UNIVERSITY OF CAMBRIDGE
DEPARTMENT OF HISTORY AND PHILOSOPHY OF SCIENCE

Seminar Programme
LENT TERM 2002

Departmental Seminars
- Literature and Science 1700-1830
- History of Medicine
- Psychoanalysis and the Humanities
- Psy Studies
- Cabinet of Natural History
- EPACTS
- Epistemology Reading Group

Philosophy of Mathematics Reading Group
- History of Science Workshop
- Philosophy Workshop
- Science and Literature Reading Group
- Medieval Science & Philosophy Reading Group
- Gender and Science Reading Group
- Biological Sciences Reading Group
Departmental Seminars

Seminars meet at 4.30pm on Thursdays in Seminar Room 2, Department of History and Philosophy of Science, Free School Lane. There is tea beforehand in Seminar Room 1 at 4pm.

Organised by Simon Schaffer

17 January  Barbara Saunders (Clare Hall, Cambridge; University of Louvain)  The Deadly Time-Machine

24 January  Jerry Kutcher (Columbia University College of Physicians and Surgeons)  The Production of Trustworthy Knowledge: Clinical Trials, Ethical Review and the Reduction of Risk

31 January  Nick Jardine (HPS, University of Cambridge)  Edgar Zilsel and the problems of his scientific historical sociology of science

7 February  Stuart Clark (University of Wales, Swansea)  Demonic Dreams and Visual Paradoxes

14 February  Margaret Osler (University of Calgary)  New Wine in Old Bottles: Gassendi and the Aristotelian Origin of Physics

21 February  Alexander Bird (University of Edinburgh)  Scientific Progress and the Aim of Belief

28 February  Frank Jackson (Australian National University)  Mind and Illusion

7 March  Christopher Cullen (School of Oriental and African Studies, London)  Actors, networks and ‘disturbing spectacles’ in institutional science: second century Chinese debates on astronomy

14 March  Charlotte Bigg (Max Planck Institute for History of Science, Berlin)  ‘To see is to know’: Mechanisms of Authenticity in the 1886 interview between Nadar and Chevreul

Seminar programmes are sent out at the start of each term to the people on our mailing list. Please contact us if you would like to be added to or removed from the mailing list, or if you change your address.

This seminar programme is also available on our website at www.hps.cam.ac.uk

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Abstracts

17 January  Barbara Saunders (Clare Hall, Cambridge; University of Louvain)
The Deadly Time-Machine

In many disciplines Berlin and Kay’s Basic Color Terms (1969) is cited as support for the cross-cultural universality of an evolutionarily emerging number of basic colour categories. Although the exact meaning of basic colour terms (BCTs) has never been spelled out, here is how they might be understood. The referent could be a set of colour chips (colour-in-the-world), a set of neurons in the brain or functionally defined term in a language-of-thought (colour-in-the-head), words in different languages labelling basic colours (colour semantics), or the experience or sensation associated with basic colour categories (phenomenal colour). As basic colours are claimed to be universals, the exact reference of a BCT is irrelevant because all levels are connected by linking propositions in one-to-one correspondence. Berlin and Kay’s results are assimilated in a variety of disciplines: cognitive science, artificial intelligence, psychology, linguistics and anthropology, and it has been said that there is a small chromatic zeitgeist loose in the world (Byrne and Hilbert 1997).

‘Colour’ on this account is a universal, autonomous domain, programmed by evolution, governed by a species-specific organ, known as ‘the colour space’. It is claimed to be the evolutionary solution for integrating a physically heterogeneous collection of distal stimuli into a small set of visually salient equivalence classes, deployed in a variety of perceptual conditions. It has prompted the claim that Berlin and Kay’s evolutionary sequence constitutes ‘a primary epigenetic rule serving color category development’ linking genes, neurons and the evolutionary development of macro-cognitive behaviour (Lumsden 1985, p. 5808).

In contrast to this theory, I shall argue that the theory of Basic Color Terms runs on two foundational myths: i) camera obscura epistemology; ii) the denial of coevalness. In this presentation I shall show how together they form a deadly time-machine, that locks the narrative in place.

