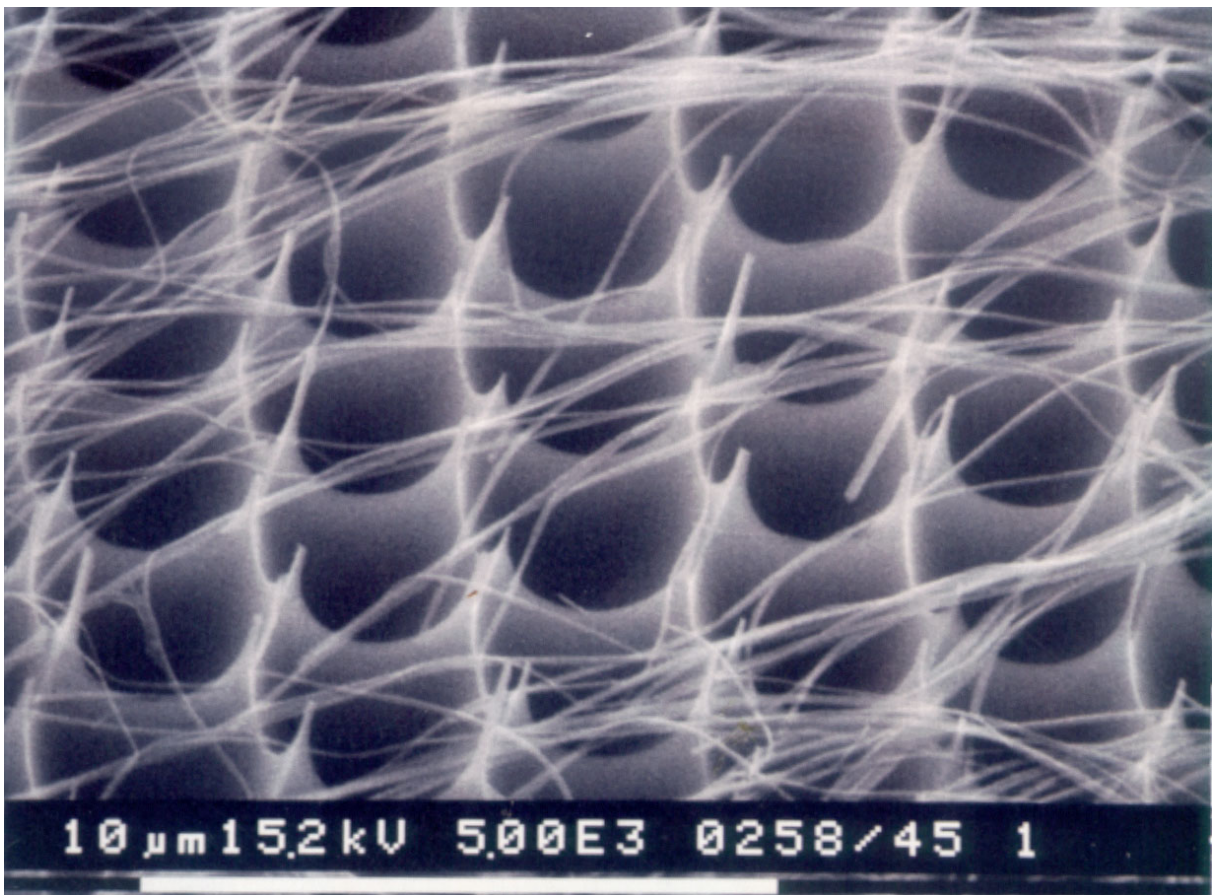


# EASST

## *Review*

Volume 25 (1) *European Association for the Study of Science and Technology* March 2006



*Editor: Chunglin Kwa*  
*Deputy Editor: Richard Rogers*  
*Tel: 31 20 5256593 (Kwa)*  
*31 20 525 3352 (Rogers)*  
*email:c.l.kwa@uva.nl*  
*rogers@hum.uva.nl*  
*Membership queries:*  
*admin@easst.net*

*EASST Review on the Web:*  
*http://www.easst.net*

*Contributing Editors:*  
*Andrew Jamison (University of Aalborg)*  
*Janet Rachel Low (London)*  
*Harald Rohracher (Graz)*  
*Gerald Wagner (Berlin)*  
*Paul Wouters (University of Amsterdam)*

*Council of the European Association for the*  
*Study of Science and Technology:*

*Christine Hine, President (University of Surrey)*  
*(Christine.Hine@btinternet.com)*  
*Nik Brown (University of York, UK)*  
*Rainer Grundmann (Anston University, UK)*  
*Claire Marris (National Institute for Agronomic*  
*Research, France)*  
*Jessica Mesman (University of Maastricht)*  
*Ann Rudinow Sætman (Norwegian University for*  
*Science and Technology)*  
*Fred Steward (Brunel University, UK)*  
*Niki Vermeulen, student member (University of*  
*Maastricht)*  
*Ragna Zeiss (Free University, Amsterdam)*  
*Bruno Latour (President of the Society for*  
*Social Studies of Science, ex-officio)*

*EASST's Institutional Members:*

*Academy of Finland*  
*Ecole des Mines, Paris*  
*Europäische Akademie, Bad Neuenahr-*  
*Ahrweiler*  
*Inter-University Research Center for*  
*Technology, Work and Culture, Graz*  
*James Martin Institute, University of Oxford*  
*Linköping University*  
*Norwegian Institute for Studies in Research of*  
*Higher Education*  
*Maison des Sciences de l'Homme, Paris*  
*Science Museum, London*

*University of Bielefeld*  
*University of Edinburgh*  
*University of Gothenburg*  
*University of Maastricht*  
*University of Manchester*  
*University of Surrey*  
*University of Sussex*  
*University of York*  
*VTT Group for Technology Studies, Finland*  
*Wellcome Trust*

*EASST Review (ISSN 1384-5160) is published*  
*quarterly, in March, June, September and*  
*December. The Association's journal was called*  
*the EASST Newsletter through 1994.*

*Subscription: Individual membership fee: EUR*  
*34, US\$ 30 annual. Reduced two- and three-year*  
*membership available. Students and citizens of*  
*East European countries pay reduced rates on*  
*applicaton EUR 20. Library rate is EUR 34.*  
*Please note that subscriptions can also be made*  
*through the EASST website.*

*Member benefits*  
*Travel stipends for Ph.D. students, young*  
*scholars and researchers from developing*  
*countries are available.*  
*Reduced subscriptions to a number of journals*  
*are available through arrangements between*  
*EASST and several publishers. (For details on*  
*the benefits, see the EASST website.)*

*EASST's Past Presidents:*  
*Sally Wyatt, 2000-2004; Rob Hagendijk, 1997-*  
*2000; Aant Elzinga, 1991-1997; Stuart Blume,*  
*1987-1991; John Ziman, 1983-1986; Peter*  
*Weingart, 1982.*

*EASST Review's Past Editors*  
*Arie Rip, 1982-1991; Georg Kamphausen, 1982.*

*Erratum:*

*Lotte Asveld (in the EASST Review 24, no. 2/3,*  
*is not at the Free University but at Delft*  
*University of Technology.*

*frontpage illustration: Silicon nanowires (Photo:*  
*Philips). Nanotechnology was discussed as a*  
*case in the symposium on path dependency*  
*reported in this issue.*



# Middle-Range Theories in Science and Technology Studies

by Sally Wyatt

**Report of a workshop at the University of Amsterdam, 27-29 April 2005, organised by Brian Balmer, University College London, & Sally Wyatt, University of Amsterdam**

This workshop grew, in part, from recognising a number of shared concerns that both of us felt when reading student work in Science and Technology Studies, and from talking with colleagues who shared similar experiences. Even the best student writing could provoke such uncharitable thoughts as: What is this a case study of? What does it add to our understanding of different concepts? How does it contribute to discussions of anything outside the case study? How can the student think it reasonable to use concepts from completely different normative and epistemological traditions in the same case study? There seemed to be some missing middle ground, something that would add up to more than 'not just another case study'. Going beyond such frustrations, we began to wonder if these problems were arising because of the ways in which STS is presented in the literature and in teaching. Fixing the blame on ourselves, we asked, how, given the state of the academic field, would students know to do anything differently?

In Amsterdam in April 2005, 24 academics came together for three days aiming to discuss the role of middle-range theories in Science and Technology Studies. The majority of participants were based in British or Dutch institutions, though not all of these people are British or Dutch. Eleven of the 24 participants were women (though all of the professors present were men). All were white. Younger scholars were well represented: three current PhD students; three people who have received their PhDs within the past 12 months and a further three who have received their PhDs within the past 2-3 years. Our original invitation to participants included the following paragraphs:

*Within STS there are a few 'grand theories' such as ANT and SCOT. STS scholars have also put*

*forward various programmatic statements, such as the Strong Programme and more recently the 'Third Wave' of science studies. In contrast, numerous detailed empirical studies exist which add to our understanding of particular concerns but may not, or are not intended to, generalise beyond their substantive areas of concern. Studies can often appear to trade-off abstraction and generalisation with the demands of remaining faithful to the complexity of their empirical material. While this may or may not be a necessary or desirable feature of STS, it is usually not explicitly discussed as a choice. Our aim is to make this gap, between the empirical richness of individual studies and the development of middle-range theory, the topic of focused and critical workshop discussion.*

*We are seeking four types of contribution in the form of a paper for circulation prior to the meeting.*

- *Whether or not we need 'middle-range theory' or other ways of bridging between focused studies and 'grand theories'*
- *Contributions which use on-going empirical research to reflect upon these 'middle-range' issues*
- *Contributions which focus on the problems of operationalising 'grand' STS theories*
- *Contributions which focus on ways of developing the skills of presenting such material.*

Looking back at the invitation, during and after the workshop, it included two implicit assumptions that could be interrogated further. The first, echoing Robert Merton, is that we wanted to raise the question of whether or not STS should be more engaged with producing theories of the middle range in order to avoid the mistakes Merton associated with sociology. In *Social Theory and Social Structures*, Merton argued for 'theories that lie between the minor but necessary working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a

unified theory that will explain all the observed uniformities of social behaviour, social organisation and social change' (Merton, 1968: 39). According to Merton, failure to develop middle range theory prevented sociology from maturing as a science – a direction, needless to say, STS scholars would be sceptical of following. Of more contemporary relevance, for Merton the failure to develop such theories, by focusing instead on the production of descriptions or the production of theories of everything, meant that sociology was unable to engage with wider audiences for its work. For Merton, middle-range theory meant engaging with reality, albeit a limited aspect of it; producing theoretical accounts that engaged with that reality which themselves could be used to communicate with others, whether policy-makers or scholars from other disciplines; and providing ideas for future work. In the words of today, Merton was concerned with issues of accountability and engagement, and it remains an important consideration whether theories of the middle range would facilitate different sorts of engagement for STS.

The second assumption is that our invitation, also following Merton, conceptualised the middle as the space between the theoretical imagination and the richly empirical textures of lived experience. One of the main areas of discussion during the workshop was precisely about how limited this second assumption was, that the middle is much more complicated.

Indeed, as the assumptions in our original invitation were dissected and challenged in the workshop papers and discussions, the topic of 'middle-range theory in STS' proved to be a fruitful one for considering the state of STS and theorising more generally. Our formulation of the problem was not shared by everyone, with some participants suggesting that even by thinking about the middle we were in fact reinforcing the divide between the micro and the macro (Woolgar). But, the spirit was correct in suggesting that STS needs something to avert the dangers of repeating ourselves, of losing our critical – some argued anarchic and mischief-making – edge.

Although the workshop group was small, there were nevertheless too many voices and perspectives aired over the three days to even suggest that we could offer a definitive statement about the middle-range. Some participants were cautious of speaking on behalf of a homogenised entity called 'STS', and most, if not all, recognised that a diverse range of positions on the significance of the 'middle' was inevitable.

Our aim, in this brief report, is to provide some flavour of the discussions, organised around a series of questions that were revisited over the course of the workshop, and which we, the organisers, have identified as the most interesting/productive currents of debate.

#### *What or where is the middle range?*

Our discussions ranged between thinking of the middle range as an adjective, as in middle-range theory, as a noun or place and as a verb or process. When middle-range is used as an adjective, it is closest to Merton's conception, the moving between theory and data (Morris & Balmer; Geels). When middle range is used as a noun or as a place it becomes liminal: the place between theories, between audiences, between levels. Discussion touched on whether this middle range place is an (empty) space/gap between case studies and theory, or the grey area where the two already meet and mix but which is not properly interrogated? Can we think of the middle as a location of shared concerns? (Rappert) Alternatively, when 'to middle range' is used as a verb (Brown), it becomes a process or performance, middling but not muddling. Then middle ranging is a way of making connections across time, discipline, community and place. All three of these ways of thinking about the middle range do have some sense of movement, and it is that capacity for moving, travelling or resonating that seemed, to many at the workshop, most important.

#### *What do we want [theories in] STS to do?*

For logical positivists, theories are the most concise summaries of as many empirical facts as possible. Workshop participants articulated a number of very different ideas about theories and their utility (Rip). Theories can be explanations or interpretations; they are sets of related concepts; they can be used 'to shoot holes in essentialisms'. In STS, some of the things we call theories, such as SCOT and ANT may, some argued, actually be better understood as methodologies or ontologies. Theories can be communication devices, namely abstractions or generalisations which can help us to convey our ideas to policy makers (and other non-academic groups), to students, between different academic communities, or between STS scholars studying different objects. In turn, this latter version of theory opened up questions about how to theorise audiences within and beyond STS.

#### *Does opening up the middle open up new questions, new methods?*

Again, discussion ranged widely around this topic over the course of the workshop. Are (ethnographic) case studies the only way to do STS research? Is there not a danger that case studies in STS carry a hidden commitment to realism? (Brown) What is the basis for the constant moral pressure to relate “micro” level work to the “bigger picture”? Is there, on the other hand, sometimes a zealotry associated with doing micro-level, case study work? If so, is this because the micro is seen as more ‘real’, more ‘authentic’? Does standardisation of methods lead to less interesting theorising? Are methods within STS already too standardised (in the form of case studies) or would middle ranging itself lead to standardisation? (Zeiss & Hope) Within STS we are very good at opening up the methods of others but perhaps less good at doing it for ourselves. Some of the papers in the workshop directly countered this tendency by exploring the links between ‘middle-range’ and method (Geels), thinking through practices such as: multi-sited ethnography (Hine); memory work (Berg); distinguishing for methodological purposes between action (to be analysed) and scenery (to be black-boxed) (Collins); ‘exnovating’ data (Mesman); and the analysis of temporality (Beaulieu, Scharnhorst & Wouters).

*Why would we want a middle-range sensibility?*

A fourth theme that was discussed from the outset was the very desirability of anything in the middle. After all, why would we want, if not a middle-range theory, at least a middle-range sensibility? Would it facilitate legitimation within the academy, would it enable inter- and trans-disciplinarity? Would it allow STS concepts to travel? Or, as posed by some participants, would having a middle help STS to be at the centre of sociology (or other STS ‘parent’ disciplines) (Yearley), of adjunct disciplines (such as political science or policy studies), or of policy-making itself (Hagendijk; Farrands)? Alternatively, does an STS sensibility open up the ‘middle’ for other disciplines, such as urban studies (Coutard & Guy)?

So, some participants wanted ideas that can travel and resonate between disciplines, between research and policy/politics, between STS colleagues working on different topics, or with students. If not middle-range theories, some wanted ‘tellable’ stories (Simakova). But this resonance and tellability is not a transcendental or essential quality, again it is about people themselves being connected in a moment of resonance.

