Seminars

Departmental Seminars

Seminars are held on **Thursdays from 4.30 to 6.00pm in Seminar Room 2**, Department of History and Philosophy of Science, Free School Lane, Cambridge. There is tea beforehand from 4pm in Seminar Room 1. Organised by Alex Broadbent.

22 October Richard Barnett (HPS, Cambridge)

Dr Lauder Lindsay's lemmings: mad beasts and misanthropy in a Victorian asylum

29 October John Worrall (London School of Economics)

A philosopher of science looks at medicine: do we 'need some large, simple

randomized trials'?

5 November Alexander Bird (University of Bristol)

Social knowing

12 November Melanie Keene (Homerton College, Cambridge)

Learning things: the objects of familiar science in nineteenth-century Britain

19 November Sabina Leonelli (University of Exeter)

Dynamic (bio)ontologies for good epistemology

26 November Stephen Gaukroger (University of Sydney and University of Aberdeen)

Picturability and the mathematical ideals of knowledge: Leibniz versus Newton

3 December Fifth Cambridge Wellcome Lecture in the History of Medicine

Angus McLaren (University of Victoria)

Divorcing sex and reproduction: the discussion of artificial insemination in Britain,

1918-1948

Research Topics and Resources Seminars

Seminars on research topics and resources in history and philosophy of the sciences and medicine, for all new graduate students, are held in the first two weeks of term, on Thursdays at 4pm in Seminar Room 2. Tea is available from 3.45pm in Seminar Room 1. All welcome.

Each seminar will consist of short informal talks presenting research methodologies and areas. The Research Guide is on the HPS website at www.hps.cam.ac.uk/research.

Organised by Nick Jardine and Tim Lewens.

8 October Nick Jardine: Introduction to research resources in HPS

Ayesha Nathoo: Modern medicine and media research

Josh Nall and Caitlin Wylie: Researching in the Whipple Museum **Billy Wheeler:** Non-standard resources for philosophy of science

15 October Patricia Fara: Scientific images

Nick Whitfield: Archives

Sacha Golob: Reading continental philosophy

John Forrester: Crucial trivia

Abstracts

22 October Richard Barnett (HPS, Cambridge)

Dr Lauder Lindsay's lemmings: mad beasts and misanthropy in a Victorian asylum

If you read the DNB entry on William Lauder Lindsay, you might be forgiven for concluding that the high point of this Scottish physician's career was his *Memoir on the Spermogones and Pycnides of Lichens*, published in 1870. But in *Mind in the Lower Animals in Health and Disease*, written at the end of his life in 1879, Lindsay ranged across continents and millennia, pillaging writers from Pliny to Darwin and ushering his readers into a dark, destabilised world of simian neurosis and reptilian psychosis, suicidal scorpions and deranged, Prufockian lemmings. In this talk I want to grab *Mind in the Lower Animals* by its provocatively twitching tail. I will argue that Lindsay's sentimental anthropomorphism, and his engagement with both evolutionary theory and Spiritualism, marked him out as distinctively Victorian, responding to the hopes and anxieties of the British nineteenth century.

29 October John Worrall (London School of Economics)

A philosopher of science looks at medicine: do we 'need some large, simple randomized trials'?

A number of arguments have convinced nearly all of the medical community that randomized controlled trials provide the most telling, most scientifically weighty evidence for the efficacy of any treatment. Earlier work suggests that all but one of these arguments fail to withstand critical scrutiny.

The exception is the argument from 'selection bias'. Although this argument sounds very plausible, I suggest in this talk that it faces a number of both epistemological and practical problems. In particular it focuses attention on the relatively under-emphasised (epistemic) issue of 'external validity' (generalisability to the 'target population') and on practical issues about the significance of (very) large trials aimed at detecting small effects.

5 November Alexander Bird (University of Bristol)

Social knowing

There is a social or collective sense of 'knowledge', as used, for example, in the phrase 'the growth of scientific knowledge'. I show that social knowledge does not supervene on facts about what individuals know, nor even what they believe or intend, or any combination of these or other mental states. Instead I develop the idea that social knowing is an analogue to individual knowing. The analogy focuses on the functional role of social and individual knowing.