24 January  Jerry Kutcher (Columbia University College of Physicians and Surgeons)
The Production of Trustworthy Knowledge: Clinical Trials, Ethical Review and the Reduction of Risk

During the period following World War II, clinical trials became the standard method for producing medical knowledge about new therapies in the US. However, by the mid-1960s a series of public disclosures of unethical experimentation, culminating in the thalidomide scandal, threatened the viability of a medical research enterprise that had grown to enormous proportions. The National Institutes of Health (as well as the Food and Drug Administration) introduced prescriptive rules to govern medical research. In particular, grant proposals had to demonstrate an independent determination of the subject’s welfare, the methods to secure informed consent, and the risks and potential medical benefits. A number of bioethicists, among them Ruth Faden and Tom Beauchamp in their influential A History and Theory of Informed Consent, have claimed the NIH rules marked another significant step in the affirmation of the autonomy rights of patients. In this presentation I argue rather that regulators, particularly James Shannon at the NIH, began to realise that it was no longer tenable for trust in the ethical probity of research to be held by individual investigators. These NIH regulators appreciated that the increasingly potent therapeutic regimes on offer in clinical trials was exposing the medical community to appreciable and unpredictable risks of scandals and the further erosion of public support. Shannon instituted a new system of governance that transferred the authority for sanctioning research from researchers who were seemingly impossible to control to local peer review committees. This system would moderate the experimental risks that researchers were willing to take through peer pressure, thereby reducing the risks to the medical community. As a consequence, peer review would restore the public’s trust through demonstrable institutional practices that would control medical investigations. In this new system of governance, researchers were de-centred – but so were patients. Informed consent was instrumental to maintaining public trust and not a means for affirming autonomy rights.

31 January  Nick Jardine (HPS, University of Cambridge)
Edgar Zilsel and the problems of his scientific historical sociology of science

For several years before his suicide in 1944, Edgar Zilsel was working on two ambitious book projects, one on the sociological roots of science, the other on the nature of socio-historical laws; and his articles from these years (collected in The Social Origins of Modern Science, ed. D. Raven et al., Dordrecht, 2000) can be read as contributions to these projects. It is, however, hard to see how they could have been brought to fruition. For these writings are deeply problematic, showing striking discrepancies of practice and theory: polemical and politically engaged writing versus commitment to cold scientific objectivity; frequent use of Weberian ideal types versus rejection of all such models in
favour of an inductive approach; offering of bold causal conjectures vs rejection of all causal claims ungrounded in explicit socio-historical laws; and so on. In this talk I shall argue that Zilsel’s war-time essays are exemplary failures - that the specific problems of historical stance and method with which he so valiantly wrestled remain central issues for the social and cultural history of the sciences today.

7 February  
**Stuart Clark (University of Wales, Swansea)**  
Demonic Dreams and Visual Paradoxes

Until the early modern period, the interpretation of dreams was dominated by moral questions, rather than epistemological ones, although the latter were certainly not absent. In the period between Montaigne and Descartes (and presumably beyond) epistemological issues become much more important, perhaps even fusing with moral ones. What might have brought this about was the debate about whether witchcraft experiences were merely dreams, a debate which flourished within demonology from the 1430s onwards and was certainly going strong by the time Montaigne tackled both epistemological scepticism and witchcraft in his ‘Essays’. It seems to be a significant debate in this context, because it confronted (as only a debate about the devil’s powers could confront) the possibility of total deception. I treat this as visual deception only by taking dream experiences to be essentially visual ones. In other words, witchcraft theory created opportunities for discussing demonic dreams as epistemological and visual paradoxes – the sort of paradoxes usually reserved for philosophical discussion. The paper ends with the chapter in Malebranche’s ‘De la recherche de la vérité’ on ‘People Who Imagine Themselves to be Sorcerers and Werewolves’.

