

SATSU

Science and Technology Studies Unit

Activities during
2005

Science & Technology
Governance

Sociology of
the Biosciences

Mobilities,
Informatics & Space



Cowside Beck Valley, Yorkshire Dales National Park.

Director

Prof Andrew Webster

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Research Fellows

Dr Nik Brown (Deputy Director)

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Blakey Ridge, North York Moors National Park (Site of Special Scientific Interest)

Research Students

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York Cemetery (butterfly walk)

Affiliated Research Fellows

Prof Roger Burrows (University of York)

Dr John Forrester (University of York)

Prof Herbert Gottweiss (University of Vienna)

Dr Anne Kerr (University of York)

Dr Paul Martin (University of Nottingham)

Prof Mike Michael (University of London)

Dr Annemiek Nelis (University of Amsterdam)

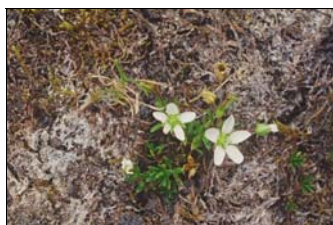
Dr Brian Rappert (University of Exeter)

Prof Arie Rip (University of Twente)

Dr Richard Tutton (University of Nottingham)

Dr Peter Wright (University of York)

Prof Steven Yearley (University of York) (until Sep 2005)



Yorkshire sandwort on Sulber Common, Ingleborough National Nature Reserve. (Site of Special Scientific Interest)

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Activities During 2005

The Science and Technology Studies Unit specialises in understanding the complex dynamics of change in contemporary S&T networks. SATSU has sought to explore the socio-technical co-construction of knowledge, artefacts and public policy.

The Unit was initially established in the late 1980s to critique public/private links between university and industrial actors.

In subsequent years, the SATSU portfolio has expanded considerably to encompass a widening field of critique applied to technology and science.

This document provides a brief overview of SATSU's work during 2005

2005

Director's Introduction

This past year saw the arrival of a number of new colleagues to the Unit, two Research Fellows, Lena Eriksson, who had recently completed a postdoc at Cardiff, and Conor Douglas from Vancouver. Lena is working on stem cell standards and Conor on the Department of Health project on pharmacogenetics. Both continue the Unit's tradition of broad international membership, as have the visiting Marie Curie Fellows who joined us this year. We had four Fellows in residence and sadly the programme has now come to an end. It has been a great success and one that will pay dividends in the long term through continuing research links with these European scholars. Darren Reed with whom we had been working in 2004 formally joined the Unit as full time Research Fellow and brings new skills with respect to language, interaction and technology design especially in informatics. We also saw the arrival of two new PhD students, Helen Cox, ex-NHS, and Oh Min Kwon from South Korea to join our existing doctoral candidates Eugenia and Luke, and a long term Visiting Fellow from China, Juren Lin, who has been busy translating Mike Mulkay's work over the past few years and is here to get to know the 'York School' more closely.

The Unit continues to consolidate its work in biosciences with a cluster of projects on pharmacogenetics and stem cells, and its interests in informatics within the transport field and more recently through liaison with our Associate Research Fellow, Roger Burrows, neighbourhoods and identity; in addition, science policy work is pursued through the PRIME network and work on regulation, while Nik Brown's analysis of expectations and futurity continues to develop, not least through an extremely valuable international workshop SATSU hosted on this topic in July, and a special issue of the journal *Technology Analysis*

and *Strategic Management* due out in 2006. Brian Woods has completed, with Nick Watson, a major text on the history of wheelchair design, and is now engaged on a new ESRC grant relating to food allergies.

The Unit has been in detailed discussion throughout the year with other Departments, notably Biology, and has been developing collaborative research proposals relating to stem cells, tissue engineering, and the 'future of medicine', most of which should come to fruition in 2006.

The new MSc programme got off to a good start and we are hoping to recruit additional numbers next year.

