host of ethical and legal issues, including concerns about privacy, intervention and due process. All of this will be discussed by leading clinicians, social scientists, neuroscientists, lawyers, and ethicists at a workshop on May 8-9 in Washington DC. Revised papers from this workshop will be published in a collection.

This conference will involve, among others, Sir Michael Rutter, Steven Hyman, Susan Wolf, Martha Farah, Julian Savulescu, Iлина Singh and Walter Sinnott-Armstrong.

Selected Media/Public Outreach

David Edmonds: research associate in charge of media outreach. The Centre is fortunate to be able to draw upon the expertise of David Edmonds, who joined the Centre for Neuroethics and the Uehiro Centre in January, 2009 as a part-time Research Associate, in conjunction with his part-time appointment at the British Broadcasting Corporation (BBC). The Uehiro Centre funds him £7,280 per year over 3 years. Edmonds has made major contributions in terms of both academic research and being involved in helping the Centre develop its media capabilities and activities. He is a multi-award winning journalist with the BBC World Service and is the author of several books, including (with



John Eidinow), *Wittgenstein's Poker*, which was shortlisted for the Guardian First Book Award and was an international best seller. He has published articles in almost all the British broadsheets and leading periodicals and is an Associate Editor at *Prospect Magazine*.

Edmonds co-hosts *Philosophy Bites* which is a series of 15 minute online interviews with leading philosophers giving a brief introduction to an area of their work. This philosophy podcast has had over 6 million downloads to-date. Julian Savulescu's podcast interview 'the Yuk Factor' on *Philosophy Bites* received 25,000 downloads in its first week, above the average for this very popular service. Edmonds has conducted podcast interviews with members of the Centre and these have been a popular addition to our website and related websites.

Edmonds has also written two lengthy (4000 word) articles on neuroethics for *Prospect Magazine*. One of these was on **enhancement**, the other on **experimental ethics**. Both these articles quoted Centre members – they were impressively two of *Prospect's* most downloaded articles of the year.

Edmonds has also done a lot to promote the Uehiro Centre and to showcase its members and their work as much as possible in the general media. In addition to *Philosophy Bites*, this includes producing a popular Radio 4 programme on Experimental Ethics, ***Analysis: Thought Experiments***, presented by Professor Janet Radcliffe-Richards and the programme also included an interview with Dr Nicholas Shea, a funded researcher at the Oxford Centre for Neuroethics. Edmonds is now producing a two part series on the the psychology and neuroscience of moral decision-making for the BBC World Service and a four part series on neuroscience, also for the BBC World Service.

Notable media appearances and public outreach

- Professor Barbara Sahakian holds an International Distinguished Scholar's award from the University of Pennsylvania and gave their first public talk in the 'Neuroscience and Society Lecture Series': **'Cognitive Enhancing Drugs: Neuroscience and Society'**
- President's Lecture (Lord Rees) of the Royal Society (London), given by Professor Barbara Sahakian: **'Neuroethical Issues of Cognitive Enhancing Drug-Use'**
- Julian Savulescu gave a talk on **'Unfit for Life: Genetically Enhance Humanity or Face Extinction'** presented at Sydney Festival of Dangerous Ideas, <http://tinyurl.com/ykhgrbc>. He also appeared on an 'Insight' TV programme, **'In Your Genes,'** discussing genetic testing, <http://www.sbs.com.au/insight> and participated in a live-radio broadcast discussing ethical issues of vaccination (swine flu specifically), ABC (Australian Broadcasting Corp.)
- Walter Sinnott-Armstrong gave a talk on **'Neurolaw'** to judges in a National Judicial College educational event in Chicago.



Notable Neuroethics Publications

Centre members have had an extremely productive year, with several books published or in press, and numerous articles appearing in leading journals:

- The Volume **'Human Enhancement'** edited by Julian Savulescu and Nick Bostrom was published in January 2009. In a review in the widely read *Notre Dame Philosophical Reviews*, Robert Streiffer writes:

"...the book as a whole provides an excellent discussion by leading bioethicists of the issues raised by human enhancement. It would be excellent for use in classes devoted to spending at least a few weeks on enhancement, either at the upper-level undergraduate or graduate level."
- The volume **'Enhancing Human Capacities'** edited by Julian Savulescu, Guy Kahane and Ruud ter Meulen (Bristol University), Wiley-Blackwell, is now in press. This volume is unique in its examination of the ethical and policy implications of human enhancement technologies from a broad range of perspectives, including philosophy, the biological and neurosciences, and the social sciences. It covers all major forms of human enhancement: cognitive, mood, physical, moral and life extension, as well as general conceptual and moral questions about enhancement.
- Neil Levy's monograph **'Hard Luck: How Luck Destroys Freedom'** will be published by Oxford University Press in late 2010 or early 2011. Levy defends the radical conclusion that no one is morally responsible for anything, because our actions are too much the product of luck.
- Skene, L., Wilkinson, D., Kahane, G., Savulescu, J. (2009), **'Neuroimaging and the Withdrawal of Life-Sustaining Treatment from Patients in Vegetative State,'** *Medical Law Review*, 17, 245-261, doi:10.1093/medlaw/fwp002, was listed on SSRN's Top Ten download list for Law & Neuroscience.
- Levy, N. (2009), **'Neuroethics: Ethics and the Sciences of the Mind,'** *Philosophy Compass* 4: 69-81
- Sahakian, B.J., Morein-Zamir, S. (2009), **'Neuroscientists need neuroethics teaching,'** *Science*, 325,147
- Centre researchers have published their research in the leading journals in their fields, including *Science*, *PNAS*, *Ethics*, *Bioethics*, *American Journal of Bioethics*, *Journal of Medical Ethics*, *Neuroethics*, *Mind and Language*, *The British Journal of Psychiatry*, *Psychopharmacology*, *Medical Law Review*, *The British Journal of Psychiatry*, *Biological Psychiatry*, and *British Medical Journal*. The full publication list for 2009 can be found below.

Summary of Research Output for 2009

BOOKS EDITED/AUTHORED:	1
BOOK CHAPTERS PUBLISHED:	30
JOURNAL ARTICLES PUBLISHED:	73
BOOKS FORTHCOMING:	2
BOOK CHAPTERS FORTHCOMING:	23
JOURNAL ARTICLES FORTHCOMING:	61
TALKS GIVEN AT OXFORD:	27
TALKS GIVEN OUTSIDE OXFORD:	73

Awards and Funding

Centre members have been working hard to secure further funding, either to secure more researchers in related areas or to free up Oxford Centre for Neuroethics funds for use in enhancing its aims.

Individual funding awards

- Dr Guy Kahane was awarded a 5 year Wellcome Trust University Award on '**Wellbeing, Consciousness and Decision Making: Key concepts in Biomedical Ethics**' (£190,871) thereby freeing up the salary originally allocated to him. Part of this funding will cover the salary of Dr Katja Wiech (FMRIB) for 2010, to support collaborative neuroimaging studies of moral decision-making.
- Dr Hanna Pickard was awarded a highly competitive 5 year Wellcome Trust Clinical Research Fellowship in Biomedical Ethics on '**Responsibility and Morality within Personality Disorder**' (£135,596).
- Dr Tom Douglas was awarded a competitive Wellcome Trust Biomedical Ethics Research Fellowship on '**The Dual-Use Dilemma in Biomedical Science: an Ethical Analysis**' (£121,955).



Major Project Funding Awards

- **AHRC Grant on 'Science and Religious Conflict'**. The Director, Julian Savulescu, was awarded a highly competitive *Arts and Humanities Research Council* grant (£571,412) to conduct a three year project on 'Science and Religious Conflict,' commencing 1 June 2009. The project investigates the ways that neuroscience, psychology and evolutionary theory might help to understand and reduce religious conflict. Dr Steve Clarke is a named researcher on the project, and Dr Russell Powell has been appointed as a second researcher on the project. As part of this project, Professor Tony Coady (University of Melbourne) gave two popular lectures at Oxford on '*How Dangerous is Religion*' and '*Religion, Public Reason and the Liberal State.*'
- **Volkswagen Foundation Grant on the Psychology and Neuroscience of Moral Decision-Making**. Dr Guy Kahane and colleagues from Cologne and Groningen have received a €400,000 grant from the Volkswagen Foundation for a 3 year interdisciplinary project on 'Emotion and Intuition in Moral Decision-Making: Empirical Evidence and Ethical Implications'. This project will bring together ethicists, sociologists and social psychologists to study the ethical implications of the neuroscience of morality, and the role of expertise in moral decision-making. The planned research will include philosophical and ethical analysis, historical and sociological investigation, and psychological and neuroscientific experiments. This grant will fund an additional 3-year postdoctoral researcher at the Oxford Centre for Neuroethics, and significantly strengthen the Centre's ties to the social sciences and to neuroethical research in continental Europe.

New Satellite Centre for Neuroethics at the Florey Institute, Melbourne

- As part of Julian Savulescu's successful efforts to set up a satellite research centre for the Uehiro Centre at the Florey Neuroscience Institutes, the Florey Neuroscience Institutes have agreed to fund Neil Levy for nine months of the year, the balance of the year is funded by the Oxford Centre for Neuroethics.

Leverhulme Visiting Professorships in Neuroethics

The centre received two Leverhulme Visiting Professorships:

- Professor Walter Sinnott-Armstrong (Professor of Philosophy and Hardy Professor of Legal Studies at Dartmouth College; now Kenan Institute for Ethics, Duke University; and co-Director of the MacArthur Law and Neuroscience Program) was funded through a highly-competitive Leverhulme Visiting Professorship. Sinnott-Armstrong spent a very productive and busy time with us during two visits, April and May 2009.
- Professor Allen Buchanan, James B. Professor of Philosophy at Duke University was also elected Leverhulme Visiting Professor by the Leverhulme Trust, against international competition, which provided funding for him to spend four months visiting the Uehiro Centre, from January 2009 until May 2009.



- These prestigious, highly competitive awards (£28,845 and £32,271 respectively) count for half of the total number of Leverhulme Visiting Professorships awarded to the University of Oxford Humanities Division since records began in 1999.

Appointments

During 2009, several researchers and postgraduates were selected to join the Oxford Centre for Neuroethics. We have secured funds to support two further postgraduate students working in Neuroethics. We have also secured the services of the Oxford Uehiro Centre for Practical Ethics Administrator, Deborah Sheehan, benefiting from 30% of her time in coordinating major projects.

Wellcome funded senior appointments

- Professor Neil Levy is 25% funded as a Senior Research Fellow
- Dr Nicholas Shea is funded 20% as a Research Fellow

Wellcome funded doctoral studentships

- Pablo Stafforini was selected as an Oxford-based D.Phil. student, supervised by Professor Julian Savulescu and Dr Krister Bykvist and writing on pain and pleasure in normative ethics and metaethics.
- Ahmed Mohamed was selected as a Cambridge based Ph.D. student, supervised by Professor Barbara Sahakian and Professor Julian Savulescu, and working on 'The neuroethics of elective cognitive enhancing drugs in human subjects.'

Two New Doctoral Studentships in Neuroethics

External funding was also successfully sourced from the James Martin 21st Century School 'Program on the Ethics of the New Biosciences' to support two further doctoral studentships in neuroethics:

- Eleanor Grant (£40,960), looking into aspects of cognitive enhancement and neuroscience and working with our colleagues in the FMRIB Centre, Dr Katja Wiech and Professor Irene Tracey.
- Sylvia Terbeck (£40,960), working with Professors Miles Hewstone and Kia Nobre, Experimental Psychology. Terbeck is investigating the role of empathy and prejudice in moral decision-making.

Both these new positions and the joint empirical experiments conducted serve to strengthen links with related departments within the university.

Visiting Researcher – Professor Ingmar Persson

The Centre is fortunate to benefit from 3 visits of a fortnight in 2009 by Ingmar Persson, Professor of Practical Philosophy at the University of Gothenburg, Sweden, and part-time Research Fellow at the Oxford Uehiro Centre for Practical Ethics since January 2009. His visits have are funded by the Oxford Uehiro Centre for £30,000 over 3 years. Professor Persson has led a distinguished career,



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publishing over 200 articles in Swedish and English and seven books including one with OUP. He co-supervises younger scholars in the centre as well as pursuing his own research during his periods in Oxford and is a highly valued and very productive member of the Uehiro Centre. His main publication is *The Retreat of Reason* (Oxford U P, 2005). His publications during his time at the Uehiro Centre include: 'Rights and the Asymmetry Between Creating Good and Bad Lives, M. Roberts & D. Wasserman (eds.): *Harming Future Persons*, Springer, 2009; 'The Origination of a Human Being: A Reply to Oderberg', *Journal of Applied Philosophy*, 26 (2009), 371-8; 'Actualizable Potential, Reproduction and Embryo Research', (co-author: Julian Savulescu), *Cambridge Quarterly of Healthcare Ethics*, 19 (2010), 1-10; 'Unfit for the Future? Human Nature, Scientific Progress, and the Need for Moral Enhancement', (co-author: Julian Savulescu), in Savulescu, J., ter Meulen, R., and Kahane, G. (eds.) *Enhancing Human Capabilities*, Wiley-Blackwell, forthcoming 2010; 'Moral Transhumanism', (co-author: Julian Savulescu), *Journal of Medicine and Philosophy*, forthcoming 2010.

He is also due to give the following talk: 'Could Democracy Cope with Climate Change?', one of the invited lectures at the annual conference of The Society for Applied Philosophy, St Anne's College Oxford, July 2-4, 2010.

Neuroethics Society. Professor Julian Savulescu was elected member of the Neuroethics Society Board of Directors.