14 February  
**Margaret Osler (University of Calgary)**  
New Wine in Old Bottles: Gassendi and the Aristotelian Origin of Physics

The demise of Aristotelianism is the main theme of many accounts of the Scientific Revolution. Accordingly, the rise of modern science coincided with and depended upon the rejection of Aristotelian physics. Examination of physics texts from the early modern period calls for a more complicated understanding of the relationship between Aristotelian physics and early modern natural philosophy. In this paper I argue that although much of the content of early modern physics was the result of profound intellectual changes that involved the replacement of Aristotelian concepts with those associated with Galileo’s new science of motion and the mechanization of nature, the form in which natural philosophers wrote about physics continued to follow the Aristotelian model. This continuity of form was reflected in the definition of physics, certain methodological tenets, and the order in which topics were treated. In other words, the discipline of physics retained its Aristotelian format even while its content underwent dramatic conceptual change. An examination of Pierre Gassendi’s ‘Physics’ is a compelling illustration of this thesis.

21 February  
**Alexander Bird (University of Edinburgh)**  
Scientific Progress and the Aim of Belief

What is scientific progress? Answer: science or a particular scientific field progresses precisely when it generates an increase in knowledge. I argue that this view has advantages over rival realist/external accounts (e.g. progress as increasing verisimilitude) as well as over anti-realist/internal accounts (such as the accounts of the positivists, Lakatos, and Kuhn). Separately, I also argue that the aim of belief in knowledge, and hence that progress in scientific belief is success in generating scientific knowledge.

28 February  
**Frank Jackson (Australian National University)**  
Mind and Illusion

Much of the contemporary debate in the philosophy of mind is concerned with the clash between, on the one hand, certain strongly held intuitions, and, on the other, what science tells us about the mind and its relation to the world. What science tells us about the mind points strongly towards some version or other of physicalism. The intuitions, in one way or another, suggest that there is something seriously incomplete about any purely physical story about mind. Most philosophers given a choice between going with science and going with intuitions, go with science. Although I once dissented from the majority at least as far as one argument from a certain epistemic intuition goes, I have capitulated and now see the really interesting issue as being where the arguments from the intuitions, the arguments that seem so compelling, go wrong. I now think that the case for physicalism is sufficiently strong that we can be confident that the arguments from the intuitions go wrong somewhere, but where is somewhere? This paper offers an answer to that question for the knowledge argument against physicalism. I start with a reminder about the argument. I then consider two ways of dismissing it and explain why I am unmoved by either. The discussion here delivers two
constraints that any satisfying physicalist reply should meet. The rest of the paper gives the answer I favour. It rests on a representationalist account of experience and, as the title suggests, I say inter alia that there is a pervasive illusion that conspires to lead us astray when we think about what it is like to have a colour experience.

7 March  Christopher Cullen (School of Oriental and African Studies, London)
Actors, networks and ‘disturbing spectacles’ in institutional science: second century Chinese debates on astronomy

Ancient Western records provide only fragmentary materials for a history of institutionalised science. But from ancient China the evidence is rich and plentiful. Not only can we trace the development of the technical aspects of state-sponsored mathematical and observational astronomy in detail from a relatively early stage, but we can also follow the course of a series of acerbic debates on astronomical questions that took place at the highest levels of the imperial court. The records of these debates have only now begun to be studied. As well as adding new dimensions to our picture of ancient science, they also prompt us to reassess and perhaps modify widely accepted views of a contrast between a contestational ancient west and a consensus-centred east.

14 March  Charlotte Bigg (Max Planck Institute for History of Science, Berlin)
‘To see is to know’: Mechanisms of Authenticity in the 1886 interview between Nadar and Chevreul

At the end of August 1886, the Parisian photographer and socialite Nadar carried out an interview with the organic chemist Michel Eugène Chevreul on the occasion of the latter’s hundredth birthday. In the subsequent article, Nadar described at length his methods for recording mechanically Chevreul’s appearance and voice, all intended, he argued, to supply readers with an unmediated and intimate access to the great scientist’s mind and character. The paper analyses the technical and rhetorical means by which Nadar sought to achieve such an authenticity, drawing on the contemporary search in scientific and literary circles for a ‘science of immediacy’, expressed in Honoré de Balzac’s dictum ‘voir c’est savoir’, as well as in Chevreul’s own scientific practices. Nadar’s project constituted an innovative portrayal of the scientific persona, which contrasted with the more conventional images produced simultaneously at the official celebrations held in honour of the hundred-year-old scientist. It implied a different conception of science and technology and of their publics.