Returning to the idea of the middle range as a

noun, middle range is frequently regarded as a possible bridge between micro the macro, but – as the workshop discussion soon established – the metaphor of a bridge presupposes you know what the fixed points are and its linearity can be restrictive. A different metaphor would be that of a lens, that allows simultaneous focusing or rapid refocusing on different perspectives. This gets closer to the notion of mobility, to enable movement between different audiences, and the middle itself becomes a metaphor for the need to engage, to travel. Equally it recognises scale itself as constructed and contested. But it also introduces another notion of middle range as noun, but now as a resource for our own research as well as contributing to the development of a resource for others.

Finally, and perhaps not co-incidentally, a theme raised on the final day was that ‘ranging’ implied a longing for home. A longing, it was suggested, that maybe within STS we also have because of our fears of being uprooted from disciplinary anchors, and, for some of us, of feeling institutionally precarious. Possibly endemic within STS, such fears, one participant suggested, manifest as ‘reificaphobia’ (© Halfman) – the fear and also the challenge that anything within the discipline should settle or solidify for too long.

*Summary of programme*

Further to the people indicated as authors below (names in brackets indicate absent co-author), Willem Halfman, Helen Kennedy, Sabina Leonelli, Paul Wouters and Sally Wyatt were present as discussants, each providing up to ten minutes of commentary on individual papers. In total, seventeen papers were discussed during the workshop. In addition, Steve Rayner gave an open lecture entitled, *The Excluded Middle? Reflections on micro-, meso- and macro- in the social science of global change*, attended by approximately 45 people.

Steve Yearley *Reflection & explanation in science studies: Finding where the middle range lies.*

Ragna Zeiss (& Tom Hope) *On standardising STS, un-standardising theories & deconstructing STS standards.*

Brian Rappert *On the mid-range: An exercise in disposing (or minding the gaps).*

Frank Geels *Theories of the middle range in STS: Achievements & steps to be taken.*

Norma Morris & Brian Balmer *A Woman walks into a laboratory and is asked to take part in an experiment. Now theorise that.*

Jessica Mesman *Exnovating styles of ordering & their embedded normativity.*

Olivier Coutard (& Simon Guy) *STS & the city: Contingency & hope vs. universalised pessimism in studies of the contemporary urban condition*

Arie Rip *Haven't we got all the theory we need?*

Steve Woolgar *The ethics of scale – Oh please, not middle range theories again!*

Anne Beaulieu, Andrea Scharnhorst & Paul Wouters *Not another case study? Ethnography, formalisation & the scope of science*

Elena Simakova *'Softly, softly' tagging the world: The accomplishment of RFID as a tellable story.*

Christine Hine *Multi-sited ethnography as middle range methodology for STS.*

Rob Hagendijk *Theorising public engagement with science & technology.*

Alice Farrands *Bioethics & policy for stem cell*

*research: Do we need a mid-range theory?*

Anne-Jorunn Berg *Hard categories & hard work: Racialisation & feminist memory work.*

Nik Brown *Home on the mid-range: Some notes on theory in STS .*

Harry Collins *The Green-ink letters: Methodological relativism & the choice about how much of the world to treat as relative & how much as real.*

Financial support for the workshop was received from the following: Science in Society Programme of the ESRC [www.sci-soc-net/SciSoc](http://www.sci-soc-net/SciSoc); Amsterdam School of Communications Research, ASCoR, UvA [www.fmg.uva.nl/ascor](http://www.fmg.uva.nl/ascor); European Association for the Study of Science and Technology, EASST, [www.easst.net](http://www.easst.net); Department of Science and Technology Studies, UCL, [www.ucl.ac.uk/sts](http://www.ucl.ac.uk/sts)

# Quality Control in Scientific Policy Advice

by Justus Lentsch

## **Report of the Expert-Symposium at the Berlin-Brandenburg Academy of Sciences and Humanities, January 2006**

What is the proper role of science in relation to policymaking? How should scientific advice to policymakers be institutionalised in government in a way more accountable to academic science and public concerns alike? Science is the major institution for producing knowledge pertaining to political decision making and regulation. However, concerns about the quality of scientific expert advice to policy-makers have been raised for years in the UK and by the EU. Past experience with public debates such as the BSE case or the controversy about genetically engineered food show that the legitimacy of experts and of the policy makers whom they advise essentially depends on the reliability and transparency of scientific advice. This has highlighted the absence of clear rules to follow as well as a legal framework and structures for obtaining institutionalised advice from academics. Thus, the issue of quality control and assurance in scientific expert advising is of vital importance for both, decision makers and the academic community.

With these problems in mind, the interdisciplinary research group “Scientific Advice to Policy in Democracy” of the Berlin-Brandenburg Academy of Sciences and Humanities has organised the expert symposium “Quality Control and Assurance in Scientific Policy Advice”, January 12-14, 2006 (with generous support by the Fritz Thyssen Foundation). The idea of this international high-level symposium was to have scientific consultants, agency heads and distinguished science studies scholars exchange their ideas and perspectives. Presentations were given amongst others by leading scientific advisers like Sir David King, chief scientific advisor to the UK Government, Geoffrey Podger, by that time Executive Director of the European Food Safety Authority, and Peter D. Blair, former Assistant Director of the Office of Technology Assessment (OTA) of the United States Congress, as well as

by distinguished science studies scholars like Sheila Jasanoff, Naomi Oreskes and Peter Weingart.

For the first time, this symposium has assembled the perspectives and experiences of advisory bodies that have been functioning as “model organisations” for the institutional implementation of scientific advice across Europe and the United States. These advisory bodies can be regarded as model organisations because they have been functioning as blue prints or as reference points for the institutionalisation of scientific policy advice in their field. The symposium gave a review of the broad spectrum of the different procedures of quality control as well as the different institutional arrangements putting these procedures into practice within these organisations.

On a theoretical level, the role of scientific expertise in the policy process has been a core issue in the social study of science: Quality control, and particularly review by peers, is a central institution of the scientific system itself (cf. Merton 1973). As such it has been of major interest in science studies (cf. e.g. Chubin / Hackett 1990; Jasanoff 1987; Jasanoff 1985). However, regulatory or policy oriented science differs in important respects (such as goals, tasks institutions, time-frames and its accountability) from basic or curiosity driven science. Moreover, even within a scientific community, different experts may weigh evidence differently and adhere to different standards of demonstration – particularly in cases where their results have political or economic ramifications (cf. Oreskes 2004). Therefore, controlling and assuring the quality of scientific advice for public policy making is neither a uniform nor even a well-defined procedure, as more than a decade in science studies has shown (cf. most notably Jasanoff 1990).

In addition, recent developments in the relationship between science and politics are also affecting the system of quality control (cf. e.g. Maasen / Weingart 2005; Hemlin / Rasmussen 2006): ‘Fitness for function’ is increasingly becoming the norm in policy oriented science and scientific advice to policy (cf. e.g. Funtowicz



2001). But results that work may not be easy to accomplish, because the production and provision of science advice takes place in particular institutional arrangements and under particular constraints like uncertainty and emergent time frames. The need for knowledge quality assessment at the science-policy interface was emphasised in the presentation by Arthur Petersen and Silvio Funtowicz on quality management and extended peer review at the Netherlands Environmental Assessment Agency. Moreover, as Willem Halffman pointed out in his discussion note, norms guiding professional conduct in scientific expert advising will have to take into account a broad variety of different tasks performed under the heading of expert advice such as reviewing, reflecting and mediating. This resonates with a reflexive turn and a process (rather than product) orientation in scientific advisory organisations (cf. Hemlin / Rasmussen 2006).

On the political level, evaluation and quality control in regulatory science and scientific policy advice is also in urgent demand of politics and in government settings, as became apparent in the presentation by Manfred Hennecke. In his paper, he discussed the German Federal Institute for Materials and Testing that was founded in 1870/71 as the former Prussian Royal Mechanical and Technical Research Institute. However, when it comes to such tasks as the evaluation of the production and provision of expert knowledge, the uncritical use of success criteria often yields unexpected and advert consequences in science (cf. for the use of scientometric indicators Weingart 2005). The basic dilemma for a scientific advisory body is how to effectively produce, assess and provide scientific expertise to public policy makers in a way accountable to both sides of the science-policy boundary. This dilemma has led to a shift in the organisational forms of policy advice towards so called "boundary organisations" (a nice review of the discussion in science studies and organisational studies is given in: Jacob 2005). One instructive kind of boundary organisations that was discussed at the symposium is the Dutch sector council model presented by Bert de Wit. The sector councils function as a kind of "knowledge broker" by giving meta-level advice from a cross-departmental perspective. As another important example of a boundary organisation, the agency model that gains increasing popularity on the European level was discussed on the examples of the European Food Safety Authority (Geoffrey Podger) and of the European Environment Agency (David Gee; cf. also Waterton / Wynne

2004). From the perspective of scientific advice to risk regulation, Podger emphasised the eminent importance of stakeholder consultation at expert level before a final opinion is reached.

But how can the impact of scientific expert advice be evaluated outside the scientific community? This fundamental question was most explicitly addressed in Susan Owens paper on the British *Royal Commission on Environmental Pollution*: Drawing on a discourse analysis, she was able to show that the commission has contributed significantly to the development and acceptance of modern concepts such as integrated pollution control. Following Owens, effectiveness of scientific policy advice can be best described in terms of policy learning (cf. also Owens 1999). Further evidence was given by Peter D. Blair's comparison of the NRC-study process and the OTA-assessment process: The strength of an OTA style analysis lies in a broad policy context, paralleling that of congressional deliberation, where (a.) questions involve broader societal, economical and environmental issues, (b.) a consensus view is highly unlikely and where (c.) many legitimate courses of policy action are possible. However, the demise of the OTA in 1994 shows the limitation of the Mertonian norms in guiding the production of scientific expertise and policy advice (cf. for a further critique Hamlin 2005: 402ff).

But where do we go from here? The symposium revealed several impediments on the way to a responsible practice of scientific policy advice:

Firstly, the responsiveness of organised science to public concerns about contentious issues will have to be increased. In order to restore and enhance the credibility of its advice, organised science will have to engage with the public in an open and transparent discourse over these issues. This is not only a question of enlightening and improving the public understanding of science but one of taking science's role as a dialogue partner seriously and making this process really become a two-way discussion process. In particular, as Heather Douglas has pointed out, one has to be careful about bias in expert judgement as well as to somehow capture the different societal, experiential and epistemic perspectives on the problem at issue (cf. also Brown / Lentsch / Weingart 2006, with regard to citizen participation Brown 2006, and with regard to the role of values in science Douglas 2004 and, still the locus classicus, Rudner 1953). The issue of quality control pertaining to the use as well as the provision of scientific expertise by NGOs was broached by Paul Johnston from

Greenpeace Research Laboratories, Exeter. In particular, he pointed out that precaution has to be necessarily science-based, but inevitably requires that decisions be made in the face of unresolved uncertainties (cf. also Johnston / Santillo 1999). In general, as was argued by Sheila Jasanoff, the quality of scientific expertise and regulatory information will be improved by coupling procedures of scientific analysis and deliberation.

Secondly, the question was raised whether scientific policy advice is in need of professional standards of conduct. In his opening lecture, Sir David King, UK Chief Scientific Advisor, presented his “Rigour, Respect and Responsibility: A Universal Ethical Code for Scientists” as well as the British Chief Scientific Advisor’s Guidelines as instructive examples of how such codes for ethical as well as professional conduct might look like.

Thirdly, the symposium highlighted the importance of taking into account the difference between policy advice and political advice: Policy Advice is about using science to broaden the range of choices available to decision makers. In order to fulfil this task, horizon-scanning, mitigating the effects of departmentalisation of scientific expert advising as well as first identifying and articulating effectively the needs and the place for scientific advice in policy development will be important measures as Sir David King pointed out. Moreover, as the OTA legacy as presented in Blair’s paper shows, it is often essential that science takes a partisan stance towards politics on behalf of the public interest; for this purpose, mechanisms will have to be developed that integrate and accommodate scientific and policy debates (cf. also Hamlin 2005: 16). Whereas policy advice broadens the range of choices, political advice goes along with a reduction of choices – preferable to one single option. However, often both aspects are related to one another: Abstaining from settling on one “best option“ in advising policy sometimes means to take the risk that political decision or regulation about scientifically or technologically complex issues will be made on the basis of a poor risk analysis (cf. Pielke Jr. 2003).

Finally, the symposium has highlighted the importance of what Sheila Jasanoff has called the “three body problem of expertise” (Jasanoff 2005), namely, that accountability measures of scientific policy advice have to take into account all three bodies relevant to the effective integration of science and politics: Firstly, the bodies of knowledge that the experts represent (“good science”), secondly, the bodies of the

experts themselves (“unbiased experts”) and, thirdly, the bodies through which experts offer judgements in the policy domain (“balanced committees”) (ibid.: 211). In order to succeed in establishing an effective and responsible system of scientific policy advice, it is crucial how the different lines of responsibility and accountability to both, academic science and politics, are organised and institutionalised. This point was nicely illustrated by Frank den Butter’s paper on the Dutch “polder model” and the institutional set-up of (economic) policy preparation in the Netherlands. The polder model goes back to Jan Tinbergen, the first Nobel prize laureate in economics. It relies on a clear separation of lines of accountability in policy preparation: firstly, a consensus on the mechanisms of the economy as formalised in econometric models; secondly, a compromise on policy goals between the different parties and, thirdly, on an independent and uncontroversial collection of data by an autonomous agency, the Central Bureau of Statistics. The aim of the polder model is to ensure the scientific quality of the policy preparation on the one hand and to gain public acceptance of the policy measures on the other. Since the foundation of the *Central Planning Bureau* by Tinbergen in 1948 this model has been serving as a blue print for the institutional set up of policy advice in the Netherlands (cf. also den Butter / Mosch 2003 and den Butter / Morgan 2000). However, the indubitable success of the Dutch Polder Model is dependent upon the specifics of the Netherlands: a relatively small number of key actors, a corporatists culture and a high mobility between academia, planning bureaus, advisory councils and think tanks at ministries.

To sum up, it is not by coincidence that this expert symposium was convened by the Berlin-Brandenburg Academy of Sciences and Humanities: Being one of the most outstanding bodies of organised science in Germany, responding to the societal need for reliable and credible expert advice is of highest priority to the Academy. The symposium has disclosed some of the most pertinent questions and difficulties attached to issues of quality in scientific policy advice. Moreover, it became apparent that a standardised and universal answer to the quality question in scientific policy advice is highly unlikely and, in many cases, will even not be appropriate and desirable. However, the symposium has convincingly demonstrated how science studies scholarship can very well contribute to a kind of benchmarking by which

“best practices” within the institutional landscape of scientific policy advice can be identified.

