

ISSTI

THE INSTITUTE FOR
THE STUDY OF SCIENCE
TECHNOLOGY AND INNOVATION

newsletter

no. 17 October 2010

Welcome to the new Chair of Innovation in the Life Sciences

In this newsletter we welcome the arrival of the newly appointed **Professor David Castle**. We are pleased to record the strategic investment by the University of Edinburgh in developing our research strengths in this crucially important area. David brings a wealth of experience from his previous work as Canada Research Chair in Science and Society at the University of Ottawa and principal investigator on the Genome Canada funded Canadian Program on Genomics and Global Health.



Robin Williams

On his very first week at Innogen, David met with Jen Foley, the new Innogen Communications and Policy Officer, to talk about his past experiences and future plans.

What experience do you bring to Innogen?

My work in Canada over the last decade has focused on many of Innogen's fields of expertise, including innovation systems theory, intellectual property and knowledge management, regulation and governance of emerging technologies and public engagement. I have studied life science innovation in genetically modified foods, aquaculture innovation, nutritional genomics and applied crop genomics and bioproducts and food security. Trained as a philosopher of biology, I also have an interest in sustainability, biodiversity and DNA barcoding of life.

What areas do you feel are opportune for Innogen to capitalise on?

The field of genomics has expanded greatly in the last decade, well beyond the applications expected to be borne out of the mapping of the human genome. Developments in translational medicine, for example, will continue to

be important for health and will form an important part of Innogen's work. Innogen's portfolio will continue to broaden to focus on emerging disciplines including nanomedicine, the barcoding of life project

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HEAT and the CITY

Janette Webb, David Hawkey, David McCrone, and Stewart Russell, together with **Andy Kerr & Heather Lovell** (School of Geosciences), **Mark Winskel** (Institute for Energy Systems), and **Richard Bellingham** (Fraser of Allander Institute, University of Strathclyde) have been awarded almost £1M by ESRC/EPSRC for the four-year project entitled “HEAT and the CITY - A Research Project on Sustainable Heat and Energy Conservation in Cities”.



Janette Webb

Funded under the Research Councils' Energy and Communities Programme, the project will contribute to the development of sustainable and low carbon heat systems in Northern European cities. Public debate about energy demand and carbon emissions has been dominated by two perspectives. One puts the onus on government to pass legislation, the other puts on individuals and households to change their attitudes and behaviour. This project examines the thesis that solutions are most likely at the community level, and that city

communities are the key to mobilising actors to achieve major change.

Webb and colleagues will initially analyze the recent history of successful and failed sustainable heat projects in the UK and Northern Europe. They will then focus on progress in Glasgow and Edinburgh, where Councils, businesses and community enterprises are collaborating over development of sustainable heat and energy efficiency in buildings. The team will study new projects as they develop and will give feedback on them, enabling shared learning in relation to community leadership, management and financial expertise. They will work closely with the Glasgow-Edinburgh Collaborative Initiative (GECI), Sustainable Glasgow, Edinburgh Council Sustainable Development Unit, Scottish Enterprise, social enterprises and community groups. This collaboration between academia and community will create a blueprint for facilitating transitions to sustainable heat in 'cold climate' cities.



Stewart Russell

Seminar Series on Synthetic Biology and the Social Sciences

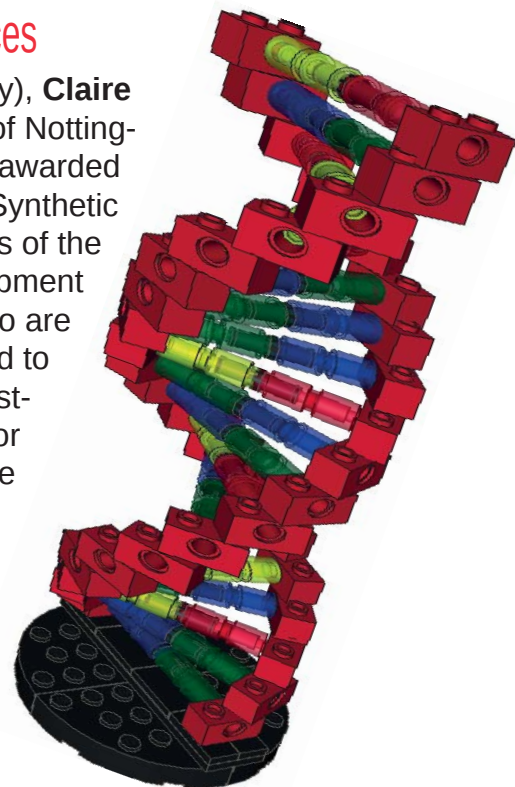
Jane Calvert, along with **Matthew Kearnes** (Durham University), **Claire Marris** (London School of Economics), **Paul Martin** (University of Nottingham) and **Adrian MacKenzie** (Lancaster University) have been awarded