Summary of External Funding, 2009

Source of funding	Amount	Duration
AHRC	£571,412	2009-2012
The Wellcome Trust	£455,840	2009-2014
Volkswagen Foundation	£117,500	2010-2012
James Martin 21 st Century School	£81,920	2009-2012
The Leverhulme Trust	£61,116	2009
ESRC	£36,000	2009-2012
The Brocher Foundation	£22,534	2009
Oxford Uehiro Centre for Practical Ethics	£51,840	2009-2012
The MacArthur Foundation	£10,000	2009
The Laces Trust	£5,000	2009
BIOS, London School of Economics	£3,000	2009
Kenan Institute for Ethics, Duke University	£2,000	2009
Total	£1,418,162	

List of grants, awards and financial support for the Centre's activity beyond the core funding provided by the Wellcome Trust *Strategic Award*



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- 7.2 Walter Sinnott-Armstrong
- 7.3 Neil Levy
- 7.4 Barbara Sahakian
- 7.5 Bill Fulford
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- 7.7 Nick Bostrom
- 7.8 Anne Aimola Davies
- 7.9 Alastair Buchan



8. Further Researcher Output

- 8.1 Guy Kahane
- 8.2 Anders Sandberg
- 8.3 Barbro Fröding
- 8.4 Nicholas Shea
- 8.5 S Matthew Liao
- 8.6 Janet Radcliffe-Richards
- 8.7 Steve Clarke
- 8.8 Hanna Pickard
- 8.9 Katja Wiech
- 8.10 Nicholas Shackel
- 8.11 Loane Skene
- 8.12 Bennett Foddy

9. Postgraduate Output

- 9.1 Dr Dominic Wilkinson
- 9.2 Dr Tom Douglas
- 9.3 Alexandre Erler
- 9.4 Ahmed Mohamed
- 9.5 Pablo Stafforini
- 9.6 Sylvia Terbeck



1. The Centre Staff and its Board

1.1 Centre Staff

Principal Researchers: Professor Julian Savulescu (Director); Professor Walter Sinnott-Armstrong (Duke University); *Dr Neil Levy (Deputy Director –Research)*; Professor Barbara Sahakian (Cambridge University); Professor Bill Fulford (University of Warwick); Professor Irene Tracey; Professor Nick Bostrom; Dr Anne Aimola Davies; Professor Alastair Buchan; Dr Hilary Madder.

Further Researchers: Dr Guy Kahane (Deputy Director – Administration); Dr Anders Sandberg; Dr Barbro Fröding; *Dr Nicholas Shea*; Professor Janet Radcliffe-Richards; Dr S Matthew Liao; Dr Steve Clarke; Dr Hanna Pickard; *Dr Katja Wiech*; Dr Nicholas Shackel; Professor Loane Skene; Dr Bennett Foddy.

Postgraduates: Dr Dominic Wilkinson; Dr Tom Douglas; *Mr Pablo Stafforini*; *Mr Ahmed Mohamed*; Ms Eleanor Grant; Ms Sylvia Terbeck.

(Italics: researcher is partly or wholly funded by the Oxford Centre for Neuroethics.)

1.2 New Appointments

Dr Guy Kahane was awarded a 5 year Wellcome Trust University Award on ‘*Wellbeing, Consciousness and Decision Making: Key concepts in Biomedical Ethics*’ (£190,871) thereby freeing up the salary originally allocated to him. Part of that amount is funding the salary of Dr. Katja Wiech (FMRIB) for 2010, to support collaborative neuroimaging studies of moral decision-making. The balance of the released funding will also be used to fund half of another intended appointment to begin in 2010.

Dr Hanna Pickard was awarded a highly competitive 5 year Wellcome Trust Clinical Research Fellowship in Biomedical Ethics on ‘*Responsibility and Morality within Personality Disorder*’ (£135,596).

Mr Nicholas Iles was appointed Administrator and commenced work in March 2009.

Mr Pablo Stafforini and Mr Ahmed Mohamed were elected as funded postgraduate students based in Oxford and Cambridge respectively.

1.3 Management Committee

The Centre Management Committee is comprised of the following people and met three times in 2009 (9th March, 19th May, 12th December):



Professor Julian Savulescu, Professor Martin Davies, Professor Roger Crisp (chair), Dr Neil Levy, Professor Janet Radcliffe-Richards, Dr Guy Kahane, Mr Tom Moore, Mrs Deborah Sheehan.

Minutes of these meetings are available on request.

1.4 Advisory Board

The International Advisory Board is comprised of:

- Professor David Chalmers (Director of The Centre for Consciousness, Australian National University)
- Professor Martin Davies (Wilde Professor in Mental Philosophy, University of Oxford)
- Professor Ray Fitzpatrick, Professor of Public Health and Primary Care at Nuffield College, University of Oxford)
- Professor John Harris (Professor of Bioethics Manchester University and Research Director in the Institute of Science, Ethics and Innovation);
- Professor Sue Iversen (Pro-Vice Chancellor (planning), University of Oxford)
- Professor Tony Hope (Professor of Medical Ethics, University of Oxford , Fellow of St Cross College, and an Honorary Consultant Psychiatrist);
- Professor Jeff McMahan (Professor of Philosophy at Rutgers University);
- Professor Derek Parfit (Senior Research Fellow at All Souls College, University of Oxford, and Professor at Harvard University);

The Centre also uses the James Martin 21st Century School Advisory Board for advice and direction. That Board includes Professor Martin Rees, Amartya Sen (Nobel Laureate), Sir Nicholas Stern, Professor Joseph Stiglitz (Nobel Laureate), Sir Crispin Tickell and Professor Craig Venter.

2. Awards and Funding

2.1 Successful Funding Applications

- Dr Guy Kahane was awarded a grant by the John Fell OUP Research Fund (£7,418) for *'The Neuroethics of Moral Decision Making,'* and was awarded a 5 year Wellcome Trust University Award on *'Wellbeing, Consciousness and Decision Making: Key concepts in Biomedical Ethics'* (£190,871).
- Dr Tom Douglas was awarded a competitive Wellcome Trust Biomedical Ethics Research Fellowship on *'The Dual-Use Dilemma in Biomedical Science: an Ethical Analysis'* (£121,955).



- Dr Hanna Pickard was awarded a competitive 5 year Wellcome Trust Clinical Research Fellowship in Biomedical Ethics on '*Responsibility and Morality within Personality Disorder*' (£135,596).
- Seven further postdoctoral applications to the Wellcome Trust were made by individuals linked to the Oxford Centre for Neuroethics in 2009, but unfortunately none were successful.
- Dr Guy Kahane and colleagues from Cologne and Groningen have received a €400,000 grant from the Volkswagen Foundation for a 3 year interdisciplinary project on 'Emotion and Intuition in Moral Decision-Making: Empirical Evidence and Ethical Implications'. This project will bring together ethicists, sociologists and social psychologists to study the ethical implications of the neuroscience of morality, and the role of expertise in moral decision-making. The planned research will include philosophical and ethical analysis, historical and sociological investigation, and psychological and neuroscientific experiments. This grant will fund an additional 3-year postdoctoral researcher at the Oxford Centre for Neuroethics, and significantly strengthen the Centre's ties to the social sciences and to neuroethical research in continental Europe.
- A senior postdoctoral researcher will be appointed at the Uehiro Centre later in 2010 as the result of a recent successful application under the James Martin 21st Century School Matched Funding Scheme to support this new project. The successful proposal was put together by Julian Savulescu, Professor Jonathan Flint (Wellcome Trust Centre for Human Genetics), a leading geneticist and Gero Miesenböck (Waynflete Professor of Physiology), a molecular biologist and world leader in the field of circuit analysis. This is a great example of a strong interdisciplinary project that will bring together and capitalize on existing strengths within Oxford.

The project arises from a key challenge for 21st Century biology, which is to understand how the limited biophysical repertoire of individual neurons gives rise to behaviour. This raises profound ethical issues related to understanding behaviour and potentially manipulating it, so called 'mind control.' The project will examine the ethical, social and legal implications of intervening in normal brain function. Machine-mind interfaces raise the possibility of targeted behavioural manipulation and mind control, issues which are of immense significance to future societies. Such research raises profound issues such as who should have control over such technologies, can such technology ethically be used on incompetent people, including children and the intellectually disabled or demented. It asks the question whether there should be a role for such technology in controlling desires and addictions, and should it be used for purposes of cognitive enhancement or mind networking?

- Funding has been successfully obtained from the Economic & Social Research Council (ESRC) Studentship scheme and the Oxford Biomedical Research Centre (BRC), to obtain funding for a 3 year PhD Studentship. Mark Sheehan (The Ethox Centre) was able to obtain £12,000 from each institution for a student that he will supervise. The individual involved, Steve Curd, is to work on a PhD project which will be a collaboration between the BRC and Goldsmith's College, London, entitled '*Redesigning Neurological Care Pathways: Brain Imaging, Ethics and Performativity*'. Funding from the ESRC had also



been applied for under its 2010 CASE Studentship Scheme for this student, which if also successful would replace the standard ESRC Studentship award mentioned.

For the duration of the empirical phase of the project, the student will be based at the BRC in the John Radcliffe Hospital, Oxford. The project will seek to identify and critically analyse the ways in which functional magnetic resonance imaging (fMRI) technology is used by scientists, clinicians, patients and their carers during the research, diagnosis and treatment of progressive neurological diseases at the John Radcliffe Hospital, Oxford and how these are addressed in prevailing research and medical ethics frameworks. As such, the outcomes of this work will have direct relevance to the Oxford BRC's Patient and Public Involvement Strategy and potentially engender the redesign of neurological care pathways at the Trust and in the wider National Health Service, thereby improving the quality of the care provided to patients with neurological conditions.

- Additional funding to support the 2010 'BioPrediction' Conference, to which The Oxford Centre for Neuroethics contributed £10,000, was sourced from The MacArthur Foundation Law & Neuroscience Project (£10,000), BIOS (LSE) (£3,000) and The Kenan Institute for Ethics, Duke University (£2,000).
- Additional funding for the 2010 Conference on 'The Mechanisms of Self-Control: Lessons from Addiction' was sourced from The Laces Trust (£5,000) and an Australian Research Council Discovery Project (Neuroethics: the practical and the philosophical), of which Neil Levy is the chief investigator.
- Julian Savulescu and Tom Douglas received CHF 37,500 of funding from the Brocher Foundation for a Symposium on '*Human Enhancement: What Should Be Permitted?*' which they organized and which took place at The Brocher Centre, 20-21 October, 2009

External funding was sourced to support two new postgraduate positions:

- Eleanor Grant (£40,960, looking into aspects of cognitive enhancement and neuroscience and working with our colleagues in the fMRIB Centre, Dr Katja Wiech and Professor Irene Tracey)
- Sylvia Terbeck (£40,960, working with Professor Miles Hewstone and Professor Kia Nobre, Experimental Psychology, Oxford).

2.2. Funding Applications in Progress

Applications by Centre members for several major grants for neuroethical research are currently under review:

- As part of its collaboration with 3TU (see page 24 for details) The Oxford Centre for Neuroethics was involved in the submission of three applications to the Dutch Research Council for funding of approximately €550,000 for each project. Whilst the details of the final structure are not fully worked out at this preliminary stage, the expectation is that each successful project could fund at least one postdoctoral researcher to be based at the Centre for each successful application.



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The three projects submitted are:

'The Ethics and Use of Neurologically Modified Animals in Agriculture and Neurobiological Research' (prepared by Julian Savulescu and James Yeates)

'Anti-aged Versus Anti-Aging: Individual and Societal Concerns With Regard to Lifespan Extension' (Julian Savulescu and Bennett Foddy)

'Moral Enhancement—Overcoming Biological Limits to Impartial Concern' (Guy Kahane, Irene Tracey, Nicole Vincent)

- A £4 million application was made to the ESRC for an interdisciplinary project on 'Justice, Partiality and Moral Judgment', involving researchers from philosophy, anthropology, experimental psychology, neuroscience, and politics, which if successful would fund current centre members and allow for a further postdoctoral position in philosophy.
- Professor Neil Levy is in the process of submitting an application for a Future Research Fellowship from the Australian Research Council which would provide another external source to fund his work full-time for four years. If successful, this would replace his remaining Oxford Centre for Neuroethics funding, making it available for another partial position. It would also release the funding that he is receiving from the Florey Neuroscience Institutes, which is for the other three-quarters of his annual salary, thereby making it available to fund another individual.

3. Wellcome Lectures in Neuroethics

- Professor Walter Sinnott-Armstrong gave the 2009 Wellcome Lectures in Neuroethics in February and April on '*Does Neuroscience Undermine Responsibility?*' and '*Are Psychopaths Responsible?*' Both lectures were very well attended and audio of both lectures is accessible from the Centre website.
- The Inaugural 2010 Wellcome Public Lecture in Neuroethics will be given by Dr Steven Hyman, Provost of Harvard University, on '*Meditations on Self-Control: Lessons from the Neurobiology of Addiction.*'

4. Collaborations and new collaborators

- A new satellite centre, the Melbourne Centre for Neuroethics, has been created at the Flory Neuroscience Institutes (FNI), based at Melbourne University, to support the neuroscience work being carried out at the Uehiro Centre. Due to Julian Savulescu's efforts and relationship with FNI, it has agreed to provide funding to support 75% of Professor Neil Levy's position for two years. The FNI is one of the world's top 10



neuroscience Institutes and has been formed from the amalgamation of three research Institutes (the Howard Florey Institute, Brain Research Institute and National Stroke Research Institute) to develop more effective treatments for the millions of Australians affected by brain disorders every year.