12 November Melanie Keene (Homerton College, Cambridge)

Learning things: the objects of familiar science in nineteenth-century Britain

'To many a Royal Society, the Creation of a World is little more mysterious than the cooking of a Dumpling' – Thomas Carlyle, *Sartor Resartus* (1838).

The use of familiar objects as both physical didactic devices and literary pedagogic analogies was particularly prevalent and powerful in nineteenth-century science education. Candles and cups of tea, pebbles and primroses, salt and see-saws were recruited to explain and entertain, as everyday science was placed at the heart of Victorian domestic life. In this talk I shall introduce the aims and artefacts of 'familiar science', exploring how the quotidian world of commonplace artefacts was used to communicate facts and phenomena – in short, how learning things was achieved through learning with things.

19 November Sabina Leonelli (University of Exeter)

Dynamic (bio)ontologies for good epistemology

I will explore the significance of a newcomer in the epistemology of biology: the bio-ontology, a classification tool that has come to play a crucial role in the dissemination of results across research contexts, as well as in the extraction of inferences and testable hypotheses from available datasets. I will analyse the characteristics of bio-ontologies and illustrate how their use is affecting experimental practices in biology. I will then show that bio-ontologies' success as research tools lies in their capability to change in response to new developments. I will conclude that the case of bio-ontologies exemplifies a fundamental characteristic of any ontology underlying scientific inquiry: a strong interdependence with epistemic practices.

26 November Stephen Gaukroger (University of Sydney)

Picturability and the mathematical ideals of knowledge: Leibniz versus Newton

There had been a widely-held view in the seventeenth century that the Fall had dulled Adam's senses, and that the use of artificial aids might effect the restoration of their pre-lapsarian acuity. But while there had also been a widespread view that reason too had been impaired in the Fall, this was generally diagnosed in terms of the passions triumphing over reason, the remedy being to control the passions. I offer an interpretation of Leibniz's account of the calculus as holding that artificial aids can correct reason itself.

Newton developed a version of infinitesimal calculus in the early 1670s but abandoned it on the grounds that it used procedures that could not be justified. They were black boxes: one put in the premisses and generated the right results, but had no grasp on what was going on in the middle. In fact, both Newton and Leibniz agreed that infinitesimal calculus required justification in terms of limit procedures, which were geometrical and open to inspection at every stage. The difference was that Newton believed that this meant that any procedure using infinitesimal calculus had to be translated into geometrical limit procedures, whereas Leibniz believed that it was only the general technique that had to be justified in terms of limit procedures, and that, once this was done, it was not required that one justify each and every operation employing infinitesimals in this way. Leibniz's approach is not driven by pragmatic concerns, however, but rather by a view that the calculus extends human capacities in new ways into new areas: it goes beyond our natural faculties and hence we cannot expect our natural faculties to be able to legitimate it. This raises the general question of whether we can employ procedures of enquiry whose workings transcend our faculties.

3 December Fifth Cambridge Wellcome Lecture in the History of Medicine Angus McLaren (University of Victoria)

Divorcing sex and reproduction: the discussion of artificial insemination in Britain, 1918–1948

A 1922 trial marked the first time in history that a common law court dealt with the subject of artificial insemination. Why did the issue surface at this particular time? Seeking to provide some answers directs our attention to the ways in which commentators in the inter-war years attributed enormous social significance to a rarely employed but simple form of medical treatment. In the early twentieth century, just as the subject of birth control split the medical world into radical and populist types in favour of such discussions and the professional elite who were opposed, remarkably similar responses were made to the issue of artificial insemination. Two additional points are made by extending our investigation into the 1930s and 40s. The first, which is hardly surprising, is that a procedure welcomed by some as a remedy for the unhappily infertile was long regarded by others as posing a threat to Christian morality, traditional gender relationships, and the respectability of the medical profession. The second and more unexpected finding is that such debates reveal the extent and tenacity of eugenic notions in Britain. Both opponents and defenders of artificial insemination argued that they were motivated by a desire to improve the race.