£18,000 for an ESRC Seminar Series on Synthetic Biology and the Social Sciences. The aims of the seminar series are to catalyse the development of a community of UK social scientists who are critically engaged in synthetic biology, and to explore the possibility of developing a 'post-ELSI' interdisciplinary research agenda for the analysis of this emerging field. The five seminars will start in Edinburgh in early 2011 and will take place in different locations, ending with a mini-conference involving scientists and policy makers in London in June 2012.

Contact jane.calvert@ed.ac.uk for further information.



Jane Calvert



and the myriad of issues at the intersection of food security, global development and sustainable biofuel production. Innogen engages with a wide range of stakeholders and has established itself as a centre of international, interdisciplinary collaboration. I believe we should further build our international networks and develop relationships which will support our vision to be at the forefront of the study of life science innovation.

How do the University of Edinburgh and Open University bring added value to Innogen's work?

The University of Edinburgh and the Open University are internationally renowned for excellence in the life sciences, engineering and international development. Innogen is therefore very well-placed to collaborate with academics leading the way and developing technologies in these fields.

Innogen has strong working relationship with many University faculties, namely the School of Law, School of Engineering, College of Medicine and Veterinary Medicine and the Open University Business School. We will work to increase our interconnectedness with these and other colleagues at the Universities to share expertise, further develop our interdisciplinarity and expand our work in areas including food security and biodiversity.

Role of Forensic Nurses in Sexual Assault Cases

Gethin Rees has been awarded an ESRC Small Grant (£76, 918) to compare the role and work of the Forensic Nurse Examiner (FNE), a relatively novel medico-legal actor in the UK, with the more established Sexual Assault Nurse Examiner (SANE) in Ontario, Canada. Introduced in the UK because of difficulties with recruiting doctors (the practitioners normally associated with this work) during the daytime, the FNE is trained to examine sexual assault complainants. Unlike doctors, however, they are legally prohibited from offering an opinion about the veracity of a complainant's allegation, and so a physician is required to draw a conclusion based upon the FNE's notes. This is not the case in Ontario, where SANE's are allowed to provide opinion evidence. Given differences in expert evidence law, this study can potentially illuminate questions relating to the important role of opinion in expert evidence, including the influence of national jurisdictions, and given other potential variations in local best practices, it should also shed light on forensic evidence construction "in the making". For more details on the project contact: Gethin Rees g.rees@ed.ac.uk



Gethin Rees

Globalisation and the Grid

Ashley Duncan Lloyd (Management School), and **Terence Sloan** (Edinburgh Parallel Computing Centre) were awarded an ESRC grant (£95,020.70) for the project "Globalisation and the Grid: an infrastructure for demand-driven innovation".

The "Grid" is portrayed as a global Information and Communication Technology (ICT) infrastructure enabling new organisational forms and knowledge industries, and requiring new organisational competencies for competitiveness. The project builds on ESRC-funded work establishing Grid-based collaborations with China, and EU-funded work providing direct communications networks to East Asia, and will explore collaboration from a socio-technical perspective to build a framework that directly engages with industry in both the UK and China.

The economies of East Asia, and particularly China, define the world's largest market in a single time zone, generating the majority of global economic growth. The relationship to UK supply and demand makes improved understanding critical to innovation processes through which industry generates and sustains competitiveness.

For further information: Ashley Lloyd, adl@holyrood.ed.ac.uk





Lawrence Dritsas

New MSc Programme Launched

The Science, Technology and Innovation Studies subject group has welcomed its first intake of students on the MSc programme in Science, Technology and International Development. The new students will be following a programme of core courses and options that takes advantage of Edinburgh's strengths in both STS and Development Studies. Programme Director **Lawrence Dritsas** and the rest of the ISSTI community wish them a warm welcome.

Alumni

Juan Pablo Pardo-Guerra, who recently completed his PhD in STS and formerly edited the ISSTI Newsletter, joined the London School of Economics and Political Science as a Lecturer in the Department of Sociology on 1 September 2010. Juan Pablo will be involved in teaching a series of courses in economic sociology and will continue to develop research on sociological issues related to the use of technology in contemporary finance.