#### Bibliography

- Butter, F. A. G. den / Morgan, Mary S. (Eds.) 2000. *Empirical Models and Policy Making: Interaction and Institutions*. London u.a.: Routledge.
- Butter, F. A. G. den / Mosch, Robert H. J.. 2003. The Dutch Miracle: Institutions, Networks, and Trust. In: *Journal of Institutional and Theoretical Economics* 159: pp. 362-391.
- Brown, Mark B. 2006. Citizen Panels and the Concept of Representation. In: *The Journal of Political Philosophy*, forthcoming.
- Brown, Mark B. / Lentsch, Justus / Weingart, Peter. 2006. *Politikberatung und Parlament*. Opladen: Budrich.
- Chubin, Daryl E. / Hackett, Edward J. 1990. *Peerless science: Peer Review and US Science Policy*. Albany: State Univ. of New York Press.
- Douglas, Heather. 2004. Border Skirmishes Between Science and Policy: Autonomy, Responsibility, and Values. In: Machamer, Peter / Wolters, Gereon (Eds.). *Science, Values and Objectivity*. Pittsburgh: University of Pittsburgh Press.
- Funtowicz, S. O. 2001. Peer Review and Quality Control. In: Smelser, Neil J. / Baltes, Paul B. (Eds.). *International Encyclopedia of the Social and Behavioral Sciences*. Amsterdam et al.: Elsevier: pp. 11179-11183.
- Hamlin, Christopher. 2005. A Virtue-Free Science for Public Policy? In: *Minerva* 43: pp. 397-418.
- Hemlin, Sven / Soren B. Rasmussen. 2006. The Shift in Academic Quality Control. In: *Science, Technology & Human Values* 31/2: pp. 173-198.
- Jacob, Merle. 2005. Boundary Work in Contemporary Science Policy: A Review. In: *Prometheus* 23/2: pp. 195-207.
- Jasanoff, Sheila. 2005. Judgement Under Siege. In: Maasen, Sabine / Weingart, Peter (Eds.). *Democratization of Expertise? Exploring Novel Forms of Scientific Advice in Political Decision-Making*. Dordrecht: Springer: pp. 209-224.
- , 1990. *The Fifth Branch: Science Advisers as Policymakers*. Cambridge, Mass: Harvard University Press.
- , 1987. Contested Boundaries in Policy-Relevant Science. In: *Social Studies of Science* 17/2: pp. 195-230.
- , 1985. Peer Review in the Regulatory Process. In: *Science, Technology & Human Values* 10/3: pp. 20-32.
- Johnston, Paul / Santillo, David. 1999. Is There a Role for Risk Assessment within Precautionary Legislation? In: *Human and Ecological Risk Assessment* 5/5: pp. 923-932.
- Maasen, Sabine / Weingart, Peter. 2005. What's New in Scientific Advice to Politics? In: Maasen, Sabine / Weingart, Peter (Eds.). *Democratization of Expertise? Exploring Novel Forms of Scientific Advice in Political Decision-Making*. Dordrecht: Springer: pp. 1-20.
- Merton, Robert K. 1973. 'Recognition' and 'Excellence': Instructive Ambiguities. In: Merton, Robert K. *The Sociology of Science: Theoretical and Empirical Investigations*, ed. by Storer, Norman. Chicago: University of Chicago Press: pp. 419-438.
- Oreskes, Naomi. 2004. Science and public policy: what's proof got to do with it? In: *Environmental Science & Policy* 7: pp. 369-383.
- Owens, Susan. 1999. 'When Knowledge Matters': The Role and Influence of the Royal Commission on Environmental Pollution. In: *Journal of Environmental Policy and Planning* 1/1: pp. 7-24.
- Pielke, R. Jr. 2003. Another Epidemic of Politics? In: *Science* 300/5622: pp. 1092-1093.
- Rudner, Richard. 1953. The Scientist 'Qua' Scientist Makes Value Judgments. In: *Philosophy of Science* 20/1: pp. 1-6.
- Waterton, Claire / Wynne, Brian. 2004. Knowledge and political order in the European Environment Agency. In: Jasanoff, Sheila (Ed.). *States of Knowledge: The Co-Production of Science and Social Order*. London: Routledge: pp. 87-108.
- Weingart, Peter. 2005. The Impact of Bibliometrics Upon the Science System: Inadvertent Consequences? In: *Scientometrics* 62/1: pp. 117-131.

# Measuring Path Dependency: The Social Constructivist Challenge

by Tilman Deus

*Free University of Berlin, Germany*

## **Report on a workshop at the Free University of Berlin, September 5-6 2005.**

The concept of path dependency and the associated notion of path creation are attracting more and more researchers across different fields of study. To date, a fair amount of conceptual work has been done in areas such as economics, sociology and political science. Two major fields of research are studies on technological and organizational paths. During the development of this burgeoning area of research, the need for an answer to methodological problems has increased, as the idea of path processes is used in a growing number of empirical studies. In reaction to this need, Arie Rip (University of Twente), Jörg Sydow (Free University of Berlin) and Arnold Windeler (Technical University of Berlin) invited researchers to a small workshop to share their ideas on approaches to path-related research questions and to mutually confront the challenge of measuring path dependency. The participants were asked to present their empirical project and research questions, explain the theoretical backgrounds to and explicit understanding of paths and path dependency, and finally to offer potential solutions for the problem of concrete measurement. The workshop was divided into two sub-themes; technological path dependencies on the one hand, and organizational and institutional path dependencies on the other.

Arie Rip made his introductory statements on how to measure a path and placed emphasis on the conditions of path reversal (emerging irreversibility). Jörg Sydow and Arnold Windeler then took over, presenting their concept of path constitution analysis, a framework made up of six different modes of constituting technological paths. Soon it became obvious that the approaches to path measurement were significantly dependent on the researcher's understanding of what a path actually is and what

it consists of, which - in turn - was to a certain extent biased by the theoretical background. While some stressed the enabling features of a path, highlighting choice and agency, others focussed on "the dark side of paths" with more weight on dependency and determinism. Jörg Sydow and Arnold Windeler made a plea to go beyond the dichotomy of path dependency and path creation and to look, instead, for a more neutral understanding of path generation.

As a starting point for the debate, Guido Möllering (Max Planck Institute for the Study of Societies) confronted the audience with a fruitful list of some 30 indicators for the existence of a path used in seminal literature. He stated that abstract phenomena like paths could not be measured directly, but rather had to be gauged using certain indicators for each path-mechanism. Among the later discussed mechanisms or causes of path dependencies were increasing returns, self-reinforcement, lock-in and learning. In the following presentations, a wide range of possible indicators for these mechanisms were proposed.

The first day's session on technological paths was chaired by Werner Rammert (Technical University of Berlin). Douglas K.R. Robinson's (University of Twente) idea was to measure the escalation of activity as a sign of increasing irreversibility in a nanotechnological path, e.g. by counting certain keywords that were picked up during interviews. Uli Meyer (Technical University of Berlin) presented his analysis of institutional conditions and aspects of technological innovation in the automobile industry with respect to the development of "Advanced Driver Assistance Systems". Another idea was to measure the building of momentum in the creation of a path. This was illustrated by using examples from multinational R&D-consortia in the semiconductor industry (Jörg Sydow, Arnold Windeler, Guido Möllering, Cornelius Schubert). Inspired by structuration theory, here it was proposed that the momentum

of a technological path be measured by indicators of allocative and authoritative resources (e.g. sunk costs and sets of actor relations) as well as rules of signification and legitimation (e.g. technology roadmaps and norms).

Organizational and institutional paths were the topic of the second day's session chaired by Arie Rip (University of Twente). Studying the development of the German newspaper market for high quality journalism, Jochen Koch (Free University of Berlin) proposed a phase model of organizational and strategic paths (with focus on institutional inertia) to explain the crisis in the German newspaper industry. Here, the supposed lock-in will be indicated by a certain strategic pattern that inhibits blindness to alternatives. Kim van Nieuwaal (Free University of Amsterdam) introduced the notion of an institutional survival path of firm-emphasised government/firm-interaction in shaping the strategic path of firms in the Dutch cockle industry. Marc Roedenbeck, Jan Strobel and Markus Tepe (all members of the doctoral program "Research on Organizational Paths"; Free University of Berlin) focused on economic indicators for a lock-in and introduced their idea of enforcement costs.

Throughout the debates, the importance of stringency in moving towards refined measuring methods became more and more evident, if arbitrariness was to be prevented. Arnold Windeler stated that if one did not have a theory first, the number of indicators would rise close to infinity. Others called for careful distinction between paths of different fields and levels, e.g. between those of organizations and interorganizational networks or technologies and institutions. Jochen Koch remarked positively that the path had not only been referred to in a metaphorical way throughout the workshop and

argued for further elaboration of theory, which in turn would help to solve the measurement problem.

Overall, the discussions led to a number of theory-led candidates for indicators that went beyond dominant design and sunk-costs; ranging from sets of actor relations, path-related activities and the escalation of activity to emerging cognitive frames and degree of reflexivity. Above all, momentum was seen as an elementary aspect of paths. In the end, two major challenges remained: First, the process-relatedness of the path had to be taken into account even more, e.g. by identifying loops between system and environment, as Jochen Koch suggested. Second, the sometimes implicit linearity of the path concepts had to be restricted. The idea of paths branching off and/or intermingling with each other was seen as promising and in need of further elaboration.

Despite the concern of the group that measuring path dependency somewhat resembled "nailing jelly to the wall", everyone felt that the issues discussed would help in future research, even though problems had not only been solved, but also brought up. The participants decided to reconvene in a year's time, when everyone would attempt to supplement the concept of the path with actual data.

The EIASM Workshop "Organizing Path – Path of Organizing", convened by Peter Karnøe (Copenhagen Business School), Guido Möllering (Max Planck Institute for the Study of Societies, Cologne) and Jörg Sydow (Free University of Berlin) and to be held 3-4 November 2006 at the Free University in Berlin, may offer an opportunity for that. For more information visit: [http://www.eiasm.org/frontoffice/event\\_announcement.asp?event\\_id=449](http://www.eiasm.org/frontoffice/event_announcement.asp?event_id=449)

## Recent Dissertations

**Charalambos Tsekeris**, *Problems Of Reflexive Methodology*, Doctoral dissertation at the Department of Sociology, Athens Panteion University, Greece

In this theoretical work, the very idea of “reflexivity” is prioritized as a topic of sociological study in itself, and is problematized in terms of its various definitions and usages. Within a framework of “conceptual pragmatism” (Pierce), it is demonstrated that the polyarithmous and polymorphous reflexivities of social theory, as well as of the sociology of scientific knowledge (David Bloor, Steve Woolgar, Malcolm Ashmore, Bruno Latour and other ANTs), are paradoxically attracted to the old “Cartesian” ideals of mentalism, authoritarian individualism, elitism, context-transcendent knowledge, and philosophical/scientific strength. The implicit pursuit of these ideals always tends to the reinforcement of the “grand idea of sociology” (Martyn Hammersley) and the concealment of the performative “circle of representation” (Pierre Bourdieu), or “epistemological circularity” (Maturana/Varela), distantiating us from the epistemologically healthy ethics/aesthetics of “imperfection” (Dick Pels) and “scientific modesty” (U. Eco).

Encouraging the practice of a radically reflexive (anastochastic) and self-consciously performative “knowledge politics” (in a Foucauldian sense), the dissertation openly promotes an Aristotelian negation of the will to intellectual power and, eventually, the development of more “apophatic”, and less “promethean”, modes of sociological thinking and (inter)acting. This implies a kind of apophatic methodological voluntarism, where different levels of radical uncertainty are included in the self-confrontation of science, as well as in the relationship between science and society (including politics). Following Nicos Mouzelis, the “spiritualization” of socio-logical reflexivity does not entail exegetic anaemia, nihilism or political paralysis, and does not necessarily abstract from the venerable Enlightenment adage of knowing thyself/knowing better, offering itself as a potentially effective antidote against both scientific and everyday essentialism. A less cognitive (less cataphatic) form of reflexivity unavoidably turns our analytic attention not only to non-Western ways of conceiving ourselves,

sociology, and society (at both micro and macro levels), but also to a non-Western (yet critical) approach to science and technology studies, opening the “space of possibility” (Heidegger) for a more enriched, dialogical, and participative “cosmopolitan public sphere” (H. H. Koegler). Thus, there is the additional vital need for a “knowledge-political” discourse of a *europic* reflexivity, facilitating scientific communication and focusing on wider contexts and interests, in contrast to the myopic (short-sighted), narrow reflexivities which still dominate the various sociological fields.

author's address: tsekeris@panteion.gr

**Christoph Maria Ravesloot**, *Development of an organizational method for the realization of energy-neutral housing in the Netherlands*, Doctoral dissertation, Technical University Eindhoven, October 2005.

The Dutch public authorities decided as a precaution to reduce CO<sub>2</sub> emissions, in all sectors of the economy, including the building sector. If houses, both new and existing, would stop emitting CO<sub>2</sub> produced by the heating and electrification of the dwellings, an important contribution to the solution of the CO<sub>2</sub> problem could be made. Such housing would be called energy-neutral. If all 6,5 million existing houses in the Netherlands would be built and retrofitted energy-neutrally, about 12 % of the yearly CO<sub>2</sub> emissions would be reduced. An average Dutch dwelling uses up to 30.000 kWh of fossil fuel a year for heating and electrification. Calculations show that an average energy-neutral dwelling uses 12.000 kWh sustainable energy a year.

Case-studies in Germany and the Netherlands show that with only a few technical means can save enough energy and can produce enough sustainable energy to transform a house into an energy-neutral one. This result was validated in two experimentally built case studies of energy-neutral houses in Woubrugge and Delft in The Netherlands. According to the official used energy-calculation programs EPA and EPW and by comparison with other more accurate energy-calculation programmed it was shown that these calculations are not very exact. However, the calculations are precise enough for that stage of

preliminary designing.

Organization in the building sector, induced by the failing market mechanism, is especially unable to produce energy savings and the production of sustainable energy without influence and pressure from local authorities. Despite legal enforcement and incentives from subsidies and tax reductions, large-scale production of energy-neutral housing has not developed.

Therefore this research analyzes the possibilities of achieving a more successful concerted action under the direction of local authorities. At the moment, Dutch local authorities use performance demands to enforce minimal standards in newly-built housing (EPW). In the renovation, a voluntary energy calculation with a recommendation is used to raise standards (EPA). These calculations can be attached to subsidies and tax reductions. Some authorities also developed covenants to influence the development and production of housing. However, these methods only function partly and are not up to the standard of energy-neutral building. From an analysis of the literature and from a case study in the city of The Hague, success and failure factors were gathered and reproduced in the form of recommendations and criteria for new tactical organizational method to help local authorities achieve greater success. The criteria were classified on the basis of selection criteria from Appropriate Technology (AT), combined with a conditional definition of feasibility from technical ecology, into development criteria and constraints for a new tactical method. These constraints and criteria were once more evaluated and checked in a case study in the city of The Hague.

The Rombo tactic (Ruimtelijke = spatial, Ordening = Planning, Milieu= environmental, Beleid = policy, Ontwerp = development) has been developed according to the criteria and was tested in a four years case study in the city of The Hague. The case study makes it plausible that the local authorities can direct the long-term and large scale development of energy-neutral housing.

In a series of Rombo tactic workshops, based on the sociocratic organization management model, the workshop participants seek their way through the techniques, processes and decision-making. The model of appropriate technology and the management structure of sociocracy provide a

solid basis for unanimous decision making with the accounting of technical and organizational scale effects. This forms the basis for three claims:

1. The Rombo tactic provides a design tool for integral and interdisciplinary collaboration for experts and non-experts, knowledge management and innovation;
2. The Rombo tactic directs a process of open communication and management where arguments in legal, economical and organizational perspective can be exchanged to collaborate as efficiently as possible;
3. The Rombo tactic provides a decision-making platform on the basis of equality for the participation of all interested actors, especially for the participation of the end users the future or existing inhabitants.

To analyze the sensitivities of the Rombo tactic for these disadvantages a comparison with other organizational methods was made. The conclusion was that the Rombo tactic is the only method available that combines three aspects of innovation development: technical design-process management, process management and participation management. Some disadvantages were due to lack and dynamic changes of external conditions for the method, such as changing legislation, economical circumstances and subsidy-policy changes. From the validation of the development of the Rombo tactic, it was learned that the Rombo tactic is not the most accurate design and process management tool, but it is the most socially-feasible one. It is recommendable to test the Rombo tactic in many closely-monitored workshops and projects, and to compare the results with other innovation-management methods.