- New collaborators are: Professor Martha Farah (Director, Center for Cognitive Neuroscience, University of Pennsylvania); Dr James Giordano (Director of the Center for Neurotechnology Studies and Chair of Academic Programs at the Potomac Institute for Policy Studies, Arlington, Virginia); Dr Raffaele Rodogno (Swiss National Science Foundation Senior Research Fellow, Harvard University and University of Oxford); Professor Ingmar Persson (Uehiro Centre and University of Gothenburg).
- Dr Guy Kahane has developed a collaborative project with Drs Birte Englich (Applied Social Psychology, University of Cologne) and Stephan Schleim (History of Psychology, University of Groningen) to investigate the role of intuition, emotion and expertise in moral decision-making.

5. Centre Activity

5.1 Neuroethics in the News

Members of the Centre frequently contribute to an internet service Practical Ethics in the News, which provides a daily ethical analysis of the news, which now has a readership of up to 2000 people daily, and reached its 100,000th reader in January 2009. The site has been linked from CNN's website and The Guardian's Bad Science column, where it has frequently been cited as an example of good science. It is also linked from a number of Philosophy related blogs, including the Singer Institute blog, Leeds University, Glasgow University and social networking site groups devoted to Ethics. It allows us to reach a far wider audience than standard publications and to engage with topical issues, as well as with commentators. Recently members have commented on issues such as cognitive enhancement among university students, and issues surrounding persistent vegetative state.

Blogs on neuroethical issues posted in 2009 include:

- Erlor, A., 'Self control matters – but to what extent can it be taught?' 21/05/09
- Erlor, A., 'Should we be afraid of virtual reality?' 28/9/09
- Levy, N., 'Authenticity and Enhancement,' 26/10/09
- Levy, N., 'Authenticity and Enhancement,' 26/10/09
- Sandberg, A., 'Speaking Truth to Power,' 02/11/09
- Sandberg, A., 'Supercoach and the MRI Machine,' 24/09/09
- Sandberg, A., 'Non-lethal but dangerous: neuroactive agents,' 20/08/09
- Sandberg, A., 'Be mindful of results, not the method,' 06/04/09
- Sandberg, A., 'Am I allowed to throw away "my" memories: does memory editing threaten human identity?' 17/02/09
- Sandberg, A., 'Transparent brains: detecting preferences with infrared light,' 11/02/09
- Stafforini, P., 'Free will and brain stimulation,' 26/05/09
- Stafforini, P., 'Born believers?' 10/02/09



Wilkinson, D., 'The Ventilator Lottery: rolling the dice in the face of difficult decisions,' 15/10/09

Wilkinson, D., 'Brain training and cognitive enhancement,' 26/02/09

5.2 Informing Clinical Practice

Below is a selection of events our members participated in which were aimed at clinicians:

January

Talk to the Neurosciences Grand Round, John Radcliffe Hospital, Oxford, by Dr Dominic Wilkinson: *'Maternal Brain death'*

James Martin Advanced Research Seminar, Professor Bill Fulford: *'Combining Values-Based Practice with Evidence Based Practice in Psychiatric Diagnosis'*

James Martin Advanced Research Seminars, Dr Linsey McGoe (Said Business School, University of Oxford): *'Seroxat, regulatory failure, and current limits of neuroethical discourses;'* Dr Dominic Wilkinson: *'The self-fulfilling prophecy in intensive care'*

February

Oxford Forum for Medical Humanities Event, Dr Simon Cohen: *'Conflict in the ICU'*

James Martin Advanced Research Seminar, Dr Jill Craigie (Centre of Medical Law & Ethics, King's College, London): *'Capacity, practical rationality and what a patient values'*

Oxford Forum for Medical Humanities Event, Dr Deborah Bowman (Senior Lecturer in Medical Ethics and Law at St George's University of London): *'Telling Tales: The Ethics Roadshow and preventing 'Ethical Erosion''*

March

Seminar presentation for the Children's and Young People's Directorate, part of the Bedfordshire and Luton Mental Health and Social Care Partnership NHS Trust, on *'Case Studies in Involuntary Treatment: A Values-Based Approach to the Mental Health Act'* by Professor Bill Fulford

April

Talk to Paediatric Registrars, John Radcliffe Hospital, Dr Dominic Wilkinson: *'Disability, discrimination and death'*

Professor Julian Savulescu spoke on *'The Ethics of Creating Admixed Embryos as a source of stem cells,'* National Stem Cell Conference, Oxford

May



James Martin Advanced Research Seminar, Dr Jeremy Howick (Centre for Evidence-Based Medicine, University of Oxford): *'Questioning the methodological superiority of 'placebo' over 'active' controlled trials;* Professor Matthew Rushworth (Department of Experimental Psychology and Oxford University FMRIB Centre, University of Oxford) *'The medial frontal cortex: a brain region for detecting conflict?'*

The Vision for Oxford as an Academic Health Sciences Centre – The Benefits for Local Health Communities, Cherwell District Council, Bodicote House, Banbury, UK (attendance and presentation by Professor Alastair Buchan to Health Professionals)

June

James Martin Advanced Research Seminars, Dr Dominic Wilkinson: *'A life worth giving: the threshold for withdrawal of life support from newborn infants;* Dr Davinia Talbot (Institut für Ethik, Geschichte und Theorie der Medizin, Universität Münster): *"None of my business'. Why physicians are wrong in abstaining from (neuro-)enhancement matters'*

Series of Seminars for the Children's and Young People's Directorate, Bedfordshire and Luton Mental Health and Social Care Partnership NHS Trust, by Professor Bill Fulford: 1) 'Simon the Seer: Values and Diagnostic Assessment'; 2) 'Tom? Which Tom? Values and the Multidisciplinary Team'; 3) 'Mrs Lazy: Values and 'Personalised' Practice'; 4) 'The Artist who Couldn't See Colours: Bringing Values and Evidence Together in the Care Plan'. (Research Centre, Dunstable. (June 2009 to present)

Professor Julian Savulescu led an 'Interactive Session' with Bruce Lefroy Centre for Genetic Health Research team on 'Practical Ethics', Monash Childrens Research Institute, Melbourne, Australia

Professor Bill Fulford gave a Guest Lecture on "Values-Based Practice" at Cambridge University Hospital

Professor Bill Fulford was keynote speaker at the RCPsych. AGM: "A Secret History of ICD and the Hidden Future of DSM" in Liverpool

July

Talk at Becoming a Person Conference, Magdalen College, Oxford, Dr Dominic Wilkinson: *'Premature infants, late-term fetuses, moral status and viability'*

Talk at Law and Neuroscience Colloquium, UCL, London, by Dr Dominic Wilkinson: *'The Carmentis machine: legal and ethical issues in the use of neuroimaging for prognosis in newborn infants'*

Professor Bill Fulford was invited speaker on 'Values-Based Practice' to NHS East Midlands Development Team, Nottingham

Special Lecture by Geoffrey Miller, MD (Clinical Director of Pediatric Neurology, Yale University, New Haven Hospital, and Professor of Pediatrics and Neurology, Yale University):



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'Extreme Prematurity – Truth, Justice and the Tyranny of Language' and response by Dr Dominic Wilkinson

Talk at Critical care Symposium, London, by Dr Dominic Wilkinson: *'Should we allow organ-donation euthanasia?'*

October

Professor Bill Fulford was an invited speaker to the National Mental Health Development Unit, China Week, *'3 Keys – A Shared Approach to Assessment in Mental Health,'* Wellington House, London

5.3 Media/public engagement

The Centre is fortunate to be able to draw upon the expertise of David Edmonds, who joined the Uehiro Centre in January, 2009 as a part-time Research Associate, working at the Uehiro Centre four days a month, in conjunction with his part-time appointment at the British Broadcasting Corporation (BBC). He has made major contributions in terms of both academic research and being involved in helping the Centre develop its media capabilities and activities. He is a multi-award winning journalist with the BBC World Service and is the author of several books, including (with John Eidinow), *Wittgenstein's Poker*, which was shortlisted for the Guardian First Book Award and was an international best seller, and *Caste Wars: a Philosophy of Discrimination*.

With Nigel Warburton he co-hosts *Philosophy Bites* which is a series of 15 minute interviews with top philosophers giving a brief introduction to an area of their work. This philosophy podcast has had over 6 million downloads to-date. Julian Savulescu's podcast interview 'the Yuk Factor' on Philosophy Bites received 25,000 downloads in its first week, above the average for this very popular service. He has conducted podcast interviews with members of the Centre and these have been a popular addition to our website and related websites.

He has also written and published two lengthy (4000 word) articles on philosophy for *Prospect Magazine*. One of these was on enhancement, the other on *Experimental Ethics*. Both these articles quoted Centre members – they were impressively two of Prospect's most downloaded articles of the year. He has published articles in almost all the British broadsheets and leading periodicals and is an Associate Editor at *Prospect Magazine*.

Selected Media/Public Engagement

January

Dr Anders Sandberg was interviewed by Yojana Sharma of the South China Morning Post on cognition enhancing drugs.



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February

Julian Savulescu, Aubrey de Grey (SENS, Cambridge) and Nick Bostrom wrote an ABC Unleashed Opinion Piece on 'The War Against Ageing'

March

Professor Bill Fulford organized two Workshops on 'Values-based education and training' with Ian McGonagle for the National Workforce programme conference on 'Moving On: From New Ways of Working to a Creative, Capable Workforce'

Professor Julian Savulescu spoke on 'The Moral Imperative to Enhance Human Beings,' Royal Institution Friday Evening Discourse, London

April

Dr Anders Sandberg was interviewed by Brandon Keim for Wired on memory editing: '*The Messy Future of Memory-Editing Drugs*,

<http://www.wired.com/wiredscience/2009/04/memoryedit/>

May

Professor Walter Sinnott-Armstrong and Professor Julian Savulescu gave talks at a dinner event for local business leaders, St Cross College, Oxford, on '*Neurolaw*'.

Professor Walter Sinnott-Armstrong was a panel member after a radio play 'Interior Traces,' Birkbeck Cinema, London

June

Professor Janet Radcliffe-Richards led the BBC Radio 4 programme *Analysis: Thought Experiments*, and among others interviewed Dr Nick Shea.

Professor Julian Savulescu appeared on 'Fitter, Faster, Future', True Tube (educational videos online) videocast on drugs in sport

July

Julian Savulescu appeared on 'I want to be a Superhero,' True Tube (educational videos online) videocast on human enhancement

August

Melbourne Writer's Festival, talk by Dr Neil Levy: '*Free Will and the Brain*'



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Dr Neil Levy was interviewed by *The Australian* on 'Enhanced Brains say Know to Drugs'

Professor Julian Savulescu and Dr Wilkinson interviewed by The Wellcome Trust on 'Caution urged over fMRI for life or death decisions,'

<http://www.wellcome.ac.uk/News/2009/News/WTX056177.htm>

September

Professor Barbara Sahakian holds an International Distinguished Scholar's award from the University of Pennsylvania and gave the first public talk in the 'Neuroscience and Society Lecture Series': 'Cognitive Enhancing Drugs: Neuroscience and Society'

Professor Walter Sinnott-Armstrong was interviewed about Morality Without God? with Dianne Robinson and Barry Lynn of Americans United for Separation of Church and State in D.C., a on call in radio show on Roots Up Radio and www.cultureshocks.com.

Professor Julian Savulescu took part in a Panel Discussion, 'Beyond the Financial Crisis – Systemic Shocks in the 21st Century', Oxford Analytica International Conference, Oxford

Professor Julian Savulescu took part in a Panel Discussion, 'Intelligence Squared Debate : The World in 2050', Royal Geographical Society, London

October

Julian Savulescu gave a talk on 'Unfit for Life: Genetically Enhance Humanity or Face Extinction' presented at Sydney Festival of Dangerous Ideas, <http://tinyurl.com/ykhgrbc>. He also appeared on an 'Insight' T.V. programme, 'In Your Genes,' discussing genetic testing, Australia. <http://www.sbs.com.au/insight> and participated in a live-radio broadcast discussing ethical issues of vaccination (swine flu specifically), ABC (Australian Broadcasting Corp.)

Julian Savulescu also spoke on 'Bioliberation or Biothreat,' McKinsey & Co. Directors Conference, Munich, and led debate : 'Medical Technologies : Enhanced Lives and Evolved Businesses, what are we to believe?'

President's Lecture (Lord Rees) of the Royal Society (London), given by Professor Barbara Sahakian: '*Neuroethical Issues of Cognitive Enhancing Drug-Use*'

November

Walter Sinnott-Armstrong gave a talk on neurolaw to judges in a National Judicial College educational event in Chicago.

Barbro Fröding was invited to give a talk at Wotton's Philosophy Society, Eton College on 'Aristotelian virtue ethics and human enhancement'



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Julian Savulescu was interviewed for Oxford Today, University magazine (Michaelmas issue 2009), in article 'Woe, Superman'

Julian Savulescu was a guest on 'The Forum', BBC World Service radio programme featuring leading thinkers from disparate fields.

<http://www.bbc.co.uk/programmes/p004kln9/episodes/player>

December

In 2009, Professor Barbara Sahakian was quoted in an *Independent* article entitled 'Are smart drugs really that clever?', and was interviewed for Channel 4 News: The Home Office asks the government's advisory body on drugs to look at the use of 'cognitive enhancers'. She has appeared on BBC Radio 4's 'Start the Week' and in a Sunday Times article 'It's a no brainer - bring on the pills that will make us smarter'

In 2009 Professors Nick Bostrom, Julian Savulescu and Roger Crisp and Alexandre Erler were interviewed about human enhancement ethics for Oxford Today, a magazine for University of Oxford alumni

Dr Hanna Pickard was made a member of the OBMH Clinical Ethics Advisory Group

5.4 Selected Input into Government and other policy/regulation

Julian Savulescu was elected member of the Neuroethics Society Board of Directors

March

Julian Savulescu participated in a debate 'From Stem Cells to Neuroethics,' presentation as part of Brain Awareness Week at the European Parliament

Julian Savulescu also participated in a Panel Discussion: 'Perspectives on Synthetic Biology: Ethics, Public Engagement, Biosecurity and more,' with Matthew Harvey, Senior Policy Advisor, Royal Society, UK; Piers Millet, Biological Weapons Convention Implementation Support Unit, United Nations Office Geneva, Switzerland; Drew Endy, Stanford University, USA at IET BioSysBio Conference, Cambridge.