The Director has been especially busy this year not only ensuring the Unit continues to prosper, but also with colleagues Stephanie and Luana, completing the final year of the very successful Innovative Health Technologies programme, while establishing and now directing a new ESRC initiative on stem cells that will run through to 2009. Unexpectedly, he was also asked to become Head of Department of Sociology in April and has had an extremely busy time since then with new staffing and programmes as part of the University's overall expansion plans. He was pleased to learn towards the end of the year that he had been elected Academician of the Learned Society for Social Sciences.

Prof. Andrew Webster

Core Research Areas

SATSU's key intellectual strengths lie in three related fields of enquiry, each of which serves as a basis of empirical research activity:

Science and Technology Governance

Work in the Unit seeks to understand how it is that developments in science and technology become objects for governance, both formally through policy-making and indirectly in terms of the governance of innovation. A number of activities contribute to this theme:

- ***Quality assured science: the role of standards in stabilising stem cell research***
Funding: ESRC. Status: Continuing. Contact: Lena Eriksson.
- ***PRIME (Policy Research in the Move Towards a European Research Area)***
Funding: European Commission. Status: Continuing. Contact: Andrew Webster.
- ***ITEMS - (Identifying Trends in European Medical Space)***
Funding: European Commission. Status: Continuing. Contact: Andrew Webster.

Sociology of the Biosciences

The Unit has maintained a consistent and sizeable research portfolio on the biosciences, with projects on pharmacogenomics, tissue engineering, stem cells, and xenotransplantation.

- ***Haematopoietic Stem Cells: The Dynamics of Expectations in Innovation***
Funding: ESRC. Status: Continuing. Contact: Nik Brown.
- ***Variability in response to warfarin: a prospective analysis of pharmacogenetic and environmental factors***
Funding: Department of Health. Status: Continuing. Contact: Graham Lewis.
- ***Pharmacogenomics, diagnostic tests and clinician acceptance***
Funding: ESRC. Status: Continuing. Contact: Graham Lewis.
- ***Pharmacogenetics and pharmacogenomics: State-of-the-art and potential socio-economic impact***
Funding: European Commission. Status: Completed. Contact: Graham Lewis.

Mobilities, Informatics and Space

SATSU has a continuing research interest in the spatial reorganisation of social life arising in the context on new Information and Communication Technologies (ICTs) including:

- ***Time, Dependability and Trust***
Funding: EPSRC. Status: Continuing. Contact: Darren Reed.
- ***Sorting Places Out – Classifications and its Consequences in an E-Society***
Funding: ESRC. Status: Continuing. Contact: Brian Woods.

Research Grants and Funding

Sorting Places Out? Classifications and its Consequences in an E-Society ESRC E-Society Programme, £97,858 (2004-2006). The project looks at the use of IT based marketing systems for classifying neighbourhoods, exploring the way in which ICTs are increasingly playing a role in the zoning and categorization of space. Contact: Brian Woods or Roger Burrows. Collaborators: Nicholas Gane (Brunel University), Nick Ellison and Simon Parker (University of Durham), and Michael Hardy (University of Newcastle-upon-Tyne).

BLISS - Constructing public confidence in ICT systems: time, dependability and trust ESRC/EPSRC, (2004-2006). This project examines dependability/trust relations and how these relate to the temporal properties of ICT systems in public environments, specifically a real-time information for managing and using public (bus) transport. Contact: Darren Reed, Nik Brown or Andrew Webster. Collaborators: Julian Hemperison (ACIS), Peter Edwards (First Group) Darren Capes (City of York Council), Peter Wright and Andrew Monk (University of York).

Haematopoietic Stem Cells: The dynamics of expectations in innovation ESRC, £229,895 (2004-2007). The project builds on work in the Unit and elsewhere on the 'dynamics of expectations' in science and technology innovation – and in this case looks at the changing perspectives on the future of HSCs for treating cancer (since the 1950s) and now their use in regenerative medicine. Contact: Nik Brown. Collaborators: Paul Martin and Alison Kraft (University of Nottingham), Arie Rip (University of Twente) and Joan Fujimura (University of Wisconsin, Madison).