Daniele Fanelli has taken over as ISSTI Newsletter editor. Send all your exciting news and stories to: dfanelli@staffmail.ed.ac.uk

James Stewart will be on secondment for 3 years to the European Commission Joint Research Centre, at the Institute for Prospective Technology Studies (IPTS) in Sevilla, Spain. He will join the research team on Information Communication Technologies and Social Inclusion, and will collect evidence for the effective use of ICTs in education and integration by immigrants, and on ICT support for home carers. These are both important issues in European social policy, where the evaluation of initiatives and communication of best practice can inform European and local policies for economic integration, and the long term sustainable provision of high quality care to vulnerable individuals.

Appointments

ISSTI gives a warm welcome to **Jennifer Foley**, **Toni Freitas** and **Alison Caldecott**.

Jen has replaced Lara Crossland as the new Communications and Policy Officer at Innogen.

She previously worked in the field of health improvement, where she focused on mental health in later life policy and public health nutrition. Jen has studied in Canada at Queen's University and in the UK at the University of Edinburgh and the London School of Hygiene and Tropical Medicine. Her email is jen.foley@ed.ac.uk.

Toni is the new Events Manager at the Genomics Forum, and can be reached at Toni.freitas@ed.ac.uk.

Alison is covering the Forum's Press and Communications duties during Emma Capewell's maternity leave. Her email is alison.caldecott@ed.ac.uk



Jennifer Foley

Jennifer Speirs, who recently obtained her PhD at Innogen, has been awarded an ESRC Postdoctoral Fellowship to disseminate and develop the findings of her doctoral research, entitled "Secretly connected? Anonymous semen donation, genetics and meanings of kinship". The thesis explores the views of men who donated semen between 25 and 45 years ago, and also the continuing disputes about secrecy amongst infertility treatment provision stakeholders in the UK. Jennifer will be based at Edinburgh University's Centre for Research on Families and Relationship but will be working with Innogen colleagues on plans for a joint CRFR/Innogen symposium in 2011. Jennifer Speirs can be reached at: J.M.Speirs@ed.ac.uk

Recent events

Stabilizing an Unstable World

Luciana D'Adderio, **Martha Feldman** (University of California at Irvine) and **Paula Jarzabkowski** (Aston University, Birmingham) hosted the AIM workshop "Stabilizing an Unstable World: The Role of Practices and Routines" organised by Zoe Radnor (University of Warwick).

This workshop focused and reflected on the study of change, with the objective to move away from the thinking of change as something independent of stability. Leading academics presented their new ideas on concepts such as stability, routines, and dynamics capabilities, and encouraged the participants to develop and apply such ideas to their own research. Attendees were full of praise for the workshop, describing AIM Visiting International Fellow Professor Martha Feldman, AIM Ghoshal Fellow Professor Paula Jarzabkowski and AIM Innovation Fellow Dr D'Adderio as "excellent and thoughtful speakers".



Luciana D'Adderio

Luciana also led the Advanced Institute of Management Presenter Symposium titled "Artefacts at the Centre of Routines", in collaboration with Marc Zbaracki (University of Western Ontario), Paul Leonardi (Northwestern University) and Fabrizio Ferraro (University of Navarra). The event provided an exciting opportunity to explore some new and advanced ideas about the influence of materiality (technologies, artefacts) on organisational practices or routines. The talks demonstrated how emergent concepts from the Sociology of Technology and Science and Technology Studies (STS) can help advance our theoretical and empirical understanding of key organisational phenomena such as practices/routines emergence, persistence, transfer and replication. The symposium was lively and well attended and received excellent feedback from an engaged and interdisciplinary audience.

For details of both events: L.D-Adderio@ed.ac.uk, or visit www.dependableinnovation.org

For the fifth year running, the **ESRC Genomics Forum** sponsored a series of events at the Edinburgh International Book Festival. Discussions ranged from what it means to have virtual friends in your life, and how environmental influences affect intelligence, to contemplations on the future of human beings. As usual, there were lively discussions between audiences and our stellar cast of speakers which included renowned author Iain M Banks, TV Gadget Show's Jason Bradbury, one of the world's most influential Twitterati, Kevin Warwick, Cybernetics Professor and the world's first cyborg, and David Shenk, journalist and best-selling author.



Judged by Genetics?