Literature and Science 1700-1830

A series of six lectures and classes on Mondays at 10am in the Meade Room, Faculty of Economics, Sidgwick Avenue. Photocopies of sources for classes will be provided: contact Nigel Leask or Patricia Fara.

21 January  Class: Newtonian Poetry
28 January  Lecture: Simon Schaffer (HPS): Newton and Defoe
4 February  Class: Romantic Botany: Erasmus Darwin and William Blake
11 February  Lecture: Richard Drayton (Faculty of History):
Natural History and the Poetics of Colonialism
18 February  Class: Sparks of Life: Frankenstein
25 February  Lecture: Patricia Fara (HPS): Metaphors of Magnetism
History of Medicine

Seminars will take place on Tuesdays from 1.00 - 2.00pm in Seminar Room 1, Department of History and Philosophy of Science, Free School Lane. Please note the change of time.

Please feel free to bring your lunch.

History of Modern Medicine and Biology

Organised by Sarah Hodges and Soraya de Chadarevian

22 January  Susan Jones (University of Colorado-Boulder)
Creating a Scientific Context for Contingent Knowledge in American Veterinary Medicine

5 February  Maneesha Lal (School of Oriental and African Studies, London)
Osteomalacia in India: Framing a veiled disease

19 February  Lara Marks (Cambridge Group for the History of Population and Social Structure and London School of Hygiene and Tropical Medicine)
Sexual chemistry: the power of the pill in the past and the future

5 March  Birgit Griesecke (Max-Planck Institute, Berlin)
Night scientists at work: the Bristol Circle drug experiments

Early Medicine and Natural Philosophy: Medicine and Magic

Organised by Lauren Kassell and Sophie Page

29 January  Luke Davidson (London)
The Kiss of Life, the Untold Story (1774-1825)

12 February  David Juste (Warburg Institute, University of London)
Medical Astrology in the Early Middle Ages

26 February  Emilie Savage-Smith (University of Oxford)
Countering Disease with Magic: Medieval Islamic Artefacts vs. Texts

12 March  Erik Midelfort (University of Virginia)
Joseph Gassner and Franz Anton Mesmer, Exorcism and Magnetism
Psychoanalysis and the Humanities

Seminars take place on alternate Wednesdays from 5.00 to 6.30pm in Seminar Room 1, Department of History and Philosophy of Science, Free School Lane. Tea is served from 4.40pm. All welcome.

Organised by Mary Jacobus and David Hillman

23 January  Steve Tifft (Williams College)
The Suppression of Eisenstein’s *Bezhin Meadow*: Filicide and the Contradictions of the Cultural Symptom Under Stalin

6 February  Margot Waddell (British Psychoanalytical Institute)
‘A Local Habitation and a Name’: The Dream Interpreter’s Place in the Psychoanalytic Process

20 February  Mary Jacobus (Faculty of English, University of Cambridge)
Palinurus and the Tank: Wilfred Bion, War Trauma, and Nameless Dread

6 March  Laura Marcus (Sussex University)
Bryher in Berlin: Cinema and Psychoanalysis between the Wars

Psy Studies

*History of Psychiatry, Psychology, Psychoanalysis and Allied Sciences*

All seminars start at 5.00pm in Seminar Room 1, Department of History and Philosophy of Science, Free School Lane on alternate Wednesdays. Tea is served before each seminar at 4.40pm.