Quality assured science: the role of standards in stabilising stem cell research, ESRC, £120,000 (2004-2006). This interdisciplinary project brings together social and bio-

scientists to examine the development of Embryonic Stem Cells (ESC) research and innovation, specifically with regard to establishing new quality control and safety standards, developed and overseen by intermediary institutions. Such institutions bridge between the science base and clinical and commercial arenas and work to stabilise the present and enable the future development of the field. Contact: Andrew Webster or Lena Eriksson. Collaborators: Peter Andrews & Harry Moore (University of Sheffield).

Pharmacogenomics, diagnostic tests, and clinician acceptance: ESRC Science in Society programme, £158,000 (2004-2006). The study examines the extent to which doctors are likely to incorporate pharmacogenomics into clinical practice, and analyses the factors influencing uptake, focusing on cancer, asthma, cardiovascular disease, psychiatry and general practice, and explores the role that public health systems are having on introduction. In broader terms, the research will help us understand ways in which innovation occurs and new medical technologies become embedded in doctors' practice. Contact: Graham Lewis. Collaborators: Andy Hall (Northern Institute for Cancer Research, University of Newcastle). Details at: <http://www.york.ac.uk/res/pgx/>

Variability in response to warfarin: a prospective analysis of pharmacogenetic and environmental factors Department of Health, £842,000 (2004-2007). This large-scale prospective study on pharmacogenetics will determine the complex factors affecting patient response to warfarin, a widely used anti-coagulant drug, in order to develop an improved prescribing algorithm and cost effectiveness data. The SATSU component is analysing the views and experiences of patient and clinical staff with regard to introduction of pharmacogenetics into the clinical setting, helping to identify how this technology might be introduced into "real world" clinical

situations, the extent of likely demand and uptake, and therapeutic areas most likely to produce health benefits. Contacts: Graham Lewis, Andrew Webster, and Conor Douglas. Collaborators: Munir Pirmohamed, Dyfrig Hughes, Kevin Park Cheng Hok Toh, Tom Walley, Paula Williamson (University of Liverpool), David Bentley, Panos Deloukas and Jane Rodgers (Sanger Institute, Cambridge), Ann Daly and Farhad Kamali (University of Newcastle upon Tyne), David Fitzmaurice (University of Birmingham), and Vanessa Martlew (Royal Liverpool and Broadgreen University Hospital Trust). Details at: <http://www.york.ac.uk/res/pgx/>

Pharmacogenetics: state-of-the-art and potential socio-economic impacts European Science and Technology Observatory/Institute for Prospective Technological Studies, (2004-2005). The research examined regulatory frameworks for pharmacogenetics in Europe, USA and Japan, part of a wider European Commission study analysing the current state of pharmacogenetics development and clinical incorporation from a European perspective. Contact: Graham Lewis.

i-Design – Sociological and Psychological issues for inclusive design EPSRC, (2004-2006). The i-design project seeks to provide tools to improve quality of life for the wider population. It focuses on enabling industry to design products that can be used effectively by the population as a whole, including those who are older or disabled. The York aspect concerns itself with social and psychological issues, and the development of the conception of inclusive design. Contacts: Darren Reed, Andrew Monk. Collaborators: John Clarkson (University of Cambridge), Roger Coleman (RCA), Alan Newall (University of Dundee).

Mesenchymal Stem Cells – An analysis of expectations, prospects and potential European Commission (Osteocord), 2.5m euro (2005-2008). As part of the much larger international 'Osteocord' project led by colleagues in the Department of Biology at York, SATSU is analysing

the networks involved in stem cell innovation using mesenchymal stem cells. This forms part of ongoing work on the 'dynamics of expectations' in different innovation contexts. Contact: Nik Brown. Collaborators: Paul Genever (PI – University of York) plus international partners.