The **Genomics Forum**, with the British Council, hosted a lively discussion as part of the Scottish Parliament's 2010 Festival of Politics exploring the controversial issue of using DNA testing to determine the nationality of asylum seekers. An expert panel including representatives from the Scottish Human Rights Commission, Scottish Refugee Council, and Strathclyde University debated the pros and cons of using genetic testing to verify an asylum seeker's country of origin, as well as broader questions about science taking precedence over personal experience or history.

See <http://tinyurl.com/347gvfm> for further information on the EGN's research into some of the issues surrounding 'identity' politics.
www.festivalofpolitics.org.uk/index.htm



TARGET on Paris and Brussels

Alessandro Rosiello and **Michele Mastroeni** were in Paris, at the French Ministry of Industry offices, to present the initial draft of a policy toolkit developed under the project “TARGET: International Comparative Study of Targeted Innovation and R&D Policy”, funded by the EU framework FP7 framework. Policymakers from countries that are partners in the project, including France, Lithuania, Slovenia, Israel and Galicia, offered their feedback on the toolkit’s development. Shortly after the event, Alessandro and Michele flew to Brussels, to report on the progress of the project to various EU representatives.



Alessandro Rosiello



Michele Mastroeni

As a contribution to the Scotland’s Futures Forum, **Joyce Tait** and **Alistair Elfick** (Director of Centre for Biomedical Engineering, School of Engineering) led a lunch-time event at the Scottish Parliament on the opportunities and challenges presented by emerging synthetic biology technologies. The event, which took place on the on October 6th, was attended by MSPs and representatives from organisations including Scottish Enterprise, Lloyds banking group, the Institute of Directors and the City of Edinburgh Council. Questions led to pertinent, topical discussions on health, economic and social themes of synthetic biology including the governance and regulation of new technologies, the positive public portrayal of innovative technology and the ethics of innovation. More information at: www.scotlandfutureforum.org



Joyce Tait

Joyce was also invited to participate as Rapporteur in the OECD workshop “The Future of Environmental Biotechnology: Science, Technology, Policy and Society”, which was held at the University of Bologna, Italy, on the 16th and 17th of September, in conjunction with the 14th International Biotechnology Symposium and Exhibition in Rimini.



Emma Frow (Genomics Forum) recently gave an invited talk about standardization in synthetic biology at the 2010 meeting of the European Molecular Biology Organization (EMBO) in Barcelona. This session featured an international cast of synthetic biologists, including Adam Arkin (Berkeley), Jason Chin (Cambridge), Wendell Lim (UCSF), William Shih (Harvard), and Jorg Stelling (Basel). <http://2010.the-embo-meeting.org/>

Gethin Rees spent the summer of 2010 at Trent University, Ontario, working with Dr. Deborah White, a world expert on Sexual Assault Nurse Examiners. Here they convened a symposium on forensic medical response to reported sexual offences, which marked the founding of an international network, the “Comparative Analysis of International Responses to Rape Network” (CAIRRN). The next session of the international network will take place in 2011, at the Law and Society Association’s annual conference in San Francisco.

Daniele Fanelli was invited to join the six-member “core” organizing committee of the 3rd World Conference on Research Integrity, which will take place in 2013, in a place yet to be decided. Daniele was also invited to speak and direct a workshop at Ruhr University Bochum, Germany, for the Science College 2010 event, on October 11th. This annual event gathers doctoral students from all disciplines around lectures and ensuing discussions on overarching issues of science and society. This year’s theme was the “Half life of knowledge”, and Daniele presented a lecture entitled “The mystery of the missing negative results”. For further information at: http://www.research-school.rub.de/science_college2010.html

Together with Sam Friedman, Doctoral Researcher in Sociology, Daniele talked at the Skills Development Programme Learning Lunch, on October 7th, about their recent experiences of how they went about getting their research picked up in the media.



Daniele Fanelli

Forthcoming Events

Delivering Global Promise Through the Life Sciences

The UK's Economic and Social Research Council's (ESRC) Genomics Network (EGN) in partnership with the Organisation for Economic Cooperation and Development (OECD) will host a major conference later this year to review how knowledge in the life sciences is governed, shared, regulated and managed, and to explore new linkages between the life sciences and information and communication technologies. Entitled "Delivering Global Promise Through the Life Sciences", the conference will also underline how the latest social science research into genomics science can help inform key global economic and policy decisions.