June

Julian Savulescu spoke on 'Enhancement as a Human Right', 13th Forum of National Ethics Councils : Neuroethics, Prague, Czech Republic-, European Commission- part of Czech EU presidency

July

Release of parliamentary briefing on the dual-use dilemma, by Dr Dr Tom Douglas (Uehiro Centre for Practical Ethics, University of Oxford), available here:



<http://www.parliament.uk/documents/upload/postpn340.pdf>

These parliamentary briefings (or POSTnotes, as they are called) are designed to give impartial information to MPs and Peers. The POST website is here:

http://www.parliament.uk/parliamentary_offices/post.cfm

It is accompanied by a podcast which includes some clips from an interview, as well as from two other academics and Phil Willis MP.

Professor Julian Savulescu Savulescu was Moderator of a Working Group on 'Consent in Children,' St Cross College, Oxford

Professor Barbara Sahakian (University of Cambridge, Oxford Centre for Neuroethics) was made a co-opted member of the new Working Group of the Advisory Council on the Misuse of Drugs (ACMD) to look at 'Cognition Enhancers'

5.5 Conferences, workshops and seminars

Conferences

A conference on '*The Mechanisms of Self-Control: Lessons from Addiction*' has been organised for 13-14 May 2010 in Oxford by Dr Neil Levy and Dr Nicholas Shea.

A conference on '*BioPrediction*' has been organised for 8-9 May 2010 in Washington D.C. by Professor Walter Sinnott-Armstrong and Dr Iliina Singh (BIOS, LSE).

The first meeting of the '*Mind Network*', a network for philosophy of mind and cognitive science in the UK, will take place in Oxford on 20th of March, organized by Dr Nick Shea and Dr Tim Bayne.

Workshops and Symposia

May

Symposium in Philosophy of Psychiatry, '*Neuroscience and Values*,' St Cross College, Oxford, co-sponsored by the Oxford Centre for Neuroethics

'Genes, Development and Criminology Workshop,' Oxford, UK, organised by Walter Sinnott-Armstrong and Iliina Singh

June

9th Annual conference of the UK Clinical Ethics Network, held at St Hugh's College, University of Oxford: '*Capacity, Responsibility, and Authenticity*' including a special session by Centre researchers on '*New Developments in Neuroethics*,' with talks by:

- Dr Guy Kahane: '*Neuroscientific Perspectives on Moral Judgment*'
- Dr Anders Sandberg: '*Enhancing Cognition and Mood*'
- Professor Julian Savulescu: '*Love Drugs and the Biological Enhancement of Love and*



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Relationships'

Cognitive Enhancement Symposium, St Hilda's College, Oxford, organised by Professor Nick Bostrom, at which he spoke on 'Socio-Economic and Ethical Issues in Weak Cognitive Enhancement'

July

University of Tokyo Centre for Philosophy, *Invited Lecture Series on Neuroethics*, given by Dr Neil Levy, website:

http://utcp.c.u-tokyo.ac.jp/events/2009/07/neil_levy_seminar_series/index_en.php

August

Dr Nicholas Shea co-organised and introduced a high-profile symposium on '*Consciousness in Vegetative State Patients*' at the annual conference of the European Society of Philosophy and Psychology, Budapest. Speakers included Dr. Adrian Owen (MRC Cognition and Brain Science Unit, Cambridge), Dr. Anil Seth (Informatics, Sussex) and Dr. Tim Bayne (Faculty of Philosophy, University of Oxford).

October

Brocher Foundation Symposium on '*Human Enhancement: What should be permitted?*' held in Geneva, Switzerland, organised by Dr Tom Douglas and Professor Julian Savulescu.

Jeanette Kennett, Neil Levy and Craig Fry organised a symposium on '*Addiction, Identity & Responsibility: Perspectives from Neuroscience, Social Science, Philosophy and Law*', at Macquarie University, Melbourne

November

Professor Bill Fulford organised with Malcolm King, Workshops for Leicestershire Partnership International Symposium: '*Community, Rights, Inclusion ... and Compulsory Treatment?*' Walker Stadium, Leicestershire

December

3rd Leducq Network of Excellence Conference for '*Mechanisms matching the brain's vascular energy supply to neural activity, and their failure in disease*' for the collaborators within this network, University of Paris, Paris, France (attendance and presentation by Prof Buchan and some of Acute Stroke Programme)

Seminars

January



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Dr Anders Sandberg: 'Cognitive Enhancement: Hope or Dope?' Invited talk/panel discussion on cognition enhancement organized by The Triple Helix, McCrum Lecture Hall, Cambridge.

James Martin Advanced Research Seminar, Professor Bill Fulford: 'Neuroscience and Values'

Professor Julian Savulescu spoke on 'Live Long and Prosper', Leading Interactive Session, on 'The Ethics of Science', World Economic Forum, Davos, Switzerland, and at the 'James Martin Ideas Lab', <http://www.youtube.com/watch?v=gBBNB7CtDOs>

February

Professor Allen Buchanan (Duke University): 'What Conservatism and Liberalism Have to Say About the Biomedical Enhancement Project--and Vice Versa'

James Martin Advanced Research Seminars, Professor Neil Levy: 'Cognitive Enhancement and Intuitive Dualism;'; Professor Chris Frith (Wellcome Trust Centre for Neuroimaging, University College London): 'Neuroscience, free will and responsibility;'; Professor Irene Tracey; Dr Guy Kahane; Dr Katja Wiech: 'The neuroscience of moral judgment'

Professor Julian Savulescu gave the Tanner Lecture on Human Values, on 'Enhancement as a Human Right,' Said Business School, Oxford

Professor Jeff McMahan (Rutgers University): 'Cognitive Disability and Cognitive Enhancement'

March

Dr Guy Kahane: 'Evolutionary Debunking Arguments', Moral Philosophy Club, University of Oslo, 'Neuroimaging Moral Judgment', CSMN Colloquium, University of Oslo, and 'The Normative Knowledge Argument,' Language and Rationality Seminar, University of Oslo

Professor Janet Radcliffe-Richards: 'The problem of feminist approaches to the academic disciplines: epistemology and jurisprudence', Sandra Day O'Connor School of Law, Arizona State University

Professor Janet Radcliffe Richards, 'Framing Problems', conference Unchallengeable Orthodoxy in Academia and Science, Sandra Day O'Connor School of Law and Cambridge University (UK), Arizona State University

Professor Janet Radcliffe Richards, 'Should we repeal the laws against the sale of kidneys?' 29th Annual Dialysis Conference, Houston, Texas

James Martin Advanced Research Seminars, Dr Nicholas Shea: 'Cognitive Neuroscience of Decision-Making;'; Professor Walter Sinnott-Armstrong: 'The Disunity of Morality'



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Professor Julian Savulescu: 'Biology and Freedom: Bioliberation or Biothreat', Fulvio Guerrini Lecture 2009, Centro di Ricerca e Documentazione 'Luigi Einaudi', Torino, Italy

April

Dr Guy Kahane: 'The Neuroscience of Moral Judgment: Empirical Findings and Possible Ethical Implications', Oxford-Mount Sinai Consortium on Bioethics, Mount Sinai School of Medicine, NYC.

Professor Bill Fulford gave an Update Lecture on 'Values-based practice and psychiatric diagnosis: bringing values and evidence together in policy, training and research' for World Psychiatric Association's International Congress 'Treatments in Psychiatry: A New Update,' Florence, Italy. He was also discussant for Section Symposium 'Hope in Psychiatry' with G. Stanghellini, B. Schrank, L. Davidson and M. Hayward; speaker on 'The aesthetic and the ethic dimensions in psychiatry;' and speaker on 'Can compulsory treatment be values-based?' for Committee Symposium 'Ethical Challenges in Psychiatry'

James Martin Advanced Research Seminars, Professor Walter Sinnott-Armstrong: 'Is Morality Unified?' Dr Nicole Vincent (Department of Philosophy, Delft University of Technology): 'Cognitive Enhancement and Increased Responsibility;' Professor James Griffin (Faculty of Philosophy, University of Oxford): 'What can biology and psychology tell us about ethics?'

Professor Julian Savulescu, 'Should we use technology to change our genetic destiny?' Monash Arts Lecture, Melbourne, Australia

Professor Julian Savulescu, 'Human Enhancement: Bioliberation or Biothreat?' Sydney Supper Club, Sydney, Australia

Professor Julian Savulescu, 'Ethics and Abortion Law Reform', Melbourne Law School Guest Lecture Series, Melbourne, Australia

Professor Allen Buchanan (Duke University): Three lectures on 'Beyond Humanity? The Ethics of Biomedical Enhancement'

May

Neuroethics Conference, University College London, where Professor Walter Sinnott-Armstrong gave a talk on 'Neuroscientific Evidence and Criminal Responsibility'

Professor Walter Sinnott-Armstrong: 'Moral Intuitions as Heuristics,' Reading University

June

James Martin Advanced Research Seminars, Dr Barbro Fröding: 'On the importance of treating oneself well;' Professor Folke Tersman (Department of Philosophy, Uppsala



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University): 'Non-Debunking Evolutionary Explanations of Moral Intuitions;' Dr Tom Douglas: 'Scientific Isolationism: Is it wrong to do research likely to be used wrongfully?'

Professor Bill Fulford: 'Neuroscience and Values: Philosophy into practice in 21st Century mental health and social care,' in 'Knowledge, Values & Power: Transforming Mental Health,' Professorial Lectures, Institute for Philosophy, Diversity and Mental Health: University of Central Lancashire

Professor Julian Savulescu, 'Biology and freedom : Bioliberation or Biothreat,' St Anne's College Lunchtime Discussion Group, Oxford

July

Professor Adam Kolber (Professor of Law, University of San Diego): 'Why Retributivists Must Abolish Prison'

Dr Bennett Foddy: 'Weakness of Will is not Weak'

Dr Nicholas Shackel: Mind-Brain Lecture: 'The neuroscience of moral judgement' Berlin School of Mind and Brain, Humboldt University, Berlin,

August

Dr Guy Kahane: 'Counterintuitive Moral Judgment: Cognitive Effort or Affective Deficit?' International Society for Research on Emotion Conference, Catholic University of Leuven, Belgium

Professor Julian Savulescu gave a series of ten lectures on 'Topics in Applied Ethics', Universidade Federal do Rio de Janeiro, Brazil

Professor Julian Savulescu gave 2 international invited lectures on 'Genetic Interventions and the Ethics of Human Enhancement' and 'Drugs and Free Will' GIVE EVENT NAME! and a seminar on 'Autonomy and Rights,' to Research Ethics Committees on Biotechnologies and the Human Condition, Belo Horizonte, Brazil

Professor Julian Savulescu spoke on 'Human Liberation: Overcoming our Biological and Psychological Limitations,' in 'On the Borders of Humanity: the Wonders of Technologies', 2009 Feelings of the World Seminar, Belo Horizonte, Brazil

September

Professor Julian Savulescu, 'Ethical Issues in Synthetic Biology', RoSBN Net Synthetic Biology Conference, St. Annes College, Oxford

Professor Bill Fulford gave an invited lecture: 'Neuroscience and values: from mental health to enhancement' for the GAP.7 Conference (Gesellschaft für Analytische Philosophie) on 'Reflections and Projections – Challenges to Philosophy,' University of Bremen, Germany



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Professor Julian Savulescu gave a seminar on 'The Limits of Autonomy in the Biomedical Context,' at Autonomous University, Madrid, Spain

Professor Neil Levy gave a keynote lecture on 'Neuroethics and Intuitions' at the conference 'Brain Matters – New Directions in Neuroethics,' http://www.noveltechethics.ca/site_brainmatters.php?page=467

Professor Walter Sinnott-Armstrong gave a keynote address at Central States Philosophy Association on 'Contrasts and Degrees of Freedom and Responsibility', and spoke at the University of Toronto on 'Is Morality Unified?'

October

Professor Bill Fulford was invited speaker at the Lisbon 2009 12th International Conference for Philosophy & Psychiatry: 'Post-modern perspective for psychiatry: positivistic analysis as dehumanisation and the knowledge fragments synthesis as re-humanisation of medicine: the PPP tools'

Professor Janet Radcliffe-Richards gave two seminars in Oxford on 'Consent, invalid invalidity' and 'Metaphysics for the Management of Sex'

Professor Julian Savulescu, 'Bioliberation vs. Biothreat,' Presentation to Chancellors Court of Benefactors, Oxford

Professor Walter Sinnott-Armstrong: 'Contrasts and Degrees of Freedom and Responsibility', keynote address at Central States Philosophy Association

Dr Barbro Fröding was invited by the organisers of The 4th International Tokyo Workshop on Applied Ethics and Philosophy, Department of Philosophy, University of Tokyo, to give a talk on 'Aristotelian virtue ethics and human enhancement'

Professor Julian Savulescu gave a talk on 'Human Psychology, Scientific Progress and Moral Enhancement'. Brocher Symposium on 'Human Enhancement: What Should Be Permitted?' Geneva, Switzerland

November

Dr Guy Kahane: 'Out of the Armchair: Why Ethics Needs Psychology,' Philosophy Colloquium, Delft University, Netherlands

Professor Walter Sinnott-Armstrong: 'Do Psychopaths Make Moral Judgments?' workshop on moral judgment at the University of Arizona in Tucson.