Food Allergies: Constructing a Sociological Agenda. ESRC, £159,256 (2005- 2008). Allergies are becoming a salient feature of contemporary life, and there is a growing body of research exploring their medical, genetic and environmental causes. However, there is a relative dearth of studies which have explored the social implications and consequences of the rise in allergies. This research focuses on food allergies and food intolerance. We know very little about how lay and professional people define or explain food allergies and intolerance, how people live with them, or how those who cater for people's food and health needs in a variety of institutional settings manage this growing problem. This project is exploring these issues and in so doing developing a sociological understanding of how food allergies are defined, negotiated and managed. Contact: Brian Woods. Collaborators: Sarah Nettleton, Roger Burrows (University of York), and Anne Kerr (University of Leeds).

Attitudes about Science and Technology (AASAT) (2005—2006). Funded by the World-wide University Network (WUN) and ESRC Innovative Health Technologies programme, this project analyses the formation of ('public') opinion on controversial sciences across cultures—namely stem cell research and sciences surrounding bioterrorism in the US and UK. Qualitative research at York and the University of Wisconsin—Madison will act as a platform for a larger quantitative survey. This multi-methodological approach is novel within public understanding of science research. Other partners are University of Illinois at Urbana-Champaign and University of Washington. Contact: Conor Douglas.

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Activities during 2005

Publications

Chapters

Nik Brown

Brown, N. (2005) *Encyclopaedia of 20th-Century Technology*, 3 chapters, London, Routledge.

Brian Woods

Woods, B. Watson, N. (2005) 'Wheelchair, History of,' in *Encyclopaedia of Disability*, Thousand Oaks, Sage.

Journal articles

Nik Brown

Michael, M. and Brown, N. (2005) On Doing Scientific Citizenships: Reflections on Xenotransplantation's Publics, *Science as Culture*, 14, 1, 39-57.

Conor Douglas

Douglas, C.M.W. (2005) Managing HuGE Expectations: Rhetorical Strategies in Human Genome Epidemiology, *Science Studies*, 18, 2, 26-45.

Darren Reed

Ashmore, M. and Reed, D. (2005) Innocence and Nostalgia in Conversation Analysis: The Dynamic Relations of Tape and Transcript, *Special Issue on Qualitative Social Research, Historical Social Research (Historische Sozialforschung)*, 30 (1).

Andrew Webster

Webster, A. (2005) Social science and a post-genomic future: alternative readings of genomic agency, *New Genetics and Society*, 24, 2, 226-38.

Brian Woods

Watson, N. Woods, B. (2005) No wheelchairs beyond this point: A historical examination of wheelchair access in the Twentieth Century in Britain and America, *Social Policy & Society*, 4, 1, 97-105.

Watson, N. Woods, B. (2005) The Origins and Early Developments of Special/Adaptive Wheelchair Seating, *Social History of Medicine*, 18, 3, 459-474.

Woods, B. Watson, N. (2005) When Wheelchair

Innovation in Britain was Under State Control, *Technology and Disability*, 17, 4, 237-250.

Reports and Working Papers

Lewis, G. (with Hopkins, M. M., Gaisser, S., Ryan, J., Enzing, C., Hartig, J., Vullings, W., and Forde, T.), Regulatory and quality assurance frameworks for PGx: A comparative study of the US, EU and four EU member states. Part 3 of *An ESTO study on Pharmacogenetics and Pharmacogenomics: State of the art and social and economic impacts*. Institute for Prospective Technological Studies (IPTS)/European Science and Technology Observatory (ESTO)/European Commission, 2005.

Woods, B. (with Burrows, R. Gibson, N.) (2005) *Neighbourhoods on the Net: The Nature and Impact of Internet-Based Neighbourhood Information Systems*, The Policy Press, Bristol.

Rodrigues, M. E & Machado, H (eds) (2005) 'Scientific Proofs and International Justice: the future for scientific standards in global environmental protection and international trade', Conference proceedings. Universidade do Minho/NES, Portugal.