Finally it seems possible to use the Rombo tactic for other environmental policies other than energy-neutral housing. The Rombo tactic provides a basis for interested actors to influence public and private decision making. Therefore people become more involved in policy making. The main goal of Appropriate Technology is to grant persons more influence over their working and living. The development of the Rombo tactic readily fits in with the tradition of technology assessment and Appropriate Technology. These theoretical frameworks were extended. Therefore the Rombo tactic as a new conception is called interactive constructive Appropriate Technology (iCAT).

## News from the Association

Dear Members,

It's a pleasure to send out this latest copy of the EASST Review, with a lively batch of reports and announcements. It is also a sad occasion, since Chunglin Kwa has decided that it is time to step down as editor of the Review. He has done sterling work for many years to shape the EASST Review as a distinctive way of highlighting the work of EASST members and bringing them into contact with one another. Chunglin has made an immensely valuable and sustained contribution to EASST over the years, and we owe him a huge debt of gratitude.

We are now looking for a new editor of the EASST Review, to begin with the December issue in 2006. If you are interested in taking on this role please do contact me, [c.hine@surrey.ac.uk](mailto:c.hine@surrey.ac.uk) as soon as possible. The editorship is an opportunity to make a highly visible contribution to the work of EASST, and to develop a very interesting form of engagement with the EASST community.

Meanwhile, preparation for the Lausanne

conference in August goes on apace. The conference has proved to be very popular, and an extremely interesting collection of contributed papers and plenary presentations is planned. In the next issue of the Review we will be looking in more detail at the conference and the Swiss STS scene, to whet your appetite for the event itself.

Many thanks to those who responded to the invitation to renew your membership for 2005. Renewal invitations for 2006 will be sent out shortly. Thanks to the administrative changes we collected 2005 membership fees at the end of the year, but we will now revert to the usual practice of renewals in the early part of the year. Please do one thing now to help in this task: set your spam filter to accept emails from [admin@easst.net](mailto:admin@easst.net). We really need email as a way to communicate effectively with members, and it's no good if our emails are lurking in your junk mail folder!

Best wishes,

**Christine Hine**

EASST President

Guildford February 27, 2012



## Conferences, Workshops and Calls for Papers

'Without Let or Hindrance': *Inclusion and its Subversion from the Medieval to the Modern*, is the conference organised by the Department of History, **Lancaster University**, UK, 7 – 9 July, 2006. How have distinctions between inclusion and exclusion, between insider and outsider, been articulated and subverted during the past millennium? Papers are invited which interrogate the histories of social, political and cultural regimes of recognition, inclusion and exclusion. Panels are being constituted regardless of historical period and geopolitical specificity. Themes presently include: Bodies: sexuality and deviance; Beliefs: conversion, secularism and multi-culturalism; Aesthetics and Materialities: enclosures and marking of boundaries; humans, things and differentiation; Security: from political institutions to regimes of insurance; and Culture: ethnicity, citizenship and nationality. Key notes: S. N. Balagangadhara, Ghent University; David Ditchburn, University of Aberdeen; Steve Hindle, University of Warwick; Radhika Mongia, and University of California Santa Cruz. Further information: <http://www.lancs.ac.uk/depts/history/news/hindrance.htm>, or Dr. Deborah Sutton, Department of History, Lancaster University, Lancaster, LA1 4YG, UK, [letorhindrance@lancaster.ac.uk](mailto:letorhindrance@lancaster.ac.uk).

*Media Change and Social Theory*, a major international conference organised by the ESRC-funded Centre for Research on Socio-Cultural Change (CRESC) at The Open University and The University of Manchester (in association with the Centre for Media, Culture and History, New York University), will be held at **St Hugh's College, Oxford**, on 6-8 September 2006. Confirmed plenary and keynote speakers: Annabelle Sreberny (School of Oriental and African Studies, London); Daniel Hallin (University of California San Diego); Faye Ginsburg (New York University); Karel Williams (The University of Manchester); Liesbet van Zoonen (University of Amsterdam); Nick Couldry (London School of Economics); Philip Schlesinger (University of Stirling); Purnima Mankekar (Stanford University); Toby Miller (University of California Riverside); and Tony Bennett (The Open University). This conference aims to bring together media scholars and social theorists to try to push forward media theory. For further information, see

[www.cresc.ac.uk](http://www.cresc.ac.uk) or put CRESC in your search engine. Note also Understanding Media, the new Open University media course and book series: <http://www.open.ac.uk/socialsciences/courses/da204>; [www.openupusa.com/understandingmedia](http://www.openupusa.com/understandingmedia).

The Organizing Committee of PISTA 2006 (*The 4th International Conference on Politics and Information Systems, Technologies and Applications*) has decided to extend the deadline for papers and abstracts submission to April 25, 2006. If you have not already done so, please submit your abstract or your paper through the Conference web site <http://www.conf-info.org/pista06> or rush it attached to an e-mail to: [pista06@conf-info.org](mailto:pista06@conf-info.org) or [pista06.sec@conf-info.org](mailto:pista06.sec@conf-info.org). The new deadlines are as follows: 1. April 25th for the abstract and paper submissions, and for the invited session proposals. 2. May 16th for the acceptance notifications. 3. May 30th for the submission of camera-ready papers. The best 10%-20% of the papers will be published in Volume 4 of JSCI Journal (<http://www.iiisci.org/Journal/SCI/Home.asp>). 12 issues of volumes 1 and 2 of the Journal have been sent to approximately 200 universities and research libraries, and 6 issues of Volume 3 (2005) will be sent to a larger number of libraries. Promotional, free subscriptions, for 2 years, are being considered for the organizations of the Journal's authors. Submitted papers will go through a two-tier reviewing process: a double-blinded and an open one. Submitted papers or extended abstracts will be sent to at least three reviewers, selected by the Organizing Committee, for their respective double-blinded review. Submitted papers or extended abstracts will also be sent to 1-3 reviewers suggested by the author(s) for their open, non-blinded, review. Both kinds of reviewing will support the acceptance process for the selection of the papers to be presented at the conference, as well as the selection of the best 10%-20% of the papers that will be included in the JSCI journal. All accepted papers for their presentation in the conference will be included in the conference proceedings. The papers selected, after their presentation, as the best ones of their regular or invited session, will also be considered for their inclusion in the Journal. The Journal's reviewers will select the best 30%-40% of these papers, in order to

support the acceptance process for their inclusion in the Journal. For those who are interested in organizing an invited session, please, fill the respective form provided in the conference web page, and we will send you a password (if it is pre-approved) so you can include and modify papers in your invited session. Invited session organizers with the best performance will be co-editors of the proceedings volume where their sessions' papers were included, and of the CD electronic proceedings. They will also be candidates for invited editors, or co-editors of a possible JSCI Journal issue related to their invited session papers. Information on the suggested steps to organize an invited session, have been included in the conference website. Submissions from both academia and industry are encouraged. Research papers, case studies, lessons learned, status reports, and discussions of practical problems faced by industry and user domains are all welcome submissions. If you need a detailed Call for Papers and Participation, don't hesitate in asking us for it. You can also get it in the conference's web site.

*Risk and Regulation 2006*, the Fifth CARR Student Conference will be held **London School of Economics**, London, 21 - 22 September 2006. See <http://www.lse.ac.uk/collections/CARR/events/riskAndRegulationResearchStudentConference2006.htm>. CARR is an interdisciplinary group of social scientists researching the organisational, political and legal aspects of risk regulation. We are organising this Conference for students whose research focuses on a topic related to CARR's agenda. We welcome both expressions of interest in attending the conference and proposals for papers to be considered for presentation. We encourage PhD students, especially those at an advanced stage in their research or writing, to present their work in progress, including conceptual issues regarding risk and regulation, empirical findings, methodological issues, or research strategies. The conference is intended as a forum for intense and constructive discussion and debate between research students and is designed to help students improve their research projects. In addition to students' presentations, the Conference will include keynote speeches and a series of 'Master Classes', led by members of CARR. Apply online at: [www.lse.ac.uk/collections/CARR](http://www.lse.ac.uk/collections/CARR), or send your title and a 200-word abstract of a paper (to be presented for no more than 20 minutes) to [regulation@lse.ac.uk](mailto:regulation@lse.ac.uk) by 31 May 2006.

*Science and medicine in the multinational empires of Central and Eastern Europe* is the title of the one-day workshop organized by Tatjana Buklijas and Emese Lafferton at the Department of History and Philosophy of Science, **University of Cambridge**, on 23 June 2006. Historians examining the interaction between Western science and imperialism have shown how Western powers employed science and medicine to reinforce their rule and propagate their culture in the countries they colonized. They have, furthermore, highlighted how the colonial economic and social organization affected the health of populations and how, simultaneously, Western medicine itself was profoundly reshaped by encounters with new cultures, diseases and medical practices. These studies have opened important questions that underpin the current debates about science and medicine in the post-colonial and post-Cold war world. Yet they are exclusively based on Western powers with non-European colonies, in particular Britain, and consequently fail to offer explanatory frameworks for the role of science and medicine in the expansion and maintenance of two geographically contiguous empires of Central and Eastern Europe: the Habsburg Empire and Russia. Little historical attention has been given to the ways in which the particular forms of governmentality as well as the multiethnic and multicultural environments of these empires shaped medical and scientific knowledge and practices. This workshop aims to open new perspectives on the relationship between medicine, science and imperialism by studying it in the Russian and Austro-Hungarian context in the long nineteenth century. The papers, ranging in topics from Russian astronomy to Austrian military psychiatry, will study how science and medicine were deployed in nation-building strategies and 'internal colonization' of geographic regions and ethnicities, while, at the same time, they were appropriated for political goals by non-dominant social and ethnic groups, e.g. new national movements. The workshop will furthermore examine the importance of language as a tool of cultural domination within, and beyond, science and medicine. More generally, its aim is to contribute to history of science, medicine and imperialism, as well as to the social and cultural history of these regions. For more information, including a booking form, visit <http://www.hps.cam.ac.uk/medicine/empires.html>.

*Disseminating knowledge in Seventeenth Century: Centres and peripheries in the Republic of Letters*, the FEM Seminar on Early Modern Philosophy will take place on 30 July- 4th August 2006 **in Bran, Romania**. One of the main features of modernity is the constitution of what has been called the Republic of letters: a complex of communities, societies, correspondence networks, formal or informal circles of learned individuals throughout Europe, often involved in common projects of reforming the received knowledge. Numerous seventeenth century projects for the reformation of knowledge emphasized the collective character of producing and disseminating knowledge. Thinkers like Bacon, Mersenne, Descartes, Gassendi, Boyle or Leibniz, are just some examples of those involved in such projects. What were the common features of such projects? What were the alternatives available to the seventeenth century scholar? What were the ideals, moral values or rules of conduct governing the emerging republic of letters? The FEM in modern philosophy is an international meeting of scholars interested in various aspects of early modern thought. Past editions have been held in various locations of Romania, and the seminar has become already a tradition. The aim of the seminar is to create an interesting environment for discussing papers and ideas. It includes workshops in the morning and presentations of papers in the afternoon, trying to maintain a balance between a high academic level and the informal spirit of an academia. This year, the seminar will take place in Bran, near Brasov, in Transylvania. Among the participants: Daniel Garber (Princeton University), Roger Ariew (University of South Florida), Giulia Belgioioso (Universita di Lecce), Steven Gaukroger (University of Sidney), Peter Anstey (University of Sidney). Bran is a mountain resort near Brasov, 3-4 hours by car from Bucharest' airport. An alternative route is by train from Bucharest to Brasov (which is 15 km away from Bran). The participants will be lodged in a nice little villa in between the mountains in double rooms. Participation fee: 100USD. Please, submit an abstract addressing questions like those exemplified, but by no means restricted to them, and a brief CV to [dana.jalobeanu@bbc.co.uk](mailto:dana.jalobeanu@bbc.co.uk) or/and [valexandrescu@gmail.com](mailto:valexandrescu@gmail.com) by 1st of May. More details on our web page at [www.modernthought.unibuc.ro](http://www.modernthought.unibuc.ro).

The **Oslo Summer School** in Comparative Social Science Studies, 31. July - 4. August 2006, is entitled, *Re-Imagining Social Science in the 21st Century: The Biological Challenge*. The lecturer is Professor Steve Fuller, Department of Sociology, University of Warwick, UK. It is becoming increasingly popular to diagnose the set of fields called 'social sciences' as an artifact of 19th and 20th century nation-building, especially in Europe and North America. At the dawn of the 21st century, the autonomy of these fields has been substantially eroded, on the one hand, by cultural studies (from the humanistic side) and, on the other, by the biological sciences and biotechnology (from the natural scientific side). Will -- and, more importantly, should -- the social sciences retain their autonomous status? This course will consider the stakes in answering this question by looking both backward and forward: In particular, why and how did the social sciences originally distinguish themselves from the biological sciences? To what extent are the challenges facing the social sciences similar or different to the ones they faced, say, 100 or 150 years ago? What are the genuinely new problems and opportunities facing the social sciences today and in the foreseeable future? For more information please visit: <http://www.sv.uio.no/oss/fuller.html>.

*Mobilities, Technologies, Topologies*, the Open University's one-day Workshop, will be held on Wednesday 7th June 2006, at the BT Centre, Kents Hill, **Milton Keynes** (5 minutes from the OU campus). The issue of mobility - of people, places, capital and things has become an important issue across the social sciences in recent years and questions of spatiality have been central to these debates. This one-day workshop, organised by the Department of Geography at The Open University, aims to bring together some of the leading writers on this field and to explore in an informal way how the issue of mobility intersects with our understanding of space and place. The aim of the workshop will be to consider the theme of mobility in relation to such issues as: spatial complexity; non-representational approaches to geography; materiality, technology and agency; identity, subjectivity and objectivity; and movement and landscape. The confirmed keynote speakers are John Urry (Lancaster University) and Ginette Verstraete (University of Amsterdam). The workshop is free and open to all but places are very limited and will be allocated on a first come first served basis. Lunch will be provided.

Overnight accommodation can be booked at the workshop venue. Pre-registration is required. If you would like to book a place please email either Kevin Hetherington (k.i.hetherington@open.ac.uk) or George Revill (g.revill@open.ac.uk) at The Open University for further details.

The annual conference of the *British Society for the History of Science* will be held at the University of Kent, **Canterbury** on 7th -9th July 2006. After extremely successful meetings in York, Liverpool and Leeds, the BSHS conference moves south to the picturesque surroundings of University of Kent. Surrounded by beautiful countryside and a varied coastline, the University of Kent offers a modern campus set in over 300 acres of parkland on a hill overlooking the ancient City of Canterbury with a wonderful Cathedral. More information is available at <http://www.bsbs.org.uk/> or from BSHS Executive Secretary, 5 Woodcote Green, Fleet, Hampshire GU51 4EY, UK, Phone: (+44) (0)1252 641135, email, Chris Chilvers, bsbs2006@bsbs.org.uk.

*Scientists and Social Commitment: Historical perspectives on the political, religious and philosophical ideas and activity of scientists* is the name of the event organized by the British Society for the History of Science, 15th – 17th September 2006, in order to honour the 75th Anniversary of the 1931 Second International Congress for the History of Science, a foundation event in the modern history of science. The congress is remembered for the presence of a Russian delegation that raised political and philosophical issues in science and the history of science. It led to the elaboration of sociologically and politically conscious methods of research in the relationship between science and society. As with the original congress, the venue is **Science Museum, London**, and it will assess and analyse the theme of the history of scientists and social commitment. The focus is on issues of ideological commitments and their relationship to scientific and social activism in the scientific community. The three realms of the ideological addressed are political, religious and philosophical commitment in historical perspective, encompassing a number of thematic possibilities from ideological activism, social engagement, influence on scientific practices and ideas, attempts at scientific associations and organizations, networks, to individual

commitment. These reach across the history of science, technology and medicine, with no parameters on historical period. For more information, see <http://www.bsbs.org.uk/>.