Professor Julian Savulescu, 'Human Enhancement,' Princeton University Human Values Forum



Dr Anders Sandberg participated in a seminar 'A cognitive enhanced career? – brain enhancing drugs in the classroom and workplace' organized by the Royal Society.

Dr Nicholas Shackel: 'Neuroscience of moral judgement and its significance for normativity and law', Neurosciences and Law Conference, Institute of Science and Ethics in Bonn at the Rheinisches Landesmuseum, Bonn

5.6 Teaching

- Dr Guy Kahane and Dr Matthew Liao, 'Moral Intuitions: Philosophy, Ethics and Science', Graduate Seminar, Trinity Term, University of Oxford (6 sessions)
- Weekly James Martin 21st Century School seminars were given during term time involving considerable neuroethical content.
- Professor Julian Savulescu led four graduate discussion groups per term on 'Applied Ethics', which were attended by a wide cross-section of students from various faculties and departments.
- Savulescu also led an Ethics Film Club in Hilary Term.
- Dr Anne Aimola Davies taught an Advanced Option on 'Pathologies of Belief' in Experimental Psychology, University of Oxford: 8 Lectures and a Workshop on 'Illusions and Delusions of Body Representation'

6 Visitors

6.1 Academic Visitors

Professor Enrique Bonete-Peralez (Universidad de Salamanca), researching a number of neuroethical topics and organising an anthology of articles and book chapters by Julian Savulescu in Spanish, as well as a translation of Neil Levy's book "Neuroethics" into Spanish

Dr Robin Pierce (Dalhousie University, Halifax, Nova Scotia), researching the ethical and legal implications of advances in neuroscience

Professor Dr Tom Buller (Philosophy Department, University of Alaska Anchorage), researching bioethics

6.2 Visiting Students

Aaron Chance (undergraduate at Johns Hopkins University, Baltimore)



7 Principal Researcher Output

7.1 Julian Savulescu

Savulescu, J., ter Meulen, R., Kahane, G. (eds.), *Enhancing Human Capacities*. Oxford: Wiley-Blackwell (forthcoming)

Savulescu, J., Bostrom, N. (eds.) (2009), *Human Enhancement*. Oxford: Oxford University Press

Knoepffler, N., and Savulescu, J. (eds.) (2009), *Der neue Mensch. Enhancement und Genetik*. Feiburg i. B.: Alber Verlag

Savulescu, J. and Persson, I. (forthcoming), 'Unfit for the Future? Human Nature, Scientific Progress and the Need for Moral Enhancement,' in ter Meulen, R., Kahane, G., and Savulescu, J. (eds.), *Enhancing Human Capacities*, Oxford: Wiley-Blackwell

Savulescu, J., Sandberg, A., Kahane, G., 'Wellbeing and the Concept of Enhancement,' in *Enhancing Human Capacities*, J. Savulescu, R. ter Muelen, and G. Kahane (eds.), Blackwell (forthcoming)

Sandberg, A., Savulescu, J., 'The Social and Economic Impacts of Cognitive Enhancement,' in *Enhancing Human Capacities*, J. Savulescu, R. ter Muelen, and G. Kahane (eds.), Blackwell (forthcoming)

Savulescu, J. and Foddy, B. (forthcoming), 'Le Tour and Failure of Zero Tolerance: Time to Relax Doping Controls,' in Ter Meulen, R., Kahane, G., and Savulescu, J. (eds.), *Enhancing Human Capacities*, Oxford: Wiley-Blackwell

Levy, N., Savulescu, J. (2009) 'The Moral Significance of Phenomenal Consciousness,' in Laureys, S., Schiff, N., and Owen, A. (eds.), *Coma Science: Clinical and Ethical Implications – Progress in Brain Research*, Oxford: Elsevier, pp. 361-370

Savulescu, J., 'Three Stages of Disbelief,' in Schuklenk, U and Blackford, R. (eds.), *50 Voices of Disbelief*, Wiley-Blackwell: Oxford

Savulescu, J., (forthcoming), 'Enhancement and Wisdom in the 21st Century', RSA Ethical Futures E-Book

Savulescu, J. (forthcoming), 'Yuk'. In Warburton, N., and Edmonds, D. (eds.), *Philosophy Bites*, Oxford: Oxford University Press

Savulescu, J. (2009), 'Genetic Enhancement,' in H. Kuhse and P. Singer (eds.), *A Companion to Bioethics: Second Edition*, Oxford: Wiley- Blackwell



Savulescu, J. and Devolder, K. (forthcoming), 'The Moral Imperative to Conduct Embryonic Stem Cell and Cloning Research,' in Pierce, J. and Randels, G. (eds.), *Contemporary Bioethics: An Integrated Approach*, Oxford: Oxford University Press. Reprinted from: Devolder, K., Savulescu, J. (2006) 'The Moral Imperative to Conduct Embryonic Stem Cell and Cloning Research,' *Cambridge Quarterly of Health Care Ethics* doi:10.1017/S0963180106060026

Savulescu, J., Persson, I. (forthcoming), 'Reproduction and Embryo Research: Bringing Embryos into Existence for Different Purposes, or Not at All,' in Holm, S. (ed.), *Festschrift for John Harris*

Foddy, B., and Savulescu, J., (2009), 'Ethik der Leistungssteigerung im Sport: Medikamenten- und Gen-Doping'. In Schone-Seifert, B., and Talbot, D. (eds.), *Enhancement: Die Ethische Debatte*, Mentis Verlag: Paderborn

Savulescu, J., and Kahane, G., (2009), 'The Welfarist Account of Disability,' in Cureton, A. and Brownlee, K., (eds.), *Disability and Disadvantage*, Oxford: Oxford University Press, pp. 14 – 53

Bostrom, N., and Savulescu, J. (2009), 'Human Enhancement Ethics: The State of the Debate,' in Savulescu, J., and Bostrom, N. (eds.), *Human Enhancement*, Oxford: Oxford University Press, p.p. 1 – 24.

Savulescu, J. (2009). 'The Human Prejudice and the Moral Status of Enhanced Beings,' in Savulescu J., and Bostrom, N. (eds.), *Human Enhancement*, Oxford: Oxford University Press, pp. 211-250

Savulescu, J., (2009). 'Enhancement and Fairness'. In Healey, P. and Rayner, S. (eds.), *Unnatural Selection: The Challenges of Engineering Tomorrow's People*, London: Earthscan, pp. 177 – 187.

Ranisch, R. and Savulescu, J. (2009), 'Ethics and Enhancement,' in Knoepffler & Savulescu (eds.) *The new man? Enhancement and Genetics*, Alber Verlag.

Savulescu, J. and Foddy, B. (2009), "To Gattaca and Beyond" in *Human Genetics: Ethics & Issues*. Vol 294 Series Issues in Society. Thirroul: The Spinney Press, pp.27–28, reprinted from "To Gattaca and Beyond" in *The Age*, 29 April 2007

Savulescu, J. (2009), 'Human Liberation: Removing Biological and Psychological Barriers to Freedom'. *Centro Einaudi Journal*, Biblioteca della Liberta no. 196. <http://www.centroeinaudi.it/centro/196-bdl-2009-online.html>

Savulescu, J. (2009), 'Procreative Beneficence: Why We Should Select the Best Children,' (from *Bioethics* (2001) 15: no 5. 413-426.) in Oakley, J. (ed.), *Bioethics. The International Library of Essays in Public and Professional Ethics* (Series Editors: Seumas Miller and Tom



Campbell), Aldershot, Ashgate Publishing, pp. 187 – 200

Savulescu, J. and Devolder, K. (2009). 'Therapeutic Cloning is Moral'. In D. Haugen, Musser, S., and Lovelace, K. (eds). *At Issue: The Ethics of Cloning*. Greenhaven Press. pp. 57 – 72. Reprinted from: Devolder, K., Savulescu, J. (2006) *The Moral Imperative to Conduct Embryonic Stem Cell and Cloning Research* *Cambridge Quarterly of Health Care Ethics* doi:10.1017/S0963180106060026

Mathews, D., Donovan, P., Harris, J., Lovell-Badge, R., Savulescu, J., and Faden, R. (2009), 'Pluripotent Stem Cell-Derived Gametes: Truth and (Potential) Consequences,' *Cell Stem Cell*, 5(1): 11-14

Savulescu, J. and Kahane, G. (2009), 'Brain-Damage and the Moral Significance of Consciousness,' *Journal of Medicine and Philosophy*, 33: 1-21, doi:10.1093/jmp/jhn038

Selgelid, M. J., A. R. McLean, Arinaminpathy, N., and Savulescu, J. (2009), 'Infectious Disease Ethics: Limiting Liberty in Contexts of Contagion,' *Journal of Bioethical Inquiry*, 6(2): 149-152

Arinaminpathy, N., J. Savulescu, McLean, A. (2009), 'Effective use of a Limited Antiviral Stockpile for Pandemic Influenza', *Journal of Bioethical Inquiry*, 6(2): 171-179

Douglas, T. and Savulescu, J. (2009), 'Destroying Unwanted Embryos in Research,' *European Molecular Biology Organization (EMBO) Report*, 10 (4): 307-312. doi:10.1038/embor.2009.54

Savulescu, J., and Kahane, G. (2009), The Moral Obligation to Create Children with the Best Chance of the Best Life, *Bioethics* 23 (5): 274-290, doi:10.1111/j.1467-8519.2008.00687

Skene, L., Wilkinson, D., Kahane, G., and Savulescu, J. (2009), 'Neuroimaging and the Withdrawal of Life-Sustaining Treatment from Patients in Vegetative State,' *Medical Law Review*, 17: 245-261

Wilkinson, D., Kahane, G., Horne, M., and Savulescu, J. (2009), 'Functional Neuroimaging and Withdrawal of Life-sustaining Treatment from Vegetative Patients,' *Journal of Medical Ethics*, 35: 508-511

Waterhouse, T., Hope, T., Savulescu J., Stein, A. and Pollard, A. J., (2009) 'Children's consent and paediatric research; is it appropriate for healthy children to be the decision-maker in clinical research?' *Archives of Disease in Childhood*, 93 (5), pp. 379-383. (Online First December 2007).

Sandberg, A., Sinnott-Armstrong, W., and Savulescu, J., (forthcoming), 'Cognitive Enhancement in Courts,' in Illes, J., and Sahakian, B.J., (eds.), *Oxford Handbook of Neuroethics*, Oxford University Press (scheduled for publication January 2011)

Douglas, T. And Savulescu, J. (in preparation), 'Procreative beneficence and in vitro



gametogenesis'

Bourne, H., Douglas T. and Savulescu J. (in preparation), 'Same Sex Reproduction'

Skene, L., Savulescu, J., Kahane, G., and Wilkinson, D., (forthcoming) 'Neuroimaging and PVS', *Medical Law Review*

Savulescu, J., and Skene, L., (revised and resubmitted 2008), 'The Ethics Of Creating 'Human Admixed Embryos' For Use In Research,' *British Medical Journal*

Wilkinson, D., and Savulescu, J. (submitted 2009), 'Should We Allow Organ Retrieval Euthanasia? Alternatives for Maximising the Number and Quality of Organs for Transplantation,' *Bioethics*

Sharkey, K., Savulescu, J., Aranda,S., and Schofield, P. (forthcoming), 'Clinician gate-keeping in clinical research is not ethically defensible: an analysis,' *Journal of Medical Ethics*

Duncan, R., Delatycki, M., Gillam, L., Williamson, R., Rogers, J. and Savulescu, J. (forthcoming), 'The challenge of developmentally appropriate care: Predictive genetic testing in young people for familial adenomatous polyposis (FAP),' *Familial Cancer*

Foddy, B., and Savulescu, J. (forthcoming), 'Response to Commentators: A Liberal Account of Addiction,' *Philosophy, Psychiatry and Psychology*

Foddy, B., and Savulescu, J. (forthcoming), 'A Liberal Account of Addiction,' *Philosophy, Psychiatry, and Psychology*

Savulescu, J., (forthcoming), 'Autonomy, Well-Being, Disease and Disability,' *Philosophy, Psychiatry and Psychology*

Savulescu, J., and Foddy, B. (forthcoming), 'Open Peer Commentary on S. Hyman's Target Article "The Neurobiology of Addiction: Implications for Voluntary Control of Behavior,"' *American Journal of Bioethics*

L. R. Mileskin, P. Schofield, M. Jefford, E. Agalinos, M. Levine, A. Herschtal, J. Savulescu, J. Thomson, J. R. Zalcborg, (forthcoming), 'To Tell or Not to Tell?: The Community Wants to Know about Expensive Anti-cancer Drugs as a Potential Treatment Option,' *Journal of Clinical Oncology*

Journals Edited

M.J. Selgelid, A.R. McLean, N. Arinaminpathy and J. Savulescu (eds), 2009 Special Issue: Infectious Disease Ethics: Limiting Liberty in Contexts of Contagion, *Journal of Bioethical Inquiry* 6: 2 pp.149-260.