Selected Conference Papers & Presentations

Nik Brown

Home on the mid-range, invited speaker, international workshop, 'Mid Range Theories in STS', University of Amsterdam, April 2005.

Blood Futures - capitalising haematopoietic stem cells, invited speaker, IGBIS, University of Nottingham, April 2005.

The aestheticisation of futurity - from facts to values - authority to authenticity, Invited Plenary Speaker, International Conference of Postgraduate Graduate College, 'Technisierung/Asthetisierung - Technological and Aesthetic Transformations of Society', Darmstadt University, Germany, Oct 2005.

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Governing hybrids - regulatory species boundary change in xenotransplantation and tissue engineering, Invited Plenary Speaker, 8th International Xenotransplantation Congress, Gothenburg, Sweden, Oct 2005.

Invited Visiting Lecturer at the School of Public Health, University of Copenhagen, Denmark, Oct 2005 (three public lectures and participation in School's symposium on the sociology of stem cell innovation).

Conor Douglas

Mediating and Translating Patients' Experiences in a Genetic Era: Introductory Thoughts and a Prospective Typology, Postgraduate Forum on Genetics & Society, Annual Meeting, Cardiff, Sep 2005.

Managing HuGE Expectations: Rhetorical Strategies in Human Genome Epidemiology, Postgraduate Forum on Genetics and Society Regional Meeting, York, Dec 2005.

Lena Eriksson

Inside or Outside the Bio-Science Tent? Invited Speaker, ESRC Science in Society programme, annual meeting, Crewe, Jan 2005.

WUN Global Exchange. Developing Risk Initiative and Building Stem Cell Project Collaboration, with University of Wisconsin-Madison.

Graham Lewis

Pharmacogenetics, industry strategies and the promise of personalised medicine, Invited session organiser/chair, Innogen International Conference, ELSIS Evolution of the Life Science Industry Sectors, Edinburgh, 23-25 Feb, 2005.

Variability in response to warfarin: A prospective analysis of pharmacogenetic and environmental factors, Poster presentation. HYMS Research Conference, York, 10 March 2005 (with Webster, A., Douglas, C. and Pirmohamed, M.).

Pharmacogenomics, diagnostic tests, and clinician acceptance, invited paper, ESRC Science in Society programme, Workshop on Public Engagement

in Science and Technology, Office of Science and Technology, Department of Trade and Industry, London, 12 May 2005.

UK delegate, OECD, An International Perspective on Pharmacogenetics: The Intersections Between Innovation, Regulation, and Health Delivery. Rome, 17-20 October, 2005.

Invited participant, US National Cancer Institute Symposium: International Harmonization of Biorepository Practices, Washington DC, 10 Nov, 2005.

Invited delegate, IBM Healthcare and Life Sciences Conference, Focus on Cancer: 2005 Worldwide Biobank Summit IV, Washington, DC, November 8-9, 2005.

Pharmacogenomics: Delivery to patients and acceptance. Pharmacogenomics E-Symposium, Invited Moderator and Panelist, International Web Conference and Annual Meeting of the International Society of Pharmacogenomics (ISP), broadcast live 12 Dec 2005, archived at <http://www.pgx.e-symposium.com>

Darren Reed

Learning from Loseables Home Oriented Information Technology (HOIT), York, 13-15 April, 2005.

Less is Loseable: Metonymy, Pastiche and the Use of Literary Devices for a Critical Reflexive Practice, Less is More, Microsoft, Cambridge, 25 April (with Blythe, M.).

Critical Perspectives On Dependability in the Home, Critical Computing Denmark, Aug 2005 (with Blythe, M., Wright, P. and Monk, A.).

Sociological and Psychological issues and Inclusive Design: beyond functional acceptability (early thoughts), Workshop on User Sensitive design, Accessible Design in the Digital World, Dundee, 23-24 Aug 2005.