The *Second International Conference on e-Social Science* will be held on 28th - 30th June 2006 in **Manchester**, UK. See

<http://www.ncss.ac.uk/events/conference/>. Topics to be covered at the conference include (but are not restricted to): Case studies of e-Social Science research methods and applications; Enabling new sources and forms of sociological data through e-Social Science; Infrastructure and tools for e-Social Science; Middleware for data collection, sharing and integration; Standards for metadata, ontologies, annotation, curation, etc.; Usability issues in the design of research tools and middleware; Case studies of (e-)Research and (e-) Social Science research practices; The benefits and challenges of large scale collaborative research; Interdisciplinary research and e-Social Science; International collaborations in e-Social Science; Socio-technical issues in the development of e-Research and the Grid; Ethical issues and challenges in the collection, integration, sharing and analysis of sociological and other personal data.

The Conference, *Science within the State*, will be held in **Berlin**, 9-11 September 2006. The organisers are Axel C. Hüntelmann (axel.huentelmann@charite.de) and Dr. Michael C. Schneider (Michael.Schneider@uni-duesseldorf.de). Science and the State always stand in a special relationship to each other. This can be seen clearly from the ambivalent successes, when the State tries to make use of scientific advisory boards and all kinds of expert commissions. For this general reason, such scientific activities that are located within the state sphere or are directly state-run deserve special attention from the perspective of the history of science. The planned conference will deal with exactly such institutions that pursue scientific research within the state or at least within the broader sphere of the state. For the last two decades some considerable research has been undertaken concerning 'Big Science', e.g. research relating to the Max Planck-Society and the German Research Foundation - often motivated by their role during the national socialist dictatorship -, it seems to be useful to turn again towards the specifics of state-run and

similar research institutions. We are especially interested in presentations that discuss current and new projects. Such a conference seems to be useful for at least three reasons: 1. The methodology of science studies and the history of science in general has seen a considerable widening during the last decades. This invites us to scrutinize again the specifics of state-owned scientific institutions. By looking at this special aspect of the relationship between science and the state, there seem to be grounds for the expectation seems to be founded that the completely different ways of the working way of both of these spheres could be uncovered especially clearly. 2. Until now, state-run scientific institutions have only rarely been analysed guided by the question to what extent they were able to persist as scientific institutions under the special condition of being object of direct state influence, and to what extent they have been able to maintain the scientific character of their work both with regard to their financiers to other scientific institutions - given that autonomy of scientific institutions, as opposed to their subordination in a bureaucratic hierarchy, can be seen as a basic principle of their functionality. 3. In addition, contexts of meaning concerning power, state and science shall be analysed. What did the state expect from those scientific institutions and experts whom it financed? Concepts of 'knowledge society' or of 'gouvernementalite' can help to analyse this kind of scientific institutions. By which authorization are state-run scientific institutions founded, financed and maintained? How do these institutions 'think'? Which principles of organisation do they follow? And do such principles of organisation contribute to the ability of those institutions to maintain their scientific character? Does, finally, the scientific character of such institutions change within time, and if yes, due to what reasons? The conference concentrates on the 19th and 20th centuries. Not only such proposals related to Germany are welcome, but also such that use an internationally comparative approach and deal with the whole breadth of state-run research institutions, both in the fields of natural sciences and of humanities and social sciences.

The *Society for History of Technology* has issued a call for papers for its next annual meeting (October 12-16, 2006 - **Las Vegas**) at: [http://shot.press.jhu.edu/Annual\\_Meeting/Annual\\_Meeting\\_Main\\_Page.htm](http://shot.press.jhu.edu/Annual_Meeting/Annual_Meeting_Main_Page.htm).

The Center for Globalization and Governance, University of **Hamburg**, will hold a conference on 12-13 October 2006 entitled, *Governing the Knowledge Society*. Knowledge has long been on the agenda of social sciences. Currently processes of rapid technological change and the growing importance of knowledge based markets have propelled discussions on possible contents and consequences of what is often termed the "knowledge society". Even if there is no agreement on whether we should presently speak of a transition to a postindustrial information or knowledge society, there is no doubt that at least in countries of the global north production and trade in immaterial goods - services, information, and knowledge - will continue to gain importance. Therefore modes of regulating access to knowledge resources, modes of public and private control and appropriation of the production and distribution of knowledge are becoming more and more central. The conference will address theoretical and practical implications and consequences of these new modes and models of regulating knowledge. In this context two levels of regulating or controlling access to knowledge can be distinguished: 1. Attempts and models of regulating the production and dissemination of knowledge. This level concerns the attempts of different actors to structure and control those areas in which new knowledge is generated or in which existing knowledge is taught: education and research. National actors that until now have structured contents, aims and programmatic of school and university education are currently under pressure from two sides: On the one hand processes of policy convergence and global and/or European harmonization attempts (GATS, Bologna Process) lead to educational policies in which single national or subnational actors loose much of their influence. On the other hand private actors are pushing into the growing educational market, introducing new economic imperatives and action logics. Which intentions and ideas govern these developments (e.g. "life-long learning", "learning to learn")? How does the changing perception of education in general and of its social significance influence governance processes on the national, the European and the international level? Can we speak of a retreat of the state or have nation states only changed their governance instruments? Are there repercussions of changing modes of governance in the education area on stakeholders' power and ability to influence policy processes? 2. Regulation and governance of access and use of knowledge. Differences

between private and public interests are even stronger in the case of the use and exploitation of knowledge than in the case of its production and dissemination. Claims of free access to information and knowledge compete with claims of private ownership. Concepts of communal ownership in a free information infrastructure or of a Digital Commons clash with imperatives of private appropriation and use of information and knowledge. It remains to be analyzed which models of regulation and/or governance of knowledge do exist, and on which models of property and common goods these modes draw. Which social actors propagate - implicitly or explicitly - which model? What is the content of these models? On which premises do they rest? How do they differ? What social and economic consequences would follow from different models? Do they perceive knowledge as a common or as a private good? Are there systematic differences between material and immaterial goods, and what consequences does this have for claims of intellectual property rights? Abstracts for papers (max. 250 words) should be sent before 30.4.2006 to: Sebastian Haunss <Haunss@sozialwiss.uni-hamburg.de> or to Katrin Toens <ktoens@sozialwiss.uni-hamburg.de>.

The European Network of Excellence on Policies for Research and Innovation in Europe (PRIME) is organizing an international conference on *Indicators on Science, Technology and Innovation* in the framework of its European Network of Indicator Producers project (ENIP). The conference aims to celebrate the centennial on STI statistics (1906-2006) and look at the future of indicators. We invite presentations on the following subjects: 1. Lessons from the History. What explains the origins of statistics on science, technology and innovation? Who were the forerunners, the pioneers and the followers? What were the motives of early statisticians? What type of statistics was developed? What uses were made of the statistics developed? What was the "politics" of measurement? How to make a sociology of statistics? 2. New perspectives for STI indicators. The requirements and needs of users, both institutional and academic. The misses and holes in current statistics. The methodological challenges for producing renewed statistics. The new and promising avenues. Examples of recent innovative works. Positioning indicators. Extended abstracts for papers should be submitted electronically to blepori@unisi.ch until 1st April 2006. Abstract

should indicate name and affiliation of the authors, research subject and methodology as well as (preliminary) results and conclusions. Further information: <http://www.ticinoricerca.ch/conference.html>.

*Working with Machines - Knowledge, Practice, Technical Change*, is a workshop to be held in **Vadstena, Sweden**, September 4-6, 2006. It is organized by the Department of Technology and Social Change, Institute of Tema research, Linköping University. How can we research the interactions between humans and machines in work settings, their interface, agency and meaningful encounters? What theoretical alternatives are there – and what vital new insights can recent studies bring? This workshop will bring together researchers from different fields – ethnomethodology, gender studies, labour process studies, symbolic interactionism, organization studies etc. – to investigate common themes and alternative interpretations in the study of work and technology. The background is the ubiquity of technologies in a variety of work settings – industrial, health care, service, professional – which calls for an understanding of how humans understand, interact and co-construct everyday work practices with technologies. Issues of learning, risk and technological change are salient, as are questions of gender, power and organization. How are new technologies localized in work settings? How can we conceptualize various configurations of human-machine agency, and how can the knowledge and practices involved be researched and understood? The Vadstena workshop aims to discuss these challenges for S&TS research. We invite scholars from various areas to what we hope will be a fruitful exchange of ideas and research experiences. We are happy to have professor Lucy Suchman, Lancaster university, as a contributor and resource person at the Workshop. For more information, contact Professor Boel Berner (boebe@tema.liu.se) or Assistant Professor Johan M. Sanne (johsa@tema.liu.se).

*Sociology After Durkheim*, the one-day event, will be held on 21st June 2006, Department of Sociology, **University of Surrey**, with the keynote speakers Michael Lynch (Cornell University), Steve Woolgar (Oxford University), Anne Warfield Rawls (Bentley College) and Paul du Gay (The Open University). Much sociological theory was wrought in the mould

formed by Durkheim with his principle of social objectivity, but both his position and aspiration have been challenged by post-structuralist, post modernist and feminist critiques of received notions of the social and of objectivity. Latour (2005) repudiates Durkheim's concept of the social as stable and distinctive, and argues for a return to an earlier usage and an emphasis on transient associations. Garfinkel (2002), however, has reworked Durkheim's aphorism as the foundation of ethnomethodology, while eschewing theory. Is there scope for new form of theory, for synthesis and re-evaluation of existing works, or must we accept that sociological theory has, reflexively, persuaded us to stop theorizing? Contact details: Organisers – Ruth Rettie, Geoff Cooper and Andy King. Email: [soctheory@surrey.ac.uk](mailto:soctheory@surrey.ac.uk). Workshop website: [www.soc.surrey.ac.uk/soctheory](http://www.soc.surrey.ac.uk/soctheory).

The European Conference for the History of Science, *From Marie Sklodowska-Curie to the 21st Century: Working on Women and Science in History of Science*, will be held on September 6-9, 2006 in **Cracow, Poland**. Whereas women scientists contributed important results to the development of the sciences especially in the 20th century, their "visibility" is still questionable. The Commission Women in Science of the DHS/IUHPS would like to invite colleagues from all disciplines to take part to a special session which on the one hand focuses on the role of women in all fields of science and on the other hand, questions "women and science" as a special area of research in history of science. Further information: <http://www.2iceshs.cyfronet.pl/>. Dr. Annette Vogt, President of the Commission "Women in Science" of the DHS/IUHPS, Max Planck Institute for the History of Science, Boltzmannstr. 22, 14195 Berlin, Germany, [vogt@mpiwg-berlin.mpg.de](mailto:vogt@mpiwg-berlin.mpg.de).

ICOHTEC 2006, the International Committee for the History of Technology's 33rd Symposium will be held in **Leicester**, U.K., 15 - 20 August 2006. Further information: <http://www.icohtec.org>.

*Vital Politics II: Health, Medicine, and Bioeconomics into the 21st Century* is being organized by the BIOS Centre at the **London School of Economics** and Political Science, 7-9

September 2006. The aims of the conference are to provide a comparative and global perspective on present forms of practice in the life sciences. Themes are Social science of regenerative medical technologies; Neuroscience and society; and Bioeconomics and biocapital. For any further details, please contact the BIOS Organizing Committee (Chaired by Dr. Carlos Novas) via Linsey McGoey: BIOS, London School of Economics, Houghton Street, London, WC2A 2AE, UK; Email: [l.j.mcgoey@lse.ac.uk](mailto:l.j.mcgoey@lse.ac.uk); Web: [http://www.lse.ac.uk/collections/BIOS/vital\\_politicsII.htm](http://www.lse.ac.uk/collections/BIOS/vital_politicsII.htm).

The theme of the 2006 Film and History League Conference, "The Documentary Tradition," will explore the area of *Science and Documentaries*. It is to be held on 8-12 November, 2006 in the Dolce Conference Center, **Dallas, Texas**, near the DFW airport. Filmmakers who identify themselves as documentary makers have, throughout the history of the form, made films that represent scientific themes. This can be seen to have occurred at four levels: (1) Where science and society touch most intimately, documentarists have often made films that represent the scientific point of view. Examples include nutrition science, public health, building design and medicine. Here we may consider some of the films of Paul Rotha, including his masterpiece *World of Plenty* (1943). (2) Documentarists have often promoted scientific and technological innovation. Many of the films of the GPO Film Unit promoting telephony are relevant here. (3) Documentarists have also often made films to convey scientific information or technical expertise. Many of the films of the Shell Film Unit, including the gearing film *Transfer of Power* (1939) or the *Techniques of Anaesthesia* series made by the ICI Unit during World War Two are typical of these. (4) Documentarists have often used "scientific" theories of montage, deriving from the Russian school of Kuleshov, Eisenstein, Pudovkin et al. In virtually all these cases there has been close collaboration between filmmakers and scientists, often to the extent of close advice on scripts, scenarios and structure. Sometimes filmmakers have expressed the view that scientific documentary is a distinct sub-genre; Edgar Anstey, for example, described the nutrition film *Enough to Eat?* (1936) as 'a scientific film made by scientists', even though he directed and produced it. In fact, however, the boundary between scientific documentary and documentary

in general is difficult to draw in any absolute sense; rather, definitions are specific to times and places; both scientists and filmmakers make claims about how science should be represented on the screen. Papers are invited that explore the relations of science and documentary both in the cinema and on television. The Film and History League conference details can be found at [www.filmandhistory.org](http://www.filmandhistory.org). Send all inquiries and proposals to Dr Tim Boon, Head of Collections, The Science Museum, London SW7 2DD, UK, tel: 44 20 7942 4207, fax: 44 20 7942 4103, email: [tim.boon@nmsi.ac.uk](mailto:tim.boon@nmsi.ac.uk).

A Second Call for Papers has been issued for *Steel Cities: Tradition, Transition and Transformation*, the conference to be held in **Sheffield**, June 29th - July 2nd 2006, with keynote speakers Rt Hon David Blunkett MP, Wolfgang Christ (Bauhaus-Universität Weimar), Barbara Johnstone (Carnegie Mellon University, Pittsburgh) and Scott Kiesling (University of Pittsburgh). For nearly two centuries steel has been the fundamental building block of modernity, revolutionising the lives of millions. From its use in building and construction, in weapons production, to its role in the home kitchen, the transformative power of steel is undeniable. At all stages of its life-cycle, steel impacts upon communities, regions and nations. As China and India race to modernise their economies with imported steel, many cities across Europe and North America are still struggling to cope with the transition from productive to consumptive economies. The focus of this conference is upon the ways in which economies and societies, lives, landscapes and relationships have been, and continue to be, transformed by steel. The 'Steel Cities' conference will bring together academics and professionals from a wide range of disciplines to explore the ways by which steel has impacted upon people, places and pasts and how it continues to shape lives and relationships in the context of local and global change. It will take place in Sheffield, England's most famous 'Steel City', and will be led by the University of Sheffield together with the Centre for Tourism and Cultural Change, Sheffield Hallam University, and a number of partners who are interested in discussing their research and sharing and disseminating good practice. The conference will be multi-disciplinary drawing from architecture, history, sociology, anthropology, ethnology, cultural studies, geography, tourism studies, museum studies, archaeology, ethnology,

linguistics, economics etc. We have already received a number of interesting abstracts from a wide range of disciplines, which will appear on our conference website. We are happy to receive further abstracts on any topic relating to the conference theme, but are especially looking for papers in the following areas: Industrial Archaeology; History of Technology; Landscape Material Culture; Post-Industrial Sociology; and Tourism and Heritage. If you are interested in presenting a paper at 'Steel Cities', please send an abstract of 500 words by April 17th at the latest to: Professor Joan Beal, [j.c.beal@shef.ac.uk](mailto:j.c.beal@shef.ac.uk), National Centre for English Cultural Tradition, University of Sheffield, 9 Shearwood Road, S10 2TD, United Kingdom. For further information, refer to [www.shef.ac.uk/natcect/steelcities](http://www.shef.ac.uk/natcect/steelcities), or [www.tourism-culture.com](http://www.tourism-culture.com).