Discussion led by Angus McLaren

Thursday 3 December at 11.30am in Seminar Room 1 – all welcome

'A race of human machines': robots and eugenics in inter-war Britain

In April, 1923 the play *R.U.R.* or *Rossum's Universal Robots* by the Czech dramatist Karel Èapek was presented at St Martin's Theatre. As a result, the term 'robot' entered the English language and such humanoids were immediately hailed as icons of modernity. In the inter-war period a host of commentators wrestled with the challenges posed by such 'mechanical slaves'. Why such a fascination? Many of the reasons are fairly obvious. For many in Britain, uncertain of the benefits of mechanization, the mechanical man threatened to displace the human worker. What is less obvious is that the robot story enjoyed added resonance because it could also be read as a eugenicist parable. It is no exaggeration to say that when the British were talking about automatons they were consciously or not talking about the lower classes and how they might best be controlled. Robot stories and eugenic accounts told much the same tale. They both highlighted the promises and threats posed by modernity. The harnessing of science and industry, they argued, could lead to unparalleled progress, but if not directed by an enlightened elite with the interests of the race at heart, the unleashed forces of rationalization would cause disaster.

History of Medicine

Seminars are on **Tuesdays from 5.00 to 6.30pm in Seminar Room 1**. Tea is available from 4.40pm. All welcome! Organised by Lauren Kassell and Nick Hopwood.

20 October Thomas Schlich (McGill University)

Mechanizing war and medicine: rationalized fracture care in World War I

17 November Erica Charters (University of Oxford)

Medical knowledge and enlightened war: British and French military medicine in

the eighteenth century

24 November Claire Jones (University of Leeds)

Practitioners, products and promotion: the medical trade catalogue and

professional ethics in Britain, 1880-1914

Generation to Reproduction Reading Group: see page 13

Cabinet of Natural History

Seminars are held on **Mondays at 1pm in Seminar Room 1.** You are welcome to bring your lunch with you.

Organised by Susannah Gibson.

12 October Nick Jardine (HPS, Cambridge)

Fungi in history

19 October Ruth Horry (HPS, Cambridge)

'Botany of the air': experiments, airships and agriculture in 1930

26 October Fungus Hunt

2 November Anne Secord (HPS, Cambridge)

Coming to attention: observing nature at the edges during the Napoleonic Wars

9 November Jamie Lorimer (King's College London)

After the king of beasts: the embodied histories of elephant hunting in mid-

nineteenth century Ceylon

16 November **Toby Musgrave**

Head gardeners: the forgotten heroes of horticulture

23 November Adelene Buckland (Cambridge Victorian Studies Group)

Lyell's plots

30 November Martin Rudwick (University of California, San Diego)

Reflections on re-treading Darwin's 'gigantic blunder' in Glen Roy

Twentieth Century Think Tank

The Think Tank offers broad coverage of 20th-century topics in the history and philosophy of science. Sessions alternate between readings and talks, and each term has a different theme. Copies of all texts can be found in the TCTT box in the Whipple Library. Meetings are usually **every other Tuesday**, 1–2.30pm in Seminar Room 1 (but note the different day and time for the second session). Everyone is welcome, and feel free to bring lunch!

For more information visit http://20cthinktank.googlepages.com/

13 October Sophia Davis (HPS, Cambridge)

Nature reserved: changing ideas of nature in post-WWII Britain

Readings:

- (a) Gail Davies, 'Science, observation and entertainment: competing visions of postwar Britain natural history television, 1946–1967', *Cultural Geographies*, 7 (2000), 432–460.
- (b) Helen Macdonald, "What makes you a scientist is the way you look at things": ornithology and the observer 1930–1955', Studies in the History and Philosophy of Biological and Biomedical Sciences, 33 (2002), 53–77.

Wednesday 28 October, 2–3.30pm [Note non-conventional day and time]

Jon Agar (University College London)

Science in the 20th century – and beyond: the problems of writing a synthesis

Reading:

(a) Pre-circulated introduction

10 November Vanessa Heggie (HPS, Cambridge)

Drugs, sex and cyborgs: 10 questions worth exploring in the history of sports science and medicine

Readings:

- (a) Ian Ritchie, 'Sex tested, gender verified: controlling female sexuality in the age of containment', *Sports History Review*, 34(1) (2003), 80–98.
- (b) Ivo van Hilvoorde, Rein Vos & Guido de Wert, 'Flopping, klapping and gene doping: dichotomies between "natural" and "artificial" in elite sport', *Social Studies of Science*, 37 (2007), 173–200.
- (c) Rob Beamish & Ian Ritchie, 'From fixed capacities to performance-enhancement: the paradigm shift in the science of "training" and the use of performance-enhancing substances', *Sport in History*, 25(3) (2005), 412–433.