This event is the first time the OECD has taken a systematic look at what the social sciences can bring to its policy-making and experience in this key area. Conference discussions will feed directly into the agenda of the OECD's working party on biotechnology as well as showcasing eight years' worth of original EGN research and taking a forward look to new key questions at the intersection of science and society.

Delegates will be a mix of policy-makers and regulators, industry leaders, academics, medical practitioners, social and natural scientists. Conference attendance is by invitation only, but the EGN will make as much conference content available as possible through its web pages and the ESRC Genomics Forum's YouTube channel.



The event will take place on 6 and 7 December 2010 at the OECD Conference Centre, 2 rue Andre Pascal, Paris, France. Further details at: <http://www.genomicsnetwork.ac.uk/forum/conference2010/> And check out the related video "Looking forward to the 2010 conference" <http://www.youtube.com/user/genomicsnetwork>

(Re-)Assembling Routines

Luciana D'Adderio, in collaboration with **Martha Feldman** (University of California at Irvine) and **Kajsa Lindberg** (University of Gothenburg) will be hosting a track related to their current activities (see page 5) titled "(Re-) Assembling Routines – The Role of Artefacts in Organizing" at the next EGOS Colloquium in Gothenburg in 2011.

Further information about the call at: www.egosnet.org, www.dependableinnovation.org, or contact Luciana at L.D-Adderio@ed.ac.uk

Innogen & ISSTI Seminars

On the 25th of October (starting at 15.30), **David Castle**, the new Chair of Innovation in the Life Sciences at INNOGEN, will talk about "Knowledge management as a precondition of life sciences innovation".

A preoccupation with formal intellectual property rights in science and technology innovation persists. Life sciences patents are often construed by funders of research, venture capitalists, and the private sector as indispensable for innovation. Others either doubt patents have a crucial role in innovation, or believe they are associated with variable outcomes needing more careful examination. Patents are also widely used as metrics of innovation, despite limitations in this method of measurement. The preoccupation with patents puts too much emphasis on one element of innovation when there are other aspects to consider. One aspect that is closely allied to formal intellectual

Forthcoming Events

property protection concerns the management of knowledge in pre- and post-competitive contexts. Knowledge management techniques can be used to analyse institutional contexts in which knowledge is created, tracked, accounted for, and transferred to other parties. A knowledge management framework was developed for a series of case studies of biotechnology innovation, focused on food security, in developing and industrialized countries. The case studies suggest a pattern of the determinants of success that importantly lie outside the context of intellectual property management. The framework and case studies will be presented, with some further reflection on the role that knowledge management techniques can, or ought to have, in setting priorities in approaches to open innovation that are gaining momentum. (Attendees must pre-register for this seminar).

On Monday 22nd of November, **Mark Harvey**, director of the Centre for Research in Economic Sociology and Innovation (CRESI), University of Essex, will talk about "The Changing Role of the State in Innovation: Global Climate Change, 'Peak Oil', and Biofuels".

For Abstract see link:
http://www.stis.ed.ac.uk/events/issti/2010_2011/the_changing_role_of_the_state_in_innovation_global_climate_change,_peak_oil,_and_biofuels

On Friday 10th December 2010, from 2.30 to 5pm, and followed by mince pies and wine, **Sarah Parry** & Prof. **Elizabeth Shove** (Sociology, University of Lancaster) will present their work on the Sustainable Practices Research Group (SPRG), funded by ESRC, DEFRA and Scottish Government. (attendees must pre-register for this seminar)

For further information about accessibility please contact Angela McEwan on 0131 650 9113 or



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Thursday 11 November 2010 at 6pm

Between Edinburgh and Egypt: How the Pyramids Transformed Scottish Astronomy

Professor Simon Schaffer
University of Cambridge

Charles Piazzi Smyth was one of the best-known and fascinating scientists in Victorian Edinburgh. Brilliant and quizzical artist, astronomer, designer and traveller, he helped make the Royal Observatory in Edinburgh a major centre of scientific culture and enterprise. His relationships with government, colleagues and associates were not always happy: controversy and crisis wracked his career. The talk explores major aspects of his life and work, focusing especially on Smyth's fascination with Egypt and Egyptology, a major fashion of nineteenth century Scottish culture and a vital element both in the arts and sciences of the period. Smyth's passion for Egypt, which brought him into violent conflict with the Royal Society of London and many other organisations, reveals much of what drove the sciences in the nineteenth century and the way they advanced. The talk will feature some of Piazzi Smyth's original artefacts from the Museum's collections. There will also be a chance to see the Museum's slice-of-life character of Piazzi Smyth's (fictional) 2nd assistant.