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ANNUAL REPORT

1 January - 31 December 2009



Special Edition of the Journal of Biomedical Inquiry with Angela McLean and Michael Selgelid, (forthcoming 2009)

7.2 Walter Sinnott-Armstrong

Sinnott-Armstrong, W. et al., 'Neural Lie Detection in Courts' in American Academy of Arts and Sciences, Using Imaging to Identify Deceit: Scientific and Ethical Questions (available by download at: <http://www.amacad.org/publications/deceit.aspx>)

Forthcoming/submitted

Sandberg, A., Sinnott-Armstrong, W., and Savulescu, J., (forthcoming), 'Cognitive Enhancement in Courts,' in Illes, J., and Sahakian, B.J., (eds.), *Oxford Handbook of Neuroethics*, Oxford University Press (scheduled for publication January 2011)

'Neurolaw' with Mimi Belcher for Wiley Interdisciplinary Reviews: Cognitive Science, edited by Lynn Nadel and Shaun Nichols (page proofs approved)

Conscious Will and Responsibility: A Tribute to Benjamin Libet, co-edited with Lynn Nadel (a collection of original papers an introduction and a chapter by me to be published by Oxford University Press in 2010) (being copyedited)

'Moral Reasoning' with Gilbert Harman and Kelby Mason for *A Handbook of Moral Psychology*, John Doris and the Moral Psychology Research Group (ed.), Oxford: Oxford University Press, forthcoming 2010. (being copyedited)

'Moral Intuitions' with Liane Young & Fiery Cushman for *A Handbook of Moral Psychology*, John Doris and the Moral Psychology Research Group (ed.). Oxford: Oxford University Press, forthcoming 2010. (being copyedited)

'Cognitive Enhancement in Courts' with Anders Sandberg and Julian Savulescu (forthcoming)

'Moral Perception and Heuristics', *Modern Schoolman* (forthcoming)

'Free Constrastivism' for a collection to be edited by Martijn Blaauw and published by Routledge (commissioned and completed)

'Moral Deliberation and Moral Verdicts', by Jana Schaich Borg, Walter Sinnott-Armstrong, Vince Calhoun, and Kent A. Kiehl (submitted)

'Insanity Defenses' with Ken Levy for *The Oxford Handbook on Philoosphy and Criminal Law*, edited by John Deigh and David Dolinko (commissioned and completed)

'Unique Hemispheric Laterality During Processing of Immoral Stimuli', by Lora Cope, Jana Schaich Borg, Carla Harenski, Walter Sinnott-Armstrong, Debra Lieberman, Prashanth K. Nyalakanti, Vince D. Calhoun, and Kent Kiehl (submitted)



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1 January - 31 December 2009



'Moral reasoning in split-brain patients,' Miller, M.B., Sinnott-Armstrong, W., Young, L., King, D., Paggi, A., Fabri, M., and Gazzaniga, M.S. (submitted)

IN PROGRESS

'Left Hemisphere Dominance for Processing Moral Stimuli', by Lora Cope, Jana Schaich Borg, Carla Harenski, Walter Sinnott-Armstrong, Debra Lieberman, and Kent Kiehl (in progress)

Unity of Morality, with Thalia Wheatley, Anne Krendl, Philipp Koralus, Angela Mendelovici, and others (data gathered and being analyzed)

Dehumanization in psychopaths with Eyal Aharoni (UCSB), Susan Fiske (Princeton), Lasana Harris (NYU), and Kent Kiehl (UNM) (data gathered)

Prejudicial Effects of Brain Scans on Jurors with Michael Saks, Nick Schweitzer, Emily Murphy, Teneille Brown, Adina Roskies, Andrew Mansfield, Judy Illes, Kathryn Abrams, and Jay Hull (some data gathered)

'Order Effects in Medical Diagnosis' with Matthew Liao and Dr Dominic Wilkinson (data being gathered)

'A Plea for Precision' with Nicola Knight, Ross O'Hara, and Nicholas Sinnott-Armstrong (data gathered and being analyzed)

A Primer on Neuroscience for Judges, with Adina Roskies, Michael Gazzaniga, Marc Raichle, Robert Desimone, Stephen Morse, Hank Greely, Owen Jones, and others in the MacArthur Law and Neuroscience Project

'A Case Study in Neuroscience and Responsibility' commissioned for NOMOS

'Psychopathy as Disability' with Julian Savulescu

Editing Special Issue on 'reductionism' for Neil Levy's journal *Neuroethics*

7.3 Neil Levy

Levy, N., '*Hard Luck: How Luck Destroys Freedom*' Oxford University Press (forthcoming)

Levy, N., '*Neuromarketing: Ethical and Political Challenges*,' *Etica e Politica* (forthcoming)

Levy, N., '*What Difference does Consciousness Make?*' *Monash Bioethics Review* (forthcoming)

Levy, N., '*Resisting Weakness of the Will*,' *Philosophy and Phenomenological Research* (forthcoming)

Levy, N. & Savulescu, J. (2009), '*The Moral Significance of Phenomenal Consciousness*,' *Progress in Brain Research* 117: 361-370



Levy, N. (2009), 'Culpable Ignorance and Moral Responsibility: a reply to FitzPatrick,' *Ethics* 119: 729-741

Levy, N. (2009), 'Autonomy is (Largely) Irrelevant,' *American Journal of Bioethics (AJOB-Neuroscience)* 9: 50

Levy, N. (2009), 'What, and Where, Luck Is: a response to Jennifer Lackey,' *Australasian Journal of Philosophy* 87: 489 – 497

Levy, N. (2009), 'Neuroethics: Ethics and the Sciences of the Mind,' *Philosophy Compass* 4: 69-81

Levy, N. & McKenna, M. (2009), 'Recent Developments in Free Will,' *Philosophy Compass* 4: 96-133

Levy, N. (2009), 'Luck and History-Sensitive Compatibilism,' *Philosophical Quarterly* 59: 237-251

7.4 Barbara Sahakian

Housden, C., Morein-Zamir, S., Sahakian, B., 'Cognitive Enhancing Drugs: Neuroscience and Society,' in Ter Meulen, R., Kahane, G., and Savulescu, J. (eds.), *Enhancing Human Capacities*, Oxford: Wiley-Blackwell (forthcoming)

Devito, E.E., Blackwell, A.D., Clark, L., Kent, L., Dezsery, A.M., Turner, D.C., Aitken, M.R., Sahakian, B.J. (2009), 'Psychopharmacology (Berl), 202, 531-9

Chamberlain, S.R., Hampshire, A., Müller, U., Rubia, K., Campo, N.D., Craig, K., Regenthal, R., Suckling, J., Roiser, J.P., Grant, J.E., Bullmore, E.T., Robbins, T.W., Sahakian, B.J. (2009), 'Atomoxetine Modulates Right Inferior Frontal Activation During Inhibitory Control: A Pharmacological Functional Magnetic Resonance Imaging Study,' *Biological Psychiatry*, 65, 550-555

Robinson, O.J., Sahakian, B.J. (2009), 'A double dissociation in the roles of serotonin and mood in healthy subjects,' *Biological Psychiatry*, 65, 89-92

Devito, E.E., Sahakian, B.J. (2009), 'Response to comments on 'Methylphenidate improves response inhibition but not reflection impulsivity in children with attention deficit hyperactivity disorder (ADHD),' *Psychopharmacology (Berl)*, 203, 187

Roiser J.P., Cannon, D.M., Gandhi, S.K., Taylor-Tavares, J., Erickson, K., Wood, S., Klaver, J.M., Clark, L., Zarate, C.A. Jr., Sahakian, B.J., Drevets, W.C., (2009), 'Hot and cold cognition in unmedicated depressed subjects with bipolar disorder,' *Bipolar Disorder*, 11, 178-89

Roiser, J.P., Rubinsztein, J.S., Sahakian, B.J. (2009), 'Neuropsychology of affective disorders,' *Psychiatry*, 8, 91-96



Clark, L., Chamberlain, S.R., Sahakian, B.J. (2009), 'Neurocognitive Mechanisms in Depression: Implications for Treatment,' *Annual Review of Neuroscience*, 32, 57-74

Robinson, O.J., Sahakian, B.J. (2009), 'Acute tryptophan depletion evokes negative mood in healthy females who have previously experienced concurrent negative mood and tryptophan depletion,' *Psychopharmacology (Berl)*, 205, 227-235

Lawrence, A.J., Luty, J., Bogdan, N.A., Sahakian, B.J., Clark, L. (2009), 'Problem gamblers share deficits in impulsive decision-making with alcohol-dependent individuals,' *Addiction*, 104, 1006-1015

Roiser, J.P., Farmer, A., Lam, D., Burke, A., O'Neill, N., Keating, S., Smith, G.P., Sahakian, B.J., McGuffin, P. (2009), 'The effect of positive mood induction on emotional processing in euthymic bipolar patients and controls,' *Psychological Medicine*, 39, 785-791

Roiser, J.P., Levy, J., Fromm, S.J., Nugent, A.C., Talagala, S.I., Hasler, G., Henn, F.A., Sahakian, B.J., Drevets, W.C. (2009), 'The effects of tryptophan depletion on neural responses to emotional words in remitted depression,' *Biological Psychiatry*, 66, 441-450

Sahakian, B.J., Morein-Zamir, S. (2009), 'Neuroscientists need neuroethics teaching,' *Science*, 325, 147

Lawrence, A.J., Luty, J., Bogdan, N.A., Sahakian, B.J. (2009), 'Impulsivity and response inhibition in alcohol dependence and problem gambling,' *Psychopharmacology*, 207, 163-172

Slawik, H., Salmond, C.H., Taylor-Tavares, J.V., Williams, G.B., Sahakian, B.J., Tasker, R.C. (2009), 'Frontal cerebral vulnerability and executive deficits from raised intracranial pressure in child traumatic brain injury,' *Journal of Neurotrauma*, 26, 1891-1903

7.5 Bill Fulford

Thornton, T., Fulford, K.W.M., and Christodoulou, G. (2009), 'Philosophical Perspectives on Health, Illness and Clinical Judgement in Psychiatry and Medicine,' Chapter 2 in I.M. Salloum and J.E. Mezzich (eds.) *Psychiatric Diagnosis: Challenges and Prospects*, West Sussex: John Wiley & Sons Ltd, pp. 15-28.

Fulford, K.W.M., Wallcraft, J. (2009), Values-Based Practice and Service-User Involvement in Mental Health Research, Chapter 4 in J. Wallcraft, B. Schrank and M. Amering (eds.), *Handbook of Service User Involvement in Mental Health Research*, Wiley

Fulford, K.W.M. (2009), 'Values, science and psychiatry,' Chapter 5 in Bloch, S., and Green, S.A., (eds.) *Psychiatric Ethics (4th Edition)*, Oxford: Oxford University Press, pp. 61-84

Fulford, K.W.M. (2009), 'Values and Values-Based Practice in Clinical Psychiatry,' in M.G. Gelder, N. Andreasen and J. Geddes (eds.), *Oxford Textbook of Psychiatry, Second Edition*, Oxford: Oxford University Press

Forthcoming



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1 January - 31 December 2009



Fulford, K.W.M. and Sartorius, N. (forthcoming), 'Secret History of ICD and the Hidden Future of DSM,' Chapter 2 for *Psychiatry as Cognitive Neuroscience: Philosophical Perspectives*. Broome, M. and Bortolotti, L. (eds.) Oxford: Oxford University Press

Fulford, K.W.M., Thornton, T., Philosophical Resources for Understanding Clinical Judgement in Psychiatric Assessment and Mental Healthcare (forthcoming), Chapter 5 in I.M. Salloum and J.E. Mezzich (eds.) *Psychiatric Diagnosis: Patterns and Prospects*, Wiley

Fulford, K.W.M., Scott, S., Jones, D., Ballinger, R., and Bendelow, G., The slide to pragmatism: a values-based understanding of 'dangerous' personality disorders (forthcoming), *Health Sociology Review*, Volume 18, 2009) Sydney, Australia

Fulford, K.W.M., and Sadler, J.Z., Editorial Introduction to History and Philosophy Section 'Nothing about us without us!' (forthcoming) *Current Opinion in Psychiatry*

Fulford, K.W.M., King, M., and Dewey, S., Values Based Practice and Involuntary Treatment: A new training programme in the UK (forthcoming), *Advances in Psychiatric Treatment*

Fulford, K.W.M., Shah, A.K., The Application Of The Mental Capacity Act 2005 Among Geriatric Psychiatry Patients: a Pilot Study (08-12-21), (forthcoming) *International Psychogeriatrics*, xx, Australia

Fulford, K.W.M., and Sadler, J.Z., Agency, Narrative, and Self: a philosophical case conference (forthcoming), Introduction to Special Issue of *Philosophy, Psychiatry, & Psychology*

Fulford, K.W.M., Values-Based Practice: from the Real to the Really Practical (forthcoming), Special Issue of *Philosophy, Psychiatry, & Psychology* on Evidence-based and Values-based Practice

Fulford, K.W.M. and Stanghellini, G., The Third Revolution: Philosophy into Practice in Twenty-first Century Psychiatry (forthcoming), invited article for first issue of the online journal, *Dialogues in Philosophy, Mental and Neuro Sciences*, the journal of 'Crossing Dialogues', Editor Massimiliano Aragona, University of Rome, Italy

Fulford, K.W.M. and Sadler, J.Z. (forthcoming), 'Mapping the Logical Geography of Delusion and Spiritual Experience: A Linguistic-analytic Research Agenda covering Problems, Methods and Outputs,' Chapter xx in J. Peteet & F. Lu, *Religious and spiritual issues in psychiatric diagnosis and classification*, Arlington: American Psychiatric Publishing Inc.