Borders and Appropriations in the relations between HCI and STS, Workshop on Reflexive Methods, Pasadena, 20-22 Oct 2005.

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Maria Eugenia Rodrigues

Universal protection or global depletion? Hopes and contradictions in a science-led society, International Seminar Scientific Proofs and International Justice: the future for scientific standards in global environmental protection and international trade, University of Minho, Portugal, April 12.

Andrew Webster

Genomics, public health and innovation, Evolution of the Life Sciences Industries, Innogen International Conference, Edinburgh, Feb 2005.

Pan-european and individual national perspectives: developing a unified European regulatory approach? Keynote presentation. Second International Conference on Tissue Engineering, Heraklion, Crete, May 2005.

ELSA research and genomics: the 'impact on what'? Genomics and Society, Cesagen International Conference, Royal Society, London, 2005.

Understanding innovative health technologies: where does their novelty lie?, Invited international seminar series, University of Twente, Netherlands, Nov 2005.

Brian Woods

The history of the ultra-lightweight wheelchair, Enabling the Past: New Perspectives in the History of Disability, Centre for the History of Science, Technology and Medicine, University of Manchester, June 17–19, 2005 (with Watson, N.).

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Research Graduates

Luke Cowie Thesis title: *Medicine: its meaning, management and value*.

Helen Cox Thesis title: *The implications of the new genetics on professional networks and the structuring of health delivery*.

Conor Douglas Thesis title: *Exploring the co-construction of patients and new medical technologies*.

Oh Min Kwon Thesis title: *Traditional Korean medicine as a visual culture*.

Maria Eugénia Rodrigues Thesis title: *Science, New Technologies and the Publics: the Environmental Monitoring Systems*.

SATSU – Marie Curie Training Site New Genetics/New Society

Marie Curie Training Site 2005 saw completion of SATSU's role as an EU Marie Curie Training site for scholars interested in the social and cultural aspects of developments in genetics and molecular biology. The award provided a total of 74 months of graduate research training and supervision for 15 researchers from several member states.

Marie Curie Research Fellows in 2005

Ingrid Metzler – University of Vienna, Austria.

Nete Schwennesen – University of Copenhagen, Denmark.

Sakari Tamminen – University of Helsinki, Finland.

Niki Vermeulen – University of Twente, The Netherlands.

THE UNIVERSITY of York
Department of Sociology
Science and Technology Studies Unit

MSc **NEW MEDICAL TECHNOLOGIES AND SOCIETY**

FOR GRADUATES IN SOCIOLOGY
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APPROACHES TO THE SOCIOLOGY OF MEDICAL TECHNOLOGY

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MEDICAL BIOINFORMATICS: CHANGE AND IMPLICATIONS

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END OF LIFE TECHNOLOGIES: THE MANAGEMENT OF DYING

SOCIAL SCIENCE RESEARCH METHODOLOGIES FOR MEDICINE

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S A T S U
Science and Technology Studies Unit
http://www.york.ac.uk/depts/soci/c_mamt.html

Medical technologies are increasingly at the centre of new changes in both the social and physical body. This MSc is designed for those with an interest in the sociology of medicine and healthcare.

The course covers a wide range of sociological and anthropological literature on medical innovation with a special focus on the body, reproduction, health, ageing and dying. Crucially, it applies social science research to healthcare organisation, policy and regulation. The course is for sociology graduates and healthcare practitioners interested in the social science of medicine.

Its primary aims are:

- to explore key perspectives in the Sociology of Health and Illness, Anthropology, History of Medicine, and Science and Technology Studies
- to provide a rigorous foundation in social science research drawing on a range of approaches which are broadly transferable
- to provide a rigorous training for further research and professional development

Contacting SATSU

SATSU welcomes collaboration with scholars of Science and Technology Studies worldwide. Please visit the SATSU website at: www.york.ac.uk/org/satsu/ for up to date information on our activities, or contact us directly using the addresses below.

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