The *History of Science Society* will hold its 2006 Annual Meeting in **Vancouver**, British Columbia 2-5, November 2006. This will be a joint meeting with the Philosophy of Science Association and the Society for Social Studies of Science. For additional information, please contact Jay Malone at the HSS Executive Office. HSS Executive Office, PO Box 117360, University of Florida, Gainesville, FL 32611-7360, USA. phone: 1-352-392-1677; fax: 1-352-392-2795; e-mail: [meeting@hssonline.org](mailto:meeting@hssonline.org).

An International Workshop on the *Infrastructures for Health Care: Connecting practices across institutional and professional boundaries* will be held on June 19-20, 2006 at the Center for Information and Communication Technologies (CICT), Technical University of Denmark, **Copenhagen**, Denmark. It is sponsored by NordICT ([www.nordict.net](http://www.nordict.net)) and MedIT. The purpose of this workshop is to provide a forum for discussing current issues and trends related to the integration/coordination of health care practices across institutional, organizational, and professional boundaries. The continued growth in health care costs, e.g. associated with older adults and patients with chronic diseases such as diabetes, has created widespread interest in innovative systems of care, which improve communication, coordination and collaboration among care providers, both in primary care and specialty services (e.g. clinics, hospitals, and emergency departments). Concepts like shared care, integrated care and continuity of care



are indicative of ambitions of creating coherent and effective health care services for patients that require complex – and often long-term – care. Although these concepts are often used in relation to projects that seek to enhance communication and collaboration around particular patient groups, they also have bearing on more general visions of reorganizing health care. Infrastructural arrangements – such as the electronic patient record, classification schemes, accounting systems, communication standards, and quality systems – play a crucial role in these new models of care, and it is increasingly hard to imagine integrative initiatives that do not have a strong ICT component. This raises a multitude of questions about the – actual and imagined – role and impact of ICT and other infrastructure components in the development of patient-oriented, integrated healthcare services. We wish to highlight how new infrastructures – socio-technical assemblages – simultaneously connect existing practices, influence and change these practices, and create entirely new practices in health care work (e.g. related to the maintenance of the infrastructure itself). What characterizes infrastructures in health care? What role do they play in transforming and reorganizing health care and in creating new actors in health care? How are infrastructures established and maintained? What are their impact on work practices, organizational structures, cost effectiveness, quality of care, etc.? We encourage potential participants to submit an abstract (3-500 words) describing the contribution before May 1, 2006. Abstracts must be submitted by email to Jørgen P. Bansler (bansler@cict.dtu.dk). After the conference, participants will have the opportunity to submit a full paper to an edited book (with full paper review). List of important dates: Submission of abstracts 1st of May 2006; Notification of acceptance 15th of May 2006; Deadline for registration 2nd of June 2006; Conference 19th – 20th of June 2006. For abstract submission and further information, contact Jørgen P. Bansler at bansler@cict.dtu.dk.

*Historicide and Reiteration: Innovation in the sciences, humanities and the arts* is the title of the Symposium to be held on February 9-10, 2007, at the Faculty of Arts and Culture, **Maastricht University**, The Netherlands. “Unlike art, science destroys its own past”, or so Thomas Kuhn argued in his ‘Comment on the Relations of Science and Art’ (The Essential Tension: Selected Studies in Scientific Tradition and Change, 1977, 340-351, p.345). In the arts,

older works continue to play a vital and formative role in contemporary innovations. In the sciences, however, out of date theories and practices are generally thought to have no use whatsoever to the development of new insights: science continually destroys its own past. Hence, museums are crucial to art (but not to science), while five-year-old books become obsolete in science (but certainly not in literature). Poetical and aesthetic themes, motifs and representational strategies are forever undead, it seems, ready to reappear on the cultural scene at any time. The contrast between historicide and reiteration holds out the promise of leading us beyond sterile, hackneyed terms such as fact versus fiction, objectivity versus subjectivity, or experience versus speculation in our efforts to come to terms with the interrelations between the sciences and the arts. Nevertheless, we cannot rest content with Kuhn’s treatment of the issue, for the following reasons: First of all, it needs to be more finely attuned to actual practices in art and science. What are we to make of, for example, contemporary mathematicians’ ongoing interest in Fermat’s centuries-old theorems? And how are we to understand the famous avantgarde dictum that all museums should be burnt down? Second, the categories of ‘art’ and ‘science’ are too broad to be of any use to empirical inquiry. It seems useful to at least differentiate between the natural and the social sciences. Likewise, we should ask ourselves whether the concept of art as a reiterative practice applies equally to literature, music and the visual arts, and if the humanities should also be taken into account. Do the humanities share the reiterative nature of the arts, or do they embody yet another culture of innovation? Third, we must pay closer attention to the fact that scientific and aesthetic innovations often materialize through interdisciplinary exchange, that is, by amalgamating concepts, theories and methods from diverse intellectual domains. Thus, Martha Nussbaum innovated ethics by reiterating an old master, Aristotle, and by importing concepts from the neighbouring discipline of literary studies into philosophy. Likewise, Weber and Durkheim succeeded in founding sociology by combining elements from the natural sciences and from the realist novel into a new field that distinguished itself from both science and literature. The elaboration of evolutionary theories necessarily depends on literary metaphors and narrative models for its articulation, while it is no less true that evolutionary perspectives on man’s place in nature have functioned as an important source of

innovation for literary modes of emplotment. As these examples demonstrate, processes of interdisciplinary exchange may even transgress the borders between the 'three cultures' of the natural sciences, the social sciences and the humanities/arts (cf. Wolf Lepenies, *Die drei Kulturen*, 1985). Border traffic between art and science has become an important feature of various innovative, late-twentieth-century research practices such as genomics and brain research. The arts may turn their position at the margins of society to good use by functioning as a free space for independent inquiry, embarking upon investigations ignored or discredited by commercial interests and academic science. This is exactly what happens in various forms of collaboration between artists and scientists (cf. Siân Ede, *Art and Science*, 2005). If the boundaries between the three cultures are permeable, and if artists and writers actively contribute to the shaping of scientific knowledge at times, doesn't this at least open up the possibility that scientific innovation may also proceed through reiteration? Fourth, the tenet that the leading edge of science is untrammelled by the burden of the past somehow smacks of the discarded concept of autonomous science, which would be immune to external influences and hence, to tradition. Over the last few decades, however, the supposition that science would have no significant cultural, political, social or aesthetic dimensions has been seriously questioned within the burgeoning field of Science and Technology Studies. This symposium wants to investigate the convergences and divergences between the sciences and the arts by taking our cue from the ways in which they position themselves vis-à-vis their past. It aims at a thorough evaluation of the contrast between historicide and reiteration as a potentially fruitful perspective on the interrelations between the three cultures. We propose the following levels of inquiry: The actual practice of art and science. Do specific instances of scientific innovation corroborate or falsify the idea that the creative reappropriation of the past has nothing to contribute to scientific discovery? Is historicide in the arts confined to the occasional exception of the historical avant-garde, or does it constitute a more substantial part of aesthetic innovation? The prototypical images of art and science. Are they supposed to be reiterating or destroying their pasts, and how do such assumptions figure in the public self-fashioning of scientists, writers and artists? Do such attitudes toward the past also work internally as codes of proper artistic or scientific

behaviour? If it would be the case that scientific innovation may be prone to reiteration as well, does this mean that scientists unwittingly reiterate the past and therefore cultivate a deluded self-image? Would a similar argument apply to the iconoclastic self-fashioning of avant-garde artists? The contents and products of art and science. How do views of the significance of the past relate to scientific theories, literary novels or the subject-matter of painting? Are scientific accounts of, say, the human life span or biological evolution more inclined towards linear, progressivist accounts than literary genres which also cover these domains such as the Bildungsroman or the regional novel? This symposium invites contributions from the history and sociology of science, the history of art, the history of literature, literary theory, and philosophical aesthetics. A selection of the papers will be published in a peer-reviewed volume, to appear in the series *Arts, Sciences and Cultures of Memory*, edited by Kitty Zijlmans, Lies Wesseling and Robert Zwijnenberg (publisher: Equinox, London). If you are interested in contributing, please send a 300-word abstract before May 15, 2006 to: [Lies.Wesseling@LK.Unimaas.NL](mailto:Lies.Wesseling@LK.Unimaas.NL). We will select the contributors to the symposium before July 1, 2006. You may subsequently be asked you to pre-circulate your paper before January 14, 2007. Please make sure your abstract contains the following items: a concretely delineated case study; a specification of the level of inquiry of your case study (a, b and/or c); an interdisciplinary scope: contributions that engage in a comparative analysis which crosses the borders between the 'three cultures' will be given priority.

*Innovation between society and technoscience: Research perspectives and experience* is the First National Conference of STS Italia – Italian Society for Science and Technology Studies. It will be held on the 9th-10th June 2006 at the Tiscali Auditorium, **Cagliari (Sardinia)**. STS Italia is a research network which connects Italian scholars and academics interested in studying science and technology at both theoretical and empirical level. The approaches and research perspectives pursued in the network consider relationships among science technology and society as a thick texture involving heterogenous actors, and reject any deterministic prejudice about the role of technoscience in society. Research interests characterizing STS Italia concern theoretical and empirical analysis

of science and technology in different contexts (from 'laboratory studies' to socio-technical networks; from public perception of biotechnologies to domestication of technologies in everyday life). STS Italia is inspired by the STS approach (Science and Technology Studies), which constitutes an inter- and trans-disciplinary field well known and institutionalized in Europe and the U.S. The aim of STS Italia is to promote exchange, discussion and to strengthen the debate on science technology and society inside and outside Italian Universities. The conference aims to attract a wide audience and broad participation, bringing together researchers engaged in investigating science and technology issues and willing to share their experience during plenary sessions and parallel workshops of the event. Younger researchers and Ph.D. students from University and other research centres are particularly welcome. For further information, see [www.stsitalia.org](http://www.stsitalia.org) or contact [alessandro.mongili@tiscali.it](mailto:alessandro.mongili@tiscali.it).

*Mediated Bodies* is the title of the international conference to be held on 14-16 September 2006 at the Faculty of Arts and Culture, **Maastricht University**, The Netherlands. There is no object of scientific investigation that is as difficult to consider a 'mere' object as the human body. People do not merely 'have' but 'are' their bodies. Accordingly, there is a strong mutual relationship between scientific, esp. medical conceptions and practices and the constitution and experience of the body in other cultural domains (i.e. religion, philosophy, art, popular culture etc.) and in every day life. The visualisation of the body's interior is particularly significant as it renders available what is both very nearby and inaccessible in daily experience. The way the body is dealt with, cared for, used, or sensed changes with how its interiority and boundaries are conceived of and vice versa. Therefore, the early modern body might be very different from that of the 21st century and the body in African medical practice might bear little resemblance to the corporeal object of European or American biomedicine. Bodily realities and experiences are produced as much as they are discovered and expressed in the interplay of mediating discourses and practice. Medical visualisation technologies are at the heart of this interplay. The conference centers around the question of how (medical and/or technological) visualisations of the body interact with other discourses and practices in the mediation of human bodies. This question is explored in 7

successive sessions, each dealing with specific visualisations of bodies and with particular historical or cultural contexts. For each of these sessions there is still place for several papers of 20 minutes. If you are interested please send an abstract of your contribution to Renée van de Vall, [r.vandevall@lk.unimaas.nl](mailto:r.vandevall@lk.unimaas.nl), before 15 May 2006.

*Knowledge and Society*, the conference Organised by the Social Theory Committee of the European Sociological Association, will be held on 21-22 September 2006 at the Universidad Complutense de **Madrid**. The keynote speaker is Prof. John Law, University of Lancaster. This conference deals with the complex relationship between knowledge and contemporary society. In particular, we focus on: (a) the role of knowledge and information in society today; (b) issues concerning certainty, uncertainty and risk in contemporary society; and (c) new developments in the sociology of knowledge. Abstracts (200 words max.) need to be sent to Fernando Domínguez ([fd234@cam.ac.uk](mailto:fd234@cam.ac.uk)) with a copy to Patrick Baert ([pjnb100@cam.ac.uk](mailto:pjnb100@cam.ac.uk)) by 20 May 2006. The abstract should include 1) your full name and address, 2) e-mail and 3) description of your position and affiliation. Final programme will be announced on 20 June 2006. Final registration: 15 July 2006.

The Annual Meeting of the *Society for Social Studies of Science* will be held on November 2-4, 2006 in **Vancouver**, B.C, Canada. The 2006 4S conference will celebrate the 30th anniversary of the society. The meeting will be co-located with the History of Science Society and Philosophy of Science Association, which will be in a hotel a few blocks away. This year's theme is "Silence, Suffering and Survival", and it is designed to explore the overlooked spaces, boundaries, actors, networks, and artifacts of science and technology. We welcome papers and panels that address questions about the silences of silencing, unintended consequences, and persistence in science, technology and STS. The topic is meant to open up and stir discussion about theorizing in areas we may have overlooked such as the process of secrecy under which processes of silence are often conducted. Possible topics might include the science and technology of slavery, disability, survival, warfare, peace, and quantification. Discussions might address demoralization and re-moralization within science,

technology and STS, the sort of silence/noise created by technology/science, and how technology/science create and alleviate suffering and/or survival. This could include processes of survival that are often off the record, such as workarounds, "older ways of knowing", older (non-scientific) ways of knowing, and ...? For further information, see <http://www.4sonline.org/meeting.htm> or contact the Program Chair: Wenda Bauchspies, [wkb4@psu.edu](mailto:wkb4@psu.edu).

*Medicine and the Body Politic*, the inaugural conference of the Centre for Applied Philosophy, Politics and Ethics at the University of **Brighton** on 21-22 September 2006. The keynote speakers are Donna Dickenson (Birkbeck), Conor Gearty (LSE), John Harris (Manchester), Alyson Pollock (Edinburgh), Helen Smith (Brighton and Sussex Medical School), and Rosemary Stamp (EURO RSCG RILEY). Themes include: Health and the Body Politic; Whose Life, Whose Death?; Bodies, Rights and the Body Politic; Genetic Politics; Public or Private?; The Postcode Lottery; The Global Politics of Health; Corporate Pharmaceuticals and Justice; Medical Responsibility in Genocide and Terror; Medicine and the Politics of Gender; and Insurance, Medicine and Politics. The Conference Organisers are Bob Brecher, Mark Devenney and Mel Searle. Inquiries and Abstracts of 300 words by 30th April 2006 to [m.searle@bton.ac.uk](mailto:m.searle@bton.ac.uk). Standard fee £120; a limited number of places for students at £40. Application forms from [m.searle@bton.ac.uk](mailto:m.searle@bton.ac.uk).

The Nordic Conference on *New Asian Dynamics in Science, Technology, and Innovation* will be held in **Copenhagen**, 27-29 September 2006. Application for participation and proposal for paper should be made at the conference's website: <http://asiandynamics.niasconferences.dk>.