24 November Peter Mandler (Faculty of History, Cambridge)

Culture and democracy in mid 20th-century anthropology

Readings:

(a) Virginia Yans-McLaughlin, 'Science, democracy, and ethics: mobilizing culture and personality for World War II', in: George W. Stocking Jr.(ed.), *Malinowski, Rivers, Benedict and Others: Essays on Culture and Personality*, History of Anthropology, Vol. 4 (University of Wisconsin Press: 1986), 184–217. (b) Peter Mandler, 'Margaret Mead amongst the natives of Great Britain', *Past and Present* (forthcoming, 2009).

Graduate workshops

HPS History Workshop

The HPS History Workshop is a seminar group devoted to peer discussion of work in progress in all areas of the history of science, medicine and technology. All HPS postgraduate students with an interest in history are welcome to present draft MPhil essays, PhD chapters, conference papers, etc. The workshop encourages friendly and constructive feedback while providing a fortnightly point of contact for postgraduate historians at HPS.

Sessions will be held on alternate Wednesdays (starting 14 October) in Seminar Room 1, 12noon–2pm. Speakers are reminded that talks must not exceed 30 minutes.

Organised by Alexander Wragge-Morley.

14 October Boris Jardine: Mass-Observation's May the Twelfth (1937) as utopian sociology

Nick Whitfield: The meaning of altruism in interwar London

28 October Nicky Reeves: The theatre of science vs the science of theatre: thinking about 18th

century experimental performance

Geoff Belknap: Authenticating nature: situating photographic trust in the late nineteenth

century scientific periodical press

11 November Special session in the Museum of Archaeology and Anthropology 'Assembling Bodies'

exhibition

Introduction - Anita Herle, Lead Curator

Four ten-minute talks, with discussion:

Caitlin Wylie: 'Atomised' – sculpture by Jim Bond (2005)

Virginia Langum: (i) Table of Consanguinity – Manuscript (St. Isidore of Seville);

(ii) The Genealogies Recorded in the Sacred Scriptures – John Speed (1618);

(iii) Human Genome Library, Chromosome 1, Volume I – designed by Kerr Noble (2005)

Josh Nall: Portraits and Types – plaster sculptures by Marguerite Milward (1935–8) **Alexander Wragge-Morley:** Engraving showing Linnaeus in his Lapland Dress – 19th

century, based on an original etching by Hendrik Hollander

25 November Sophie Brockmann: The contested banana tree: public debates about science in

eighteenth-century Central America

Caitlin Wylie: Teacher, toy, or calculator? Reflections of mathematics, education, and

society in a 20th-century American object

Philosophy Workshop

The Philosophy Workshop is a fortnightly peer group seminar devoted to the discussion of on-going work by researchers in philosophy. All MPhils, PhD students, post-docs, affiliated scholars, visiting scholars, and teaching officers across the University are invited. Papers will normally be circulated by email one week in advance of each meeting, where the author will give a brief synopsis. The aim of the seminar is to provide a forum for informal, constructive interaction amongst those currently engaged in philosophical research.

Meetings take place **every other Wednesday from 1–2pm in Seminar Room 1**, and are open to all researchers. For more information, and to receive the papers by email, please contact Sacha Golob.

Reading and discussion groups

Metaphysics Reading Group

This term we will be reading *A Metaphysics for Scientific Realism: Knowing the Unobservable* by Anjan Chakravartty, who was a PhD student in HPS once upon a time. We meet on **Mondays**, **1.00–2.30pm in the HPS Lodge**. All welcome. (And it is OK to jump in halfway through without having read the previous chapters.)

Organised by Alex Broadbent.