7.6 Irene Tracey

Wiech, K. & Tracey, I. (2009), 'The influence of negative emotions on pain: behavioral effects and neural mechanisms,' *NeuroImage*, 47(3), 987-994

Ploner, M., Lee, M., Wiech, K., Bingel, U., Tracey, I. (2009), 'Prestimulus cerebral connectivity determines pain perception in humans,' *PNAS*, 107(1), 355-360

Stephen E. Gwilym, John R. Keltner, Catherine E. Warnaby, Andrew J. Carr, Boris Chizh, Iain Chessell, Irene Tracey (2009), 'Psychophysical and functional imaging evidence supporting

the presence of central sensitization in a cohort of osteoarthritis patients,' *Arthritis Care and Research*, 61(9), 1226-1234

Mayer, E.A., Aziz, Q., Coen, S., Kern, M., Labus, J.S., Lane, R., Kuo, B., Naliboff, B., Tracey, I. (2009), 'BrainImaging approaches to the study of functional GI disorders: a Rome working team report,' *Neurogastroenterology and Motility*, 21(6), 579-596

Pattinson, K.T., Mitsis, G.D., Harvey, A.K., Dirckx, S., Mayhew, S.D., Rogers, R., Tracey, I. (2009), 'Wise RG: Determination of the human brainstem respiratory control network and its cortical connections in vivo using functional and structural imaging,' *NeuroImage*, 44(2), 295-305

Pattinson, K.T., Governo, R.J., MacIntosh, B.J., Russell, E.C., Corfield, D.R., Tracey, I., Wise, R.G. (2009), 'Opioids depress cortical centers responsible for the volitional control of respiration,' *Journal of Neuroscience*, 29(25), 8177-8186

Tracey, I., Bushnell M.C. (2009), 'How neuroimaging studies have challenged us to rethink: is chronic pain a disease?' *Journal of Pain*, 10(11), 113-120

Vincent, K., Moore, J., Kennedy, S., Tracey, I. (2009), 'Blood oxygenation level dependent functional magnetic resonance imaging: current and potential uses in obstetrics and gynaecology,' *British Journal of Obstetrics and Gynaecology*, 116(2), 240-246

Wartolowska, K., Tracey, I. (2009), 'Neuroimaging as a tool for pain diagnosis and analgesic development,' *Neurotherapeutics*, 6(4), 755-760

Watson, A., El-Deredy, W., Iannetti, G.D., Lloyd, D., Tracey, I., Vogt, B.A., Nadeau, V., Jones, A.K. (2009), 'Placebo conditioning and placebo analgesia modulate a common brain network during pain anticipation and perception,' *Pain*, 145(1-2), 24-30

Wiech, K., Tracey, I. (2009), 'The influence of negative emotions on pain: behavioral effects on neural mechanisms,' *NeuroImage*, 47(3), 987-994.

Wiech, K., Lin, C.-S., Brodersen, K.H., Tracey, I., 'Threat modulation of anterior insula connectivity predicts pain,' (submitted)

Wiech, K., Kahane, G., Shackel, N., Tracey, I., 'Moral conflict or emotional deficit: two mechanisms drive counterintuitive moral judgement,' (submitted)

Kahane, G., Wiech, K., Shackel, N., Farias, M., Tracey, I., 'Consequence or duty? An fMRI study of intuitive and counterintuitive moral judgement,' (submitted)

Bingel, U., Wanigasekera, V., Wiech, K., Mhurcheartaigh, R., Lee, M., Ploner, M., Tracey, I., 'When expectations overrule pharmacology: The impact of treatment expectations on drug efficacy,' (submitted)

Ploner, M., Lee, M., Wiech, K., Bingel, U., Tracey, I., 'Flexible cerebral connectivity patterns subserve contextual modulation of pain,' (submitted)

7.7 Nick Bostrom



The Oxford Centre for Neuroethics

ANNUAL REPORT

1 January - 31 December 2009



Bostrom, N., 'Brain-Boosters', In P. Healey and S. Rayner (eds.), *Unnatural Selection: The Challenges of Engineering Tomorrow's People*, (pp. 129-141). London: Sterling

Bostrom, N. and Sandberg, A., (2009), 'Cognitive Enhancement: Methods, Ethics, Regulatory Challenges', *Science and Engineering Ethics*, Vol: 15 (3), pp. 311-341

Savulescu, J., Bostrom, N. (eds.) (2009), *Human Enhancement*. Oxford: Oxford University Press

Bostrom, N., Savulescu, J. (2009), 'Human Enhancement Ethics: The State of the Debate, *Human Enhancement*, Savulescu, J., Bostrom, N. (eds.) Oxford: Oxford University Press

Bostrom, N., Sandberg, A. (2009), 'The Wisdom of Nature: An Evolutionary Heuristic for Human Enhancement,' *Human Enhancement*, Savulescu, J., Bostrom, N. (eds.) Oxford: Oxford University Press

Bostrom, N., Roache, R., 'Smart Policy: Cognitive Enhancement and the Public Interest,' in *Enhancing Human Capacities*, J. Savulescu, R. ter Muelen, and G. Kahane (eds.), Blackwell (forthcoming)

7.8 Anne Aimola Davies

Aimola Davies AM, Davies M. Explaining pathologies of belief. In: Broome M, Bortolotti L. (eds.) *Psychiatry as cognitive neuroscience: Philosophical perspectives*. Oxford: Oxford University Press; 2009. pp. 285-323

Aimola Davies AM, Davies M, Ogden JA, Smithson M, White RC. Cognitive and motivational factors in anosognosia. In: Bayne T J, Fernandez, J. (eds.) *Delusions and self-deception: Affective influences on belief formation*. Hove, East Sussex: Psychology Press; 2009. pp. 187-225.

Aimola Davies AM, White RC, Davies M. Assessment of anosognosia for motor impairments. In: Gurd JM, Kischka U, Marshall J C. (eds.) *Handbook of clinical neuropsychology. 2nd ed.* Oxford: Oxford University Press; 2010. pp. 436-468

White RC, Aimola Davies AM, Kischka U., 'Errors of somatosensory localisation in a patient with right-hemisphere stroke, *Neurocase* (in press, accepted 12th October 2009)

White RC, Aimola Davies AM, Kischka U, Davies M., 'Touch and feel: Using the rubber hand paradigm to investigate self-touch enhancement in five right-hemisphere stroke patients,' *Neuropsychologia* (in press, accepted August 5th 2009)

7.9 Alastair Buchan

Nagel S, Talbot NP, Mecinović J, Smith TG, Buchan AM, Schofield CJ. (2010), 'Therapeutic Manipulation of the HIF Hydroxylases,' *Antioxid Redox Signal.* 12(4):481-501. Epub ahead of print 15th Sep 2009



Bath PM, Gray LJ, Bath AJ, Buchan A, Miyata T, Green AR. (2009), 'Meta-analysis in individual animals with Stroke Investigators. Effects of NXY-059 in experimental stroke: an individual animal meta-analysis,' *Br J Pharmacol.*, 157(7):1157-1171

Haljan G, Maitland A, Buchan A, Arora RC, King M, Haigh J, Culleton B, Faris P, Zygun D. (2009), 'The erythropoietin neuroprotective effect: assessment in CABG surgery (TENPEAKS): a randomized, double-blind, placebo controlled, proof-of-concept clinical trial,' *Stroke*, 40(8):2769-2775

Chen LK, McClaran J, Buchan AM. (2009), 'Impact of acute stroke unit on hospital length of stay,' *Arch Gerontol Geriatr.*, 49(1):e12-5

Wu CM, Manns BJ, Hill MD, Ghali WA, Donaldson C, Buchan AM. (2009), 'Rapid evaluation after high-risk TIA is associated with lower stroke risk,' *Can J Neurol Sci.*, 36(4):450-455

Poppe AY, Majumdar SR, Jeerakathil T, Ghali W, Buchan AM, Hill MD; Canadian Alteplase for Stroke Effectiveness Study Investigators, (2009), 'Admission hyperglycemia predicts a worse outcome in stroke patients treated with intravenous thrombolysis,' *Diabetes Care*, 32(4):617-622

Poppe AY, Buchan AM, Hill MD. (2009), 'Intravenous thrombolysis for acute ischaemic stroke in young adult patients,' *Can J Neurol Sci.*, 36(2):161-167

Macleod MR, Fisher M, O'Collins V, Sena ES, Dirnagl U, Bath PM, Buchan A, van der Worp HB, Traystman R, Minematsu K, Donnan GA, Howells DW. (2009), 'Good laboratory practice: preventing introduction of bias at the bench,' *Stroke*, 40(3):e50-52

Reprinted in both *Int J Stroke*. 4(1):3-5; and *J Cereb Blood Flow Metab*. 29(2):221-3

Steffenhagen N, Hill MD, Poppe AY, Buchan AM, Coutts SB. (2009), 'Should you thrombolyse all or any stroke patients with baseline National Institutes of Health stroke scale scores < or = 5?' *Cerebrovasc Dis.*, 28(2):201-202

8 Further Researcher Output

8.1 Guy Kahane

Kahane, G. and Savulescu, J. (2009), 'Brain-Damaged Patients and the Moral Significance of Consciousness', *The Journal of Medicine and Philosophy*, 33: 1-21

Savulescu, J. and Kahane, G. (2009), 'The Moral Obligation to Create Children with the Best Chance of the Best Life,' *Bioethics*, 23 (5), 274-290

Kahane, G. And Savulescu, J. (2009), 'The Welfarist Account of Disability,' in K. Brownlee and A. Cureton, (eds.), *Disability and Disadvantage*, Oxford: Oxford University Press, 14-53

Kahane, G. (2009), 'Pain, Dislike, and Experience,' *Utilitas*, 21, 3

Wilkinson, D., Kahane, G., Savulescu, J. (2009), 'Functional neuroimaging and withdrawal of life- sustaining treatment from vegetative patients', *Journal of Medical Ethics* 35, 508-511



Skene, L., Wilkinson, D., Kahane, G. and Savulescu, J. (2009), 'Neuroimaging and the withdrawal of life-sustaining treatment from patients in vegetative state,' *Medical Law Review* 17, 245-261

Kahane, G. (2009), 'Non-Identity, Self-Defeat, and Attitudes to Future People,' *Philosophical Studies*, 145 (2), 193-214

Forthcoming

Savulescu, J., ter Meulen, R., Kahane, G. (eds.), *Enhancing Human Capacities*. Oxford: Wiley-Blackwell (forthcoming)

Kahane, G. 'Feeling Pain for the Very First Time: The Normative Knowledge Argument,' *Philosophy and Phenomenological Research* (forthcoming)

Kahane, G., 'Evolutionary Debunking Arguments,' *Nous* (forthcoming)

Kahane, G. and Shackel, N., 'Methodological Problems in the Scientific Study of Moral Judgment,' *Mind and Language* (forthcoming)

Kahane, G., 'Introduction' and 'Reasons to Feel, Reasons to Take Pills,' in *Enhancing Human Capacities*, J. Savulescu, R. ter Muelen, and G. Kahane (eds.), Blackwell (forthcoming)

Savulescu, J., Sandberg, A., Kahane, G., 'Wellbeing and the Concept of Enhancement,' in *Enhancing Human Capacities*, J. Savulescu, R. ter Muelen, and G. Kahane (eds.), Blackwell (forthcoming)

8.2 Anders Sandberg

Bostrom, N. and Sandberg, A., (2009), 'Cognitive Enhancement: Methods, Ethics, Regulatory Challenges', *Science and Engineering Ethics*, Vol: 15 (3), pp. 311-341

Bostrom, N. and Sandberg A., (2009), 'Brain-Boosters', In P. Healey and S. Rayner (Eds.), *Unnatural Selection: The Challenges of Engineering Tomorrow's People*, pp. 129-141 (London: Sterling)

Bostrom, N., Sandberg, A. (2009), 'The Wisdom of Nature: An Evolutionary Heuristic for Human Enhancement,' *Human Enhancement*, Savulescu, J., Bostrom, N. (eds.) Oxford: Oxford University Press

Sandberg, A., 'Cognition Enhancement: Upgrading the Brain,' in *Enhancing Human Capacities*, J. Savulescu, R. ter Muelen, and G. Kahane (eds.), Blackwell (forthcoming)

Sandberg, A., Savulescu, J., 'The Social and Economic Impacts of Cognitive Enhancement,' in *Enhancing Human Capacities*, J. Savulescu, R. ter Muelen, and G. Kahane (eds.), Blackwell (forthcoming)

Savulescu, J., Sandberg, A., Kahane, G., 'Wellbeing and the Concept of Enhancement,' in *Enhancing Human Capacities*, J. Savulescu, R. ter Muelen, and G. Kahane (eds.), Blackwell (forthcoming)



Sandberg, A., Sinnott-Armstrong, W., and Savulescu, J., (forthcoming), 'Cognitive Enhancement in Courts,' in Illes, J., and Sahakian, B.J., (eds.), *Oxford Handbook of Neuroethics*, Oxford University Press (scheduled for publication January 2011)

8.3 Barbro Fröding

Fröding, B, 'Cognitive Enhancement, Virtue Ethics and the Good Life' (received and conditionally accepted)

8.4 Nicholas Shea

Shea, N. (2009), 'Imitation as an inheritance system', *Philosophical Transactions of the Royal Society B*, 364: 2429-2443, doi:10.1098/rstb.2009.0061

Shea, N. & Heyes, C. (2009), 'Metamemory as Evidence of Animal Consciousness: The Type That Does The Trick', *Biology & Philosophy*, 25, 95-110, and published online doi: 10.1007/s10539-009-9171-0

Shea, N. and Bayne, T., 'The vegetative state and the science of consciousness', *British Journal for the Philosophy of Science* (forthcoming)

Mars, R.B.*, Shea, N.J.*, Kolling, N. and Rushworth, M.F.S. (forthcoming). 'Model-based analyses: Promises, pitfalls, and example applications to the study of cognitive control,' *Quarterly Journal of Experimental Psychology* (*joint first authors)

Shea, N. (forthcoming) 'New concepts can be learned', Review Essay on Susan Carey, *The Origin of Concepts* (OUP 2009), *Biology & Philosophy*, doi:10.1007/s10539-009-9187-5

8.5 S Matthew Liao

Liao, S.M., 'Agency and Human Rights,' *Journal of Applied Philosophy* (forthcoming)

Liao, S.M., 2009. 'The Basis of Human Moral Status,' *Journal of Moral Philosophy* (forthcoming)

Liao, S.M., and Roache, R., 'After Prozac,' in *Enhancing Human Capacities*, J. Savulescu, R. ter Muelen, and G. Kahane (eds.), Blackwell (forthcoming)

8.6 Janet Radcliffe-Richards

Radcliffe-Richards, J. (2009), 'Consent with inducements: the case of body parts and service', *Consent*, Alan Wertheimer and Frank Miller (eds.), OUP

Radcliffe Richards, J. (2009), 'A world of transferable parts: the ethics of transplantation', *The Blackwell Companion to Bioethics*, Peter Singer and Helga Kuhse (eds.), Blackwell



Radcliffe-Richards, J., *A world of transferable parts* (working title), Oxford University Press, delivery 2009 (ethical issues in transplantation, intended for the general reader, integrating clinical material about the realities of intensive care with analysis of ethical issues.)