Organised by John Forrester and Deborah Thom

30 January  Chris Waters (Director, Williams College Oxford Programme)
Edward Glover, the Institute for the Scientific Treatment of Delinquency, and the Question of Homosexual Law Reform in Mid-Twentieth-Century Britain

13 February  Adam Phillips (London)
The Analyst and the Bait

27 February  Joanna Bourke (Birkbeck College, London)
Fear – an emotional history

13 March  Mary Target (British Psycho-Analytical Society and UCL)
Psychoanalysis, Universities and Psychological Research: A Toxic Mixture?
Cabinet of Natural History

Meetings take place at **1pm on Mondays in Seminar Room 1**, Department of History and Philosophy of Science, Free School Lane. Feel free to bring lunch with you.

Organised by Vicky Carroll and Sadiah Qureshi

21 January **John Gascoigne (University of New South Wales)**
Improvement and science in early colonial Australia

28 January **Kate Bennet (Department of English, University of Cambridge)**
Editing the Cabinet: Aubrey’s Brief Lives

4 February **Susie West (Cambridge University Library)**
The making and meanings of country house libraries in the long eighteenth century

11 February **Sujit Sivasundaram (HPS, University of Cambridge)**
Believing Beaver or Sinful Sloth?: The Evangelical Natural History of the Colonised Mind, c. 1810

18 February **Felix Driver (Royal Holloway, University of London)**
John Septimus Roe and the Art of Navigation, c. 1812-1830

25 February **David Anderson (University of Aberdeen)**
Arctic Fantasies: The Translocation and Resurrection of Bisons, Musk Oxen and Mammoths

4 March **Ann Starr**
How to Look at a Monster: Observational Drawing and Historical Context

11 March **Martin Rudwick (HPS, University of Cambridge)**
The antiquity of man before Lyell’s *Antiquity of Man*

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**EPACTS**

Early Physics, Astronomy, Cosmology and Technology Seminar

Meetings take place fortnightly on **Wednesdays in M4 New Court, Trinity College, at 6pm**. All are welcome.

For further information, contact Adam Mosley.
Epistemology Reading Group

We will be reading articles from New Essays on the A Priori, edited by Paul Boghossian and Christopher Peacocke (OUP, 2000). The book should be available in paperback in the Philosophy section at Heffers, and two copies will be on reserve in the Whipple Library. Each meeting of the Group will focus on one article, with a member of the group offering a preliminary evaluation, followed by a general discussion. Meetings will take place on Thursdays at 2.00pm in Seminar Room 1 of the HPS Department and are open to all.

Organised by Peter Lipton

17 January Quassim Cassam, ‘Rationalism, Empiricism, and the A Priori’
24 January Philip Kitcher, ‘A Priori Knowledge Revisited’
31 January Peter Railton, ‘A Priori Rules: Wittgenstein on the Normativity of Logic’
7 February Paul Boghossian, ‘Knowledge of Logic’
14 February Frank Jackson, ‘Representation, Scepticism, and the A Priori’
21 February Michael Friedman, ‘Transcendental Philosophy and A Priori Knowledge: A Neo-Kantian Perspective’
28 February Martin Davies, ‘Externalism and Armchair Knowledge’
7 March Thomas Nagel, ‘The Psychophysical Nexus’

Philosophy of Mathematics Reading Group

The Philosophy of Mathematics Reading Group meets fortnightly on Fridays at 2pm in Seminar Room 1. You can find copies of the texts in a folder in the Whipple Library.

Organised by David Corfield

8 March TBA
History of Science Workshop

The History of Science Workshop is a seminar group devoted to peer discussion of ‘work in progress’ on the history and historiography of science, for example PhD chapters, dissertations, or articles intended for publication.

The seminar aims to provide an informal arena for the exchange of ideas among students of the history of science in HPS and elsewhere. Papers are deposited in Box File 30 in the Whipple Library one week in advance of each meeting and are also circulated by e-mail. Meetings take place on alternate Wednesdays at 1pm in Seminar Room 1, Department of History and Philosophy of Science. You are welcome to bring lunch with you.