- 12 October Ch 1 Realism and antirealism; metaphysics and empiricism
- 19 October Ch 2 Selective scepticism: entity realism, structural realism, semirealism
- 26 October Ch 3 Properties, particulars, and concrete structures
- 2 November Ch 4 Causal realism and causal processes
- 9 November Ch 5 Dispositions, property identity, and laws of nature
- 16 November Ch 6 Sociability: natural and scientific kinds
- 23 November Ch 7 Representing and describing: theories and models
- 30 November Ch 8 Approximate truths about approximate truth

Science and Literature Reading Group

This term we shall focus on the theme of **analogy** in literature and science, reading and discussing analyses of simile, metaphor, and model-making. We meet **fortnightly on Monday evenings, from 7.30–9pm, in a new venue: room MAB 119 at Homerton College**. Readings are detailed below, and photocopied packs will be made available from the Group boxfile in the Whipple Library and in Homerton College Library. Organised by Daniel Friesner (Science Museum) and Melanie Keene (Homerton College). For updates, further information and relevant news listings please see our blog at **http://sci-lit-reading-group.blogspot.com**; email Melanie to join our dedicated mailing list or if you would like to introduce a session. All welcome!

- 19 October Pierre Duhem, *The Aim and Structure of Physical Theory*, trans. Philip P. Wiener (Princeton University Press, 1954), chapter IV (pp. 55–104), 'Abstract theories and mechanical models'.
- 2 November Dedre Gentner, 'Are Scientific Analogies Metaphors?' in D. Miall (ed.), *Metaphor: Problems and Perspectives*, pp. 106–132 (Brighton, Sussex: Harvester Press, 1982).
- 16 November Mary Ellen Pitts, 'Reflective Scientists and the Critique of Mechanistic Metaphor' in M. W. McRae (ed.), *The Literature of Science: Perspectives on Popular Scientific Writing*, pp. 249–272 (Athens and London: University of Georgia Press, 1993).
- 30 November Simon Armitage, 'Modelling the Universe: Poetry, Science, and the Art of Metaphor' in Robert Crawford (ed.) *Contemporary Poetry and Contemporary Science*, pp. 110–122 (Oxford: Oxford University Press, 2006).

History and Theory Reading Group

History and Theory is a fortnightly reading group devoted to matters of historiography. The group discusses readings relating to problems of historical research, interpretation, and explanation. Each meeting is based around a selection of texts chosen and introduced by a speaker from the department.

The group meets on alternate Fridays, 2.30–4pm in the HPS Lodge, unless otherwise stated. Readings will be placed in the History and Theory box in the Whipple Library at the start of the Michaelmas Term. All welcome! Organised by Nick Whitfield.

16 October Nick Jardine: Gadamer and genealogical criticism

J. Habermas, Review of Gadamer's *Truth and Method*, in F. R. Dallmayr and T. A. McCarthy, eds., *Understanding and Social Inquiry*, Notre Dame, 1977, 335–363. Gadamer's response to Habermas, 'On the scope and function of hermeneutical reflection', in Gadamer, *Philosophical Hermeneutics*, Berkeley, CA, 1976, 18–43. N. Jardine, 'Dead questions and vicarious understandings: questioning Gadamer's genealogy', *Journal of the Philosophy of History*, 1 (2007), 63–78.

30 October **Nicky Reeves:** The politics of display and the display of politics (For this week's session we will meet in Seminar Room 1)

D. Haraway, 'Teddy Bear Patriarchy: Taxidermy in the Garden of Eden, New York City, 1908–36' in her *Primate Visions: Gender, Race and Nature in the World of Modern Science*, London, 1990, 26–58.

T. F. Gieryn, 'Balancing acts: science, Enola Gay and History Wars at the Smithsonian', in MacDonald ed., *The Politics of Display: Museums, Science, Culture*, London, 1998, 197–228.

M. Kimmelman (1992) 'An Improbable Marriage of Artist and Museum' *New York Times* 02/09/1992.

D. Garfield, 'Making the Museum Mine: An Interview with Fred Wilson', *Museum News*, May/June 1993.

13 November Matthew Drage: Hume's *Dialogues*: some historiographical problems

W. L. Sessions, 'A Dialogic Interpretation of Hume's *Dialogues*,' *Hume Studies*, Volume XVII, 1 (April 1991), 15–40.

J. Dancy, 'For Here the Author is Annihilated', in Smiley ed., *Philosophical Dialogues: Plato, Hume, Wittgenstein*, OUP, 1995, 29–60 (including appendix). M. A. Stewart, 'Hume and the "Metaphysical Argument A Priori" in A. J. Holland ed., *Philosophy, its History and Historiography*, Boston, 1983, 243–270.

27 November Ali Taheri: Nietzsche, Foucault, and the genealogy of guilt

Selections from Friedrich Nietzsche's *Genealogy of Morality*, further details to be announced.