Radcliffe-Richards, J., *Discriminations* (working title), Oxford University Press (a reworking and considerable extension of parts of *Philosophical Problems of Equality*)

8.7 Steve Clarke

Clarke, S. and Roache, R. (2009), 'Enhancement am Menschen. Intuitionen und die Weisheit einer Reflexion über Abscheu', in *Enhancement und Genetics* (Nikolaus Knoepffler ed.), Verlag Karl Alber, (in German)

Clarke, S. (2009), 'Disclosing Clinical Trial Results: Publicity, Significance and Independence', *American Journal of Bioethics*, 9 (8), W3-W5, co-authored with S. Matthew Liao and Mark Sheehan

Clarke, S. (2009), 'The Duty to Disclose Adverse Clinical Trial Results', *American Journal of Bioethics*, 9 (8), 1-9, co-authored with S. Matthew Liao and Mark Sheehan

Clarke, S. (2009), 'Scientific Imperialism and the Proper Relations between the Sciences', *International Studies in the Philosophy of Science*, 23, 195-207, co-authored with Adrian Walsh

Clarke, S. (2009), 'Surgeon Report Cards', in *Patient Safety First: Responsive Regulation in Health Care*, Judith Healy and Paul Dugdale (eds.), Sydney, Allen and Unwin, pp. 221-236, co-authored with Justin Oakley.

Clarke, S. (2009), 'New Technologies, Common Sense and the Paradoxical Precautionary Principle', in *Evaluating New Technologies: Methodological Problems for the Ethical Assessment of Technological Developments*, Paul Sollie and Marcus Duwell (eds.), Dordrecht, Springer, pp. 159-173.

Clarke, S. (2009), 'Miracles', in *A Science and Religion Primer*, H. Campbell and H. Looy (eds.), Grand Rapids, Baker Academic, pp. 147-149

Clarke, D. (2009), 'Realism, Antirealism', in *A Science and Religion Primer*, H. Campbell and H. Looy (eds.), Grand Rapids, Baker Academic

Clarke, S. 'Cognitive Bias and Collective Enhancement,' in *Enhancing Human Capacities*, J. Savulescu, R. ter Muelen, and G. Kahane (eds.), Blackwell (forthcoming)

8.8 Hanna Pickard

Pickard, H. (2009), 'The moral content of psychiatric treatment' (co-authored by Steve Pearce), *The British Journal of Psychiatry*, 195, 281-282, plus a Reply to Letters commenting on this paper

8.9 Katja Wiech

Wiech, K. & Tracey, I. (2009), 'The influence of negative emotions on pain: behavioral effects and neural mechanisms,' *NeuroImage*, 47(3), 987-994

Moseley, G.L. & Wiech, K. (2009), 'The effect of tactile discrimination training is enhanced when patients watch the reflected image of their unaffected limb during training,' *Pain*, 144(3), 314-319

Ploner, M., Lee, M., Wiech, K., Bingel, U., Tracey, I. (2009), 'Prestimulus cerebral connectivity determines pain perception in humans,' *PNAS*, 107(1), 355-360

van Damme, S., Crombez, G., Wiech, K., Legrain, V., Peters, M.L., Eccleston, C. (2009), 'Why become more general when we can be more specific?' *Pain*, 144(3), 342-343

Edwards, R.R., Campbell, C., Jamison, R.N., Wiech, K. (2009), 'The neurobiological underpinnings of coping with pain,' *Current Directions in Psychological Science*, 18(4), 237-241

Wiech, K., Lin, C.-S., Brodersen, K.H., Tracey, I., 'Threat modulation of anterior insula connectivity predicts pain,' (submitted)

Wiech, K., Kahane, G., Shackel, N., Tracey, I., 'Moral conflict or emotional deficit: two mechanisms drive counterintuitive moral judgement,' (submitted)

Kahane, G., Wiech, K., Shackel, N., Farias, M., Tracey, I., 'Consequence or duty? An fMRI study of intuitive and counterintuitive moral judgement,' (submitted)

Bingel, U., Wanigasekera, V., Wiech, K., Mhurchartaigh, R., Lee, M., Ploner, M., Tracey, I., 'When expectations overrule pharmacology: The impact of treatment expectations on drug efficacy,' (submitted)

Ploner, M., Lee, M., Wiech, K., Bingel, U., Tracey, I., 'Flexible cerebral connectivity patterns subserve contextual modulation of pain,' (submitted)

8.10 Nicholas Shackel

Wiech, K., Kahane, G., Shackel, N., Tracey, I., 'Moral conflict or emotional deficit: two mechanisms drive counterintuitive moral judgement,' (submitted)

Kahane, G. and Shackel, N., 'Methodological issues in the scientific study of moral judgement,' *Mind and Language* (forthcoming)

8.11 Loane Skene



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Skene, L. (2009), 'Feeding back significant findings to participants and relatives' in J. Kaye, M. Stranger (eds.), *Principles and Practice in Biobank Governance*, pp. 161-175

Skene, L., Wilkinson, D., Kahane, G. and Savulescu, J. (2009), 'Neuroimaging and the withdrawal of life-sustaining treatment from patients in vegetative state,' *Medical Law Review* 17, 245-261

Skene, L. (2009), 'Ethics report on interspecies somatic cell nuclear transfer research,' *Cell Stem Cell*, 5, 27-30

8.12 Bennett Foddy

Foddy, B. (2009), 'A Duty To Deceive: Placebos in Clinical Practice,' *American Journal of Bioethics*, 9(12):4-12

Foddy, B., Savulescu, J. (2009), 'Relating Addiction to Disease, Disability, Autonomy and the Good Life,' *Philosophy, Psychology, and Psychiatry*, 16(4)

Foddy, B. (forthcoming), 'Enhancing Skill,' in Ter Muelen, R., Savulescu, J., Kahane G., (eds.) *Enhancing Human Capacities*, Oxford: Wiley-Blackwell

Savulescu, J. and Foddy, B. (forthcoming), 'Le Tour and Failure of Zero Tolerance: Time to Relax Doping Controls,' in ter Meulen, R., Kahane, G., and Savulescu, J. (eds.), *Enhancing Human Capacities*, Oxford: Wiley-Blackwell

Foddy, B., Savulescu, J., 'A Liberal Account of Addiction,' *Philosophy, Psychology, and Psychiatry*, 17(1) (in press)

Foddy, B., 'Addicted to Food, Hungry for Drugs,' *Neuroethics* (forthcoming)

Foddy, B., '*Neuroethics: An Introduction*,' Polity Press (due September 2010)

9. Postgraduate output relevant to Neuroethics

9.1 Dr Dominic Wilkinson

Hope, T., Wilkinson, D. (2009), 'Will it all go wrong? Sod's law and medicine,' *BMJ*, 339: 1392-1393, doi: 10.1136/bmj.b5299

De Crespigny, L., Douglas, T., Wilkinson, D., Savulescu, J. (2009), 'Risky Business: applying risk/benefit consistently in entertainment ultrasound,' *Ultrasound in Obstetrics and Gynaecology*, 34: 613-615, doi: 10.1002/uog.7481

Wilkinson, D. (2009), 'The Self-fulfilling prophecy in intensive care,' *Theoretical Medicine and Bioethics*, 30, 401-410, doi: 10.1007/s11017-009-9120-6



Wilkinson, D. (2009), 'The window of opportunity: decision theory and the timing of prognostic tests for newborn infants,' *Bioethics*, 23, 503-514 doi:10.1111/j.1467-8519.2009.01762.x

Wilkinson, D., Kahane, G., Horne, M. and Savulescu, J. (2009), 'Functional neuroimaging and withdrawal of life- sustaining treatment from vegetative patients', *Journal of Medical Ethics* 35, 508-511

Skene, L., Wilkinson, D., Kahane, G. and Savulescu, J. (2009), 'Neuroimaging and the withdrawal of life-sustaining treatment from patients in vegetative state,' *Medical Law Review* 17, 245-261

Wilkinson, D., 'Should we replace disabled newborn infants?' *Journal of Moral Philosophy* (forthcoming)

Wilkinson, D., Savulescu, J., 'Should we allow organ donation euthanasia? Alternatives for maximising the supply and quality of organs for transplantation,' *Bioethics* forthcoming

Wilkinson, D., 'Challenging the status quo,' *Journal of Bioethical Inquiry* (forthcoming)

Wilkinson, D., 'Trade-offs in suffering and wellbeing: the utilitarian argument for primate stroke research,' *American Journal of Bioethics* (forthcoming)

Wilkinson, D., Foster, C., 'The Carmentis machine: ethical and legal issues in the use of neuroimaging to guide treatment withdrawal in newborn infants,' *Current Legal Issues: Law and Neuroscience*, Freeman, M. (ed.) (submitted October 2009)

Wilkinson, D., 'Magnetic resonance imaging and withdrawal of life support from encephalopathic newborn infants,' *Pediatrics* (submitted November 2009)

Wilkinson, D., 'Prognosis, uncertainty and the best interests of the child,' Edited Collection (Title not decided) Ed. Savulescu J, Shimazono S., Tokyo (submitted January 2009)

Wilkinson, D., 'A life worth giving: the threshold for permissible withdrawal of treatment from disabled newborn infants,' *AJOB* (submitted August 2009)

9.2 Dr Tom Douglas

Douglas, T. (2009), 'Medical Injury Compensation: Beyond "No-Fault"', *Medical Law Review*, 17(1):30-51.

de Crespigny, L., Douglas, T., Wilkinson, D.J., Savulescu, J. (2009), 'Risky Business: Applying Risk/Benefit Analysis Consistently in Entertainment and Diagnostic Ultrasound', *Ultrasound in Obstetrics and Gynaecology*, 34(6), 613-615

Douglas, T., Douglas, N.M. (2009), 'Absence of Significant Dissent Should be Sufficient for Deceased Donor Organ Procurement in New Zealand', *Australian and New Zealand Journal of Public Health*, 33 (5), 449-454



Douglas, T., Savulescu, J., (2009) 'Destroying Unwanted Embryos in Research', *EMBO Reports*, 10 (4), 307-312

Douglas, T., Douglas, N.M. (2009), 'On the Post-Mortem Analogy and the Duty to Donate' (Response to Commentary), *Australian and New Zealand Journal of Public Health*, 33 (5), 456-457

Douglas, T., 'Moral Enhancement', in R. ter Meulen, J. Savulescu, G. Kahane (eds.), *Enhancing Human Capacities*, Oxford: Wiley-Blackwell (forthcoming).

Douglas T, 'Should Institutions Prioritize Rectification over Aid?' *Philosophical Quarterly* (forthcoming)

Douglas, T., 'Intertemporal Disagreement and Empirical Slippery Slope Arguments', *Utilitas* (forthcoming)

9.3 Alexandre Erler

Erler, A., 'Authenticity, Self-Creation, and Self-Respect,' *Journal of Moral Philosophy*, under review

Erler, A., 'Does Memory Modification Threaten our Authenticity?' *Neuroethics*, under review

9.4 Ahmed Mohamed

Sahakian, B.J. & Mohamed, A.D. (in preparation) 'Cognitive Enhancing Drugs: Ethics of Elective Psychopharmacology,' *International Journal of Neuropsychopharmacology*

Mohamed, A.D. & Loewenthal, D. (under review), 'Investigating the Conceptualisation and Experience of Common Mental Disorders within the Somali community in the UK,' *British Journal of Psychology and Psychotherapy*

Mohamed, A.D., & Loewenthal, D. (2009), 'Is it possible to ethically research the mental health needs of the Somali communities in the UK?' *Journal of Ethics in Mental Health*, 4 (1), 9-14

9.6 Pablo Stafforini

Stafforini, P. (forthcoming), 'Could Evolution and Neuroscience Debunk Morality?'

Stafforini, P. (forthcoming), 'Pleasantness as a Dimension of Determination'

Devolder, K., Douglas, T., Powell, R., Rippon, S. and Stafforini, P. (forthcoming) 'Resisting Sparrow's Sexy Reductio: Selection Principles and the Social Good', *American Journal of Bioethics*



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9.6 Sylvia Terbeck

Terbeck, S., Chesterman, P., 'Parents, ADHD, and the internet,' *International Journal of Internet Science* (under review)

Chesterman, P., Terbeck, S., Vaughan, F., 'Malingered Psychosis: A simulation study,' *Journal of forensic psychiatry and psychology* (under review)

Terbeck, S., Fischmeister, F., Chesterman, P., Bauer, H., 'Attribution: Its effect on error and feedback processing,' *NeuroImage* (under review)