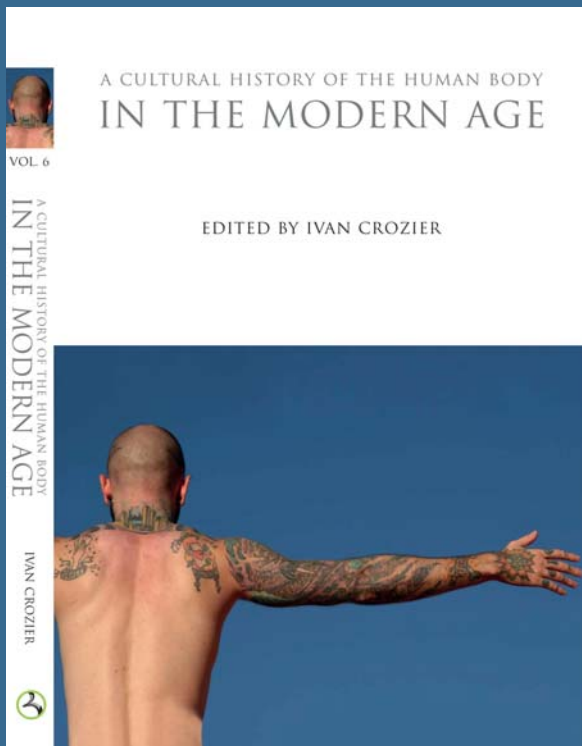
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Publications



Human Body in the Modern Age

Ivan Crozier has edited and authored a chapter in the sixth volume of “A Cultural History of the Human Body” (1700 pp. edited by William Bynum and Linda Kalof; published by BERG). The volume, entitled *In The Modern Age*, examines aspects of the cultural history of the human body since 1920, covering topics such as health, medicine, sexuality, life and death, totalitarianism, popular culture, art, beauty, tattooing and other body modifications.

Ivan's chapter analyses the sexual body, using SSK as a framework to argue that the sexual body is an artificial kind (following Martin Kusch and elaborating on ideas by Barry Barnes). After a general discussion of a performative theory of the body and the history of sexuality in the twentieth century, the chapter makes the argument through examples such as the history of pubic hair, genital piercing, and female ejaculation. Don't leave it lying around for your kids to see, unless you are prepared to answer lots of questions!



Ivan Crozier

Other recent publications:

Edited book:

Parry, S., and Dupre, J. (eds.) *Nature After the Genome Sociological Review Monographs*, Oxford: Wiley-Blackwell ISBN: 978-1-4443-3396-1

Book Chapters:

- Parry, S., and Dupre, J. 'Introducing Nature After the Genome' Chapter 1 in Parry, S and Dupré, J (Eds) *Nature After the Genome Sociological Review Monographs*, Oxford: Wiley-Blackwell
- Marks, N.J. 'Defining Stem Cells? Scientists and Their Classifications of Nature' Chapter 3 in Parry, S and Dupré, J (Eds) *Nature After the Genome Sociological Review Monographs*, Oxford: Wiley-Blackwell
- Calvert, J. 'Synthetic biology: constructing nature?' Chapter 6 in Parry, S and Dupré, J (Eds) *Nature After the Genome Sociological Review Monographs*, Oxford: Wiley-Blackwell

Journal articles:

- Chataway, J., Hanlin, R., Muraguri, L., Mugwagwa, J. 'Global health social technologies: reflections on evolving theories and landscapes' forthcoming in *Research Policy*
- D'Adderio, L. 'Artifacts at the centre of routines : performing the material turn in routines theory'. *Journal of Institutional Economics*, in press. (Currently available online, DOI: 10.1017/S174413741000024X)
- Fanelli, D. 'The black, the white and the grey areas - towards an international and interdisciplinary definition of scientific misconduct'. *Proceedings of the 2nd World Conference on Research Integrity*, in press.

Non-academic publications/media coverage

- Robin Williams' and James Stewart's work was reported in 'If you build it, will they come? How researchers perceive and use web 2.0', London: Research Information Network
- MacKenzie, D. 'Unlocking the language of structured securities'. *Financial Times*, 19/8/10, p.32 (A French translation of Donald's article will be published in *Problemes Economiques*).
- Daniele Fanelli was featured by the journal *Nature*, in the article 'Sabotage' (vol. 467, 30 September 2010)