M. Foucault, 'Nietzsche, Genealogy, History', in P. Rabinow ed., *The Foucault Reader*, London, 1984, 76–100.

Scientific Images Discussion Group

Meetings will take place fortnightly on **Thursdays**, **11am–1pm**, **in Seminar Room 1**. All welcome. For more information contact Geoff Belknap.

8 October Alexander Wragge-Morley: Why the history of science needs a history of

description

Geoff Belknap: Research images in periodical literature

22 October Rikke Schmidt Kjaergaard: Visual representations and scientific practice: how

to make a good image

Florence Grant: Patterns, profiles and perspectives. Drawings of George III's

'Philosophical Table'?

5 November Katie Taylor: Demonstration in late 16th century England

Simon Mitton: Early photography of the nebulae: Isaac Roberts and James Keeler

Astronomical Images

These meetings are part of the AHRC project 'Diagrams, Figures and the Transformation of Astronomy, 1450–1650', which analyzes the production, function and terminology of early modern astronomical imagery.

All meetings will be held on **Thursdays at 11am–1pm in Seminar Room 1.** All are welcome – do please feel free to bring lunch! Email Katie Taylor to be added to the mailing list.

15 October Alex Marr (University of St Andrews)

Diagrams in paint: optics and cosmology in a pair of late Renaissance pictures

29 October Visit to Culture and Cosmos at the Science Museum in London (contact Katie

Taylor to reserve a place)

12 November Stephen Pumfrey (Lancaster University)

Selenography without Sidereus Nuncius: images of the Moon and their uses, 1577–

1647

26 November Katie Eagleton (British Museum)

Oronce Fine's instruments

Evolution Reading Group

This group discusses readings in the themes, ideas and individuals associated with theories of evolution in the eighteenth, nineteenth and twentieth centuries. Each meeting is based around a single text, extract or article, introduced by a member of the group. We discuss both primary sources and secondary texts, and draw on a range of perspectives in history, philosophy and ethics.

Meetings are held on **alternate Thursdays at 1pm in Seminar Room 1**. All are welcome, and please feel free to bring lunch. For more information, please contact Jenny Bangham, Richard Barnett or Caitlin Wylie.

15 October Erasmus Darwin, 'The Temple of Nature, or, The Origin of Society' (1803),

Canto 1, 'Production of Life', and 'Additional Notes. Spontaneous Vitality of

Microscopic Animals'. Available online at

www.rc.umd.edu/editions/darwin_temple/toc.html

29 October Daniel P. Todes, 'Darwin's Malthusian metaphor and Russian evolutionary

thought, 1859–1917', Isis 78 (1987), 537–551

12 November J.B.S. Haldane, 'Daedalus, or, Science and the Future: a paper read to the Heretics,

Cambridge, on February 4th, 1923', online at www.cscs.umich.edu/~crshalizi/Daedalus.html

26 November V.B. Smocovitis, 'The 1959 Darwin centennial celebration in America', Osiris,

second series, 14 (1999), 274-323

Generation to Reproduction Reading Group

This year the group will discuss pre-circulated papers, classics as well as our own work, in the area of our Wellcome strategic award in the history of medicine.

This term's meetings will be at 5–7pm on Tuesdays 27 October and 3 November. To join the group, please email generate@hermes.cam.ac.uk.

Language groups

Latin Therapy

Latin Therapy will meet **every Friday during term time in the HPS Lodge from 4–5.30pm**. For this term, the first meeting will take place on 16 October and the last on 27 November. All levels are welcome and beginners are strongly encouraged to come along. Each week we will cover some introductory grammar, followed by a text suggested by members. The pain of the ablative absolute will be salved with copious tea and biscuits!

More information can be found at our website: **www.hps.cam.ac.uk/latintherapy**. To be added to the mailing list, or to suggest a text, please contact Katie Taylor.

Greek Therapy

We are a small informal group seeking to improve our Ancient Greek with the help of our tutor, Liz Smith. We are currently finishing a translation of Porphyry's *Life of Pythagoras* and we hope to move on to some easy Plato soon. Any level of Greek very welcome.

Meetings are provisionally scheduled for **5.30pm on Tuesdays** in full term (but this is flexible). All are welcome. For further information please contact Lydia Wilson.