The Second International Seville Seminar on *Future-Oriented Technology Analysis (FTA)*, to be held in **Seville, Spain**, on 28-29 September, 2006, has issued a call for abstracts. Tools like foresight, technology assessment and technology forecasting are being used more than ever in a wide variety of settings. Yet, despite their growing popularity, questions remain as to their impacts, which are believed to be distributed over space and time. This concern gives rise to

the following sorts of questions: What difference do FTA tools and approaches make to decision making processes in different contexts, e.g. public sector, business, higher education, etc.? What other demonstrable impacts can they have? To what extent is it possible to match FTA process designs to desired impacts? What concepts and theoretical traditions might be brought to bear in improving our understanding of the conduct and impacts of FTA processes? How could the use of such tools and approaches be further expanded? What sorts of community-building actions should FTA practitioners (and users) undertake to develop good practices and promote innovation? These, and other questions, will be addressed at the 2006 FTA Seminar, which is being organised by JRC-IPTS (Seville, Spain). The FTA acronym refers to strategic foresight, forecasting and technology assessment. The focus of the conference is "Impacts of FTA Approaches on Policy and Decision-Making" aiming at the delivery of concrete and value added policy outcomes and impacts from FTA activities. This call for abstracts is addressed to participants from the public sector and those engaged in business and other non-governmental FTA activities, as well as those active in areas where FTA tools and approaches have been newly-applied, including in developing countries. Contributions are expected from FTA experts, practitioners, and decision-makers from Europe, North America, Asia, Latin America, Africa, and Australasia. The full call for abstracts can be consulted and downloaded at: <http://forera.jrc.es/fta/intro.html>. Please note that only abstracts submitted directly through the online form available at the Seminar website will be considered by reviewers. To submit either a paper or a multimedia e-poster abstract please follow this link <http://forera.jrc.es/fta/submit.cfm>. The deadline for submitting abstracts is Monday 15th May 2006. Authors will be informed whether their abstracts have been accepted by 31st May 2006, with full text of papers or multimedia e-poster presentations to be delivered no later than 31st July 2006. Abstracts should be no longer than 300 words. We look forward to your contribution and participation in this event. Please use the following e-mail address for any inquiry you might have: [jrc-ipts-forera@cec.eu.int](mailto:jrc-ipts-forera@cec.eu.int).

The Centre for Logic and Philosophy of Science of **Ghent** University, Belgium, invites papers for a conference entitled, *The Social Sciences and Democracy: A philosophy of science perspective*,

to be held on 28th – 30th of September 2006, Ghent, Belgium. See <http://logica.ugent.be/SSD/>. Keynote speakers are: Patrick Baert (University of Cambridge); James Bohman (Saint Louis University); Steve Fuller (University of Warwick); Harold Kincaid (University of Alabama); Philip Mirowski (University of Notre Dame); and Stephen Turner (University of South Florida). The conference wants (a) to pay attention to the history of the social sciences and the relation with the development of democracy, the nation-states, the Cold War, globalisation, etc., which might help us to discuss the situation (and science policy) of the social sciences in our democracies today and in the future, and, (b) to analyse whether concepts of democratic theory might be useful in describing the relations between competing theories in the social sciences (e.g., consensus, pluralism, deliberation, minorities, etc.). Other possible topics are: scientific pluralism, explanatory pluralism, methodological pluralism; orthodox vs. heterodox theories; the division of labour in social science, etc. More details on possible topics can be found on the website: <http://logica.ugent.be/SSD/>. Abstracts should be minimum 150 and maximum 1000 words. Please send a Word or PDF file to [Jeroen.VanBouwel@UGent.be](mailto:Jeroen.VanBouwel@UGent.be). Abstracts received will be acknowledged within ten days by email. Authors will be informed on acceptance or rejection as soon as possible and not later than 30 April 2006. Deadline for abstracts is 31 March 2006. On the 27th of September a workshop will be organised in Brussels that may be of interest for the visitors of the conference. More info on: <http://logica.ugent.be/ssd/workshop.php>

The Centre for Society and Genomics and the International School for Humanities and Social Sciences, Universiteit van Amsterdam, are pleased to announce the introduction of a new summer programme, *The Genome and Society: ELSA Genomics State of the Art and Beyond*, to be held at the International School for Humanities and Social Sciences, University of **Amsterdam** from June 5 - 9, 2006. The Genomics and Society Summer Programme seeks to explore the status of research into the ethical, legal and social aspects (ELSA) of genetics, the merits of ELSA genomics research and its proclaimed societal engagement, both in decision making and in public interaction. The themes of the programme will be approached in an international comparative way, building on

theoretical and empirical contributions of international experts in the following areas: Science and Politics, Public Engagement, Communication and Education and Genomics and Globalisation. The Summer Programme is open to individuals with a focused interest in society and genomics (PhD/post doc) and policy makers who want to deepen their theoretical understanding of ELSA genomics. The application deadline is May 1, 2006. For further information regarding fees, travel to Amsterdam, and accommodations, please visit our website [www.ishss.uva.nl/ELSA/](http://www.ishss.uva.nl/ELSA/), or contact Jeanine Legendijk and Mirjam Schieveld, Programme managers, Centre for Society and Genomics, Postbus 9010, 6500 GL Nijmegen, [info@society-genomics.nl](mailto:info@society-genomics.nl).

History of the Food Chain: From Agriculture to Consumption and Waste is a Satellite Conference to the 1st European Chemistry Congress, to be held in Gödöllő, Hungary, 31 August - 3 September. From 27-31 August 2006 the 1st European Chemistry Congress will be held in Budapest, Hungary. At this Congress there will be several plenary lectures by Nobel laureates, over 100 top-level lectures, and 100 short communications. Among the 17 Special Topics Symposia held at the Congress there are symposia dedicated to 'Environmental Chemistry', 'Chemistry, Food and Health', and 'Teaching Chemistry - Past, Present, and Future' (see: [www.euchems-Budapest2006.hu](http://www.euchems-Budapest2006.hu)).

As a satellite conference to this Congress, the Working Party (WP) on History of Chemistry of the European Association for Chemical and Molecular Sciences (EuCheMS) and the Commission on the History of Modern Chemistry of the International Union of the History and Philosophy of Science (IUHPS), the EuCheMS-Divisions on Analytical Chemistry and Food Chemistry, together with the Hungarian Chemical Society, the Szent István University, Gödöllo, and the Hungarian Museum for Science and Technology will organise a conference on the 'History of the Food Chain - From Agriculture to Consumption and Waste', that will be held at Szent István University, Gödöllő, 30 kilometers from Budapest, from 31 August - 3 September 2006.

The aim of this conference is to bring together historically interested chemists working in the fields of food chemistry, agricultural chemistry, analytical chemistry, biochemistry and environmental chemistry, and historians of chemistry. During the 19th and, especially, the

20th century, chemistry played an important role in the study of food and nutrition, as well as in the (quality) control of foodstuffs, fertilisers, and other products involved in human nutrition and cattle-breeding. The conference wants to contribute to an improved historical understanding of the major changes of the 'food chain' during more than a century, and of the role played by chemical expertise in this process. In several European countries chemists in the food industries (e.g. sugar), and analytical chemists involved in the control of foodstuffs have played a major role in the professionalisation of chemistry. By bringing together chemists and historians working in these fields we hope to deepen our insight into the historical interdependences of the different stages of the food chain, including its environmental impacts, and by so doing improve our understanding of the social role of chemistry.

Main topics of the conference:

- \* History of agricultural chemistry;
- \* Veterinary aspects of food chemistry in historical perspective;
- \* History of the chemistry of food and nutrition;
- \* History of analytical chemistry, especially as related to the control of fertilizers, food stuffs, drinking water and mineral waters, and to the

role played by chemical analysis in agriculture and the food industries;

\*History of environmental chemistry as related to food production and consumption.

Chairperson Local Organizing Committee: Eva VAMOS, Hungarian Museum for Science and Technology, Budapest.

International Programme Committee:

Chairperson: Ernst HOMBURG, University of Maastricht, The Netherlands

Members: José Ramón BERTOMEU, University of Valencia, Spain; Duncan T. BURNS, Queen's University, Belfast; Ana CARNEIRO, Universidade Nova de Lisboa, Portugal; Hendrik DEELSTRA, University of Antwerp, Belgium; Anita KILDEBAEK NIELSEN, University of Copenhagen, Denmark; Peter KOOLMEES, University of Utrecht, The Netherlands; Halina LICHOCKA, Polish Academy of Science, Warsaw, Poland; Colin RUSSELL, The Open University, United Kingdom; Sona STRBÁNOVÁ Research Center for History of Sciences and Humanities, Czech Republic; Éva VAMOS.

## News about Education

There is a Master's programme in 'New Medical Technologies and Society' at York, UK. See [http://www.york.ac.uk/depts/soci/c\\_mamt.html](http://www.york.ac.uk/depts/soci/c_mamt.html). The MSc in New Medical Technologies and Society (Science & Technology Studies Unit - Department of Sociology - University of York, UK) is designed for graduates in sociology and others from a range of different backgrounds who have an interest in the processes of innovation in medicine and healthcare. Medical technologies are increasingly at the centre of new changes in both the social and physical body. 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. It reflects developments at national and international levels in health technology and recent government policy promoting new technologies throughout health research and delivery. Crucially, it explores the implications of social science research for healthcare organisation, policy and regulation. The course will appeal to social science graduates wishing to specialise in an expanding field of inquiry, and also healthcare practitioners interested in the social science of medicine (such as research nurses, pharmacists, procurement officers, and those seeking management education), contributing towards their work-based learning, who would benefit from learning in a multidisciplinary environment. Its primary aims are: to explore key social and cultural dimensions of medical technology informed by perspectives in the Sociology of Health and Illness, Anthropology, the 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; and to provide training for further research and professional development. To make an application, simply complete the University of York's standard form for postgraduate applications, available from the Graduate Schools Office, University of York, YO10 5DD, UK (email [graduate@york.ac.uk](mailto:graduate@york.ac.uk)); or online. If there is anything further you'd like to know about the course, please contact: Departmental office - Ms Lynn Kilgallon (email [lk6@york.ac.uk](mailto:lk6@york.ac.uk)) Tel:+44(0)1904 433044; Course coordinator - Dr Nik Brown (email [ngfb1@york.ac.uk](mailto:ngfb1@york.ac.uk)) Tel:+44(0)1904 434741.

The University of Leeds & Thackray Museum AHRC offer a collaborative PhD Studentship. An AHRC-funded PhD studentship is available from 1 October 2006 for a collaborative research project between the Division of History & Philosophy of Science, University of Leeds and the Thackray Museum in Leeds, the UK's largest medical museum. The successful applicant will use the museum's extensive collection of medical trade catalogues and medical equipment to document and analyse the changing technologies of healthcare in Britain, c.1880-1914. Selected results of this research project will be displayed in a dedicated Thackray museum exhibit and used in the museum's outreach activities. The PhD project will be supervised by Graeme Gooday and Jonathan Topham (HPS Division) and by Fiona Elliott and Joanne Stewardson (Thackray Museum). Applicants must be either UK residents (full studentship) or EU nationals (fees only). They should normally have, or expect soon to be awarded, a Masters degree preferably EITHER in the history of science, technology and/or medicine, OR in a relevant area of museum studies. The studentship can be taken up on either a full-time or a part-time basis. The closing date for applications is Friday 28 April 2006. Application forms and further details are available from: Katy Lanceley, School of Philosophy, University of Leeds, Leeds, LS2 9JT, UK, Email: [K.M.Lanceley@leeds.ac.uk](mailto:K.M.Lanceley@leeds.ac.uk); Tel: 44 113 343 3263. Enquiries about the PhD project may be directed to Jonathan Topham, [j.r.topham@leeds.ac.uk](mailto:j.r.topham@leeds.ac.uk) and Graeme Gooday, [g.j.n.gooday@leeds.ac.uk](mailto:g.j.n.gooday@leeds.ac.uk); Leeds History & Philosophy of Science website: <http://www.hps.leeds.ac.uk/>. Enquiries about the museum's resources may be directed to the Thackray's librarian, Alan Humphries, [alan@thackraymuseum.org](mailto:alan@thackraymuseum.org); Thackray Museum website: <http://www.thackraymuseum.org/>.

Cardiff University is delighted to announce its new MSc in Science, Media and Communication. This course, which is a collaboration between the Cardiff University Schools of Social Sciences and Journalism, Media and Cultural Studies, and Techniquet, will commence in September 2006. For further information, visit the course webpage at:

<http://www.cardiff.ac.uk/schoolsanddivisions/academic/schools/socsi/courses/pg/taughtdegrees/science-communication.html>, or contact Dr Robert Evans, Cardiff University, email [EvansRJ1@cardiff.ac.uk](mailto:EvansRJ1@cardiff.ac.uk).

An MSc in Social Research and Digital Design has been initiated at the University of Surrey, Guildford, UK. It is a Masters programme about the design, creation, understanding and evaluation of today's digital technologies. The MSc in Social Research and Digital Design is a new postgraduate programme taught in one of the leading (5\*) sociology departments in the United Kingdom. The department has a long history of vocationally oriented postgraduate courses in social research. Among its staff are internationally renowned academics working on the production and consumption of communication technologies, the internet, and consumer electronics, using innovative methodological approaches. This new programme combines these areas of expertise to equip students with both the social scientific resources to investigate and evaluate digital

technologies and media in society today, and sufficient technical resources to understand and contribute to their design. Modules include: The design and use of digital technologies; Social theory and its application to technology; The sociology of new technology; Web publishing; Research design and survey methods; Field methods; and a range of electives, including computational social science, knowledge management and e-business. The programme also includes a dissertation involving a student's own research and development, an optional placement in business, and many practical exercises and projects. The programme lasts for twelve months. Applicants should have a first degree in the social sciences. Further details may be found at <http://www.soc.surrey.ac.uk/srdd/> or by post from the MSc Admissions Secretary, Department of Sociology, University of Surrey, Guildford GU2 7XH, United Kingdom, telephone: +44 (0)1483 689453, email: [s.slade@surrey.ac.uk](mailto:s.slade@surrey.ac.uk). Staff teaching on the programme include Nigel Fielding, Nicky Green, Nigel Gilbert, Christine Hine, Ruth Rettie, Patrick Sturgis, and Nina Wakeford.

## News from the Field

The European University Institute and the Robert Schuman Centre for Advanced Studies, supported by GESIS and its CEE Service Agency, has initiated the Research Network 1989. See <http://www.cee-socialscience.net/1989/>. Towards 2009 a global window of attention opens for Central and Eastern Europe because of the 20th anniversary of 1989. While particularly in CEE participants, observers and academics will be recording their interpretations, 1989 was also a global and world-historical event. Cultural, economic, legal, political and social interpretations are intertwined with the flow of history and are themselves subject to appropriation and revision by actors. 'Before' and 'after' 1989 are thus inextricably linked. The Organising Committee seeks to facilitate and sustain a lively intellectual debate and academic exchange over the coming years, leading to a series of original working papers and a Public Conference. The Research Network 1989 covers cultural studies, economics, history, law, political science, sociology and related

fields of inquiry. As a second-order network we co-operatively build on existing institutions and groups to enable trans-national and comparative research projects in a European and global space. Participation in the Research Network 1989 offers a space for thinking and writing in exchange and collaboration with similarly interested researchers over two years, thus facilitating authorship and the impact of ideas; gives visibility to the participants, simultaneously promoting their knowledge claims and academic careers; and provides a standing network from which further proposals for research and publishing may be initiated and launched. The aims of the Research Network 1989 are to take stock of achievements and outline a research agenda at an Opening Plenary in October 2006. We do this both for the historical and intellectual process leading to 1989 and for the trajectories emanating from 1989. Network members are encouraged to take a global and world-historical stance. 1989 happened in Central and Eastern Europe, but it did so too in China or Western



Europe, in East Asia or North America. The collapse of that which has been called the Soviet empire, communist party rule, state socialism and so on, is world historically significant, as is the social and cultural transformation that ensued. The Network further aims to publish a series of working papers that will inspire further research, especially doctoral and post-doctoral research. Our audience is the global academic community. Finally, it aims to make available the results to a wider public audience. We expressly seek the involvement of public stakeholders and philanthropic concerns. All participants come together for a final Public Conference in June 2008 and the working papers will be archived in open access. We invite Working Group proposal. Proposals should advance, interrogate or replace knowledge claims by identifying an intellectual agenda that is worthy of sustained attention. Initiators of working group proposals may expect to lead the group. Please find further information on the website: [www.cee-socialscience.net/1989/](http://www.cee-socialscience.net/1989/), or contact Chris Armbruster, [chris.armbruster@iue.it](mailto:chris.armbruster@iue.it).