For further information please contact Jenny Downes

30 January    Katie Eagleton (HPS, University of Cambridge)  
                Chaucer’s Treatise on the Astrolabe

13 February   Michael Bresalier (HPS, University of Cambridge)  
                Membranes as Media: Culturing Flu Virus on the Developing Chick Egg, 1936-1942

27 February   Vittoria Feola (Faculty of History, University of Cambridge)  
                Antiquity and Heraldry in Ashmole’s History of the Order of the Garter

13 March      Richard Noakes (HPS, University of Cambridge)  
                Rewriting ‘Physics and Psychics’: A Revisionist History of the Victorian Physics and the Evanescent

Philosophy Workshop

The PW is a fortnightly peer group seminar devoted to the discussion of on-going work by researchers in philosophy. Short papers will normally be circulated by e-mail 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 23 January at 1pm in Seminar Room 1 of the HPS Department, and are open to all researchers.

For more information or to add your name to the list of e-mail recipients, contact Anjan Chakravartty or Tim Lewens.
Science and Literature Reading Group

The group will start meeting again this term at 8pm on Tuesdays in the Godwin Room at Clare College. Organised by Jim Endersby.

Utopian visions
The theme for this term is utopias, focusing particularly on those in which science plays a major role: here are the titles we’ve agreed. I have asked Heffers to have all of these in stock (apart from ‘Masculine Birth of Time’) for the start of term; they are also all available from Amazon.

29 January  Francis Bacon, New Atlantis and ‘The Masculine Birth of Time’
New Atlantis is available in a cheap paperback edition from Croft’s Classics (Harlan Davidson), in the UL (180.d.98.29) and is in many college libraries. The ‘Masculine Birth of Time’ is in The Philosophy of Francis Bacon by Benjamin Farrington, but photocopies will be on reserve in the Whipple Library and will be sent to anyone who requests a copy.

12 February  Jonathan Swift, ‘A Voyage to Laputa’, from Gulliver’s Travels
Available in several cheap paperback editions, is in the UL (9002.d.9582) and most college and some departmental libraries.

26 February  Edward Bulwer-Lytton, The Coming Race
Available in a cheap paperback (Woodbridge Press Publishing Co), it also is in the UL (8001.e.17) and some college and departmental libraries. It is also available as an e-book from Amazon.co.uk.

12 March    Ursula Le Guin, The Dispossessed: An Ambiguous Utopia
There is a cheap paperback (HarperPrism); it’s in the UL (1994.7.783) and some college and departmental libraries.

Medieval Science & Philosophy Reading Group

We will be reading De Ente et Essentia by St Thomas Aquinas, in the translation entitled Essence and Existence in Aquinas Selected Philosophical Writings, in the Oxford World’s Classics series. The group will meet in L1 Great Court, Trinity College at 1pm on Thursdays, and each session will consist of a discussion of an aspect of the text, introduced by one member of the group. As the text is short, but dense, people should try to read the whole thing before the first meeting. The text is available on reserve in the Whipple Library of the Department of History and Philosophy of Science, and in the medieval authors section of Heffers. It is an inexpensive paperback, and well worth buying for anyone with an interest in medieval philosophy. Everyone is welcome, and welcome to bring their lunch.

Further information is available from David Chart.
Gender and Science Reading Group

The Gender and Science Reading Group is a discussion forum devoted to exploring the role of gender as a category of analysis within the history and philosophy of science. In addition to reading published work, the group also serves as a workshop space for work-in-progress, as and when the opportunity arises.

Meetings are fortnightly at 1pm on Thursdays in Seminar Room 2, Department of History and Philosophy of Science, Free School Lane. Please feel free to bring your lunch. Copies of the readings are available on reserve in the Whipple Library. For more information, contact Sarah Hodges.

24 January

7 February

21 February

7 March

Biological Sciences Reading Group

We would like to invite everyone interested to the first meeting of the reading group on biological sciences and visual representations in the 19th and first half of the 20th century. The meeting will take place in Seminar Room 1 on Friday 18 January at 1pm when we shall decide what we will be reading this term. Feel free to bring your lunch!

Michael Bresalier, Tatjana Buklijas, Ayako Sakurai