Science Studies has renewed its website, [www.sciencestudies.fi](http://www.sciencestudies.fi). The new site contains a number of novel features, including: Full index of journal contents (from 1988); Access to full versions of articles, discussions, book reviews and editorials (from 1998; access to the most recent year limited to subscribers); Searchable keywords (from 2001); A Science Studies search portal; An issue alerting service; A portal for submission of electronic manuscripts; A portal for proposals to do a book review; and additional information about the publication and reviewing policy of Science Studies. If you want to become a subscriber and gain access to our most recent articles, download the PDF form available on the site and either mail or fax it to us. We invite you to join us in making the Science Studies website an important resource to the STS community and hope that you enjoy the new site.

AIBR, the Journal of Iberoamerican Anthropology, has recently published a special issue on Science Studies in Spanish called "Cultura, Tecnociencia y Conocimiento: El resto de los Estudios de la Ciencia," or "Culture, Technoscience and Knowledge: The challenge of Science Studies." See <http://www.aibr.org>.

This year's European Science Open Fair, which is

the second pan-European General Science Meeting, is to be held on 19 July 2006 at the Forum am Deutschen Museum, Kino 1, Munich, Germany. For more information, see <http://www.esof2006.org>. The theme is Life Science Governance: Who are the experts? Modern biology affects our understanding of life and poses moral and ethical questions. Does the promise of a cure justify any form of research? Who decides which research paths should be pursued, and which should not? In tackling these questions, parliaments and governments have habitually relied on scientific and professional experts. Who else is being consulted and what is their impact? Is there a 'democratic void'? Who has expertise on social questions about life? Speakers include Ulrike Felt (University of Vienna, Austria), Frank Fischer (Rutgers University, USA), Yael Hashiloni-Dolev (Hebrew University, Israel), Wolfgang Krohn (University of Bielefeld, Germany) and Carlos Novas (London School of Economics, UK). The seminar is organized by Barbara Prainsack (University of Vienna, Austria) and Alexander Gorsdorf (University of Bielefeld, Germany). For further information, contact Alexander Gorsdorf, Institut für Wissenschafts- & Technikforschung (IWT), Universität Bielefeld, Germany, [alexander.goersdorf@iwt.uni-bielefeld.de](mailto:alexander.goersdorf@iwt.uni-bielefeld.de); or Barbara Prainsack, Department of Political Science, University of Vienna, Austria, [barbara.prainsack@univie.ac.at](mailto:barbara.prainsack@univie.ac.at).

David Cantor has been appointed series editor for "Studies in the Social History of Medicine" published by Routledge for the Society for the Social History of Medicine (SSHM). He replaces Anne Borsay, who has held the position since 2001. The series has two editors, Joseph Melling, who remains responsible for monographs, and Dr. Cantor who is responsible for edited collections. For further information about the series and about the Society for the Social History of Medicine, see <http://www.sshm.org>. Dr. Cantor works as a historian for the National Cancer Institute and the National Library of Medicine in Bethesda, Maryland. His recent publications include the edited volume \*Reinventing Hippocrates\* (Ashgate, 2002). He is also the editor of a special cancer issue of the \*Bulletin of the History of Medicine\* (Spring 2007, forthcoming). Proposals for edited collections should be sent to Dr. Cantor via the SSHM website or [cantord@mail.nih.gov](mailto:cantord@mail.nih.gov). Proposals for monographs should go to Dr. Melling via the

SSHM website or  
J.L.Melling@exeter.ac.uk. Professor Borsay will  
see through to publication those volumes with

which she is already involved.

## Opportunities Available

At McGill University, the Department of Social Studies of Medicine, in connection with the Department of Anthropology, invites applications for a tenure track position at the rank of assistant professor to commence 1 January 2007. The successful candidate will be appointed primarily in the Faculty of Medicine (Social Studies of Medicine) but is expected to obtain a joint appointment in the Faculty of Arts (Department of Anthropology). We seek a social or cultural anthropologist with significant publications and current research interests in one or more of the following fields: the anthropology of biomedical science, epistemic and material cultures of medical science research, epistemic and material cultures of clinical science, science and technology studies, science policy. Geographical areas open. The Department of Social Studies of Medicine is a multidisciplinary department (anthropology, history, sociology). Teaching responsibilities will include primarily undergraduate and graduate courses in the Department of Anthropology (cross-listed in Social Studies of Medicine) and some teaching in the Faculty of Medicine. The language of instruction at McGill University is English; competence in French is desirable but not required. Priority will be given to applications received by 30 April 2006; the review of applications will continue until 31 May 2006. Ph.D. at the time of application is required, postdoctoral experience and a substantial set of publications are a major asset. Applicants should send a curriculum vitae; a cover letter that indicates completed research, current research program, and teaching experience; copies of up to three publications representing the applicant's current research; and the names, addresses, e-mail coordinates, and phone numbers of three references. Applications should be sent to Search Committee, Social Studies of Medicine, McGill University, 3647 Peel St., Montreal, Qc. H3A 1X1, Canada. McGill University is committed to academic excellence and scholarly achievement, and all qualified candidates are encouraged to apply. In accordance with Canadian Immigration requirements, priority will be given to Canadian

citizens and permanent residents of Canada. McGill University is committed to equity in employment.

The BSHS Singer Prize 2006, of up to £300, is awarded by the BSHS every two years to the writer of an unpublished essay based in original research into any aspect of the history of science, technology or medicine. The Prize is intended for younger scholars or recent entrants into the profession. The Prize may be awarded to the writer of one outstanding essay, or may be awarded to two or more entrants. The Prize will usually be presented at the BSHS annual conference and the Society will contribute towards the winner's travel expenses for attending the meeting. Publication in the *British Journal for the History of Science* will be at the discretion of the Editor. Essays on offer or in press will not be eligible. Candidates must be registered for a postgraduate degree or have been awarded such in the two years prior to the closing date. Entry is not limited to British nationals. Essays must not exceed 8,000 words (including footnotes following the style guidelines in the *British Journal for the History of Science*), must be fully documented, typewritten with double-line spacing, and submitted in English. Use of published and unpublished primary material is strongly encouraged, and full and correct use of scholarly apparatus (eg footnotes) is expected. Entries (3 copies, stating the number of words) should be sent to arrive not later than 15 December 2006. Essays must not bear any reference to the author, either by name or department; candidates should send a covering letter with documentation of their status and details of any publications. Entries should be sent to BSHS Secretary, Centre for Health, Medicine and Society Tonge Building, Oxford Brookes University, Gypsy Lane, Oxford, OX3 0BP, UK. Enquiries only by email to [secretary@bshs.org.uk](mailto:secretary@bshs.org.uk). Do not send essays as email attachments. The 2004 Singer Prize was awarded to Claire Brock (now at the University of Leicester) for her essay "The

Public Worth of Mary Somerville." Special Commendations were awarded to Néstor Herran (Universitat Autònoma de Barcelona), for "Spreading Nucleonics: the Isotope School at the Atomic Energy Research Establishment, 1951-1967" and Prakash Kumar (Yale University) for "Improving Indigo: the Dynamics of Science at the Colonial and Imperial Laboratories, 1898-1913." Previous winners are listed on the BSHS website, [www.bsht.org.uk](http://www.bsht.org.uk).

Applications are invited for a CASE (Collaborative Awards in Science & Engineering) studentship at the Institute for Health Research, Lancaster University [www.lancs.ac.uk/fass/ihr](http://www.lancs.ac.uk/fass/ihr) starting in October 2006. The studentship is co-funded by the University Hospitals of Morecambe Bay NHS Trust and the ESRC, [www.esrc.ac.uk](http://www.esrc.ac.uk). The total award provides a maintenance grant of £16,000 to the student, plus fees. The proposed research will explore the concept of situated learning in the context and accomplishment of safety in technologically mediated medical work. Three scenarios will be examined a) within medical education, how students learn to read and interpret images in practice; b) in operating theatre work, how ad hoc 'teams' form around highly localised practices and routines, and c) in patient safety incident reporting, how informal and formal reporting systems, might enhance learning from critical incidents. The research undertaken for this studentship will provide valuable insights into how Science & Technology Studies (STS) can contribute to both the shaping of medical curricula, in particular 'problem based learning', which is increasingly employed in medical education, and in understanding how everyday medical practice is accomplished. The focus in both these areas will be on the promotion of patient safety, which has gained momentum following national policy statements endorsing the transfer of systems thinking from other high-technology, safety critical industries into healthcare but which we believe requires substantial empirical exploration. The research will be carried out in collaboration with the University Hospitals of Morecambe Bay Trust. Candidates should have a degree at 2.1. or better, and a recognised masters degree in science studies, sociology or health research. Applicants need to have been ordinarily resident in the UK throughout the 3 year period preceding the date of the application for the studentship. EU students can be offered tuition fees only, international students can get full

award if they have Indefinite Leave to Remain issued by the Home Office. Inquiries to Dr Maggie Mort, Institute for Health Research, tel 44 1524 594077, [m.mort@lancaster.ac.uk](mailto:m.mort@lancaster.ac.uk), or Dr Andrew Smith, Dept of Anaesthesia, Royal Lancaster Infirmary, tel 44 1524 583517 or [andrew.f.smith@mbht.nhs.uk](mailto:andrew.f.smith@mbht.nhs.uk).

The Interuniversity Center for Social Science Theory and Methodology (ICS) is an internationally accredited research and graduate training school, located in the Netherlands at the Universities of Groningen, Utrecht and Nijmegen, and is offering Ph.D scholarships for highly qualified graduates. The ICS offers fully funded Ph.D scholarships for a variety of projects to excellent candidates who recently graduated in one of the social sciences. Graduates in Mathematics, Statistics or Economics are also invited to apply. The Ph.D students will be appointed for a full four-year period in which the graduates will work on an individual project, leading to a doctoral dissertation. The generous scholarships fully cover tuition, research and living expenses. The programme (in English) begins September 1st, 2006 and applications should arrive at the ICS before May 1, 2006. Extensive information on the ICS and the available Ph.D positions can be found on the ICS-homepage: <http://www.ics-graduateschool.nl> General information and applications: ms. M. Ristivojcevi-Lefering, Thomas van Aquinostraat 4, 6525 GD Nijmegen, The Netherlands, tel. 00 31 24 361 30 13, E mail: [sociologie@maw.ru.nl](mailto:sociologie@maw.ru.nl).

The Centre for the History of Science, Technology and Medicine at the Imperial College, London seeks a Lecturer in the History of Modern Technology (Fixed term appointment for three years) at a salary: £36,200 - £40,430 per annum. Applications are invited for the position of Lecturer in the History of Modern Technology at the Centre for the History of Science, Technology and Medicine. The Centre is one of the leading places internationally for the study of the history of science, technology and medicine. It runs one of the most successful graduate programmes in the world and was rated 5A in the last research assessment exercise. We are seeking to appoint a historian of modern technology on a fixed term contract to replace Professor David Edgerton for 36 months while he is on research leave having been awarded a Leverhulme Trust Major Research Fellowship. You will be

expected to contribute to undergraduate and post-graduate teaching in the history of technology and science from 1750 (the industrial revolution) to the present (including MSc supervision and some contribution to PhD teaching), and may be asked to contribute to teaching in areas beyond your research speciality at undergraduate level and in tutoring MSc students. We are looking for someone who shows outstanding potential as a researcher and teacher in the history of modern technology and science. You must have a PhD in the History of Science and Technology or closely related field, have demonstrated excellence in research and have the capacity to develop your research at international level. Further details of the research activities of the group may be found at <http://www.ic.ac.uk/historyofscience/>. Informal enquiries may be directed to the Head of Centre, Professor Andrew Warwick ([a.warwick@imperial.ac.uk](mailto:a.warwick@imperial.ac.uk)). Further particulars and an application form can be obtained from the following website: <http://www3.imperial.ac.uk/employment/academic>. Alternatively, please contact [r.powell@imperial.ac.uk](mailto:r.powell@imperial.ac.uk). Completed application forms should be sent, with curriculum vitae, list of publications, research plan, and the names and addresses of 3 referees to: Robert Powell, Departmental Administrator, Centre for the History of Science, Technology and Medicine, Imperial College London, SW7 2AZ, UK, Email: [r.powell@imperial.ac.uk](mailto:r.powell@imperial.ac.uk). (One hard copy and one electronic copy to be submitted). Closing Date: 2nd May 2006.

The Institut d'Etudes Politiques et Internationales of the Faculté des Sciences Sociales et Politique at the University of Lausanne, Switzerland, has an opening for three PhD positions in the framework of a project on Standards and International Relations: Devolution of Power in the Global Political Economy, funded by the Swiss National Science Foundation (SNF) and

directed by Prof. Jean-Christophe Graz. The project :The project explores the political implications of the growing influence of international standards on society, with a special focus on the service sector. Current and future developments in standardisation are certain to raise the political, economic and legal salience of what were for long considered as merely technical specifications. In highlighting the underestimated importance of service standards in international relations, the project attempts to critically question the structural power of standardisation within the broader context of the globalisation of markets and the role of the state in the economy. Profile : advanced university degree in social sciences, preferably a Master degree in political science or international relations ; familiarity with the field of international political economy; excellent command of English and/or German (for non French-speaking candidates, working knowledge of French). Positions :The individual research positions concern three research clusters focused on either sectoral or institutional cases of service standards. The successful candidates will work in close collaboration with the director of the project and the other researchers. For additional information on the research project, see <http://www.unil.ch/iepi/page20455.html>. Appointment : The appointment will begin September 1st, 2006, for a period of four years. The position carries a gross annual salary in accordance with the Swiss National Science regulations, and will range from CHF 33'600 to CHF 39'600. Application : Applications should include a letter of application, a detailed CV, list of publications, copies of diploma, a specimen of written work and two references, should be sent to: Prof Jean-Christophe Graz, IEPI Humense, University of Lausanne, CH-1015 Lausanne, Tel: +4121 692 31 78, e-mail: [jean-christophe.graz@unil.ch](mailto:jean-christophe.graz@unil.ch). Deadline for application: 30th April 2006.

## Contents of this issue

3	Middle-Range Theories in Science and Technology Studies, a Report by Sally Wyatt
7	Quality Control in Scientific Policy Advice, a Report by Justus Lentsch
11	Measuring Path Dependency: The Social Constructivist Challenge, a Report by Tilman Deus
13	Recent Dissertations
15	News from the Association
16	Conferences and Calls for Papers
30	News about Education
31	News from the Field
33	Opportunities Available